EXHIBIT 31

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In re BARCLAYS BANK PLC SECURITIES LITIGATION	: Master File No. 1:09-cv-01989 (PAC)
This Document Relates To:	:
ALL ACTIONS	:

EXPERT REPORT OF
ALLAN W. KLEIDON, Ph.D.

December 15, 2015

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I. Qualifications

1. I am a Senior Vice President at Cornerstone Research, a financial and economic consulting firm, and an Honorary Professor in the School of Business at the University of Queensland in Australia. Prior to joining Cornerstone Research, I was an Associate Professor of Finance at the Graduate School of Business, Stanford University, and I have taught in the Graduate School of Business and the School of Law at Stanford since joining Cornerstone Research. I have also taught at the Haas School of Business at the University of California, Berkeley, and the University of Chicago, Graduate School of Business. I received my doctorate in 1983 from the University of Chicago and my Master of Business Administration degree from that institution in 1981. My academic and other work primarily has been in the fields of econometrics (the application of statistical methods within an economic framework), security prices and markets, corporate finance, and management of financial institutions. I have published numerous articles on economic and financial topics. A copy of my curriculum vitae and a list of prior testimony over the past four years are attached hereto as Exhibit 1.

II. Assignment

2. I understand that this case arises out of an April 2008 offering by Barclays Bank PLC ("Barclays" or the "Company") of dollar-denominated non-cumulative callable preference shares, Series 5, which were sold in the form of American Depositary Shares (the "Series 5 ADS"), and that the Second Consolidated Amended Complaint, dated September 13, 2013 (the

"Complaint") alleges that the Series 5 Offering Documents contained misrepresentations (i.e., misstatements or omissions).[1]

3. I have been asked by counsel for Barclays to analyze whether any declines in the price of the Series 5 ADS during the period April 8, 2008 (the "Offering Date") to March 24, 2009 (the filing date of Barclays' Form 20-F for the year ended December 31, 2008 ("2008 Form 20-F")) (the "Analysis Period") were attributable in whole or in part to any of the alleged misrepresentations cited in the Complaint.

4. A list of the documents I have considered in forming my opinions is attached hereto as Exhibit 2. Cornerstone Research is being compensated for my work in this matter at my regular hourly rate, which currently is $940. My compensation is not affected by the outcome of this matter.

III. Summary of Opinions

5. Below is a brief summary of my findings and opinions in this matter. The bases for my findings and opinions are detailed in the sections that follow. My work in this matter is ongoing, and I reserve the right to supplement my analysis if additional information becomes available.

- There were no statistically significant price declines in the Series 5 ADS in the Analysis Period on any days when (i) any allegedly corrective information cited

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[1] As used in this report, the term "Series 5 Offering Documents" refers to: Barclays Form F-6 Registration Statement filed on August 31, 2007; Barclays Prospectus Supplement to Prospectus dated August 31, 2007, filed on April 8, 2008 ("Prospectus Supplement"); and the documents incorporated by reference therein, including but not limited to Barclays' Form 20-F for the year ended December 31, 2007, filed on March 26, 2008 ("Barclays 2007 Form 20-F").

in the Complaint was disclosed to the market, or (ii) any allegedly undisclosed risk cited in the Complaint materialized.

- All statistically significant price declines in the Series 5 ADS in the Analysis Period occurred on days when (i) there was no allegedly corrective information cited in the Complaint disclosed to the market, and (ii) no allegedly undisclosed risk cited in the Complaint materialized.

- Based on my analysis, the price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations.

IV. The Series 5 ADS

6. Barclays is an international financial services provider engaged in global retail banking, commercial banking, investment banking, and investment management (Barclays 2007 Form 20-F, p. 8). Barclays offered 100 million Series 5 ADS at $25 per share on or about April 8, 2008. According to *Bloomberg*, an additional six million Series 5 ADS were offered on April 17, 2008 pursuant to the overallotment provision of the offering. The Series 5 ADS are listed and traded on the New York Stock Exchange ("NYSE"). Each Series 5 ADS represents one preference share. The underlying preference shares are not traded. The Series 5 ADS are callable, meaning the shares can be redeemed at par by Barclays at predetermined times (i.e., dividend payment dates) and under specific circumstances (e.g., all the Series 5 ADS may be redeemed upon the occurrence of a regulatory event,[2] and all or part of the Series 5 ADS may be redeemed for any reason after June 15, 2013) (Prospectus Supplement, p. 2). The Series 5 ADS

[2] Prospectus Supplement, p. S-8 ("[I]f at any time the preference shares are no longer eligible to qualify as Tier 1 Capital (as such term is defined in the FSA's 'General Prudential Sourcebook' or any successor publication replacing such sourcebook) then we may redeem all, but not some only, of the preference shares.").

rank senior in liquidation rights to ordinary shares and have dividend priority over Barclays' ordinary shares. Unlike Barclays' ordinary shares, the Series 5 ADS do not have voting rights.

7. The Series 5 ADS pay quarterly dividends at an annual rate of 8.125% on the face value of $25 per preference share. As shown in Exhibit 3 (the Series 5 ADS dividend history), Barclays has paid this dividend on every quarterly dividend date since issuance of the Series 5 ADS. These Series 5 ADS have certain characteristics in common with corporate debt. For example, the fixed dividend is similar to interest payments associated with debt and, unlike holders of ordinary shares, Series 5 ADS holders do not have a residual claim on the assets of the Company.

8. Exhibit 4 shows the Series 5 ADS closing prices from issuance through November 30, 2015. The Series 5 ADS closing price reached a low of $4.95 per share on March 9, 2009, and then increased throughout 2009 to reach the original offering price of $25 on January 14, 2010. The Series 5 ADS closing price has not been below $24.57 since February 2012, and the average closing price over the past almost four years (February 2012–November 2015) is $25.80—above the original offering price.

9. As discussed in Section VI below, macroeconomic and market conditions changed dramatically after the Offering Date, a period often referred to as the global financial crisis. During this period, among many other developments, Lehman Brothers declared bankruptcy (September 15, 2008)[3] and the U.S. government announced a $250 billion bank

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[3] "Lehman Creditors, Shareholders May Lose Billions (Update1)," *Bloomberg*, September 15, 2008, 11:56 AM ET.

bailout (October 13, 2008).[4] The turmoil continued into 2009. Stock prices generally reached their lowest point in March 2009 (for example, the lowest price for the S&P 500 Index was reached on March 9, 2009,[5] the same day that the Series 5 ADS reached their lowest price).

V. Summary of Allegations

10. The Complaint (¶135) alleges certain misrepresentations in the Series 5 Offering Documents:

> The statements…from the April 2008 Prospectus and 2007 20-F were false and misleading for the following reasons:
>
> (a) …Barclays knowingly failed to properly write down its exposure to U.S. subprime and Alt-A mortgages, CDOs, monoline insurers and RMBS in accordance with applicable accounting standards, and failed to adequately disclose the risks posed by these assets;
>
> (b) …Barclays knowingly failed to adequately disclose the risk to the Company associated with its exposure to monoline insurers, including the fact that the Company had more than £21.5 billion of notional exposure to highly risky mortgage-backed assets, such as £10 billion in A/BBB and non-investment grade CLOs and MBSs, which had only been written down by less than 0.3% at the time of the Series 5 Offering;
>
> (c) Barclays failed to disclose the substantial and material risk that the Company's U.S. subprime and Alt-A exposure had on its stated capital ratio, shareholder's equity and the risk that the same posed to the Company's future capital ratio and liquidity; and
>
> (d) The Company's failure to disclose and comply with items (a)-(d) [*sic* (c)] above was in contravention of Barclays' stated risk management policies and public recommendations.

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[4] "U.S. Investing $250 Billion in Banks," *New York Times*, October 13, 2008, No Time.

[5] "S&P 500 Virtually Doubles from Its Bear Market Low," *CBS News*, February 14, 2011, 5:56 PM ET.

11. The Complaint (¶195) further alleges:

> Barclays would not begin to make certain disclosures of its capital credit market exposures until its 2008 Interim results, as of June 30, 2008, and certain important disclosures were not made until the annual report as of December 31, 2008 was filed in March 2009. For example, although Barclays disclosed in its 2007 Form 20-F that the impairment charges for Barclays Capital were £782 million, Barclays failed to disclose the total fair value losses and total gross losses pertaining to BarCap's credit risk, which included U.S. residential mortgages (i.e., ABS CDO super senior, other U.S. subprime, Alt-A and U.S. RMBS wrapped by monoline insurers); commercial real estate; commercial mortgages (i.e., commercial MBS and CMBS wrapped by monoline insurers); and other credit market assets (i.e., SIVs and SIV-lites, credit derivative products companies and CLOs and other assets wrapped by monoline insurers). As Barclays eventually disclosed in its 2008 Form 20-F, the total fair value losses for these credit market risks in 2007 were £2.217 billion. These losses of £2.217 combined with the £782 million impairment charges for 2007 resulted in an undisclosed total gross loss of nearly £3 billion in 2007.

12. The Complaint (¶210) also alleges:

> …Barclays failed to disclose its gross exposure to such leveraged loans in 2007 in accordance with IFRS 7, ¶¶31, 33. As of December 31, 2008, however, after Series 5 was completed, Barclays disclosed in its 2008 Form 20-F that its exposure to leveraged loans was £10.506 billion.

VI. Background

13. This section discusses the evolution of the global financial crisis, from April 2007 through March 2009. Section A outlines major events prior to the April 2008 Series 5 ADS offering, a period during which home prices declined and rising defaults in the subprime mortgage market spread beyond subprime mortgages and impacted the overall economy from April 2007 to April 2008. Section B details major events that occurred after the Series 5 ADS offering, including substantial losses sustained by financial institutions, attempts by various government agencies around the world to stabilize the financial markets, and the bankruptcy of

Lehman Brothers on September 15, 2008. There were substantial declines in financial markets during both periods.

A. Events prior to the Series 5 ADS Offering

14. There was a substantial decline in home prices in 2007, which caused turmoil in the financial markets and the broader economy. Rising defaults in subprime mortgages triggered ratings downgrades of subprime assets and assets backed by subprime residential mortgage-backed securities products. On April 2, 2007, New Century Financial, one of the largest U.S. subprime lenders, filed for Chapter 11 bankruptcy protection.[6] Uncertainty about the extent to which home prices would continue to decline and the magnitude of the losses that financial institutions might face caused many banks to stop lending to other banks for fear of counterparty risk. Both the uncertainty associated with the housing market and the dislocation in the interbank lending markets contributed to a sharp drop in the issuance of asset-backed securities.[7]

15. Ben Bernanke, Chairman of the Federal Reserve Board, stated (Speech by Ben S. Bernanke, "Financial Markets, the Economic Outlook, and Monetary Policy," January 10, 2008):

> [A]s subprime mortgage losses rose to levels that threatened even highly rated tranches, investors began to question the reliability of the credit ratings and became increasingly unwilling to hold these products. Similar concerns arose in the market for asset-backed commercial paper (ABCP). In this market, various institutions established special-purpose vehicles to issue commercial paper to help fund a variety of assets, including some private-label mortgage-backed securities, mortgages warehoused for securitization, and other long-maturity assets. Investors had typically viewed the commercial paper backed by these assets as

[6] "New Century, Biggest Subprime Casualty, Goes Bankrupt," *Bloomberg,* April 2, 2007, 4:38 PM ET.

[7] Paul Mizen, "The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses," Federal Reserve Bank of St. Louis *Review*, September/October 2008, pp. 531–568 at 542–543.

> quite safe and liquid. But the concerns about mortgage-backed securities and structured credit products more generally (even those unrelated to mortgages) led to great reluctance on the part of investors to roll over ABCP, particularly at maturities of more than a few days, leaving the sponsors of the various investment vehicles scrambling for liquidity. Those who could not find new funding were forced to sell assets into a highly illiquid and unreceptive market.

16. On July 18, 2007, Bear Stearns warned investors in two of its hedge funds that they would incur significant losses in subprime-related assets and that it would wind down those funds.[8] On September 14, 2007, the British bank Northern Rock experienced a liquidity shortage and requested financial support from the Bank of England, causing depositors to withdraw £1 billion from Northern Rock in what was the biggest run on a British bank in more than a century.[9]

17. Various financial institutions reported write-downs in the fourth quarter of 2007. In the United States, Citigroup and Merrill Lynch reported the largest losses from their extensive collateralized debt obligation ("CDO") businesses; Bank of America and Bear Stearns reported losses in the billions; and other financial institutions including insurance companies and hedge funds reported mortgage-related losses.[10] As the Complaint (¶¶118–119) acknowledges, Barclays itself issued an "unscheduled trading update" on November 15, 2007 disclosing exposures and write-downs with respect to various asset classes.[11]

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[8] "Bear Stearns Says Battered Hedge Funds Are Worth Little," *New York Times*, July 18, 2007, No Time.

[9] "Timeline: Northern Rock bank crisis," *BBC News*, September 13, 2007, No Time.

[10] "Merrill Lynch Reports $7.9 Billion Write-Down," *New York Times*, October 24, 2007, No Time; "Citi's Sub-Prime Related Exposure in Securities and Banking," *Citigroup.com*, November 4, 2007, No Time; "Bank of America Joins Parade of Mortgage-Related Losses," *New York Times*, January 23, 2008, No Time; "Bear Stearns Takes a $1.2 Billion Write-Down," *New York Times*, November 14, 2007, No Time.

[11] The November 15, 2007 disclosure focused on exposures and write-downs with respect to various asset classes held by Barclays Capital Inc. Throughout this report, my references to "Barclays" include Barclays Capital Inc.

18. The S&P 500 Financials Index declined 21% during 2007. Investment banks and other financial institutions faced tighter credit markets and increasing capital pressures.

19. In early 2008, governments around the world responded to the deteriorating macroeconomic environment, increasing their efforts to support the financial system and bolster the economy by lowering short-term interest rates and attempting to improve liquidity. For example, on January 22, 2008, the U.S. Federal Reserve cut rates by three-quarters of a percentage point to 3.5%. This was the biggest cut in 25 years and its first emergency cut in rates since 2001.[12] In the U.K., the Banking (Special Provisions) Bill, which defined the circumstances in which the Treasury can take a financial institution into public ownership, received Royal Assent on February 21, 2008.[13] On March 11, 2008, the U.S. Federal Reserve announced the creation of the Term Securities Lending Facility ("TSLF"), which would lend up to $200 billion of Treasury securities to banks.[14]

20. In the United States, investors continued to lose confidence in Bear Stearns and there was significant doubt as to whether it would remain solvent. On March 16, 2008, the troubled bank was acquired by J.P. Morgan Chase at $2 per share, less than 7% of its share price just two days earlier.[15] U.S. Treasury Secretary Timothy Geithner stated (Timothy Geithner, "Financial Crisis Amnesia," *Wall Street Journal*, March 1, 2012):

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[12] "Historical Changes of the Target Federal Funds and Discount Rates," Federal Reserve Bank of New York, http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html, accessed on November 5, 2015.

[13] Hugh Pym, *Inside the Banking Crisis: The Untold Story* (London: Bloomsbury Publishing, 2014), p. 184.

[14] "Federal Reserve Announces Expansion of Its Securities Lending Program," Federal Reserve Bank of New York, March 11, 2008, No Time.

[15] "JPMorgan Acts to Buy Ailing Bear Stearns at Huge Discount," *New York Times*, March 16, 2008, No Time.

> [Bear Stearns] was deeply entwined in financial markets and had the perfect mix of vulnerabilities. It took on too much risk. It relied on billions of dollars of risky short-term financing. And it held thousands of derivative contracts with thousands of companies. These weaknesses made Bear Stearns the most important initial casualty in what would become the worst financial crisis since the Great Depression. But as we saw in the summer and fall of 2008, these weaknesses were not unique to that firm.

B. Events after the Series 5 ADS Offering

21. Following the collapse of Bear Stearns, the credit crisis continued to worsen and spread to other sectors of the global economy during the remainder of 2008 and into 2009. The prices of the Series 5 ADS declined at various points over this period, as did the prices of other stocks, in response to the growing global financial crisis, as shown in Exhibit 5.

22. On April 8, 2008, the IMF warned ("Global Financial Stability Report," International Monetary Fund, April 2008):

> [F]alling U.S. housing prices and rising delinquencies on mortgage payments could lead to aggregate losses related to the residential mortgage market and related securities of about $565 billion, including the expected deterioration of prime loans. Adding other categories of loans originated and securities issued in the United States related to commercial real estate, the consumer credit market, and corporations increases aggregate potential losses to about $945 billion.

23. Monetary authorities and large financial institutions around the world took major steps to try to stem the crisis. After cutting interest rates by 0.25% on April 10, 2008,[16] the Bank of England announced on April 21, 2008 details of a £50 billion plan to allow banks affected by the credit crunch to swap mortgage-backed securities for government bonds. The U.S. Federal

[16] "Statistical Interactive Database – Official Bank Rate History," Bank of England, http://www.bankofengland.co.uk/boeapps/iadb/Repo.asp, accessed on November 1, 2015.

Reserve lowered the federal funds rate an additional 0.25% on April 30, 2008, citing weak economic activity.

24. On June 6, 2008, the United States announced a decline of 49,000 payrolls and an increase in the unemployment rate from 5% to 5.5%, signaling a weaker job market.[17]

25. On July 12, 2008, the FDIC announced that IndyMac Bank had been closed by the Office of Thrift Supervision and placed into conservatorship of the FDIC,[18] a move widely interpreted as a sign of more failures to come ("Crisis Deepens as Big Bank Fails," *Wall Street Journal*, July 12, 2008):

> IndyMac is the biggest mortgage lender to go under since a fall in housing prices and surge in defaults began rippling through the economy last year – and it likely won't be the last. Banking regulators are bracing for a slew of failures over the next year as analysts say housing prices have yet to bottom out.

26. The following Monday, the U.S. Treasury stepped in to assist Fannie Mae and Freddie Mac directly ("Treasury Acts to Shore Up Fannie Mae and Freddie Mac," *New York Times*, July 14, 2008):

> Alarmed by the sharply eroding confidence in the nation's two largest mortgage finance companies, the Bush administration on Sunday asked Congress to approve a sweeping rescue package that would give officials the power to inject billions of federal dollars into the beleaguered companies through investments and loans. In a separate announcement, the Federal Reserve said it would make one of its short-term lending programs available to the two companies, Fannie Mae and Freddie Mac.

[17] "U.S. Economy: Payrolls Fall, Unemployment Rate Climbs (Update4)," *Bloomberg*, June 6, 2008, 4:32 PM ET.

[18] "FDIC Establishes IndyMac Federal Bank, FSB as Successor to IndyMac Bank, F.S.B.," Federal Deposit Insurance Corporation Press Release, July 11, 2008, No Time.

27. On September 7, 2008, the Federal Housing Finance Agency placed Fannie Mae and Freddie Mac into government conservatorship.[19] Placing Fannie and Freddie into conservatorship was described as "a seismic event in a year of repeated financial crises followed by aggressive federal intervention."[20]

28. On September 15, 2008, Lehman Brothers filed for Chapter 11 bankruptcy protection, further increasing the turmoil in the financial markets. Chairman Bernanke commented on the impact of Lehman's collapse on money market funds, which, in turn, constricted liquidity (Speech by Ben S. Bernanke, "Reflections on a Year of Crisis," September 15, 2009):

> As a result of losses on Lehman's commercial paper, a prominent money market mutual fund announced on September 16 that it had "broken the buck"--that is, its net asset value had fallen below $1 per share. Over the subsequent several weeks, investors withdrew more than $400 billion from so-called prime money funds. Conditions in short-term funding markets, including the interbank market and the commercial paper market, deteriorated sharply. Equity prices fell precipitously, and credit risk spreads jumped.

29. On the same day that Lehman Brothers filed for bankruptcy protection, Bank of America announced that it would purchase Merrill Lynch for $29 per share "to avert a deepening financial crisis"; Merrill Lynch traded earlier in 2007 for nearly $100 per share. September 15 was described as "one of the most dramatic days in Wall Street's history."[21]

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[19] "U.S. Seizes Fannie and Freddie," *CNN Money*, September 7, 2008, 8:28 PM ET.

[20] "In Rescue to Stabilize Lending, U.S. Takes Over Mortgage Finance Titans," *New York Times*, September 8, 2008, No Time.

[21] "Bids To Halt Financial Crisis Reshape Landscape of Wall St.," *New York Times*, September 15, 2008, No Time.

30. The next day, September 16, 2008, AIG received a bailout package from the U.S. government in return for an 80% public stake in the firm, "without which the company may have [had] only days to survive."[22] AIG at this time conducted business with "thousands of companies around the globe," indicating the widespread effects its failure would have had.[23] The collapse of AIG "would have been a chain reaction…[and] the spillover effects [w]ould have been incredible."[24] The government's bailout of AIG was described as "the most radical intervention in private business in the…history" of the Federal Reserve.[25]

31. Treasury Secretary Henry Paulson discussed this period of the crisis in a speech delivered in late November 2008 (Remarks by Secretary Henry M. Paulson Jr. at the Ronald Reagan Presidential Library, November 20, 2008): "By mid-September, after 13 months of market stress, the financial system essentially seized up and we had a system-wide crisis. Credit markets froze and banks substantially reduced interbank lending…. Our system was on the verge of collapse."

32. On September 25, 2008, the Office of Thrift Supervision seized Washington Mutual Bank and placed it into FDIC receivership.[26] On the same day, J.P. Morgan purchased the assets of Washington Mutual from the FDIC.[27]

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[22] "Fed's $85 Billion Loan Rescues Insurer," *New York Times*, September 16, 2008, No Time; "Bids To Halt Financial Crisis Reshape Landscape of Wall St.," *New York Times*, September 15, 2008, No Time.

[23] "Fed's $85 Billion Loan Rescues Insurer," *New York Times*, September 16, 2008, No Time.

[24] "Fed's $85 Billion Loan Rescues Insurer," *New York Times*, September 16, 2008, No Time.

[25] "Bids To Halt Financial Crisis Reshape Landscape of Wall St.," *New York Times*, September 15, 2008, No Time.

[26] "Government Seizes WaMu and Sells Some Assets," *New York Times*, September 26, 2008, No Time.

[27] "Government Seizes WaMu and Sells Some Assets," *New York Times*, September 26, 2008, No Time.

33. On September 29, 2008, the FDIC announced that Citigroup would acquire the banking operations of Wachovia Corp. in an FDIC-assisted transaction.[28] On October 3, 2008, rather than complete the transaction with Citigroup, Wachovia announced that it had agreed to be acquired by Wells Fargo.[29]

34. The markets continued to face a series of steep one-day drops. On October 10, 2008, the Financial Times Stock Exchange 100 ("FTSE") fell 8.9% to 3,932.1 points, its first time under the 4,000 mark in five years, representing the worst daily fall since the stock market crash of 1987 and wiping approximately £89.5 billion from the value of Britain's largest companies.[30] On October 15, 2008, the Dow Jones fell 733 points, or 7.9%, to 8,578, and the S&P 500 fell 90 points, or 9%, to 907.8, their worst single-day percentage drops since the 1987 crash.[31] By December 31, 2008, the FTSE had fallen 31.3% over 2008, the biggest annual fall since the index began.[32] The S&P 500 fell 38.5% over the same period.[33]

35. The U.S. government responded with a series of aggressive policy responses, including the Troubled Asset Relief Program ("TARP"), a voluntary capital purchase program

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[28] "Citigroup Inc. to Acquire Banking Operations of Wachovia," FDIC Press Release, September 29, 2008, No Time.

[29] "Wells Fargo Swoops In," *New York Times*, October 3, 2008, No Time.

[30] "London Suffers Third Biggest Fall in 'Great Crash of 2008,'" *Guardian,* October 10, 2008, 2:00 PM ET.

[31] "Another Huge Dow Loss," *CNN Money*, October 15, 2008, 6:21 PM ET.

[32] "FTSE 100 Index Has Its Worst Year," *BBC*, December 31, 2008, 4:32 PM ET.

[33] "U.S. Stocks Post Steepest Yearly Decline Since Great Depression," *Bloomberg*, December 31, 2008, 8:17 PM ET.

under which the U.S. Treasury would purchase up to $250 billion of senior preferred shares from U.S. financial institutions.[34]

36. In the U.K., on October 8, 2008, Prime Minister Gordon Brown announced a bailout for the financial industry,[35] and on the same day, the U.K. government introduced higher capital requirements as part of the government's attempt to stabilize the financial system.[36]

37. Chairman Bernanke has described September and October of 2008 as "the worst financial crisis in global history," noting that 12 out of 13 of the most important U.S. financial institutions "were at risk of failure."[37]

38. By the end of 2008, the U.S. government ultimately purchased approximately $178 billion in the preferred stock and warrants of 214 financial institutions.[38] These extraordinary government interventions were not limited to traditional financial institutions; on December 19, 2008, the Treasury authorized loans of up to $13.4 billion for General Motors and $4 billion for Chrysler from the TARP program.[39]

39. On February 26, 2009, the U.K. government announced the details of its asset purchasing program.[40] On March 18, 2009, the Federal Reserve decided to purchase up to $300

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[34] "U.S. Investing $250 Billion in Banks," *New York Times*, October 13, 2008, No Time.

[35] "Britain's Bank Bailout Worth Hundreds of Billions," *New York Times*, October 8, 2008, No Time.

[36] "Rescue Plan for UK Banks Unveiled," *BBC*, October 8, 2008, 12:58 PM ET.

[37] "Bernanke: 2008 Meltdown Was Worse than Great Depression," *Wall Street Journal*, August 26, 2014, 4:03 PM ET.

[38] "The Troubled Asset Relief Program: Report on Transactions Through December 31, 2008," Congressional Budget Office, January 16, 2009, p. 2.

[39] "Bush Aids Detroit, but Hard Choices Wait for Obama," *New York Times*, December 19, 2008, No Time.

[40] "Asset Protection Scheme and Increased Lending," HM Treasury Press Release, February 26, 2009, No Time.

billion of longer-term Treasury securities "to help improve conditions in private credit markets."[41] On March 26, 2009, the U.S. government revealed details of a regulatory framework centered on systemic risk, consumer and investor protection, regulatory gaps, and international coordination.[42]

40. Chairman Bernanke made the following observation about the period from August 2008 forward (Speech by Ben S. Bernanke, "Reflections on a Year of Crisis," September 15, 2009):

> A year after the onset of the current crisis in August 2007, financial markets remained stressed, the economy was slowing, and inflation—driven by a global commodity boom—had risen significantly. What we could not fully appreciate then was that the economic and policy environment was about to become vastly more difficult. In the weeks that followed, several systemically critical financial institutions would either fail or come close to failure, activity in some key financial markets would virtually cease, and the global economy would enter a deep recession.

VII. Event Study Analysis

41. To assess whether any declines in the price of the Series 5 ADS during the Analysis Period were attributable in whole or in part to any of the alleged misrepresentations cited in the Complaint, I conducted an event study. An event study is a widely used and generally accepted statistical framework for investigating the effects of information on securities prices. Section VII.A below explains the general event study methodology, while Section VII.B describes the particular regression model used in this report. Section VII.C analyzes all days in

[41] "Federal Reserve Monetary Policy Release," Board of Governors of the Federal Reserve System Press Release, March 18, 2009, No Time.

[42] "Treasury Outlines Framework for Regulatory Reform," U.S. Treasury Press Release, March 26, 2009, No Time.

the Analysis Period on which there were statistically significant movements in the price of the Series 5 ADS, as well as the days on which allegedly corrective information entered the market as described in the Complaint.[43]

A. Methodology

42. Over the past 40 years, the event study methodology has been used and refined in academic research in the fields of finance and accounting.[44] An event study provides an objective measure of whether a particular disclosure is associated with a significant change in the total mix of information.

43. The standard approach uses the statistical method of linear regression to account for market and industry effects. Because stock prices reflect market, industry, and company-specific information, it is necessary to extract the market and industry-related portions of stock price movements to isolate that part that may be related to company-specific information. Once market and industry effects are controlled for, standard statistical tests can be conducted on the remaining price movement (known as the "residual return") to test for significant price changes

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[43] In this report, the phrase "corrective information" includes both (i) allegedly corrective information that was disclosed to the market, and (ii) the materialization of any allegedly undisclosed risk. The use of the phrase "corrective information" is based solely on the allegations of the Complaint; it does not reflect any conclusion that any "corrective information" was disclosed to the market, or that any allegedly undisclosed risk materialized, on any given day.

[44] For an introduction to event study analysis, see Richard A. Brealey, Stewart C. Myers, and Franklin Allen, "Corporate Financing and the Six Lessons of Market Efficiency," Chapter 13 in *Principles of Corporate Finance*, 8th ed. (New York: McGraw-Hill/Irwin, 2006). See also Stephen J. Brown and Jerold B. Warner, "Using Daily Stock Returns: The Case of Event Studies," *Journal of Financial Economics* 14 (1985), pp. 3–31; John J. Binder, "On the Use of the Multivariate Regression Model in Event Studies," *Journal of Accounting Research* 23, no. 1 (Spring 1985), pp. 370–383; A. Craig MacKinlay, "Event Studies in Economics and Finance," *Journal of Economic Literature* 35, no. 1 (March 1997), pp. 13–39; and John Y. Campbell, Andrew W. Lo, and A. Craig MacKinlay, "Event-Study Analysis," Chapter 4 in *The Econometrics of Financial Markets* (Princeton, NJ: Princeton University Press, 1997).

that may indicate the presence of new, material, company-specific information in the market. Such statistical tests must account for the normal random movements in stock price.

44. To account for this random element, "normal" stock price volatility is estimated over a control period. A standard statistical measure of normal behavior during the control period is defined as the range that contains a specified fraction of observations. This range, or "confidence interval," depends on the normal variation or volatility of the residual price changes for the security in question. The standard 95% confidence interval (or equivalently 5% significance level, corresponding to a t-statistic of 1.96 or greater in absolute value) used in event studies is applied in this report.[45]

45. Thus, this methodology identifies days on which the security price increased or decreased by significantly more than would have been predicted by market and industry factors; such price movements are referred to as "statistically significant" ("positive" for statistically significant price increases and "negative" for statistically significant price decreases). For days with statistically significant price movements, one can analyze the company-specific information that entered the market that may explain the price movements. This is a standard and generally accepted methodology for event studies and it is the one employed here.

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[45] The *Reference Manual on Scientific Evidence* (David H. Kaye and David A. Freedman, "Reference Guide on Statistics," in *Reference Manual on Scientific Evidence*, 3rd ed., Federal Judicial Center (Washington, DC: The National Academies Press, 2011))—a guide published by the Federal Judicial Center for use by federal judges—states (pp. 251–252, internal footnote omitted, emphasis added):

> In practice, statistical analysts typically use levels of 5% and 1%. The 5% level is the most common in social science, and an analyst who speaks of significant results without specifying the threshold probably is using this figure. An unexplained reference to highly significant results probably means that p is less than 1%. *These levels of 5% and 1% have become icons of science and the legal process.*

B. Regression Model Specification

46. To account for both market and industry effects, an index is constructed based on the Standard & Poor's ("S&P") U.S. Fixed Rate Preferred Stock Index. The S&P U.S. Fixed Rate Preferred Stock Index is composed of preferred stocks that pay dividends at a fixed rate.[46] As of December 31, 2008, the S&P U.S. Fixed Rate Preferred Stock Index contained 57 "Financial" securities (based on the Global Industry Classification Standard), three of which were issued by Barclays.[47] A market-capitalization-weighted index ("Preferred Stock Index") composed of the 54 financial securities of the S&P U.S. Fixed Rate Preferred Stock Index not issued by Barclays is constructed. Exhibit 5 gives the performance of the Series 5 ADS during the Analysis Period relative to the Preferred Stock Index and the NYSE Composite Index. The list of securities that comprise the Preferred Stock Index is given in Exhibit 6.[48]

47. A separate regression was performed for the periods before and after the Lehman bankruptcy on September 15, 2008 (Period 1: April 11, 2008 to September 14, 2008; Period 2: September 15, 2008 to March 24, 2009).[49] A statistical test indicates that the volatility of the residual returns, which are shown in Exhibit 7,[50] increased after the Lehman bankruptcy. The

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[46] "S&P U.S. Fixed Rate Preferred Stock Index," S&P Dow Jones Indices, http://us.spindices.com/indices/fixed-income/sp-us-fixed-rate-preferred-stock-index, accessed on December 11, 2015.

[47] There were a total of 63 securities as of December 31, 2008 in the S&P U.S. Fixed Rate Preferred Stock Index, of which 57 were "Financial" securities. Three Barclays securities were excluded from the index.

[48] The addition of the NYSE Composite Index as a second regressor does not improve the explanatory power of the model.

[49] Consistent with standard practice, indicator variables are included for the 10 days identified in the Complaint as pertaining to allegedly corrective information.

[50] Volatility is estimated as squared residuals.

regression model summary is given in Exhibit 8 and the residual returns for all the trading days in the Analysis Period are given in Exhibit 9.

48. In the regression estimated over Period 1, the model indicates five days on which the Series 5 ADS had a statistically significant residual price change using a 95% confidence interval. This equates to approximately 4.6% of the total number of trading days in Period 1.[51] Given the normal variation in the residual price changes, one would expect the percentage to be close to 5%, as it is. In Period 2, the model indicates five days on which the Series 5 ADS had a statistically significant residual price change, which equates to 3.8% of the total number of trading days in Period 2.[52, 53]

C. Event Study Analysis of Relevant Days

49. This section analyzes all of the days in the Analysis Period on which there were statistically significant movements in the price of the Series 5 ADS, as well as the days on which allegedly corrective information entered the market. The Complaint contains a section titled "Post-Offering Events," in which it cites many specific events that occurred after the Series 5 ADS offering. For the purposes of analysis, all of the events cited in that section of the

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[51] There are five statistically significant days in Period 1 out of 108 total trading days.

[52] There are five statistically significant days in Period 2 out of 132 total trading days.

[53] This result may be due to the presence of a large "outlier" residual return (50.1%) on January 26, 2009. As a sensitivity analysis, I estimated another regression model over Period 2 in which I included an indicator variable for January 26, 2009. This model resulted in five additional significant days (September 30, 2008, October 10, 2008, January 30, 2009, February 9, 2009, and March 10, 2009). Four of these five days were not cited in the Complaint, and I did not find any evidence that the Barclays-specific news that entered the market on any of these days corrected any misrepresentations asserted in the Complaint. The fifth day, February 9, 2009, became statistically significant, but positive, under this alternative regression model.

Complaint that occurred within the Analysis Period (Complaint, ¶¶211–223), along with the March 24, 2009 filing of Barclays' 2008 Form 20-F (Complaint, ¶195), have been considered to be allegedly corrective disclosures.

50. As shown in Figure 1 below, there are 10 days on which the residual returns are statistically significant, and 11 days on which allegedly corrective information entered the market. There was a statistically significant price movement on only one of the days when allegedly corrective information entered the market, and on that day—October 13, 2008—the price of the Series 5 ADS *increased* from $9.10 to $13.87.

Figure 1

Days with Statistically Significant Price Movements (positive/negative)		**Days on Which Allegedly Corrective Information Entered the Market** (Only one statistically significant price movement)
July 14, 2008	(negative)	May 15, 2008
July 18, 2008	(negative)	June 25, 2008
July 21, 2008	(negative)	August 7, 2008
September 11, 2008	(negative)	**October 13, 2008 (positive)**
September 12, 2008	(positive)	October 31, 2008
October 13, 2008	**(positive)**	November 18, 2008
January 21, 2009	(negative)	November 24, 2008
January 23, 2009	(negative)	January 13, 2009
January 26, 2009	(positive)	February 9, 2009
March 9, 2009	(negative)	February 17, 2009
		March 24, 2009

51. The dates cited in Figure 1 are discussed in chronological order below. The analysis demonstrates that (i) on days when allegedly corrective information entered the market, there were no statistically significant price declines; and (ii) on days when there were statistically significant price declines, no allegedly corrective information entered the market (which is consistent with the fact that none of the days with a statistically significant price decline was cited in the Complaint). I have found no evidence that any price declines during the Analysis Period are attributable in whole or in part to any of the alleged misrepresentations.

1. May 15, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

52. On May 15, 2008, Barclays released its financial results for the first quarter of 2008 (ending March 31, 2008), including a five-page appendix that detailed Barclays' credit market exposures and reported write-downs of various credit market assets (Barclays Form 6-K, filed on May 15, 2008).

53. The Complaint (¶211) refers to this disclosure and states:

> On May 15, 2008, just over a month after the Series 5 Offering, the Company issued a Q1 Interim Management Statement announcing that it had taken £1.7 billion in charges to BarCap's risk assets, but failed to disclose to investors how the marks taken were split across the Company's asset classes. The Company also disclosed that it was below the target 5.25% Equity Tier 1 ratio, and that it expected its Tier 1 capital and equity under Basel II on June 30, 2008 to be lower than the 7.6% and 5.1% the Company reported as its goals on December 31, 2007.

54. The closing price of the Series 5 ADS on May 15 was \$25.23, an increase of \$0.06 over the closing price of \$25.17 on the previous trading day (May 14). The residual return is not statistically significant (t = -0.02).[54]

55. Based on my analysis, the allegedly corrective information that entered the market on May 15, 2008 did not cause a decline in the price of the Series 5 ADS.

2. June 25, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

56. On June 25, 2008, Barclays filed a Form 6-K stating that it would issue 1.576 billion new ordinary shares in order to raise approximately £4.5 billion from new and existing investors.[55]

57. Although the Complaint does not cite the June 25 Form 6-K directly, it does refer, in ¶214, to a June 26, 2008 *Wall Street Journal* article reporting on Barclays' June 25 disclosure.

58. Analyst reports released shortly after the June 25 announcement stated that Barclays' capital raising had been anticipated by the market. For example:

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[54] As discussed in ¶44 above, a t-statistic of 1.96 or greater in absolute value indicates statistical significance at the 5% level.

[55] Barclays Form 6-K, filed on June 25, 2008. Barclays previously confirmed that it was considering a new equity issuance in a trading update on June 16, 2008 ("Barclays notes recent speculation regarding the possible issuance of new equity by Barclays by way of a placing and pre-emptive offer to existing shareholders. The Board of Barclays confirms this is currently under active consideration. A further announcement will be made in the event that the Board of Barclays decides to pursue such an equity issuance."). See http://www.newsroom.barclays.com/releases/ReleaseDetailPage.aspx?releaseId=1377, accessed on April 22, 2015. There was no statistically significant change in the price of the Series 5 ADS on June 16.

- "It has been clear to the market for some time that Barclays would have to raise around £4bn of capital. What the market has been speculating about was the method of raising capital." (Charles Stanley, June 25, 2008)

- "We understand the excitement and relief at BARC's long-anticipated capital raise, but it does not change our view that BARC will not escape the deteriorating macro trends that have claimed most of its peers." (Panmure Gordon & Co., June 25, 2008)

- "Fitch had expected Barclays to raise new capital to above its equity tier 1 ratio target of 5.25%, particularly given turbulent markets and stakeholder sentiment." (Fitch, June 25, 2008)

59. The Complaint itself acknowledges that the market had been anticipating that Barclays would be raising additional capital. For example, the Complaint (¶212) quotes a *Wall Street Journal* article from May 16, 2008 referring to "a widely expected move to raise capital" by Barclays.

60. The closing price of the Series 5 ADS on June 25 was $24.96, an increase of $0.16 over the closing price of $24.80 on the previous trading day (June 24). The residual return is not statistically significant (t = -0.04).

61. Based on my analysis, the allegedly corrective information that entered the market on June 25, 2008 did not cause a decline in the price of the Series 5 ADS.

3. July 14, 2008
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

62. On July 14, 2008, the closing price of the Series 5 ADS was $20.85, a decrease of $2.50 from the closing price of $23.35 on the previous trading day (July 11). The residual return is statistically significant (t = -2.75). Because the Complaint did not identify July 14 as a date on

which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days).[56] The Barclays-specific information included references to M&A deals in which Barclays was a sponsor, advisor, or underwriter, including an acquisition of Anheuser-Busch by InBev and a sale of Somerfield to The Co-Operative Group by Barclays and a consortium of private equity firms.[57, 58] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

4. July 18, 2008
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

63. On July 18, 2008, the closing price of the Series 5 ADS was $22.31, a decrease of $0.59 from the closing price of $22.90 on the previous trading day (July 17). The residual return is statistically significant (t = -4.24). Because the Complaint did not identify July 18 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent

[56] For a list of days with statistically significant returns, see Exhibit 9. A search was performed on all major business publications in the Factiva database on and around days in which there was a statistically significant return using the search term "Barclays" in the headline or lead paragraph.

[57] "Senior Syndication Underway for InBev's $45B M&A Debt-Sources," *Dow Jones International News*, July 14, 2008, 9:30 AM ET; "Co-op Likely to Seal Buy of Somerfield within Days – Source," *Dow Jones International News*, July 14, 2008, 6:21 AM ET.

[58] In addition, macroeconomic events surrounding July 14, 2008 included the seizure of IndyMac Bancorp Inc. by U.S. federal regulators after market close on Friday, July 11, 2008 ("Focus: Santander-A&L Tie Unlikely to Spark Anti-Trust Probe," *Dow Jones International News*, July 14, 2008, 2:28 PM ET). Some analyst reports released after July 14, 2008 indicate that the general weakness in global financial markets had weighed on Barclays' common stock price (see, for example, "Significant Decline in Common Stock Price Since Our FY 2007 Update Report," Independent International Investment Research, July 16, 2008).

trading days). The Barclays-specific information included an announcement from Barclays that its open offer to raise £4.5 billion in capital (referenced above) had closed on July 17, that 19% of the new shares had been purchased by existing shareholders, and that the remaining shares had been allocated to certain institutional investors (Barclays Form 6-K, filed on July 18, 2008). I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint. As previously discussed, Barclays' £4.5 billion offering had been publicly known no later than June 25, and there was no statistically significant movement in the price of the Series 5 ADS on June 25.

5. July 21, 2008
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

64. On July 21, 2008, the closing price of the Series 5 ADS was $22.12, a decrease of $0.19 from the closing price of $22.31 on the previous trading day (July 18). The residual return is statistically significant (t = -3.11). Because the Complaint did not identify July 21 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included the reduction of mortgage rates by Woolwich (Barclays' mortgage-lending arm),[59] the introduction of a new credit card in conjunction with Hilton hotels,[60] and the launch of "National Share Giving Day" by Barclays

[59] "Woolwich Launches Market Leading Fixed and Tracker Mortgages," Barclays Press Release, July 21, 2008, 6:16 AM ET.

[60] "Enjoy the Best of Summer with Hilton Family Hotels and Barclaycard," Barclays Press Release, July 21, 2008, 6:30 AM ET.

Stockbrokers, which gave investors an opportunity to donate shares to a range of U.K. charities for no cost.[61] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

6. August 7, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

65. On August 7, 2008, Barclays released its financial results for the first half of 2008 (ending June 30, 2008), including an 11-page section detailing credit market exposures and reporting write-downs of various credit market assets (Barclays Form 6-K, filed on August 7, 2008).

66. The Complaint (¶215) refers to this disclosure and states:

> On August 7, 2008, Barclays issued its 2008 Interim Results, disclosing that its first half net income declined 34% to £1.72 billion ($3.4 billion). The net income reduction was due in large part to a massive writedown of £2.8 billion of credit-related assets, more than analysts predicted.

67. The closing price of the Series 5 ADS on August 7 was $24.46, a decrease of $0.23 from the closing price of $24.69 on the previous trading day (August 6). The residual return is not statistically significant (t = -0.66).

68. Based on my analysis, the allegedly corrective information that entered the market on August 7, 2008 did not cause a decline in the price of the Series 5 ADS.

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[61] "Barclays Stockbrokers Launches National Share Giving Day to Celebrate Sharegift Initiative," Barclays Press Release, July 21, 2008, 6:49 AM ET.

7. September 11, 2008
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

69. On September 11, 2008, the closing price of the Series 5 ADS was $20.06, a decrease of $1.66 from the closing price of $21.72 on the previous trading day (September 10). The residual return is statistically significant (t = -2.86). Because the Complaint did not identify September 11 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included Barclays' announcement that it had commenced the transfer of credit card customer accounts to Barclaycard from a credit card portfolio acquired from Discover Financial Services U.K.[62] In addition, it was reported that Lehman was actively looking to be acquired, after announcing a quarterly loss of nearly $4 billion the previous day, and that Barclays was a potential buyer.[63, 64] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

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[62] "Barclaycard Rewards Goldfish Customers," Barclays Press Release, September 11, 2008, 7:27 AM ET.

[63] "Update: Sale of Lehman May Be More Likely after Firm's Latest Moves," *Dow Jones Business News*, September 10, 2008, 3:38 PM ET.

[64] Lehman's deteriorating financial condition featured prominently in the public press on September 11, 2008. After market close on September 10, 2008, it was reported that Moody's Investors Service placed a review on Lehman's credit rating, opening the possibility of a downgrade that "would drive up Lehman's borrowing costs, making it tougher to operate" ("Lehman Races to Find a Buyer," *Wall Street Journal*, September 12, 2008, No Time). Additionally, on September 11, 2008, it was reported that a Merrill Lynch & Co. analyst expressed concerns about Lehman "fac[ing] a potential 'take-under' offer, a scenario in which a company is sold for less than its per-share stock price" ("Lehman Races to Find a Buyer," *Wall Street Journal*, September 12, 2008, No Time).

8. September 12, 2008
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (positive)

70. On September 12, 2008, the closing price of the Series 5 ADS was $20.90, an increase of $0.84 from the closing price of $20.06 on the previous trading day (September 11). The residual return is statistically significant ($t = 2.96$). Because the Complaint did not identify September 12 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included Barclays continuing to be named, along with other financial institutions such as Bank of America, as a potential buyer of Lehman.[65] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

9. October 13, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? Yes (positive)

71. On October 13, 2008, Barclays issued a press release announcing that, rather than accepting U.K. government funds, it would seek to raise over £6.5 billion of Tier 1 capital through the issuance of new shares to investors, and that it would not pay a final dividend for its ordinary shares in 2008.[66, 67]

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[65] "UK Summary: FTSE Positive as Banks Gain; Lehman Move Eyed," *Dow Jones International News*, September 12, 2008, 7:00 AM ET.

[66] There were also reports on October 13 that the U.K. government would make capital investments, totaling £37 billion, in a number of U.K. financial institutions including RBS, HBOS, and Lloyds ("UK Govt to Make GBP37B Investment in Banks," *Dow Jones International News*, October 13, 2008, 2:25 AM ET). That same day, the U.S.

72. The Complaint (¶217, emphasis in original) states, "By October, these [first half 2008 write-downs] and other impending writedowns and impairments required Barclays to seek ***another*** massive infusion of capital," and goes on to quote Barclays' October 13 press release, which explains that the U.K. government had introduced higher capital requirements in an effort to stabilize the financial system.

73. The closing price of the Series 5 ADS on October 13 was $13.87, an increase of $4.77 from the closing price of $9.10 on the previous trading day (October 10). The residual return is statistically significant and positive (t = 2.58). This is the only day in the Analysis Period when allegedly corrective information entered the market and there was a statistically significant price movement. However, on this day, the price of the Series 5 ADS *increased*.

74. Based on my analysis, the allegedly corrective information that entered the market on October 13, 2008 did not cause a decline in the price of the Series 5 ADS.

10. October 31, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

75. On October 31, 2008, Barclays announced that it was selling up to one-third of the Company to investors in Abu Dhabi and Qatar (the "Abu Dhabi Offering").[68]

76. The Complaint (¶219) refers to this announcement and states:

Treasury Department also announced that it was finalizing plans to inject capital into banks as part of TARP ("Europe Raises Stakes in Bank Bailout Race," *Wall Street Journal*, October 13, 2008, No Time).

[67] "Update on Capital, Dividend and Current Trading," Barclays Press Release, October 13, 2008, 2:10 AM ET.

[68] "Barclays Announces Capital Raising," Barclays Press Release, October 31, 2008, 4:49 AM ET.

> As evidenced by Barclays' piecemeal disclosure of its capital needs, the market was slow to realize the true condition of the Company's capital structure. Investors were extremely unhappy, and it quickly became apparent however, that Barclays might not be able to persuade investors to approve a (now) £7+ billion plan to raise cash by the November 24 deadline.

77. The closing price of the Series 5 ADS on October 31 was $16.12, a decrease of $0.13 from the closing price of $16.25 on the previous trading day (October 30). The residual return is not statistically significant (t = -0.30).

78. Based on my analysis, the allegedly corrective information that entered the market on October 31, 2008 did not cause a decline in the price of the Series 5 ADS.

11. November 18, 2008
Allegedly Corrective Disclosure? Yes
Statistically Significant Price Movement? No

79. On November 18, 2008, Barclays announced that it would permit its existing institutional shareholders to participate in the previously announced Abu Dhabi Offering, discussed above.

80. The Complaint (¶220) quotes an *Associated Press* report on the announcement.

81. The closing price of the Series 5 ADS on November 18 was $15.56, a decrease of $1.43 from the closing price of $16.99 on the previous trading day (November 17). The residual return is not statistically significant (t = -0.73).

82. Based on my analysis, the allegedly corrective information that entered the market on November 18, 2008 did not cause a decline in the price of the Series 5 ADS.

12. November 24, 2008
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

83. On November 24, 2008, Barclays' ordinary shareholders approved the Abu Dhabi Offering.

84. The Complaint (¶221) states that Barclays' shareholders "railed against the Individual Defendants' stewardship of the Company," and quotes a November 24 *Reuters* article discussing the shareholder vote.

85. The closing price of the Series 5 ADS on November 24 was $13.44, an increase of $0.94 from the closing price of $12.50 on the previous trading day (November 21). The residual return is not statistically significant ($t = -1.33$).

86. Based on my analysis, the allegedly corrective information that entered the market on November 24, 2008 did not cause a decline in the price of the Series 5 ADS.

13. January 13, 2009
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

87. On January 13, 2009, Barclays announced that it would eliminate more than 2,100 jobs in its retail and commercial banking units.[69]

[69] "Barclays Set to Cut 2,100 Banking Jobs – Source," *Reuters*, January 13, 2009, 12:32 PM ET; "Barclays to Cut 2,100 Jobs in Investment Units," *New York Times*, January 13, 2009, 2:08 PM ET.

88. Although the Complaint (¶222) does not specify the date of this announcement, it states that the announcement was made "in mid-January" and states that "[a]nalysts were again surprised by this development":

> "We think this is a significant development, as previously Barclays had been arguing that this downturn was a great time to invest in people," said analysts at Evolution Securities.
>
> "Management have consistently been too upbeat with their outlook statements; we are going into the worst downturn in living memory and it is hard to see how Barclays, with a 1.4 trillion pound balance sheet, is not going to have to recognize larger write-downs," they added.

89. The closing price of the Series 5 ADS on January 13 was $18.29, a decrease of $0.94 from the closing price of $19.23 on the previous trading day (January 12). The residual return is not statistically significant (t = -0.48).

90. Based on my analysis, the allegedly corrective information that entered the market on January 13, 2009 did not cause a decline in the price of the Series 5 ADS.

14. January 21, 2009
Allegedly Corrective Information: No
Statistically Significant Price Movement? Yes (negative)

91. On January 21, 2009, the closing price of the Series 5 ADS was $10.35, a decrease of $2.88 from the closing price of $13.23 on the previous trading day (January 20). The residual return is statistically significant (t = -3.16). Because the Complaint did not identify January 21 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included media reports

that there was speculation that Barclays would be nationalized by the U.K. government.[70] This speculation proved to be wrong, as Barclays was not nationalized and did not accept any U.K. government funds. I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

15. January 23, 2009
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

92. On January 23, 2009, the closing price of the Series 5 ADS was $8.02, a decrease of $1.50 from the closing price of $9.52 on the previous trading day (January 22). The Series 5 ADS residual return is statistically significant (t = -1.99). Because the Complaint did not identify January 23 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included (i) a news report that Barclays would report a net profit for 2008,[71] and (ii) similar to the (incorrect) speculation about nationalization of Barclays two days earlier, an analyst report that expressed the view (based on Barclays' ordinary share price) that there was a "70 per cent chance of nationalisation."[72] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

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[70] "Update 1-Barclays Slumps, Dogged by Capital Worries," *Reuters News*, January 21, 2009, 4:36 AM ET; "Lloyds and Barclays Suffer Further Losses," *Financial Times*, January 21, 2009, No Time.

[71] "Barclays CEO: Will Make 08 Profit after Write-Downs – Report," *Dow Jones International News*, January 23, 2009, 2:07 AM ET.

[72] "Concern Remains that Bank Is on the Brink," *Financial Times*, January 23, 2009, No Time.

16. January 26, 2009
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (positive)

93. On January 26, 2009, the closing price of the Series 5 ADS was $12.60, an increase of $4.58 over the closing price of $8.02 on the previous trading day (January 23). The Series 5 ADS residual return is statistically significant ($t = 6.55$). Because the Complaint did not identify January 26 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included a joint open letter issued on January 26 by Barclays' Chairman (Mr. Agius) and CEO (Mr. Varley) stating that Barclays would report a positive pre-tax profit for 2008 (net of write-downs) and that gross write-downs would be approximately £8 billion (£5 billion net) for 2008 for various assets classes.[73] As discussed in ¶52 above, Barclays had previously reported write-downs for the first quarter and first half of 2008 announced on May 15 and August 7, 2008, respectively. The open letter stated:

> Also included in the 2008 results are some £8bn of gross write downs (£5bn net of own credit, hedging and attributable income) relating to credit market exposures in Barclays Capital. This amount is arrived at by applying year end valuations and marks to market. It is derived on a consistent basis with, and includes, the comparable numbers for the first half of 2008 which were £3.3bn gross and £2bn net. In the interests of clarity and transparency, we are reporting these numbers on a gross and net basis. We will provide extensive details as to the level of write downs and marks by asset class when we report our results on 9th February 2009.

[73] "Open Letter from Marcus Agius and John Varley," Barclays Press Release, January 26, 2009, 2:00 AM ET.

Also on January 26, 2009, Barclays announced that, as part of a consortium of five banks, it would provide $4.5 billion in financing for Pfizer's $68 billion purchase of Wyeth.[74] I do not find any evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

17. February 9, 2009
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

94. On February 9, 2009, Barclays released its financial results for the year ending December 31, 2008 (Barclays Form 6-K, filed on February 9, 2009 ("Barclays Form 6-K, February 9, 2009")).[75]

95. The Complaint does not refer to this February 9 announcement of Barclays' 2008 year-end results. The Complaint (¶195) does, however, refer to Barclays' 2008 annual report—the 2008 Form 20-F—which was filed on March 24, 2009 and provided details of Barclays' credit market exposures and write-downs of various credit market assets, including a reference to gross losses of £2.999 billion for 2007 due to dislocation of credit markets. Because the February 9 results announcement also provided details of Barclays' credit market exposures and write-downs of various credit market assets, including a reference to gross losses of £2.999 billion for 2007 due to dislocation of credit markets (Barclays Form 6-K, February 9, 2009, Part

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[74] "Pfizer Confirms $68B Deal to Buy Wyeth; 4Q Net Down 90%," *Dow Jones News Service*, January 26, 2009, 7:18 AM ET.

[75] "Barclays Full Year Results 2008," Barclays Press Release, February 9, 2009, 1:47 AM ET.

2, p. 10), for purposes of the analysis, February 9, 2009 has been treated as a date on which allegedly corrective information entered the market.

96. The closing price of the Series 5 ADS on February 9 was $13.45, an increase of $1.76 from the closing price of $11.69 on the previous trading day (February 6). The residual return is positive but not statistically significant (t = 1.71).

97. Based on my analysis, the allegedly corrective information that entered the market on February 9, 2009 did not cause a decline in the price of the Series 5 ADS.

18. February 17, 2009
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

98. On February 17, 2009, *Bloomberg* reported that Barclays would close EquiFirst, its U.S. mortgage origination business.[76]

99. The Complaint (¶223) refers to this news and states:

> On February 18, 2009, Barclays announced it was shutting down its U.S. mortgage origination business EquiFirst, less than two years after Barclays purchased the entity from Regions in April of 2007…. While Barclays had originally offered $225 million for the entity back in 2007, Barclays ended up paying only $76 million, in light of the severe impairment the U.S. housing crisis exacted on EquiFirst's underlying assets.

100. Although the Complaint identifies February 18 as the date that Barclays announced the closing of EquiFirst, this information first entered the market the previous day. Therefore, I have analyzed the price impact on February 17, 2009. The closing price of the

[76] "Barclays Capital Exiting Equifirst Business, CNBC Says," *Bloomberg*, February 17, 2009, 10:56 AM ET.

Series 5 ADS on February 17 was $10.00, a decrease of $1.95 from the closing price of $11.95 on the previous trading day (February 13). The residual return is not statistically significant (t = -0.83).

101. Based on my analysis, the allegedly corrective information that entered the market on February 17, 2009 did not cause a decline in the price of the Series 5 ADS.

19. March 9, 2009
Allegedly Corrective Information? No
Statistically Significant Price Movement? Yes (negative)

102. On March 9, 2009, the closing price of the Series 5 ADS was $4.95, a decrease of $1.16 from the closing price of $6.11 on the previous trading day (March 6). The Series 5 ADS residual return is statistically significant (t = -2.62). Because the Complaint did not identify March 9 as a date on which allegedly corrective information entered the market, I conducted a search of information concerning Barclays that entered the market on that date (as well as the prior and subsequent trading days). The Barclays-specific information included reported speculation that Barclays could potentially agree to insure certain assets with the U.K. government.[77] This speculation proved to be wrong, as Barclays did not accept any U.K. government insurance for any of its assets. Barclays also announced that it was launching a new Golden Individual Savings Account plan for new and existing customers.[78] I do not find any

[77] "Barclays Not In Talks On Govt Asset Protection Plan-Source," *Dow Jones International News*, March 9, 2009, 8:07 AM ET.

evidence that any of the Barclays-specific information that entered the market at this time corrected any misrepresentations alleged in the Complaint.

20. March 24, 2009
Allegedly Corrective Information? Yes
Statistically Significant Price Movement? No

103. On March 24, 2009, Barclays filed its 2008 Form 20-F, which included details of its credit market exposures and write-downs of various credit market assets for 2008.

104. The Complaint (¶195, emphasis in original) refers to this disclosure and states:

> Barclays would not begin to make certain disclosures of its capital credit market exposures until its 2008 Interim results, as of June 30, 2008, and certain important disclosures were not made until the annual report as of December 31, 2008 was filed in March 2009. For example, although Barclays disclosed in its 2007 Form 20-F that the impairment charges for Barclays Capital were £782 million, Barclays failed to disclose the total fair value losses and total gross losses pertaining to BarCap's credit risk…. As Barclays eventually disclosed in its 2008 Form 20-F, the total fair value losses for these credit market risks ***in 2007*** were £2.217 billion. These losses of £2.217 combined with the £782 million impairment charges for 2007 resulted in an undisclosed total gross loss of nearly £3 billion in 2007.

105. As discussed above (¶87), the gross losses of £2.999 for 2007—which the Complaint (¶195) refers to as the "undisclosed total gross loss of nearly £3 billion in 2007" and asserts was not disclosed until the 2008 Form 20-F was filed on March 24, 2009—was disclosed more than a month earlier, on February 9, 2009 in the 2008 results announcement. As discussed above in ¶88, the residual return on February 9 was not statistically significant (t = 1.71). The closing price of the Series 5 ADS on March 24 was $11.38, an increase of $0.25 from the closing

[78] "Barclays Launches Best Buy Cash ISA," Barclays Press Release, March 9, 2009, 5:30 AM ET.

price of $11.13 on the previous trading day (March 23). The residual return on March 24 is not statistically significant either (t = 0.08).

106. Based on my analysis, the allegedly corrective information that the Complaint cites as entering the market on March 24, 2009 (and which actually entered the market much earlier) did not cause a decline in the price of the Series 5 ADS.

VIII. Conclusions

107. As detailed above, there were no statistically significant price declines in the Series 5 ADS during the Analysis Period on any days when (i) any allegedly corrective information was disclosed to the market, or (ii) any allegedly undisclosed risk materialized. Moreover, all statistically significant price declines in the Series 5 ADS during the Analysis Period occurred on days when (i) there was no allegedly corrective information disclosed to the market, and (ii) no allegedly undisclosed risk materialized. Based on my analysis, the price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations.

Executed this 15th day of December, 2015, in Menlo Park, CA.

Allan W. Kleidon, Ph.D.

Exhibit 1

ALLAN WILLIAM KLEIDON

Cornerstone Research
1000 El Camino Real, Suite 250 • Menlo Park, CA 94025
650.470.7112 • akleidon@cornerstone.com

CURRENT POSITIONS

Cornerstone Research
Senior Vice President

University of Queensland, School of Business, Australia
Honorary Professor

EDUCATION

University of Queensland, Australia
Bachelor of Commerce, 1973
Bachelor of Commerce (First Class Honours), 1976
Bachelor of Laws (Honours), 1978

Graduate School of Business, University of Chicago
Master of Business Administration, 1981
PhD, 1983
Finance examination, 1979
Economics examination, 1980

ACADEMIC EXPERIENCE

School of Law, Stanford University
Consulting Professor of Law (in Finance), 1994 – 2000
Lecturer in Law (in Finance), 2001 – 2003

Graduate School of Business, Stanford University
Lecturer in Finance, 1993 – 1994; 1997 – 1999; 2005 – 2006
Associate Professor of Finance, 1986 – 1992
Assistant Professor of Finance, 1982 – 1986

Doctoral	Econometrics
	Empirical Research in Finance
	Doctoral Seminar in Finance
Masters	Corporate Finance
	Management of Financial Institutions
	Derivatives
Executive	International Investment Management Program
	Financial Management Program

University of California, Berkeley
Visiting Associate Professor of Finance, 1992
Lecturer (Finance), 2003

Exhibit 1

University of Chicago
Part-time teaching and tutoring, 1978 – 1982:
Corporate Finance, Investments
Personal tutoring in finance, statistics, accounting, economics, and mathematics.

University of Queensland, Australia
Honorary Professor, School of Business, 2008 – present
Full-time faculty, 1974 – 1978:
Finance (undergraduate, postgraduate), Business Economics (Honours), Scientific Method (Honours), Research Methods (M.B.A. level), Financial Accounting, Managerial Accounting

HONORS

Professional
Business School Trust Faculty Fellow, 1990 – 1991
Batterymarch Fellowship, 1989 – 1990

Graduate
Dean's List all eligible quarters
1979 Finance Prize
1980 Center for Research in Security Prices Research Grant
1980 Beta Gamma Sigma

Undergraduate
1974 Institute of Chartered Accountants in Australia Prize in Finance
1976 Thomas Brown and Sons, Ltd. Prize in Commerce Honours

RESEARCH

Publications

"Just How Much Damage Did Those Misrepresentations Actually Cause And To Whom?: Damages Measurement in 'Fraud on the Market' Securities Class Actions," joint with D. Lefler, *Securities Litigation & Enforcement Institute 2005,* 2005, pp. 285–325.

"The Stock Market Crashes of 1987 and 1989," joint with R. Mehra, *Business Cycles, Panics and Depressions,* D. Glassner, ed., Garland Press, New York, 1997.

"U.K. and U.S. Trading of British Cross-Listed Stocks: An Intraday Analysis of Market Integration," joint with I. Werner, *The Review of Financial Studies*, Vol. 9 (2), 1996, pp. 619–664.

"Bid-Ask Spreads in Foreign Exchange Markets: Implications for Models of Asymmetric Information," joint with D. A. Hsieh, in *Microstructure of Foreign Exchange Markets,* J. Frankel, G. Galli and A. Giovannini, eds., National Bureau of Economic Research, University of Chicago Press, 1996, pp. 41–65.

"Stock Market Crashes," in *Finance Handbook,* K. Jarrow, V. Maksimovic and W.T. Ziemba, eds., Elsevier Science B.V., North Holland, *Handbooks in OR & MS*, Vol. 9, 1995, pp. 465–495.

Exhibit 1

"Price Volatility and Volume Spillovers between the Tokyo and New York Stock Markets: Comment," *The Internationalization of Equity Markets,* J. Frankel, ed., National Bureau of Economic Research, University of Chicago Press, 1994, pp. 333–338.

"Market Maker Activity on Nasdaq: Implications for Trading Volume," joint with J. Gould, *Stanford Journal of Law, Business and Finance,* Vol. 1 (1), 1994, pp. 11–27.

"'Windfall' Gains in Mutual-to-Stock Conversion of Thrift Institutions?," joint with J. Barth and R. D. Brumbaugh, *Challenge: The Magazine of Economic Affairs,* Vol. 37 (4), 1994, pp. 43–49.

"CEO Performance, Board Types and Board Performance: A First Cut," joint with K.E. Scott, in *Institutional Investors and Corporate Governance,* T. Baums, R.M. Buxbaum, and K.J. Hobt, eds., de Gruyter, 1993, pp. 181–199.

"Market 2000," in *Modernizing U.S. Securities Regulation: Economic and Legal Perspectives,* K. Lehn and R.W. Kamphuis, Jr., eds., Business One Irwin, 1992, pp. 363–373.

"Arbitrage, Nontrading, and Stale Prices: October 1987," *Journal of Business,* Vol. 65 (4), 1992, pp. 483–507.

"One Market? Stocks, Futures and Options During October 1987," joint with R. Whaley, *Journal of Finance,* Vol. 47, 1992, pp. 851–877.

"Market and Environmental Uncertainty," *The New Palgrave Dictionary of Money and Finance,* The Macmillan Press, Vol. 2, 1992, pp. 651–653.

"Periodic Market Closure and Trading Volume: A Model of Intraday Bids and Asks," joint with W. A. Brock, *Journal of Economic Dynamics and Control,* Vol. 16, 1992, pp. 451–489.

"Underestimation of Portfolio Insurance and the Crash of October 1987," joint with C.J. Jacklin and P. Pfleiderer, *The Review of Financial Studies,* Vol. 5 (1), 1992, pp. 35–63.

"Are Stock Prices Excessively Sensitive to Current Information? Comment," joint with J. Lynch Koski, *Journal of Economic Behavior and Organization,* Vol. 18, 1992, pp. 127–131.

"Market Volatility: Review," *Journal of Economic Literature,* Vol. 29, December 1991, pp. 1760–1761.

"Tests de acotacion de la varianza Y modelos de valoracion del precio de las acciones," *Cuadernos Economicos De Ice,* Numero 38 (1), 1988, pp. 49–93. (Translation of "Variance Bounds Tests and Stock Price Valuation Models," *Journal of Political Economy,* Vol. 94 (5), 1986, pp. 953–1001.

"The Probability of Gross Violations of a Present Value Variance Inequality: Reply," *Journal of Political Economy,* Vol. 96 (5), 1988, pp. 1093–1096.

"Bubbles, Fads and Stock Price Volatility Tests, A Partial Evaluation: Discussion," *Journal of Finance,* Vol. 43 (3), 1988, pp. 656–660.

Exhibit 1

“Anomalies in Financial Economics: Blueprint for Change?,” *Journal of Business*, Vol. 59, 1986, S469–S499. Reprinted in *Rational Choice: The Contrast Between Economics and Psychology*, R. G. Hogarth and M. W. Reder, eds., University of Chicago Press, 1987.

“Empirical Assessment of Present Value Relations: Comment,” *Econometric Reviews*, Vol. 5 (2), 1986, pp. 261–265.

“Variance Bounds Tests and Stock Price Valuation Models,” *Journal of Political Economy*, Vol. 94, 1986, pp. 953–1001. (Reprinted in *The International Library of Financial Econometrics*, Andrew W. Lo, ed., Cheltenham: Edward Elgar, 2007, pp. 953–1001.)

“Bias in Small Sample Tests of Stock Price Rationality,” *Journal of Business*, Vol. 59, 1986, pp. 237–261.

“New Evidence on the Nature of Size Related Anomalies in Stock Prices,” joint with P. Brown and T. A. Marsh, *Journal of Financial Economics*, Vol. 12, 1983, pp. 33–56.

“Stock Return Seasonalities and the ‘Tax-loss Selling’ Hypothesis: Analysis of the Arguments and Australian Evidence,” joint with P. Brown, D. B. Keim, and T. A. Marsh, *Journal of Financial Economics*, Vol. 12, 1983, pp. 105–127. (Reprinted in *Share Markets and Portfolio Theory: Readings and Australian Evidence*, 2nd ed., R. Ball, P. Brown, F. Finn, and R. Officer, eds., University of Queensland Press, 1987.)

“International Arbitrage Pricing Theory: Discussion,” joint with P. Pfleiderer, *Journal of Finance*, Vol. 38 (2), 1983, pp. 470–472.

“Stock Prices as Rational Forecasters of Future Cash Flows,” Proceedings, *Seminar on the Analysis of Security Prices*, Vol. 27 (1), 1982, pp. 157–189.

“Mergers and the Trade Practices Act, 1974,” joint with L. E. Bracker, Proceedings, *Tenth Students Congress of the Institute of Chartered Accountants in Australia* (Queensland Branch), April 1977.

“Some Problems Associated with the Prices Justification Tribunal,” *The Chartered Secretary*, April–June 1975, pp. 67–74.

Work in Progress

“Why Nasdaq Market Makers Use Even-Eighths Quotes: A Model of Quote Clustering in Dealer Markets,” joint with P. Pfleiderer.

Conferences

Practising Law Institute, Securities Litigation & Enforcement Institute 2005, San Francisco, September 2005: Panelist, “Just How Much Did Those Misrepresentations Actually Cause and to Whom: Damages Measurement in ‘Fraud on the Market’ Securities Class Actions.”

Practising Law Institute, Securities Litigation 2001, San Francisco, November 2001: Panelist, “Damages: Illusion or Reality?”

Exhibit 1

Professional Liability Underwriting Society, 2001 PLUS D&O Liability and Insurance Issues Symposium, New York, February 2001: Panelist, "Causation & Damages Analysis in Volatile Securities Markets."

Market Microstructure Program Meeting, December 1998, NBER: Discussant, "The Effects of Market Reform on the Trading Costs and Depths of Nasdaq Stocks."

Symposium on Electronic Call Market Trading, New York University Salomon Center, April 1995: Session Chair, "Panel II: The Demand for Immediacy."

Conference on Financial Markets' Reform, Financial Markets Research Center, Vanderbilt University, April 1995: "Why do Christie and Schultz Infer Collusion From Their Data?"

American Finance Association, Annual Conference, January 1995: Discussant, "Market Making and the Competition for Order Flow," and Discussant, "Speculative Trading and Stock Market Volatility."

The Microstructure of Foreign Exchange Markets, Perugia, Italy, July 1994, NBER: "Bid-Ask Spreads in Foreign Exchange Markets: Implications for Models of Asymmetric Information."

Western Finance Association, Annual Conference, June 1994: Chair of Session on *Empirical Market Microstructure.*

Global Competition in the Market for Markets, The Fuqua School of Business/NYSE, Conference on Market Microstructure, November 1993: "Stock Market Crashes."

The Internationalization of Equity Markets, October 1993, NBER: "Price Volatility and Volume Spillovers between the Tokyo and New York Stock Markets: Comment."

Western Finance Association, Annual Conference, June 1993: "Round-the-Clock Trading: Evidence from Cross-Listed Securities."

American Finance Association, Annual Conference, January 1992: "One Market? Stocks, Futures and Options During October 1987."

Western Finance Association, Annual Conference, June 1989: "Exogenous Demand Shocks and Trading Volume: A Model of Intraday Bids and Asks."

Joint *American Economic Association-American Finance Association*, Annual Meetings, December 1987: "The Volatility Debate."

Institute for Mathematical Studies in the Social Sciences, Stanford University, July 1986: "Variance Bounds Tests and Stock Price Valuation Models."

Conference on the Behavioral Foundations of Economic Theory, University of Chicago, October 1985: "Anomalies in Financial Economics: Blueprint for Change?"

Western Finance Association, Annual Conference, June 1983: "Stock Return Seasonalities and the 'Tax-loss Selling' Hypothesis: Analysis of the Arguments and Australian Evidence."

American Finance Association, Annual Conference, December 1982: "Stock Prices as Rational Forecasters of Future Cash Flows."

Center for Research in Security Prices, Seminar on The Analysis of Security Prices, May 1982.

Accounting Association of Australia and New Zealand, Annual Conference, August 1976: "Accounting Theories and Practice: Arbitrary? Incorrigible? or Useful?"

Exhibit 1

Accounting Association of Australia and New Zealand, Annual Conference, August 1977: "The Paradigm of Accounting?"

Institute of Chartered Accountants in Australia, Student Congress (Queensland Branch), April 1977: "Mergers and the Trade Practices Act, 1974.

Paper prepared for the Japan Advisory Committee of the New York Stock Exchange

"Liberalization in the Japanese Financial Markets," with Kenneth J. Singleton, *Research Paper Series, Stanford University*, September 1989, Research Paper No. 1069, pp. 1–22.

Papers requested by and sent to Trade Practices Commission, Australian Government, Canberra

"The Structure of the Queensland Liquor Industry: Brewer-Hotel Ties of Trade, and the Trade Practices Act 1974."

"Theories of Government Regulation and the Queensland Liquor Industry."

"The Trade Practices Act 1974 and Queensland Brewer-Hotel Ties of Trade."

SOCIETY MEMBERSHIP

American Finance Association

Western Finance Association

Australian Society of Accountants (Senior Associate)

The Econometric Society

Securities Institute of Australia

OTHER PROFESSIONAL ACTIVITIES

Associate Editor, *Journal of Finance*

Associate Editor, *Journal of Financial Economics*

Referee for: *National Science Foundation, Econometrica, Journal of Political Economy, American Economic Review, Journal of Monetary Economics, Journal of Money, Credit and Banking, Quarterly Journal of Economics, Journal of Financial Economics, Journal of Business, Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Accounting Research, Science, Australian Journal of Management, and Journal of Economic Behavior and Organization.*

Research consultant

PERSONAL

Raised in Toowoomba, Queensland, Australia. Graduated from Harristown State High School, 1969. Active in school sports (Sporting House Captain); Army Cadets (Cadet Commanding Officer, Head Cadet Under Officer); drama (President of Drama Club); debating (team captain); school prefect, and Vice School Captain. Recent interests include sports, music, drama, food and wine, and family. Birth date: 1/23/53.

Exhibit 1

ALLAN WILLIAM KLEIDON
Previous Expert Testimony
Past Four Years

TRIAL AND ARBITRATION TESTIMONY

Confidential Arbitration Testimony
October 7 and 8, 2014

DEPOSITIONS

Tutor Perini Corp. v. Banc of America Securities LLC
April 29, 2015

In re St. Jude Medical Inc. Securities Litigation
July 15, 2014

Confidential Arbitration
July 10, 2014

In re Gatekeeper Pharmaceuticals Inc. Securities Litigation
June 6, 2013

Cunha v. Hansen Natural Corporation et al.
March 14, 2013

Dow Corning Corp. and Hemlock Semiconductor Corp. v. BB&T Corp. and Scott & Stringfellow, LLC
April 25, 2012

In re New Jersey Carpenters Health Fund v. DLJ Mortgage Capital Inc. et al.
February 16, 2011 and January 14, 2015

DECLARATIONS AND REPORTS

In the Matter of Dendreon Corporation Shareholder Litigations Derivative
August 26, 2015 and September 25, 2015

In the Matter of Tutor Perini Corp. v. Banc of America Securities LLC
March 19, 2015 and April 16, 2015

In the Matter of AirTouch Communications, Inc., Hideyuki Kanakubo and Jerome Kaiser, CPA
December 16, 2014

In re Green Mountain Coffee Roasters, Inc., HO-11484
October 3, 2014

Confidential Arbitration
May 19, 2014 (revised on July 9, 2014)

In re St. Jude Medical Inc. Securities Litigation
October 14, 2013, February 3, 2014, and June 2, 2014

BNP Paribas v. The Bank of New York Trust Company, N.A.
June 3, 2013

Marie Gaudin v. Saxon Mortgage Services, Inc.
May 30, 2013

In re Gatekeeper Pharmaceuticals Inc. Litigation
May 3, 2013

Exhibit 1

ALLAN WILLIAM KLEIDON
Previous Expert Testimony
Past Four Years

DECLARATIONS AND REPORTS (CONT'D.)

In re Diamond Foods Inc. Securities Litigation
April 11, 2013

Cunha v. Hansen Natural Corporation et al.
February 19, 2013 and May 30, 2013

In re STEC Inc. Securities Litigation
July 10, 2012 and July 24, 2012

Dow Corning Corp. and Hemlock Semiconductor Corp. v. BB&T Corp. and Scott & Stringfellow, LLC
March 2, 2012 and April 2, 2012

Class v. Towers, Perrin, Forster & Crosby Inc. et al.
January 31, 2012

United Food and Commercial Workers Union v. Chesapeake Energy Corporation et al.
December 14, 2011 and August 20, 2012

In re Telstra Limited Corporation
May 12, 2011

In re New Jersey Carpenters Health Fund v. DLJ Mortgage Capital, Inc., et al.
January 17, 2011, June 13, 2014, September 30, 2014, December 19, 2014, February 26, 2015, April 28, 2015, June 29, 2015, and July 28, 2015

Exhibit 2

Documents Considered
by Allan W. Kleidon

Legal Documents

- Second Consolidated Amended Complaint dated September 16, 2013

Analyst Reports

- See Exhibit 2A

Public Press

As described in footnote 56 of the Report, in preparing the Report, searches were conducted of (A) the Factiva database for articles containing the search term "Barclays" in the headline or lead paragraph and (B) Barclays' press releases. These searches were conducted for the following days, as well as for one trading day immediately preceding and following each day: (i) days during the Analysis Period (as defined in the Report) on which there was a statistically significant movement in the price of the Series 5 ADS, *i.e.*, July 14, 2008, July 18, 2008, July 21, 2008, September 11, 2008, September 12, 2008, October 13, 2008, January 21, 2009, January 23, 2009, January 26, 2009 and March 9, 2009; and (ii) additional days during the Analysis Period on which there was a statistically significant movement in the price of the Series 5 ADS under the alternative regression model discussed in footnote 53 of the Report, *i.e.*, September 30, 2008, October 10, 2008, January 30, 2009, February 9, 2009 and March 10, 2009.

The following news reports that are specifically cited in the Report were also reviewed. Some of these articles may also have been among the results of the Factiva and press release searches described above.

• "Another Huge Dow Loss," *CNN Money*	October 15, 2008 6:21 PM ET
• "Asset Protection Scheme and Increased Lending," *HM Treasury Press Release*	February 26, 2009 No Time
• "Bank of America Joins Parade of Mortgage-Related Losses," *New York Times*	January 23, 2008 No Time
• "Barclaycard Rewards Goldfish Customers," *Barclays Press Release*	September 11, 2008 7:27 AM ET
• "Barclays Announces Capital Raising," *Barclays Press Release*	October 31, 2008 4:49 AM ET

Exhibit 2

• "Barclays Capital Exiting Equifirst Business, CNBC Says," *Bloomberg*	February 17, 2009 10:56 AM ET
• "Barclays CEO: Will Make 08 Profit after Write-Downs – Report," *Dow Jones International News*	January 23, 2009 2:07 AM ET
• "Barclays Full Year Results 2008," *Barclays Press Release*	February 9, 2009 1:47 AM ET
• "Barclays Launches Best Buy Cash ISA," *Barclays Press Release*	March 9, 2009 5:30 AM ET
• "Barclays Not In Talks On Govt Asset Protection Plan-Source," *Dow Jones International News*	March 9, 2009 8:07 AM ET
• "Barclays Set to Cut 2,100 Banking Jobs – Source," *Reuters*	January 13, 2009 12:32 PM ET
• "Barclays Stockbrokers Launches National Share Giving Day to Celebrate Sharegift Initiative," *Barclays Press Release*	July 21, 2008 6:49 AM ET
• "Barclays to Cut 2,100 Jobs in Investment Units," *New York Times*	January 13, 2009 2:08 PM ET
• "Bear Stearns Says Battered Hedge Funds Are Worth Little," *New York Times*	July 18, 2007 No Time
• "Bear Stearns Takes a $1.2 Billion Write-Down," *New York Times*	November 14, 2007 No Time
• "Bernanke: 2008 Meltdown Was Worse than Great Depression," *Wall Street Journal*	August 26, 2014 4:03 PM ET
• "Bids To Halt Financial Crisis Reshape Landscape of Wall St.," *New York Times*	September 15, 2008 No Time
• "Britain's Bank Bailout Worth Hundreds of Billions," *New York Times*	October 8, 2008 No Time

Exhibit 2

•	"Bush Aids Detroit, but Hard Choices Wait for Obama," *New York Times*	December 19, 2008 No Time
•	"Citi's Sub-Prime Related Exposure in Securities and Banking," *Citigroup.com*	November 4, 2007 No Time
•	"Citigroup Inc. to Acquire Banking Operations of Wachovia," *FDIC Press Release*	September 29, 2008 No Time
•	"Concern Remains that Bank Is on the Brink," *Financial Times*	January 23, 2009 No Time
•	"Co-op Likely to Seal Buy of Somerfield within Days – Source," *Dow Jones International News*	July 14, 2008 6:21 AM ET
•	"Enjoy the Best of Summer with Hilton Family Hotels and Barclaycard," *Barclays Press Release*	July 21, 2008 6:30 AM ET
•	"Europe Raises Stakes in Bank Bailout Race," *Wall Street Journal*	October 13, 2008 No Time
•	"FDIC Establishes IndyMac Federal Bank, FSB as Successor to IndyMac Bank, F.S.B.," *Federal Deposit Insurance Corporation Press Release*	July 11, 2008 No Time
•	"Fed's $85 Billion Loan Rescues Insurer," *New York Times*	September 16, 2008 No Time
•	"Federal Reserve Monetary Policy Release," *Board of Governors of the Federal Reserve System Press Release*	March 18, 2009 No Time
•	"Financial Crisis Amnesia," *Wall Street Journal*	March 1, 2012 7:19 PM ET
•	"Government Seizes WaMu and Sells Some Assets," *New York Times*	September 26, 2008 No Time
•	"In Rescue to Stabilize Lending, U.S. Takes Over Mortgage Finance Titans," *New York Times*	September 8, 2008 No Time

Exhibit 2

• "JPMorgan Acts to Buy Ailing Bear Stearns at Huge Discount," *New York Times*	March 16, 2008 No Time
• "Lehman Creditors, Shareholders May Lose Billions (Update1)," *Bloomberg*	September 15, 2008 11:56 AM ET
• "Lehman Races to Find a Buyer," *Wall Street Journal*	September 12, 2008 No Time
• "Lloyds and Barclays Suffer Further Losses," *Financial Times*	January 21, 2009 No Time
• "London Suffers Third Biggest Fall in 'Great Crash of 2008,'" *Guardian*	October 10, 2008 2:00 PM ET
• "Merrill Lynch Reports $7.9 Billion Write-Down," *New York Times*	October 24, 2007 No Time
• "New Century, Biggest Subprime Casualty, Goes Bankrupt," *Bloomberg*	April 2, 2007 4:38 PM ET
• "Open Letter from Marcus Agius and John Varley," *Barclays Press Release*	January 26, 2009 2:00 AM ET
• "Pfizer Confirms $68B Deal to Buy Wyeth; 4Q Net Down 90%," *Dow Jones News Service*	January 26, 2009 7:18 AM ET
• "S&P 500 Virtually Doubles from Its Bear Market Low," *CBS News*	February 14, 2011 5:56 PM ET
• "Senior Syndication Underway for InBev's $45B M&A Debt-Sources," *Dow Jones International News*	July 14, 2008 9:30 AM ET
• "Timeline: Northern Rock Bank Crisis," *BBC News*	September 13, 2007 No Time
• "Treasury Outlines Framework for Regulatory Reform," *U.S. Treasury Press Release*	March 26, 2009 No Time

Exhibit 2

• "U.S. Economy: Payrolls Fall, Unemployment Rate Climbs (Update4)," *Bloomberg*	June 6, 2008 4:32 PM ET
• "U.S. Investing $250 Billion in Banks," *New York Times*	October 13, 2008 No Time
• "U.S. Seizes Fannie and Freddie," *CNN Money*	September 7, 2008 8:28 PM ET
• "U.S. Stocks Post Steepest Yearly Decline Since Great Depression," *Bloomberg*	December 31, 2008 8:17 PM ET
• "UK Govt to Make GBP 37B Investment in Banks," *Dow Jones International News*	October 13, 2008 2:25 AM ET
• "UK Summary: FTSE Positive as Banks Gain; Lehman Move Eyed," *Dow Jones International News*	September 12, 2008 7:00 AM ET
• "Update 1-Barclays Slumps, Dogged by Capital Worries," *Reuters News*	January 21, 2009 4:36 AM ET
• "Update on Capital, Dividend and Current Trading," *Barclays Press Release*	October 13, 2008 2:10 AM ET
• "Update: Sale of Lehman May Be More Likely after Firm's Latest Moves," *Dow Jones Business News*	September 10, 2008 3:38 PM ET
• "Wells Fargo Swoops In," *New York Times*	October 3, 2008 No Time
• "Woolwich Launches Market Leading Fixed and Tracker Mortgages," *Barclays Press Release*	July 21, 2008 6:16 AM ET

SEC Filings

- Barclays Bank PLC - Prospectus Supplement Dated August 31, 2007, filed on April 8, 2008
- Barclays PLC and Barclays Bank PLC Form 6-K Interim Management Statement, dated May 15, 2008

Exhibit 2

- Barclays PLC and Barclays Bank PLC Form 6-K for June 2008, dated June 25, 2008

- Barclays Form 6-K, filed on July 18, 2008

- Barclays PLC and Barclays Bank PLC Interim Management Statement for the Period Ended June 30, 2008, filed on August 7, 2008

- Barclays PLC and Barclays Bank PLC Form 6-K for January 2009, filed on January 26, 2009

- Barclays PLC and Barclays Bank PLC Form 20-F for the Fiscal Year Ended December 31, 2008, filed on March 24, 2009

Data Sources

- *Bloomberg*

- *S&P Dow Jones Indices*

Academic Literature

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- "The Troubled Asset Relief Program: Report on Transactions Through December 31, 2008," Congressional Budget Office, January 16, 2009, p. 2

All other materials cited in this report and in the exhibits to this report.

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
11/27/2007	Barclays	Charles Stanley
11/27/2007	Barclays - Another Step Back Towards P/E Valuations	Deutsche Bank
11/27/2007	Barclays PLC - Ongoing Money Market Tightness Dampens Our Outlook	Independent International Investment Research PLC
11/27/2007	Barclays - Trading Update No News is Good News	Societe Generale
11/27/2007	BCS - Barclays Bank PLC 2007 Trading Update Conference Call - Final Transcript	Thomson StreetEvents
11/28/2007	Barclays PLC - Barclays Holding the Line; Reducing Our Estimates	Bear Stearns
11/30/2007	Barclays - Tiefe Bewertung Reflektiert Wachstumsverlangsamung	Zürcher Kantonalbank
12/5/2007	Fitch Assigns Barclays Bank USD Preference Shares 'AA' Rating	Fitch Ratings
1/14/2008	Barclays - Trading Alert: Buy (Recommendation Neutral)	Credit Suisse
1/22/2008	Barclays Bank of Zimbabwe Ltd. - Company Profile	Datamonitor
2/7/2008	Barclays - FY2007 Results Preview	Deutsche Bank
2/18/2008	Barclays - Suddenly Softer	Panmure Gordon & Co
2/18/2008	Barclays - Focus on the Extent of Further Writedowns	Societe Generale
2/19/2008	Barclays	Charles Stanley
2/19/2008	Barclays - Strong Trading, Confident on Capital	Deutsche Bank
2/19/2008	Barclays - FY2007 Snap Reaction	Deutsche Bank
2/19/2008	Barclays - FY07 Results First Thoughts - Alert	JPMorgan
2/19/2008	Barclays - Results Initial Comment	Panmure Gordon & Co
2/19/2008	BCS - Preliminary 2007 Barclays Bank PLC Earnings Conference Call - Final Transcript	Thomson StreetEvents
2/20/2008	Barclays - Adjusting Forecasts	Credit Suisse
2/20/2008	Barclays - 2007 FY Results - As Good As Could Be Expected	JPMorgan
2/21/2008	Barclays - Relief Bounce, but Risk Exposure Remains - Stay UW, TP410	HSBC
2/22/2008	Barclays - Bullish Bob Makes Us Uneasy	Societe Generale
3/7/2008	Autonomy - Deal with Barclays Capital - Alert	JPMorgan
3/31/2008	Fitch: Cumbernauld Ratings Confirmed on Goldfish Sale to Barclays	Fitch Ratings
4/15/2008	Barclays - GRCB Investor Seminar - Reassuringly Realistic	Deutsche Bank
4/16/2008	Barclays - GRCB Seminar: Insightful but Questions Remain Over the Group's Long-term Strategy	Societe Generale
4/24/2008	Croesus - Barclays	Charles Stanley
4/24/2008	Barclays - AGM Statement Confidence and Capital	Deutsche Bank

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
4/24/2008	Barclays PLC - Barclays Announces Y-O-Y Fall in Pre-Tax Profit During 1Q 08	Independent International Investment Research PLC
4/24/2008	Barclays - AGM Statement - What Is It Telling Us? - Alert	JPMorgan
4/24/2008	Barclays - Equity Capital Strengthening Required?	Panmure Gordon & Co
4/25/2008	Fitch Downgrades Barclays Bank Plc to 'AA'; Outlook Stable	Fitch Ratings
5/6/2008	Barclays - Potentially Strengthening its Balance Sheet with the Help of a Strategic Investor	Societe Generale
5/8/2008	Barclays - Maybe a Rights Issue?	HSBC
5/15/2008	Barclays - The 2 Sides to BARC.L	Deutsche Bank
5/15/2008	Barclays PLC - Difficult Trading Conditions Began to Impact Performance in March	Independent International Investment Research PLC
5/15/2008	BCS - Barclays Bank PLC Interim Management Statement Conference Call - Final Transcript	Thomson StreetEvents
5/16/2008	Barclays - Trading Update Misses the Mark; Rating is Underweight	HSBC
5/16/2008	Barclays Bank - Cutting Earnings and Price Target to 410p; Remain Equal-Weight	Morgan Stanley
5/16/2008	Barclays - Still the Best Positioned in our UK Banking Universe	Societe Generale
5/20/2008	Barclays Bank of Zimbabwe Ltd - Company Profile	Datamonitor
5/21/2008	Premium Company Profile: Barclays PLC - Company Financials	Datamonitor
5/21/2008	Long Barclays / Short Lloyds - Capital Stability	Societe Generale
5/27/2008	Premium Company Profile: Barclays PLC - Strategic Analysis	Datamonitor
6/2/2008	Barclay - Corporate Technology Information Services	Investext
6/6/2008	UK Banks - Monolines - It Isn't Priced in Yet	Panmure Gordon & Co
6/16/2008	Barclays - Strong Trading Update; Confirmation on Capital	Deutsche Bank
6/16/2008	Barclays PLC - Barclays Confirms Plans to Raise Fresh Capital	Independent International Investment Research PLC
6/17/2008	UK Daily - Company Updates	Deutsche Bank
6/19/2008	Barclays PLC - Valuation Remains Attractive Despite Near Term Concerns	Independent International Investment Research PLC
6/25/2008	Barclays	Charles Stanley
6/25/2008	Croesus - Barclays	Charles Stanley
6/25/2008	Barclays - Confirmation of Capital Increase	Deutsche Bank
6/25/2008	Fitch: Barclays Strengthening Capital as Anticipated	Fitch Ratings
6/25/2008	Barclays - Share Issue Comment	Panmure Gordon & Co

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
6/25/2008	Barclays - Corporate News Shoring up the Capital Base and Limiting Writedowns	Societe Generale
6/26/2008	Barclays Bank - Overhang Removed; Upgrade to Overweight	Morgan Stanley
6/26/2008	Barclays Bank - Correction: Overhang Removed; Upgrade to OW	Morgan Stanley
6/30/2008	Barclays - Enough is (Probably) Enough - Upgrade to Outperform	Fox-Pitt, Kelton
6/30/2008	Barclays - Answering the Call for Capital to Provide a Deeper Buffer and Foster Growth	Societe Generale
7/1/2008	Barclays - Will £4.5bn Be Enough? Is the Dividend Safe?	Charles Stanley
7/2/2008	Fitch Rates Barclays' Covered Bonds 'AAA'	Fitch Ratings
7/3/2008	Fitch Assigns Mercurio Mortgage Finance S.r.1. Series 2008-3 Notes 'AAA' Ratings; Outlook Stable	Fitch Ratings
7/7/2008	Barclays - Becoming a Dark Horse?	UBS Investment Research
7/16/2008	Barclays PLC - Significant Decline in Common Stock Price Since our FY 2007 Updates Report	Independent International Investment Research PLC
7/21/2008	Barclays PLC - Significant Increase in Common Stock Price on 18 July 2008	Independent International Investment Research PLC
7/23/2008	Barclays - 1H08 Earnings Preview	Deutsche Bank
7/24/2008	Barclays PLC - Significant Increase in Common Stock Price on 23 July 2008	Independent International Investment Research PLC
7/30/2008	Barclays - Deal Report: Barclay Raises $6,440.47 Million in Private Placement	Datamonitor
8/5/2008	Barclays PLC - Barclays Sells Its Life Insurance Business to Swiss Re for GBP753 mn	Independent International Investment Research PLC
8/5/2008	Barclays - All Eyes on Barclays Capital, Credit Market Exposures and Capital	Societe Generale
8/6/2008	Barclays - Deal Report: Swiss Re to Acquire Barclays Life Assurance from Barclays	Datamonitor
8/7/2008	Barclays	Charles Stanley
8/7/2008	Croesus - Barclays	Charles Stanley
8/7/2008	Barclays - Impairment Charges Hit 1H 08 Earnings	Independent International Investment Research PLC
8/7/2008	Barclays - Post-Meeting Comment	Panmure Gordon & Co
8/7/2008	BCS - Interim 2008 Barclays PLC Earnings Conference Call and Presentation - Final Transcript	Thomson StreetEvents
8/8/2008	Barclays - Glimmers of Excellence...But Still Cautious	Credit Suisse
8/8/2008	Barclays - 1H08 Results Review	Deutsche Bank
8/8/2008	Barclays Bank - Better BarCap Offsets Rising Impairment Trends; Stay OW	Morgan Stanley
8/8/2008	Barclays - Post-Meeting Comment	Panmure Gordon & Co

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
8/8/2008	Barclays - Robust Underlying Results and Expanded Disclosure, but Not Everything is Rosy	Societe Generale
8/11/2008	Barclays plc - It's All About the Balance Sheet	Citigroup Global Markets
8/11/2008	Barclays - Credit Market Exposures, Revisited	HSBC
8/11/2008	Barclays - Upgraded Earnings	UBS Investment Research
8/28/2008	Barclays - It's Not Different This Time	Redburn Partners
9/3/2008	Barclays - Some of the Parts	Royal Bank of Scotland
9/17/2008	Fitch Revises Barclays' Outlook to Negative; Affirms IDR at 'AA'	Fitch Ratings
9/17/2008	Barclays PCL - Barclays to Acquire Key Lehman Brothers Assets	Independent International Investment Research PLC
9/17/2008	Barclays - 0.07x - Licence to Thrill?	Panmure Gordon & Co.
9/17/2008	BCS - Barclays Plc Announces Agreement to Acquire Lehman Brothers	Thomson StreetEvents
9/17/2008	Barclays - Joining the Bulge Bracket	UBS Investment Research
9/18/2008	Amendment: Fitch Revises Barclays' Outlook to Negative; Affirms IDR at 'AA'	Fitch Ratings
9/18/2008	Barclays - A Lucky Deal	Fox-Pitt, Kelton
9/18/2008	Barclays - Corporate News Bargain Basement Deal Transforms Barclays' Earnings Profile	Societe Generale
9/18/2008	Rating / Outlook Changes	Vontobel
9/19/2008	Barclays - Corporate News Placing Succeeds	Societe Generale
9/22/2008	Barclays PLC - Strategic Corporate Assessment - Strategic Analysis	Datamonitor
9/22/2008	Barclays PLC - Strategic Corporate Assessment - Company Financials	Datamonitor
9/22/2008	Barclays - United States Bankruptcy Court Approves Revised Lehman Deal	Societe Generale
10/1/2008	Barclays PLC - Company Profile	Datamonitor
10/2/2008	Barclays - Still Our Preferred Pick in the UK	Societe Generale
10/14/2008	Barclays - Better Credit, Better Dividend Prospects	Deutsche Bank
10/14/2008	Barclays Bank - Capital Benefits from Lower UK Risk Profile	Morgan Stanley
10/17/2008	Fitch Affirms Barclays at 'AA'	Fitch Ratings
10/23/2008	Fitch Rates Barclays EUR3bn Guaranteed Notes 'AAA'	Fitch Ratings
10/24/2008	Barclays - Differentiated but Headwinds Remain	UBS Investment Research
10/31/2008	Barclays - Details of Capital Raising and Q3 Update - First Thoughts - Alert	JP Morgan
10/31/2008	Barclays - Capital Raising and IMS - Initial Comment	Panmure Gordon & Co
10/31/2008	BCS - Barclays PLC Announces Capital Raising - Conference Call - Final Transcript	Panmure Gordon & Co

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
11/2/2008	Barclays - Capital Measures in Place; Focus on Medium Term	Deutsche Bank
11/3/2008	Barclays PLC - Profits Grow in 3Q 08, Despite Difficult Macroeconomic Conditions	Independent International Investment Research PLC
11/3/2008	Barclays - Elegance is Rarely Cheap	UBS Investment Research
11/4/2008	Barclays - Rebasing Again	Royal Bank of Scotland
11/6/2008	Bovis Homes - IMS Statement	Panmure Gordon & Co
11/14/2008	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
11/18/2008	Barclays - Resolving the Uncertainty on Capital	Deutsche Bank
11/19/2008	Barclays - Amended Capital Raising Proposition Still the Best Way Forward	Societe Generale
12/1/2008	Barclays - UK Recession Weighs on Barclays Valuation	Independent International Investment Research PLC
12/3/2008	Barclays - Premium Review Confident and Clear Message on the Bank's Ability to Weather Any Difficulties Ahead	Societe Generale
12/4/2008	Barclay - Corporate Technology Information Services	Investext
12/13/2008	Barclays PLC	Price Target Research
12/30/2008	Barclays PLC - Detailed Research Report	ValuEngine
12/31/2008	Barclays PLC - Detailed Research Report	ValuEngine
1/1/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
1/2/2009	Barclays PLC - Detailed Research Report	ValuEngine
1/3/2009	Barclays PLC	Price Target Research
1/5/2009	Barclays PLC - Detailed Research Report	ValuEngine
1/15/2009	Barclays PLC - Detailed Research Report	ValuEngine
1/16/2009	Barclays PLC - Significant Decline in the Common Stock Price Since Our Last Update Report	Independent International Investment Research PLC
1/17/2009	Barclays PLC	Price Target Research
1/19/2009	Barclays PLC - Significant Decline in the Common Stock Price on 16 January 2009	Independent International Investment Research PLC
1/19/2009	Barclays - Profits Higher than Expected but the Concern is the Balance Sheet	Societe Generale
1/19/2009	Barclays - A Profitable UK Bank	UBS Investment Research
1/20/2009	Barclays PLC - A Stay of Execution	MF Global Securities
1/21/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
1/22/2009	Barclays PLC - Significant Decline in the Common Stock Price Since Our Last News Alert	Independent International Investment Research PLC
1/26/2009	Barclays - In Unusual Times, Unusual Things Will Happen	Charles Stanley
1/26/2009	Croesus - Barclays - In Unusual Times, Unusual Things Will Happen	Charles Stanley
1/26/2009	Barclays - Bringing the Result Forward to 9th Feb	Deutsche Bank
1/26/2009	Barclays - Statement from the Chairman on 2008 Results and Capital - First Thoughts - Alert	JP Morgan
1/26/2009	Barclays - Corporate News No Material Incremental Information Unveiled	Societe Generale
1/26/2009	Barclays - Clarity Supports Confidence	UBS Investment Research
1/27/2009	Barclays PLC - Significant Increase in the Common Stock Price on 26 January 2009	Independent International Investment Research PLC
1/28/2009	Fitch Downgrades Barclays Bank to 'AA-', Outlook Revised to Stable	Fitch Ratings
1/31/2009	Barclays PLC	Price Target Research
2/3/2009	Barclays - FY08 Earnings Preview	Deutsche Bank
2/3/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
2/4/2009	Barclays Bank - BarCap Drives 2008 PBT Upgrade - Keep EW	Morgan Stanley
2/4/2009	Barclays - Growth is Your Enemy	Societe Generale
2/5/2009	Croesus - Barclays	Charles Stanley
2/5/2009	Barclays - FY 08 Results Preview	JP Morgan
2/9/2009	Barclays PLC - Impaired Charges Limit Earnings in FY 2008; but Lehman Brothers' Assets Provide Support	Independent International Investment Research PLC
2/9/2009	Barclays - 2008 FY Results - First Thoughts - Alert	JP Morgan
2/9/2009	Barclays - 2008 Results - Post-Meeting Comments	Panmure Gordon & Co
2/9/2009	Barclays - Results - Initial Comment	Panmure Gordon & Co
2/9/2009	BCS - Preliminary 2008 Barclays PLC Earnings Conference Call - Final Transcript	Thomson StreetEvents
2/9/2009	Barclays - Results Snapshot	UBS Investment Research
2/10/2009	Barclays - Big Balance Sheets and Regulatory Ratios (TP Change)	Deutsche Bank
2/10/2009	Barclays - FY08 Results - Despite Volatility, Not Much New - Remain UW	JP Morgan
2/10/2009	Barclays Plc - Short-Term Reassurance	Macquarie Research
2/11/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
2/15/2009	Barclays PLC	Price Target Research
2/16/2009	Barclays - Keeping the Engine Running	Fox-Pitt, Kelton

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
2/16/2009	Barclays - First Among Not So Equals	UBS Investment Research
2/20/2009	Barclays - Bob's Great Idea?	Evolution Securities
2/25/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
2/25/2009	Barclays - Still in the Black; Reiterate Neutral (V) and 110p TP	HSBC
2/27/2009	Barclay - Corporate Technology Information Services	Investext
3/4/2009	Barclays - Monoline and Other Structured Credit Risks	Panmure Gordon & Co
3/5/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
3/6/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
3/6/2009	Barclays PLC - Significant Decline in the Common Stock Price on 05 March 2009	Independent International Investment Research PLC
3/10/2009	Barclays PLC - Company Profile	Datamonitor
3/16/2009	Barclays - Confirms Talks Over Potential Sale of iShares	Deutsche Bank
3/16/2009	Barclays - APS Scheme - Thoughts on Potential Participation - Alert	JP Morgan
3/16/2009	Barclays - iShares Potential Disposal Comment	Panmure Gordon & Co
3/16/2009	Barclays - Corporate News Difficult Times Call for Difficult Decisions	Societe Generale
3/17/2009	Barclays - Significant Increases in the Common Stock Price on 17 March 2009	Independent International Investment Research PLC
3/20/2009	Barclays Bank - Correction: Lowering Earnings, Evaluating Capital	Morgan Stanley
3/21/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
3/24/2009	Barclays - Geithner, Turner and the BARC Read-Across	Panmure Gordon & Co
3/26/2009	Barclays - Pillar 3 Disclosures and iShares	Credit Suisse
3/27/2009	Barclays Bank - Narrowing the Capital Options	Morgan Stanley
3/27/2009	Barclays - Another Battle Won But War Far from Over	Societe Generale
3/30/2009	Barclays PLC - Significant Appreciation in the Common Stock Price on 27 March 2009	Independent International Investment Research PLC
3/30/2009	Barclays - Corporate News As Expected, Barclays Declines to Participate in APS	Societe Generale
3/31/2009	Barclays - Stressed But No Detox	UBS Investment Research
4/1/2009	Barclays PLC - Macro Environment More Supportive	MF Global Securities
4/2/2009	Barclays - Look Market, No Gaps!	Fox-Pitt, Kelton
4/3/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct
4/9/2009	Barclays - iShares - Sold	Deutsche Bank

Exhibit 2A
Analyst Reports Considered

Date	Headline	Source
4/9/2009	Fitch Affirms Barclays Bank PLC's India Branch at 'F1+(ind)'	Fitch Ratings
4/13/2009	Barclays - iShares Disposal	UBS Investment Research
4/14/2009	Barclays - Impact of the iShares Business Disposal	Fox-Pitt, Kelton
4/14/2009	Barclays - Corporate News Disposal of iShares Business Does Little to Ease Our Capital and Leverage Concerns	Societe Generale
4/15/2009	Barclays PLC - Detailed Research Report	ValuEngine
4/23/2009	Barclays PLC - Barclays' Financial Performance Improves in Q1 09	Independent International Investment Research PLC
4/25/2009	Barclays PLC - Financial and Strategic Analysis Review	Global Markets Direct

Exhibit 3
Barclays Bank PLC Series 5 Preferred ADS
Dividend History
4/11/08 – 11/30/15

Date [1]	Amount [2]
5/28/08	$0.36
8/27/08	$0.51
11/26/08	$0.51
2/25/09	$0.51
5/28/09	$0.51
8/28/09	$0.51
11/27/09	$0.51
2/25/10	$0.51
5/27/10	$0.51
8/30/10	$0.51
11/29/10	$0.51
2/25/11	$0.51
5/27/11	$0.51
8/30/11	$0.51
11/29/11	$0.51
2/28/12	$0.51
5/30/12	$0.51
8/29/12	$0.51
11/28/12	$0.51
2/27/13	$0.51
5/29/13	$0.51
8/28/13	$0.51
11/26/13	$0.51
3/6/14	$0.51
5/28/14	$0.51
8/27/14	$0.51
11/26/14	$0.51
3/5/15	$0.51
5/28/15	$0.51
8/28/15	$0.51
11/27/15	$0.51

Source: *Bloomberg*

Note:
[1] The date shown is the ex-dividend date, the date on which ownership of the dividend is assigned.
[2] Dividends accrue on each preferred share at a rate of 8.125% per year on the amount of $25 per preferred share, payable quarterly on March 15, June 15, September 15, and December 15 of each year. $0.51 represents full payment of the dividend. The first dividend payment of $0.36 was pro-rated for the period from issuance on 4/11/08 through 6/15/08.

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume
4/11/08	$25.00	6,440,755
4/14/08	$24.89	2,019,738
4/15/08	$24.92	3,642,237
4/16/08	$25.10	7,595,780
4/17/08	$25.15	4,239,429
4/18/08	$25.35	2,990,464
4/21/08	$25.15	2,177,013
4/22/08	$25.00	1,795,912
4/23/08	$25.00	1,299,736
4/24/08	$25.05	1,472,064
4/25/08	$25.12	1,050,850
4/28/08	$25.60	1,235,952
4/29/08	$25.35	1,512,440
4/30/08	$25.35	1,120,821
5/1/08	$25.25	1,211,176
5/2/08	$25.40	1,283,166
5/5/08	$25.15	637,181
5/6/08	$25.30	869,988
5/7/08	$25.40	1,261,239
5/8/08	$25.35	468,795
5/9/08	$25.26	677,605
5/12/08	$25.11	651,433
5/13/08	$25.20	730,190
5/14/08	$25.17	839,974
5/15/08	$25.23	888,372
5/16/08	$25.19	2,244,260
5/19/08	$25.16	570,288
5/20/08	$25.20	813,888
5/21/08	$25.18	884,628
5/22/08	$25.25	1,290,719
5/23/08	$25.21	444,647
5/27/08	$25.25	533,961
5/28/08	$25.08	961,618
5/29/08	$25.05	1,107,529
5/30/08	$25.17	719,488
6/2/08	$25.08	1,126,907
6/3/08	$24.95	1,511,489
6/4/08	$25.01	499,793

Date	Closing ADS Price	Volume
6/5/08	$25.07	329,113
6/6/08	$25.02	375,900
6/9/08	$25.02	743,000
6/10/08	$24.91	702,263
6/11/08	$24.73	341,185
6/12/08	$24.93	322,422
6/13/08	$25.08	376,810
6/16/08	$24.98	291,830
6/17/08	$25.00	369,303
6/18/08	$25.00	231,885
6/19/08	$24.97	225,057
6/20/08	$24.97	313,942
6/23/08	$24.71	251,220
6/24/08	$24.80	248,005
6/25/08	$24.96	490,566
6/26/08	$24.80	224,738
6/27/08	$24.72	287,122
6/30/08	$24.59	438,808
7/1/08	$24.25	250,340
7/2/08	$24.07	224,256
7/3/08	$24.25	92,265
7/7/08	$24.26	954,382
7/8/08	$24.30	236,986
7/9/08	$24.36	235,489
7/10/08	$24.25	168,459
7/11/08	$23.35	237,341
7/14/08	$20.85	249,417
7/15/08	$20.01	597,977
7/16/08	$21.99	293,017
7/17/08	$22.90	440,597
7/18/08	$22.31	685,024
7/21/08	$22.12	940,983
7/22/08	$22.75	502,698
7/23/08	$23.59	1,333,966
7/24/08	$23.10	442,157
7/25/08	$23.42	349,369
7/28/08	$23.16	337,950
7/29/08	$23.75	562,600

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
7/30/08	$23.74	314,076	9/23/08	$20.26	163,924
7/31/08	$23.90	235,518	9/24/08	$20.02	210,897
8/1/08	$24.37	203,153	9/25/08	$21.07	171,798
8/4/08	$24.22	351,530	9/26/08	$20.80	225,852
8/5/08	$24.45	339,370	9/29/08	$16.94	409,573
8/6/08	$24.69	404,983	9/30/08	$17.10	236,799
8/7/08	$24.46	223,086	10/1/08	$17.83	335,630
8/8/08	$24.50	269,257	10/2/08	$17.00	181,245
8/11/08	$24.65	306,485	10/3/08	$18.24	230,263
8/12/08	$24.63	239,949	10/6/08	$16.25	381,297
8/13/08	$24.44	5,548,264	10/7/08	$13.50	688,398
8/14/08	$24.02	278,476	10/8/08	$12.59	1,145,382
8/15/08	$24.22	457,102	10/9/08	$11.55	739,701
8/18/08	$24.45	120,554	10/10/08	$9.10	590,572
8/19/08	$24.30	159,906	10/13/08	$13.87	463,172
8/20/08	$24.46	228,024	10/14/08	$17.45	802,027
8/21/08	$24.31	150,312	10/15/08	$16.94	321,151
8/22/08	$24.45	204,680	10/16/08	$16.52	285,609
8/25/08	$24.57	266,273	10/17/08	$16.52	159,872
8/26/08	$24.75	190,432	10/20/08	$16.39	329,959
8/27/08	$24.35	308,943	10/21/08	$17.59	201,653
8/28/08	$24.60	184,969	10/22/08	$16.01	726,116
8/29/08	$24.74	134,235	10/23/08	$16.10	1,014,004
9/2/08	$24.77	222,463	10/24/08	$15.64	174,596
9/3/08	$24.50	1,398,552	10/27/08	$15.32	114,499
9/4/08	$24.00	764,392	10/28/08	$15.50	345,242
9/5/08	$23.80	2,389,612	10/29/08	$15.87	276,450
9/8/08	$23.57	790,818	10/30/08	$16.25	654,940
9/9/08	$22.81	600,742	10/31/08	$16.12	498,932
9/10/08	$21.72	604,697	11/3/08	$16.70	295,672
9/11/08	$20.06	1,339,312	11/4/08	$17.53	660,003
9/12/08	$20.90	512,756	11/5/08	$17.39	378,649
9/15/08	$18.68	411,900	11/6/08	$17.95	419,068
9/16/08	$17.55	514,636	11/7/08	$18.08	282,486
9/17/08	$16.56	513,508	11/10/08	$18.39	225,075
9/18/08	$19.84	475,246	11/11/08	$18.36	187,979
9/19/08	$19.76	573,615	11/12/08	$17.52	1,126,656
9/22/08	$20.01	283,082	11/13/08	$17.25	189,544

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
11/14/08	$17.20	186,608	1/12/09	$19.23	445,045
11/17/08	$16.99	75,042	1/13/09	$18.29	319,263
11/18/08	$15.56	379,630	1/14/09	$18.08	367,118
11/19/08	$13.00	335,714	1/15/09	$16.74	604,783
11/20/08	$11.39	334,605	1/16/09	$16.01	668,900
11/21/08	$12.50	364,086	1/20/09	$13.23	576,274
11/24/08	$13.44	800,542	1/21/09	$10.35	1,522,658
11/25/08	$13.55	404,207	1/22/09	$9.52	1,148,821
11/26/08	$13.07	601,889	1/23/09	$8.02	831,901
11/28/08	$13.91	123,548	1/26/09	$12.60	935,676
12/1/08	$13.25	334,326	1/27/09	$13.40	332,998
12/2/08	$12.50	903,243	1/28/09	$14.40	354,382
12/3/08	$12.60	1,450,349	1/29/09	$12.59	241,265
12/4/08	$12.65	414,700	1/30/09	$14.00	194,631
12/5/08	$12.20	707,834	2/2/09	$12.00	285,238
12/8/08	$12.69	303,045	2/3/09	$11.57	231,037
12/9/08	$12.90	641,273	2/4/09	$10.59	244,127
12/10/08	$13.60	498,046	2/5/09	$10.59	361,335
12/11/08	$14.10	558,466	2/6/09	$11.69	228,737
12/12/08	$13.70	242,625	2/9/09	$13.45	662,907
12/15/08	$14.00	429,325	2/10/09	$13.03	314,443
12/16/08	$14.48	360,184	2/11/09	$13.45	209,916
12/17/08	$15.50	462,441	2/12/09	$12.38	259,222
12/18/08	$15.35	490,182	2/13/09	$11.95	136,248
12/19/08	$14.64	296,827	2/17/09	$10.00	233,731
12/22/08	$14.38	325,191	2/18/09	$9.45	515,170
12/23/08	$14.15	272,940	2/19/09	$9.20	1,112,825
12/24/08	$14.43	125,904	2/20/09	$8.51	553,990
12/26/08	$14.86	169,676	2/23/09	$7.40	312,840
12/29/08	$13.99	1,103,167	2/24/09	$8.88	369,980
12/30/08	$14.25	470,656	2/25/09	$8.80	210,193
12/31/08	$15.02	336,489	2/26/09	$9.13	695,859
1/2/09	$16.37	316,454	2/27/09	$7.57	403,772
1/5/09	$18.20	536,071	3/2/09	$6.80	578,816
1/6/09	$18.96	796,396	3/3/09	$6.30	293,204
1/7/09	$18.99	393,633	3/4/09	$6.84	491,723
1/8/09	$19.25	340,759	3/5/09	$6.02	739,041
1/9/09	$19.80	284,681	3/6/09	$6.11	898,817

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume
3/9/09	$4.95	351,113
3/10/09	$6.89	321,303
3/11/09	$7.40	235,617
3/12/09	$7.98	240,984
3/13/09	$9.00	254,248
3/16/09	$10.15	384,439
3/17/09	$10.10	187,789
3/18/09	$10.00	397,760
3/19/09	$10.68	250,385
3/20/09	$10.03	105,862
3/23/09	$11.13	192,027
3/24/09	$11.38	252,498
3/25/09	$11.38	250,478
3/26/09	$11.70	246,301
3/27/09	$13.08	511,729
3/30/09	$12.52	309,124
3/31/09	$13.32	307,125
4/1/09	$13.17	242,177
4/2/09	$14.13	350,241
4/3/09	$14.25	185,187
4/6/09	$14.15	163,957
4/7/09	$13.33	208,229
4/8/09	$12.82	240,534
4/9/09	$14.00	197,205
4/13/09	$14.88	188,745
4/14/09	$14.94	239,068
4/15/09	$15.00	215,278
4/16/09	$15.45	242,959
4/17/09	$15.57	213,691
4/20/09	$14.17	326,048
4/21/09	$14.32	285,563
4/22/09	$14.24	204,097
4/23/09	$15.69	227,438
4/24/09	$15.66	363,249
4/27/09	$15.28	170,811
4/28/09	$15.00	118,302
4/29/09	$15.79	254,298
4/30/09	$15.89	218,963

Date	Closing ADS Price	Volume
5/1/09	$16.07	128,815
5/4/09	$16.40	188,048
5/5/09	$16.60	252,774
5/6/09	$17.30	205,252
5/7/09	$17.70	416,016
5/8/09	$17.90	492,657
5/11/09	$17.70	449,093
5/12/09	$16.96	495,524
5/13/09	$16.19	346,438
5/14/09	$17.18	495,015
5/15/09	$17.10	537,549
5/18/09	$17.82	568,979
5/19/09	$18.26	652,566
5/20/09	$18.53	590,948
5/21/09	$18.55	259,572
5/22/09	$18.80	254,579
5/26/09	$19.12	278,968
5/27/09	$19.34	210,677
5/28/09	$18.79	241,234
5/29/09	$18.90	239,707
6/1/09	$18.97	280,664
6/2/09	$18.75	412,137
6/3/09	$18.69	260,214
6/4/09	$18.77	216,753
6/5/09	$18.79	347,113
6/8/09	$18.80	230,498
6/9/09	$19.48	213,884
6/10/09	$19.80	218,494
6/11/09	$19.80	253,291
6/12/09	$20.37	403,551
6/15/09	$20.36	321,695
6/16/09	$20.08	432,887
6/17/09	$20.00	453,274
6/18/09	$20.20	211,786
6/19/09	$20.40	216,745
6/22/09	$19.80	353,255
6/23/09	$19.55	240,446
6/24/09	$19.64	166,393

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
6/25/09	$20.22	195,761	8/19/09	$23.72	208,281
6/26/09	$20.20	254,408	8/20/09	$23.14	484,691
6/29/09	$20.70	262,856	8/21/09	$23.05	292,460
6/30/09	$20.65	261,174	8/24/09	$22.75	355,715
7/1/09	$20.30	192,375	8/25/09	$22.34	766,656
7/2/09	$20.41	97,203	8/26/09	$22.28	283,623
7/6/09	$20.55	184,690	8/27/09	$22.23	642,654
7/7/09	$20.54	150,761	8/28/09	$22.34	245,336
7/8/09	$20.08	221,702	8/31/09	$22.17	162,923
7/9/09	$20.35	190,765	9/1/09	$22.18	458,254
7/10/09	$20.53	148,821	9/2/09	$22.16	437,628
7/13/09	$20.75	202,205	9/3/09	$22.06	312,651
7/14/09	$20.96	190,553	9/4/09	$22.60	927,913
7/15/09	$21.40	322,696	9/8/09	$22.75	296,312
7/16/09	$21.40	232,941	9/9/09	$22.79	325,361
7/17/09	$22.00	287,108	9/10/09	$22.56	673,017
7/20/09	$22.01	275,875	9/11/09	$23.05	263,739
7/21/09	$21.90	270,304	9/14/09	$22.97	253,346
7/22/09	$21.93	125,036	9/15/09	$23.25	245,412
7/23/09	$22.00	223,504	9/16/09	$23.20	619,289
7/24/09	$22.14	241,116	9/17/09	$23.31	1,038,838
7/27/09	$22.32	312,041	9/18/09	$23.34	337,634
7/28/09	$22.40	282,129	9/21/09	$23.46	2,505,410
7/29/09	$22.35	195,497	9/22/09	$23.71	786,449
7/30/09	$22.38	322,578	9/23/09	$23.94	472,934
7/31/09	$22.90	151,783	9/24/09	$24.12	324,759
8/3/09	$23.14	402,873	9/25/09	$24.93	381,855
8/4/09	$23.35	1,867,702	9/28/09	$24.50	1,186,556
8/5/09	$23.35	594,347	9/29/09	$24.48	513,949
8/6/09	$23.38	432,616	9/30/09	$24.40	586,901
8/7/09	$23.56	351,066	10/1/09	$24.40	359,096
8/10/09	$23.47	281,849	10/2/09	$24.33	815,925
8/11/09	$23.34	425,797	10/5/09	$24.35	277,058
8/12/09	$23.56	377,130	10/6/09	$24.35	442,773
8/13/09	$23.80	351,215	10/7/09	$24.39	236,561
8/14/09	$23.94	243,804	10/8/09	$24.53	284,919
8/17/09	$23.77	301,594	10/9/09	$24.45	205,218
8/18/09	$23.72	277,452	10/12/09	$24.42	223,505

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
10/13/09	$24.47	322,425	12/7/09	$24.10	235,919
10/14/09	$24.73	390,087	12/8/09	$24.25	188,598
10/15/09	$24.70	356,535	12/9/09	$24.26	203,837
10/16/09	$24.60	580,086	12/10/09	$24.21	182,613
10/19/09	$24.49	407,027	12/11/09	$24.15	172,597
10/20/09	$24.58	505,004	12/14/09	$24.11	162,705
10/21/09	$24.61	746,971	12/15/09	$24.17	159,391
10/22/09	$24.65	418,579	12/16/09	$24.36	169,297
10/23/09	$24.70	384,894	12/17/09	$24.40	238,470
10/26/09	$24.44	648,250	12/18/09	$24.35	128,152
10/27/09	$24.11	571,871	12/21/09	$24.33	220,610
10/28/09	$23.45	364,113	12/22/09	$24.38	277,978
10/29/09	$23.64	371,408	12/23/09	$24.38	229,174
10/30/09	$23.55	217,095	12/24/09	$24.45	67,036
11/2/09	$23.48	715,230	12/28/09	$24.49	254,215
11/3/09	$22.87	652,468	12/29/09	$24.54	211,559
11/4/09	$22.91	283,882	12/30/09	$24.67	121,532
11/5/09	$23.25	167,702	12/31/09	$24.86	95,266
11/6/09	$23.52	156,206	1/4/10	$24.79	330,380
11/9/09	$24.11	229,103	1/5/10	$24.90	385,815
11/10/09	$24.25	1,092,464	1/6/10	$24.90	391,995
11/11/09	$24.31	209,335	1/7/10	$24.88	215,476
11/12/09	$24.42	413,503	1/8/10	$24.91	211,381
11/13/09	$24.25	312,038	1/11/10	$24.97	303,932
11/16/09	$24.30	159,546	1/12/10	$24.99	339,706
11/17/09	$24.36	195,369	1/13/10	$24.98	333,164
11/18/09	$24.30	196,694	1/14/10	$25.00	320,759
11/19/09	$24.21	146,280	1/15/10	$24.99	206,465
11/20/09	$24.44	124,992	1/19/10	$24.95	253,129
11/23/09	$24.50	233,543	1/20/10	$24.96	229,121
11/24/09	$24.47	247,192	1/21/10	$24.90	288,807
11/25/09	$24.57	158,365	1/22/10	$24.75	278,774
11/27/09	$23.44	282,025	1/25/10	$24.82	234,851
11/30/09	$23.47	442,764	1/26/10	$24.87	213,913
12/1/09	$23.65	179,031	1/27/10	$24.74	178,345
12/2/09	$23.98	218,092	1/28/10	$24.90	227,900
12/3/09	$23.97	192,553	1/29/10	$24.60	238,034
12/4/09	$24.03	162,952	2/1/10	$24.88	181,006

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
2/2/10	$25.00	420,151	3/29/10	$25.90	103,699
2/3/10	$25.00	260,524	3/30/10	$25.86	159,647
2/4/10	$24.72	226,571	3/31/10	$25.74	259,908
2/5/10	$24.73	402,068	4/1/10	$25.76	101,043
2/8/10	$24.72	258,088	4/5/10	$25.81	98,705
2/9/10	$24.77	263,899	4/6/10	$25.81	232,290
2/10/10	$24.85	237,381	4/7/10	$25.75	168,750
2/11/10	$25.00	204,951	4/8/10	$25.77	179,569
2/12/10	$24.97	209,869	4/9/10	$25.72	127,343
2/16/10	$25.20	603,335	4/12/10	$25.81	135,998
2/17/10	$25.46	582,634	4/13/10	$25.76	205,662
2/18/10	$25.42	382,345	4/14/10	$25.83	346,528
2/19/10	$25.43	235,218	4/15/10	$25.77	369,237
2/22/10	$25.38	368,882	4/16/10	$25.72	154,264
2/23/10	$25.46	304,207	4/19/10	$25.73	168,558
2/24/10	$25.44	457,898	4/20/10	$25.93	104,943
2/25/10	$25.20	287,701	4/21/10	$25.80	295,995
2/26/10	$25.10	281,846	4/22/10	$25.85	124,269
3/1/10	$25.28	561,704	4/23/10	$25.78	118,793
3/2/10	$25.25	299,206	4/26/10	$25.71	134,133
3/3/10	$25.28	224,324	4/27/10	$25.57	241,638
3/4/10	$25.50	285,833	4/28/10	$25.36	262,227
3/5/10	$25.52	327,024	4/29/10	$25.29	341,982
3/8/10	$25.59	242,136	4/30/10	$25.16	240,582
3/9/10	$25.58	225,791	5/3/10	$25.31	147,079
3/10/10	$25.66	214,614	5/4/10	$25.20	495,686
3/11/10	$25.75	178,320	5/5/10	$24.50	916,057
3/12/10	$25.90	271,434	5/6/10	$23.01	1,219,190
3/15/10	$25.68	229,169	5/7/10	$23.88	563,671
3/16/10	$25.86	228,488	5/10/10	$25.00	394,600
3/17/10	$25.84	187,158	5/11/10	$24.90	297,811
3/18/10	$25.88	188,266	5/12/10	$25.03	245,849
3/19/10	$25.75	111,882	5/13/10	$24.80	407,743
3/22/10	$25.75	198,839	5/14/10	$24.27	291,112
3/23/10	$25.72	300,624	5/17/10	$24.00	352,333
3/24/10	$25.72	179,550	5/18/10	$23.97	425,094
3/25/10	$25.87	143,887	5/19/10	$23.60	752,932
3/26/10	$25.74	112,387	5/20/10	$23.05	521,128

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
5/21/10	$23.35	392,174	7/16/10	$25.25	265,899
5/24/10	$24.12	233,120	7/19/10	$25.29	139,745
5/25/10	$23.76	288,367	7/20/10	$25.32	204,803
5/26/10	$24.20	229,548	7/21/10	$25.41	211,839
5/27/10	$24.00	276,380	7/22/10	$25.49	229,585
5/28/10	$24.25	165,482	7/23/10	$25.60	183,423
6/1/10	$24.06	119,465	7/26/10	$25.79	198,956
6/2/10	$24.11	235,856	7/27/10	$25.77	215,915
6/3/10	$24.23	176,074	7/28/10	$25.74	140,434
6/4/10	$24.00	188,997	7/29/10	$25.73	139,154
6/7/10	$24.00	145,610	7/30/10	$25.93	214,602
6/8/10	$23.45	227,625	8/2/10	$26.08	183,806
6/9/10	$23.97	195,861	8/3/10	$26.04	139,736
6/10/10	$24.37	187,830	8/4/10	$26.12	212,118
6/11/10	$24.73	200,488	8/5/10	$26.10	259,959
6/14/10	$24.80	169,017	8/6/10	$26.12	145,220
6/15/10	$24.91	234,156	8/9/10	$26.10	144,944
6/16/10	$24.79	202,344	8/10/10	$26.06	180,025
6/17/10	$24.78	242,653	8/11/10	$26.10	280,290
6/18/10	$24.70	447,698	8/12/10	$26.26	896,043
6/21/10	$24.65	179,281	8/13/10	$26.61	214,801
6/22/10	$24.59	150,797	8/16/10	$26.48	186,478
6/23/10	$24.68	374,684	8/17/10	$26.55	164,613
6/24/10	$24.75	174,629	8/18/10	$26.89	221,484
6/25/10	$24.50	250,733	8/19/10	$26.58	184,625
6/28/10	$24.82	169,917	8/20/10	$26.61	209,720
6/29/10	$24.53	227,856	8/23/10	$26.65	135,308
6/30/10	$24.50	175,343	8/24/10	$26.40	470,471
7/1/10	$24.76	123,178	8/25/10	$26.21	177,618
7/2/10	$24.95	175,485	8/26/10	$26.39	152,029
7/6/10	$24.70	162,165	8/27/10	$26.60	171,358
7/7/10	$25.05	205,212	8/30/10	$26.19	289,144
7/8/10	$25.26	173,435	8/31/10	$26.26	233,074
7/9/10	$25.48	149,382	9/1/10	$26.36	151,882
7/12/10	$25.30	429,695	9/2/10	$26.34	107,008
7/13/10	$25.34	307,341	9/3/10	$26.29	166,649
7/14/10	$25.39	218,406	9/7/10	$26.22	92,789
7/15/10	$25.49	228,127	9/8/10	$26.10	376,139

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
9/9/10	$25.95	213,590	11/2/10	$26.06	154,704
9/10/10	$26.13	220,701	11/3/10	$26.11	130,590
9/13/10	$26.10	126,374	11/4/10	$26.27	136,749
9/14/10	$26.15	169,094	11/5/10	$26.27	184,932
9/15/10	$26.20	825,658	11/8/10	$26.27	122,079
9/16/10	$26.10	312,478	11/9/10	$26.27	137,360
9/17/10	$26.00	587,002	11/10/10	$26.32	100,224
9/20/10	$25.91	1,715,391	11/11/10	$26.27	155,248
9/21/10	$25.90	628,571	11/12/10	$26.29	120,332
9/22/10	$25.91	210,496	11/15/10	$26.51	88,431
9/23/10	$25.96	216,443	11/16/10	$26.18	195,061
9/24/10	$25.96	164,054	11/17/10	$26.13	141,703
9/27/10	$25.92	164,540	11/18/10	$26.60	102,006
9/28/10	$25.81	166,774	11/19/10	$26.58	109,682
9/29/10	$25.95	139,903	11/22/10	$26.32	142,819
9/30/10	$25.93	223,347	11/23/10	$26.34	161,229
10/1/10	$25.94	138,692	11/24/10	$26.45	63,914
10/4/10	$25.80	159,387	11/26/10	$26.33	33,243
10/5/10	$25.89	324,254	11/29/10	$25.83	194,141
10/6/10	$25.95	155,797	11/30/10	$25.80	417,116
10/7/10	$25.98	211,615	12/1/10	$25.78	187,622
10/8/10	$26.10	135,308	12/2/10	$25.60	204,535
10/11/10	$26.32	128,234	12/3/10	$25.51	168,581
10/12/10	$26.14	271,684	12/6/10	$25.54	137,022
10/13/10	$26.29	233,062	12/7/10	$25.75	91,543
10/14/10	$26.22	275,367	12/8/10	$25.78	177,658
10/15/10	$26.24	325,895	12/9/10	$25.75	138,427
10/18/10	$26.06	142,022	12/10/10	$25.84	124,948
10/19/10	$26.15	154,928	12/13/10	$26.03	120,308
10/20/10	$25.90	109,287	12/14/10	$25.66	149,202
10/21/10	$25.91	219,885	12/15/10	$25.55	169,891
10/22/10	$26.01	145,935	12/16/10	$25.31	186,591
10/25/10	$25.81	179,654	12/17/10	$25.49	236,733
10/26/10	$26.05	134,494	12/20/10	$25.38	201,609
10/27/10	$25.96	102,663	12/21/10	$25.33	182,991
10/28/10	$26.09	104,083	12/22/10	$25.15	335,915
10/29/10	$26.07	1,104,051	12/23/10	$25.39	135,251
11/1/10	$26.09	1,083,386	12/27/10	$25.47	85,202

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4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
12/28/10	$25.47	94,003	2/22/11	$26.10	706,457
12/29/10	$25.43	86,842	2/23/11	$26.12	130,162
12/30/10	$25.51	67,058	2/24/11	$26.15	257,946
12/31/10	$25.70	50,605	2/25/11	$25.69	210,851
1/3/11	$25.56	857,474	2/28/11	$25.78	147,271
1/4/11	$25.58	96,303	3/1/11	$25.67	229,072
1/5/11	$25.51	140,709	3/2/11	$25.69	170,455
1/6/11	$25.43	255,650	3/3/11	$25.83	215,335
1/7/11	$25.34	145,700	3/4/11	$25.88	262,668
1/10/11	$25.36	312,295	3/7/11	$25.77	177,817
1/11/11	$25.35	419,090	3/8/11	$25.73	115,628
1/12/11	$25.34	252,019	3/9/11	$25.86	95,598
1/13/11	$25.49	975,809	3/10/11	$25.79	341,879
1/14/11	$25.40	891,011	3/11/11	$25.72	163,447
1/18/11	$25.44	387,356	3/14/11	$25.80	112,099
1/19/11	$25.37	639,295	3/15/11	$25.76	261,151
1/20/11	$25.35	3,755,543	3/16/11	$25.69	317,481
1/21/11	$25.60	1,295,587	3/17/11	$25.71	159,985
1/24/11	$25.50	348,325	3/18/11	$25.86	350,055
1/25/11	$25.62	448,439	3/21/11	$25.91	190,873
1/26/11	$25.84	435,452	3/22/11	$25.98	159,686
1/27/11	$25.87	778,712	3/23/11	$25.97	310,868
1/28/11	$25.71	301,989	3/24/11	$25.93	194,491
1/31/11	$25.79	437,212	3/25/11	$25.97	101,654
2/1/11	$25.75	435,598	3/28/11	$25.96	170,005
2/2/11	$25.78	150,012	3/29/11	$26.06	168,328
2/3/11	$25.77	308,336	3/30/11	$26.08	329,000
2/4/11	$25.91	117,759	3/31/11	$26.29	419,007
2/7/11	$25.91	126,758	4/1/11	$26.39	128,238
2/8/11	$25.98	268,652	4/4/11	$26.21	262,495
2/9/11	$25.93	158,674	4/5/11	$26.29	225,445
2/10/11	$26.01	158,541	4/6/11	$26.35	237,328
2/11/11	$26.13	185,094	4/7/11	$26.26	171,317
2/14/11	$26.15	118,156	4/8/11	$26.30	59,965
2/15/11	$26.13	176,960	4/11/11	$26.19	174,487
2/16/11	$26.22	298,606	4/12/11	$26.14	261,890
2/17/11	$26.12	158,273	4/13/11	$26.21	152,725
2/18/11	$26.30	126,384	4/14/11	$26.21	166,679

Exhibit 4
Barclays Bank PLC
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Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
4/15/11	$26.06	110,109	6/10/11	$25.81	140,782
4/18/11	$26.07	117,955	6/13/11	$25.65	143,560
4/19/11	$26.30	99,472	6/14/11	$25.90	187,060
4/20/11	$26.42	203,876	6/15/11	$25.74	147,298
4/21/11	$26.23	162,455	6/16/11	$25.28	300,825
4/25/11	$26.33	134,636	6/17/11	$25.65	235,821
4/26/11	$26.50	212,906	6/20/11	$25.35	185,098
4/27/11	$26.66	223,285	6/21/11	$25.53	238,212
4/28/11	$26.80	91,850	6/22/11	$25.65	140,854
4/29/11	$26.60	130,383	6/23/11	$25.48	270,664
5/2/11	$26.57	81,536	6/24/11	$25.47	164,853
5/3/11	$26.57	135,510	6/27/11	$25.42	168,033
5/4/11	$26.73	94,963	6/28/11	$25.96	349,871
5/5/11	$26.77	89,688	6/29/11	$25.89	232,914
5/6/11	$26.82	139,378	6/30/11	$26.34	436,745
5/9/11	$26.83	136,060	7/1/11	$26.27	79,228
5/10/11	$26.95	123,303	7/5/11	$26.28	171,400
5/11/11	$26.83	106,260	7/6/11	$26.20	132,014
5/12/11	$26.93	91,665	7/7/11	$26.38	86,936
5/13/11	$26.93	185,937	7/8/11	$26.25	91,179
5/16/11	$26.88	176,636	7/11/11	$26.01	262,691
5/17/11	$26.96	141,999	7/12/11	$25.79	286,918
5/18/11	$26.92	132,069	7/13/11	$25.82	173,387
5/19/11	$26.85	105,410	7/14/11	$25.65	207,213
5/20/11	$26.87	115,822	7/15/11	$25.52	503,233
5/23/11	$26.82	116,243	7/18/11	$25.31	458,121
5/24/11	$26.95	85,155	7/19/11	$25.33	551,268
5/25/11	$26.93	131,565	7/20/11	$25.40	584,493
5/26/11	$26.89	147,602	7/21/11	$25.69	227,608
5/27/11	$26.40	120,687	7/22/11	$25.61	97,448
5/31/11	$26.29	171,512	7/25/11	$25.52	224,871
6/1/11	$26.13	196,231	7/26/11	$25.56	157,780
6/2/11	$26.03	181,934	7/27/11	$25.52	247,577
6/3/11	$26.03	146,450	7/28/11	$25.47	166,286
6/6/11	$25.97	224,898	7/29/11	$25.33	183,986
6/7/11	$25.88	189,985	8/1/11	$25.56	147,696
6/8/11	$25.77	203,115	8/2/11	$25.46	167,371
6/9/11	$25.80	151,160	8/3/11	$25.60	154,272

Exhibit 4
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Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
8/4/11	$24.77	536,257	9/28/11	$22.94	349,183
8/5/11	$24.27	878,390	9/29/11	$23.18	267,984
8/8/11	$21.30	948,567	9/30/11	$23.11	228,898
8/9/11	$23.87	617,644	10/3/11	$22.34	219,933
8/10/11	$24.22	701,617	10/4/11	$21.93	554,303
8/11/11	$24.65	425,954	10/5/11	$22.42	235,098
8/12/11	$25.02	306,169	10/6/11	$23.18	404,107
8/15/11	$25.12	233,032	10/7/11	$23.20	271,596
8/16/11	$25.20	254,731	10/10/11	$23.91	279,598
8/17/11	$25.29	294,871	10/11/11	$23.85	234,104
8/18/11	$24.07	554,967	10/12/11	$24.26	377,882
8/19/11	$23.98	633,332	10/13/11	$23.88	224,946
8/22/11	$23.30	319,285	10/14/11	$23.80	375,185
8/23/11	$23.85	350,795	10/17/11	$23.51	186,018
8/24/11	$24.20	317,564	10/18/11	$24.15	337,227
8/25/11	$24.72	283,501	10/19/11	$23.87	632,441
8/26/11	$25.09	193,098	10/20/11	$23.84	395,762
8/29/11	$25.48	165,552	10/21/11	$23.74	363,636
8/30/11	$25.00	393,098	10/24/11	$23.88	274,189
8/31/11	$24.67	272,829	10/25/11	$23.70	409,297
9/1/11	$24.78	184,616	10/26/11	$23.86	293,265
9/2/11	$24.91	236,925	10/27/11	$24.80	551,078
9/6/11	$24.54	322,301	10/28/11	$24.90	597,717
9/7/11	$24.77	204,432	10/31/11	$24.66	356,146
9/8/11	$24.70	164,784	11/1/11	$24.22	197,844
9/9/11	$24.10	299,610	11/2/11	$24.71	192,763
9/12/11	$22.58	666,058	11/3/11	$24.76	153,811
9/13/11	$23.05	464,756	11/4/11	$24.70	199,233
9/14/11	$23.38	425,033	11/7/11	$24.67	242,840
9/15/11	$24.09	282,468	11/8/11	$24.87	366,899
9/16/11	$24.04	236,883	11/9/11	$24.43	485,363
9/19/11	$23.90	295,517	11/10/11	$24.43	333,237
9/20/11	$23.91	245,358	11/11/11	$24.72	168,373
9/21/11	$23.40	246,322	11/14/11	$24.45	197,826
9/22/11	$22.87	512,198	11/15/11	$24.41	179,580
9/23/11	$22.96	406,319	11/16/11	$24.24	208,412
9/26/11	$22.65	446,050	11/17/11	$23.86	542,372
9/27/11	$23.78	312,203	11/18/11	$23.93	225,941

Exhibit 4
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Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume
11/21/11	$23.43	228,109
11/22/11	$23.40	171,691
11/23/11	$23.05	233,825
11/25/11	$23.45	72,200
11/28/11	$23.50	278,264
11/29/11	$22.74	135,288
11/30/11	$22.70	277,756
12/1/11	$22.72	215,916
12/2/11	$22.68	409,207
12/5/11	$23.38	753,185
12/6/11	$23.45	234,476
12/7/11	$23.30	203,563
12/8/11	$23.05	214,819
12/9/11	$23.32	201,357
12/12/11	$23.07	155,061
12/13/11	$23.48	235,568
12/14/11	$22.99	138,292
12/15/11	$23.21	199,286
12/16/11	$22.68	247,239
12/19/11	$22.01	249,523
12/20/11	$22.21	343,861
12/21/11	$22.20	262,886
12/22/11	$22.60	319,266
12/23/11	$22.79	252,963
12/27/11	$22.41	349,635
12/28/11	$22.02	296,320
12/29/11	$22.13	212,466
12/30/11	$22.28	145,753
1/3/12	$22.80	194,226
1/4/12	$23.24	448,403
1/5/12	$23.76	351,201
1/6/12	$23.87	174,421
1/9/12	$24.17	232,158
1/10/12	$24.32	238,104
1/11/12	$24.27	225,459
1/12/12	$24.38	203,445
1/13/12	$24.19	446,465
1/17/12	$24.29	154,558
1/18/12	$24.55	291,025
1/19/12	$24.67	413,778
1/20/12	$25.00	301,865
1/23/12	$24.88	234,567
1/24/12	$24.96	173,766
1/25/12	$25.01	196,025
1/26/12	$25.20	207,361
1/27/12	$25.22	151,585
1/30/12	$25.15	166,991
1/31/12	$25.15	147,723
2/1/12	$25.42	183,460
2/2/12	$25.50	145,384
2/3/12	$25.63	172,144
2/6/12	$25.42	107,124
2/7/12	$25.46	100,262
2/8/12	$25.56	218,773
2/9/12	$25.58	194,741
2/10/12	$25.19	196,581
2/13/12	$25.62	184,146
2/14/12	$25.59	193,098
2/15/12	$25.60	169,860
2/16/12	$25.61	143,541
2/17/12	$25.57	255,691
2/21/12	$25.70	150,025
2/22/12	$25.73	76,507
2/23/12	$25.88	118,436
2/24/12	$25.88	130,362
2/27/12	$26.00	159,895
2/28/12	$25.69	229,996
2/29/12	$25.55	151,381
3/1/12	$25.69	111,848
3/2/12	$25.61	279,058
3/5/12	$25.64	116,190
3/6/12	$25.29	195,792
3/7/12	$25.36	123,384
3/8/12	$25.49	178,400
3/9/12	$25.48	111,709
3/12/12	$25.69	132,829

Exhibit 4
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Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
3/13/12	$25.86	163,764	5/7/12	$25.78	152,724
3/14/12	$25.81	115,308	5/8/12	$25.89	119,788
3/15/12	$25.86	89,786	5/9/12	$25.67	372,104
3/16/12	$25.84	223,397	5/10/12	$25.67	153,173
3/19/12	$25.84	81,219	5/11/12	$25.57	129,639
3/20/12	$25.80	130,844	5/14/12	$25.33	162,400
3/21/12	$25.79	115,869	5/15/12	$25.30	161,723
3/22/12	$25.65	164,443	5/16/12	$25.33	163,625
3/23/12	$25.75	85,203	5/17/12	$24.85	362,959
3/26/12	$25.80	131,026	5/18/12	$24.57	399,063
3/27/12	$25.84	86,919	5/21/12	$25.24	157,802
3/28/12	$25.73	73,541	5/22/12	$25.44	294,144
3/29/12	$25.55	116,182	5/23/12	$25.53	462,926
3/30/12	$25.44	194,479	5/24/12	$25.61	212,465
4/2/12	$25.52	83,923	5/25/12	$25.79	134,396
4/3/12	$25.54	64,000	5/29/12	$25.96	176,989
4/4/12	$25.47	232,431	5/30/12	$25.15	219,177
4/5/12	$25.51	125,245	5/31/12	$25.16	169,447
4/9/12	$25.48	111,662	6/1/12	$24.98	229,506
4/10/12	$25.14	345,243	6/4/12	$24.94	400,593
4/11/12	$25.32	130,366	6/5/12	$24.94	264,020
4/12/12	$25.57	123,405	6/6/12	$25.05	211,401
4/13/12	$25.30	72,051	6/7/12	$25.10	148,804
4/16/12	$25.29	171,618	6/8/12	$25.14	165,911
4/17/12	$25.28	133,275	6/11/12	$25.23	138,159
4/18/12	$25.12	187,695	6/12/12	$25.43	109,123
4/19/12	$25.17	327,825	6/13/12	$25.48	96,012
4/20/12	$25.03	683,994	6/14/12	$25.48	168,431
4/23/12	$25.17	251,057	6/15/12	$25.33	166,875
4/24/12	$25.35	161,290	6/18/12	$25.45	109,805
4/25/12	$25.60	160,627	6/19/12	$25.54	221,192
4/26/12	$25.59	100,032	6/20/12	$25.63	190,451
4/27/12	$25.71	136,066	6/21/12	$25.49	136,609
4/30/12	$25.54	154,752	6/22/12	$25.40	243,906
5/1/12	$25.75	173,583	6/25/12	$25.37	107,308
5/2/12	$25.70	82,957	6/26/12	$25.38	107,692
5/3/12	$25.85	152,117	6/27/12	$25.35	136,183
5/4/12	$25.80	115,083	6/28/12	$25.35	308,587

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
6/29/12	$25.38	320,488	8/23/12	$26.01	70,555
7/2/12	$25.60	122,781	8/24/12	$26.11	51,965
7/3/12	$25.61	120,989	8/27/12	$26.13	119,895
7/5/12	$25.45	302,148	8/28/12	$26.14	147,872
7/6/12	$25.41	163,523	8/29/12	$25.65	396,970
7/9/12	$25.34	176,241	8/30/12	$25.65	139,849
7/10/12	$25.40	123,914	8/31/12	$25.57	125,558
7/11/12	$25.40	193,396	9/4/12	$25.61	135,119
7/12/12	$25.47	244,385	9/5/12	$25.65	124,121
7/13/12	$25.54	274,705	9/6/12	$25.70	315,607
7/16/12	$25.42	385,389	9/7/12	$25.82	145,154
7/17/12	$25.60	179,448	9/10/12	$25.89	179,803
7/18/12	$25.67	217,447	9/11/12	$25.93	103,919
7/19/12	$25.69	136,454	9/12/12	$25.97	128,048
7/20/12	$25.80	242,026	9/13/12	$26.00	217,117
7/23/12	$25.59	156,183	9/14/12	$25.97	92,696
7/24/12	$25.54	96,453	9/17/12	$25.92	71,470
7/25/12	$25.68	84,931	9/18/12	$25.98	77,286
7/26/12	$25.75	110,458	9/19/12	$25.90	130,784
7/27/12	$25.84	86,119	9/20/12	$25.78	80,150
7/30/12	$25.78	112,856	9/21/12	$25.68	117,795
7/31/12	$25.69	212,297	9/24/12	$25.80	175,614
8/1/12	$25.70	175,936	9/25/12	$25.87	89,073
8/2/12	$25.75	45,877	9/26/12	$25.76	79,089
8/3/12	$25.80	93,374	9/27/12	$25.90	75,942
8/6/12	$25.98	212,873	9/28/12	$25.92	85,476
8/7/12	$25.95	126,728	10/1/12	$25.97	82,605
8/8/12	$25.97	92,310	10/2/12	$25.91	71,224
8/9/12	$25.95	131,370	10/3/12	$25.94	63,773
8/10/12	$25.95	66,742	10/4/12	$25.98	61,334
8/13/12	$25.92	78,806	10/5/12	$25.99	64,063
8/14/12	$25.95	115,560	10/8/12	$25.96	46,403
8/15/12	$26.04	89,356	10/9/12	$25.87	92,590
8/16/12	$26.08	142,001	10/10/12	$25.84	78,390
8/17/12	$26.17	100,383	10/11/12	$25.92	82,998
8/20/12	$26.25	100,854	10/12/12	$25.95	46,383
8/21/12	$26.05	145,921	10/15/12	$25.94	89,379
8/22/12	$25.99	91,773	10/16/12	$25.95	213,555

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
10/17/12	$25.92	656,729	12/13/12	$25.40	119,548
10/18/12	$26.06	154,944	12/14/12	$25.53	111,306
10/19/12	$25.39	281,703	12/17/12	$25.57	132,929
10/22/12	$25.81	75,998	12/18/12	$25.52	123,578
10/23/12	$25.78	128,733	12/19/12	$25.55	139,536
10/24/12	$25.74	124,259	12/20/12	$25.48	323,273
10/25/12	$25.70	136,494	12/21/12	$25.42	109,644
10/26/12	$25.70	160,195	12/24/12	$25.44	13,744
10/31/12	$25.85	175,271	12/26/12	$25.48	66,780
11/1/12	$25.82	76,499	12/27/12	$25.46	85,379
11/2/12	$25.79	61,759	12/28/12	$25.47	87,202
11/5/12	$25.87	71,336	12/31/12	$25.43	108,583
11/6/12	$25.84	62,833	1/2/13	$25.55	127,705
11/7/12	$25.92	92,737	1/3/13	$25.56	127,114
11/8/12	$25.75	86,150	1/4/13	$25.68	180,116
11/9/12	$25.73	98,220	1/7/13	$25.66	71,576
11/12/12	$25.84	45,982	1/8/13	$25.79	130,383
11/13/12	$25.85	104,149	1/9/13	$25.76	106,645
11/14/12	$25.66	219,995	1/10/13	$25.84	143,625
11/15/12	$25.47	200,142	1/11/13	$25.78	109,417
11/16/12	$25.75	165,709	1/14/13	$25.77	68,101
11/19/12	$25.88	104,802	1/15/13	$25.80	107,642
11/20/12	$25.88	87,257	1/16/13	$25.76	105,254
11/21/12	$25.94	71,078	1/17/13	$25.79	169,973
11/23/12	$26.00	29,007	1/18/13	$25.99	157,969
11/26/12	$25.95	114,802	1/22/13	$25.97	126,536
11/27/12	$25.98	113,819	1/23/13	$25.98	91,013
11/28/12	$25.54	139,969	1/24/13	$25.99	84,930
11/29/12	$25.58	165,836	1/25/13	$25.96	112,119
11/30/12	$25.57	122,446	1/28/13	$25.87	121,117
12/3/12	$25.52	112,901	1/29/13	$25.88	74,576
12/4/12	$25.50	120,419	1/30/13	$25.89	61,776
12/5/12	$25.46	121,013	1/31/13	$25.87	197,604
12/6/12	$25.54	94,100	2/1/13	$26.00	83,780
12/7/12	$25.49	65,681	2/4/13	$25.89	110,900
12/10/12	$25.41	131,375	2/5/13	$25.96	56,432
12/11/12	$25.39	110,205	2/6/13	$25.91	95,536
12/12/12	$25.36	187,594	2/7/13	$25.91	100,403

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume
2/8/13	$25.93	68,222
2/11/13	$25.90	103,799
2/12/13	$25.89	89,314
2/13/13	$25.96	181,557
2/14/13	$25.95	116,600
2/15/13	$25.90	76,675
2/19/13	$25.98	158,522
2/20/13	$25.99	64,153
2/21/13	$25.98	245,017
2/22/13	$25.94	141,351
2/25/13	$25.98	145,556
2/26/13	$26.00	127,201
2/27/13	$25.49	202,017
2/28/13	$25.44	209,538
3/1/13	$25.49	216,573
3/4/13	$25.50	251,476
3/5/13	$25.55	580,424
3/6/13	$25.55	99,836
3/7/13	$25.55	116,603
3/8/13	$25.54	112,370
3/11/13	$25.54	111,707
3/12/13	$25.52	63,206
3/13/13	$25.54	86,170
3/14/13	$25.54	152,178
3/15/13	$25.55	120,080
3/18/13	$25.53	195,531
3/19/13	$25.55	205,442
3/20/13	$25.54	133,791
3/21/13	$25.58	103,741
3/22/13	$25.56	927,725
3/25/13	$25.51	147,627
3/26/13	$25.53	239,331
3/27/13	$25.58	117,630
3/28/13	$25.56	140,158
4/1/13	$25.52	151,375
4/2/13	$25.55	141,040
4/3/13	$25.50	118,466
4/4/13	$25.50	105,868
4/5/13	$25.55	82,616
4/8/13	$25.51	106,220
4/9/13	$25.54	88,812
4/10/13	$25.53	81,342
4/11/13	$25.55	95,170
4/12/13	$25.60	98,890
4/15/13	$25.58	102,577
4/16/13	$25.65	67,022
4/17/13	$25.67	85,328
4/18/13	$25.77	133,640
4/19/13	$25.54	315,729
4/22/13	$25.61	182,536
4/23/13	$25.56	187,943
4/24/13	$25.56	100,853
4/25/13	$25.56	73,934
4/26/13	$25.55	55,474
4/29/13	$25.80	202,519
4/30/13	$25.73	187,457
5/1/13	$25.67	93,058
5/2/13	$25.72	143,233
5/3/13	$25.74	242,330
5/6/13	$25.77	190,824
5/7/13	$25.90	294,973
5/8/13	$25.90	153,691
5/9/13	$25.90	122,856
5/10/13	$25.87	58,397
5/13/13	$25.82	131,899
5/14/13	$25.79	62,070
5/15/13	$25.74	90,371
5/16/13	$25.87	138,388
5/17/13	$25.87	130,343
5/20/13	$25.89	116,935
5/21/13	$25.91	202,708
5/22/13	$25.84	106,375
5/23/13	$25.87	107,686
5/24/13	$25.94	114,101
5/28/13	$25.94	87,708
5/29/13	$25.52	185,203

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
5/30/13	$25.55	166,889	7/24/13	$25.36	123,598
5/31/13	$25.40	111,789	7/25/13	$25.35	87,224
6/3/13	$25.38	269,008	7/26/13	$25.40	42,837
6/4/13	$25.62	415,523	7/29/13	$25.35	215,851
6/5/13	$25.46	106,616	7/30/13	$25.35	129,149
6/6/13	$25.51	152,080	7/31/13	$25.44	95,236
6/7/13	$25.50	96,755	8/1/13	$25.35	303,878
6/10/13	$25.42	132,242	8/2/13	$25.36	290,739
6/11/13	$25.31	261,108	8/5/13	$25.39	129,865
6/12/13	$25.09	533,700	8/6/13	$25.40	150,572
6/13/13	$25.31	402,019	8/7/13	$25.38	138,913
6/14/13	$25.49	194,950	8/8/13	$25.38	131,217
6/17/13	$25.44	266,521	8/9/13	$25.38	110,096
6/18/13	$25.48	128,978	8/12/13	$25.42	126,314
6/19/13	$25.37	168,315	8/13/13	$25.44	139,322
6/20/13	$25.29	270,855	8/14/13	$25.46	172,070
6/21/13	$25.16	208,062	8/15/13	$25.42	213,606
6/24/13	$25.15	266,171	8/16/13	$25.43	133,995
6/25/13	$25.26	240,906	8/19/13	$25.40	208,436
6/26/13	$25.46	338,704	8/20/13	$25.50	206,305
6/27/13	$25.38	203,518	8/21/13	$25.48	171,253
6/28/13	$25.33	188,906	8/22/13	$25.55	243,935
7/1/13	$25.35	138,353	8/23/13	$25.69	194,019
7/2/13	$25.35	160,834	8/26/13	$25.62	180,061
7/3/13	$25.30	106,051	8/27/13	$25.62	155,334
7/5/13	$25.23	166,372	8/28/13	$25.27	212,340
7/8/13	$25.16	283,778	8/29/13	$25.28	154,007
7/9/13	$25.22	117,695	8/30/13	$25.25	216,190
7/10/13	$25.26	166,701	9/3/13	$25.25	232,156
7/11/13	$25.31	120,018	9/4/13	$25.17	560,941
7/12/13	$25.48	116,203	9/5/13	$25.24	203,314
7/15/13	$25.43	115,048	9/6/13	$25.27	85,728
7/16/13	$25.38	64,031	9/9/13	$25.32	184,640
7/17/13	$25.38	136,821	9/10/13	$25.30	251,325
7/18/13	$25.38	87,116	9/11/13	$25.28	178,077
7/19/13	$25.33	300,755	9/12/13	$25.30	155,846
7/22/13	$25.41	61,825	9/13/13	$25.30	95,150
7/23/13	$25.46	78,761	9/16/13	$25.27	207,300

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
9/17/13	$25.30	203,377	11/8/13	$25.53	117,804
9/18/13	$25.39	219,930	11/11/13	$25.57	51,511
9/19/13	$25.33	119,201	11/12/13	$25.57	85,273
9/20/13	$25.35	151,405	11/13/13	$25.51	233,096
9/23/13	$25.35	196,260	11/14/13	$25.59	67,470
9/24/13	$25.35	97,677	11/15/13	$25.59	121,884
9/25/13	$25.41	93,256	11/18/13	$25.64	124,922
9/26/13	$25.41	71,387	11/19/13	$25.67	186,716
9/27/13	$25.38	113,975	11/20/13	$25.66	136,329
9/30/13	$25.44	131,918	11/21/13	$25.70	128,471
10/1/13	$25.35	164,413	11/22/13	$25.70	257,023
10/2/13	$25.36	93,017	11/25/13	$25.73	150,559
10/3/13	$25.36	175,141	11/26/13	$25.37	199,121
10/4/13	$25.34	165,731	11/27/13	$25.38	147,717
10/7/13	$25.32	113,788	11/29/13	$25.40	28,469
10/8/13	$25.36	103,812	12/2/13	$25.37	124,345
10/9/13	$25.40	175,114	12/3/13	$25.38	88,744
10/10/13	$25.37	86,271	12/4/13	$25.36	82,637
10/11/13	$25.37	49,729	12/5/13	$25.30	175,429
10/14/13	$25.35	111,466	12/6/13	$25.30	81,878
10/15/13	$25.38	130,610	12/9/13	$25.37	148,611
10/16/13	$25.40	134,081	12/10/13	$25.32	111,715
10/17/13	$25.45	80,053	12/11/13	$25.31	124,705
10/18/13	$25.40	297,631	12/12/13	$25.36	135,697
10/21/13	$25.48	78,394	12/13/13	$25.59	351,141
10/22/13	$25.49	176,182	12/16/13	$25.43	104,468
10/23/13	$25.54	71,360	12/17/13	$25.42	135,325
10/24/13	$25.50	113,486	12/18/13	$25.35	149,651
10/25/13	$25.52	95,861	12/19/13	$25.34	143,725
10/28/13	$25.52	92,034	12/20/13	$25.35	158,563
10/29/13	$25.51	94,681	12/23/13	$25.39	1,781,274
10/30/13	$25.51	78,550	12/24/13	$25.31	627,939
10/31/13	$25.51	87,219	12/26/13	$25.30	898,703
11/1/13	$25.50	79,282	12/27/13	$25.31	194,896
11/4/13	$25.50	183,497	12/30/13	$25.30	237,487
11/5/13	$25.53	41,143	12/31/13	$25.37	148,292
11/6/13	$25.56	146,679	1/2/14	$25.36	81,399
11/7/13	$25.58	141,213	1/3/14	$25.40	98,341

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
1/6/14	$25.43	145,447	3/3/14	$25.96	178,642
1/7/14	$25.41	178,098	3/4/14	$25.92	309,768
1/8/14	$25.43	152,677	3/5/14	$25.92	171,991
1/9/14	$25.43	1,705,066	3/6/14	$25.54	340,632
1/10/14	$25.47	162,282	3/7/14	$25.57	103,204
1/13/14	$25.45	184,774	3/10/14	$25.58	113,740
1/14/14	$25.47	135,985	3/11/14	$25.62	52,875
1/15/14	$25.49	137,063	3/12/14	$25.62	96,042
1/16/14	$25.49	185,101	3/13/14	$25.62	99,700
1/17/14	$25.47	376,930	3/14/14	$25.62	402,520
1/21/14	$25.51	230,382	3/17/14	$25.69	100,976
1/22/14	$25.49	547,485	3/18/14	$25.70	116,816
1/23/14	$25.50	169,539	3/19/14	$25.73	95,691
1/24/14	$25.52	79,120	3/20/14	$25.77	142,524
1/27/14	$25.52	67,146	3/21/14	$25.78	87,335
1/28/14	$25.52	111,538	3/24/14	$25.73	103,037
1/29/14	$25.51	179,687	3/25/14	$25.77	102,869
1/30/14	$25.51	104,367	3/26/14	$25.85	83,122
1/31/14	$25.53	89,522	3/27/14	$25.84	71,450
2/3/14	$25.54	59,140	3/28/14	$25.87	104,466
2/4/14	$25.57	111,189	3/31/14	$26.01	108,671
2/5/14	$25.59	128,478	4/1/14	$25.98	108,058
2/6/14	$25.58	91,470	4/2/14	$25.85	124,177
2/7/14	$25.58	66,400	4/3/14	$25.90	63,379
2/10/14	$25.58	120,699	4/4/14	$25.93	61,318
2/11/14	$25.55	220,064	4/7/14	$25.97	87,017
2/12/14	$25.58	151,243	4/8/14	$25.95	52,153
2/13/14	$25.73	144,438	4/9/14	$25.90	123,492
2/14/14	$25.77	120,501	4/10/14	$25.90	136,757
2/18/14	$25.85	210,123	4/11/14	$25.92	89,250
2/19/14	$25.87	149,943	4/14/14	$25.91	116,445
2/20/14	$25.84	127,162	4/15/14	$25.91	107,377
2/21/14	$25.90	158,212	4/16/14	$25.86	95,063
2/24/14	$25.86	137,629	4/17/14	$25.66	401,811
2/25/14	$25.86	71,415	4/21/14	$25.75	67,309
2/26/14	$25.80	186,343	4/22/14	$25.78	113,306
2/27/14	$25.85	150,739	4/23/14	$25.83	53,923
2/28/14	$25.90	222,719	4/24/14	$25.87	65,248

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
4/25/14	$26.00	150,529	6/19/14	$25.91	110,962
4/28/14	$25.92	151,918	6/20/14	$26.18	384,964
4/29/14	$25.91	84,484	6/23/14	$25.96	139,635
4/30/14	$25.91	113,267	6/24/14	$25.90	111,438
5/1/14	$25.97	91,615	6/25/14	$25.99	79,207
5/2/14	$25.93	123,694	6/26/14	$25.89	129,194
5/5/14	$25.93	130,850	6/27/14	$25.82	133,790
5/6/14	$25.92	143,108	6/30/14	$25.86	101,681
5/7/14	$25.93	157,792	7/1/14	$26.06	103,016
5/8/14	$25.93	127,486	7/2/14	$26.07	125,104
5/9/14	$25.90	92,958	7/3/14	$26.00	67,050
5/12/14	$25.92	133,066	7/7/14	$26.02	70,294
5/13/14	$25.90	73,588	7/8/14	$26.02	61,907
5/14/14	$25.92	294,886	7/9/14	$25.97	84,453
5/15/14	$25.93	688,158	7/10/14	$25.90	88,766
5/16/14	$26.07	242,417	7/11/14	$26.01	126,600
5/19/14	$26.09	110,737	7/14/14	$25.99	75,008
5/20/14	$26.19	89,049	7/15/14	$25.97	88,519
5/21/14	$26.14	93,990	7/16/14	$25.98	52,513
5/22/14	$26.10	61,165	7/17/14	$25.89	83,514
5/23/14	$26.20	62,634	7/18/14	$25.87	233,457
5/27/14	$26.20	130,549	7/21/14	$25.88	66,696
5/28/14	$25.65	224,940	7/22/14	$25.86	81,739
5/29/14	$25.66	149,288	7/23/14	$25.88	35,723
5/30/14	$25.77	78,660	7/24/14	$25.97	46,811
6/2/14	$25.71	116,398	7/25/14	$26.00	113,289
6/3/14	$25.59	477,142	7/28/14	$25.95	73,818
6/4/14	$25.71	248,205	7/29/14	$25.86	140,497
6/5/14	$25.68	131,760	7/30/14	$25.86	78,458
6/6/14	$25.62	82,139	7/31/14	$25.79	170,743
6/9/14	$25.66	60,090	8/1/14	$25.71	117,479
6/10/14	$25.64	112,861	8/4/14	$25.80	100,534
6/11/14	$25.64	70,155	8/5/14	$25.74	132,067
6/12/14	$25.74	121,973	8/6/14	$25.76	92,864
6/13/14	$25.71	77,393	8/7/14	$25.99	80,478
6/16/14	$25.73	150,533	8/8/14	$25.90	75,478
6/17/14	$25.81	134,438	8/11/14	$25.91	171,731
6/18/14	$25.85	99,672	8/12/14	$25.94	38,355

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
8/13/14	$26.01	77,899	10/7/14	$25.77	228,382
8/14/14	$26.06	135,285	10/8/14	$25.79	257,835
8/15/14	$26.12	96,221	10/9/14	$25.79	121,525
8/18/14	$26.14	117,087	10/10/14	$25.74	143,648
8/19/14	$26.11	149,560	10/13/14	$25.79	161,241
8/20/14	$26.11	82,596	10/14/14	$25.77	175,895
8/21/14	$26.11	76,363	10/15/14	$25.73	237,078
8/22/14	$26.17	103,048	10/16/14	$25.81	167,685
8/25/14	$26.20	100,731	10/17/14	$25.65	271,297
8/26/14	$26.23	191,407	10/20/14	$25.90	163,933
8/27/14	$25.90	174,833	10/21/14	$25.92	116,471
8/28/14	$25.89	156,642	10/22/14	$25.88	137,980
8/29/14	$25.92	48,654	10/23/14	$25.93	129,616
9/2/14	$25.96	100,287	10/24/14	$25.99	100,037
9/3/14	$25.94	105,919	10/27/14	$25.95	160,396
9/4/14	$25.81	199,068	10/28/14	$25.97	129,168
9/5/14	$25.84	171,113	10/29/14	$25.99	91,430
9/8/14	$25.80	122,047	10/30/14	$25.95	166,915
9/9/14	$25.78	105,038	10/31/14	$25.81	392,596
9/10/14	$25.75	129,048	11/3/14	$25.88	149,226
9/11/14	$25.72	39,216	11/4/14	$25.96	145,384
9/12/14	$25.74	96,868	11/5/14	$25.97	93,405
9/15/14	$25.72	60,252	11/6/14	$25.96	80,029
9/16/14	$25.74	181,860	11/7/14	$26.10	142,623
9/17/14	$25.83	194,714	11/10/14	$26.04	201,011
9/18/14	$25.75	170,253	11/11/14	$26.05	120,401
9/19/14	$25.81	94,832	11/12/14	$26.07	182,738
9/22/14	$25.79	85,667	11/13/14	$26.11	128,775
9/23/14	$25.88	175,299	11/14/14	$26.15	122,894
9/24/14	$25.83	63,844	11/17/14	$26.16	306,758
9/25/14	$25.71	96,962	11/18/14	$26.20	268,913
9/26/14	$25.88	92,507	11/19/14	$26.32	193,566
9/29/14	$25.90	146,808	11/20/14	$26.36	125,279
9/30/14	$25.97	136,891	11/21/14	$26.40	161,966
10/1/14	$25.98	198,973	11/24/14	$26.44	142,966
10/2/14	$25.89	178,019	11/25/14	$26.48	191,467
10/3/14	$25.82	70,592	11/26/14	$26.00	301,913
10/6/14	$25.82	162,639	11/28/14	$25.92	109,470

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
12/1/14	$25.75	252,702	1/27/15	$26.39	140,591
12/2/14	$25.88	183,010	1/28/15	$26.43	238,496
12/3/14	$25.84	226,951	1/29/15	$26.27	222,788
12/4/14	$25.75	240,163	1/30/15	$26.30	82,033
12/5/14	$25.88	173,397	2/2/15	$26.44	94,231
12/8/14	$25.81	223,238	2/3/15	$26.44	135,490
12/9/14	$25.82	147,528	2/4/15	$26.36	167,897
12/10/14	$25.80	106,944	2/5/15	$26.47	121,837
12/11/14	$25.90	148,363	2/6/15	$26.49	272,163
12/12/14	$25.94	90,088	2/9/15	$26.51	130,595
12/15/14	$25.85	181,140	2/10/15	$26.48	182,901
12/16/14	$25.80	141,025	2/11/15	$26.57	126,459
12/17/14	$25.80	163,870	2/12/15	$26.63	123,785
12/18/14	$25.87	100,568	2/13/15	$26.68	106,617
12/19/14	$25.88	157,869	2/17/15	$26.71	116,110
12/22/14	$25.85	156,371	2/18/15	$26.66	187,045
12/23/14	$25.90	122,235	2/19/15	$26.72	72,970
12/24/14	$25.88	94,786	2/20/15	$26.72	109,736
12/26/14	$25.90	33,149	2/23/15	$26.80	76,307
12/29/14	$25.96	111,171	2/24/15	$26.80	96,368
12/30/14	$26.06	69,337	2/25/15	$26.85	124,212
12/31/14	$26.08	109,648	2/26/15	$26.74	276,726
1/2/15	$26.20	250,080	2/27/15	$26.63	265,322
1/5/15	$26.11	198,052	3/2/15	$26.67	185,414
1/6/15	$26.16	210,082	3/3/15	$26.90	443,670
1/7/15	$26.31	103,155	3/4/15	$27.00	153,772
1/8/15	$26.21	158,536	3/5/15	$26.45	324,717
1/9/15	$26.19	99,094	3/6/15	$26.35	250,172
1/12/15	$26.28	270,779	3/9/15	$26.25	204,803
1/13/15	$26.31	154,899	3/10/15	$26.27	240,391
1/14/15	$26.23	188,691	3/11/15	$26.25	91,493
1/15/15	$26.16	226,043	3/12/15	$26.21	135,864
1/16/15	$26.32	198,989	3/13/15	$26.17	135,559
1/20/15	$26.22	140,972	3/16/15	$26.16	156,428
1/21/15	$26.33	98,219	3/17/15	$26.20	97,860
1/22/15	$26.39	112,455	3/18/15	$26.26	236,827
1/23/15	$26.40	113,038	3/19/15	$26.20	115,436
1/26/15	$26.36	155,811	3/20/15	$26.20	182,408

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
3/23/15	$26.29	93,364	5/15/15	$26.25	51,021
3/24/15	$26.29	78,014	5/18/15	$26.20	58,378
3/25/15	$26.44	113,263	5/19/15	$26.19	61,056
3/26/15	$26.42	95,040	5/20/15	$26.22	67,474
3/27/15	$26.41	54,468	5/21/15	$26.30	69,066
3/30/15	$26.23	185,736	5/22/15	$26.30	48,844
3/31/15	$26.25	117,184	5/26/15	$26.37	66,298
4/1/15	$26.21	89,050	5/27/15	$26.35	79,203
4/2/15	$26.34	110,951	5/28/15	$26.02	131,615
4/6/15	$26.31	57,836	5/29/15	$26.02	109,377
4/7/15	$26.30	96,980	6/1/15	$26.00	96,577
4/8/15	$26.30	71,775	6/2/15	$25.82	209,450
4/9/15	$26.31	90,178	6/3/15	$25.85	70,396
4/10/15	$26.33	43,578	6/4/15	$25.98	47,663
4/13/15	$26.24	129,099	6/5/15	$26.02	58,751
4/14/15	$26.29	160,515	6/8/15	$25.90	78,443
4/15/15	$26.30	99,106	6/9/15	$25.85	60,862
4/16/15	$26.24	109,778	6/10/15	$25.81	58,331
4/17/15	$26.05	378,204	6/11/15	$25.86	66,393
4/20/15	$26.06	226,546	6/12/15	$25.87	56,712
4/21/15	$26.09	128,206	6/15/15	$25.89	81,897
4/22/15	$26.08	88,490	6/16/15	$25.97	104,976
4/23/15	$26.13	167,513	6/17/15	$25.95	71,032
4/24/15	$26.15	76,131	6/18/15	$25.84	122,859
4/27/15	$26.15	88,602	6/19/15	$25.86	164,993
4/28/15	$26.12	167,609	6/22/15	$25.96	72,335
4/29/15	$26.12	96,029	6/23/15	$25.91	53,213
4/30/15	$26.14	70,232	6/24/15	$25.93	57,793
5/1/15	$26.06	109,324	6/25/15	$25.95	42,986
5/4/15	$26.13	68,353	6/26/15	$26.00	51,897
5/5/15	$26.11	75,952	6/29/15	$25.85	122,665
5/6/15	$25.84	233,850	6/30/15	$25.99	47,577
5/7/15	$25.89	96,481	7/1/15	$26.04	58,083
5/8/15	$26.00	169,264	7/2/15	$26.04	62,656
5/11/15	$25.91	102,045	7/6/15	$25.96	79,053
5/12/15	$25.99	104,469	7/7/15	$25.90	95,593
5/13/15	$26.23	117,065	7/8/15	$25.89	60,531
5/14/15	$26.31	100,213	7/9/15	$25.87	44,609

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume	Date	Closing ADS Price	Volume
7/10/15	$25.91	47,924	9/2/15	$25.75	247,525
7/13/15	$26.00	104,193	9/3/15	$25.78	79,876
7/14/15	$25.99	75,442	9/4/15	$25.76	70,804
7/15/15	$26.03	187,475	9/8/15	$25.80	94,407
7/16/15	$26.14	154,473	9/9/15	$25.83	119,327
7/17/15	$26.18	257,491	9/10/15	$25.87	74,343
7/20/15	$26.20	116,161	9/11/15	$25.94	59,432
7/21/15	$26.18	43,998	9/14/15	$25.84	50,994
7/22/15	$26.14	94,076	9/15/15	$25.97	123,280
7/23/15	$26.14	57,030	9/16/15	$25.98	77,129
7/24/15	$26.12	100,183	9/17/15	$26.04	150,650
7/27/15	$26.07	66,323	9/18/15	$25.89	123,191
7/28/15	$26.15	85,935	9/21/15	$26.09	71,136
7/29/15	$26.14	59,486	9/22/15	$25.97	48,840
7/30/15	$26.14	98,694	9/23/15	$26.14	67,759
7/31/15	$26.26	137,475	9/24/15	$26.12	84,894
8/3/15	$26.27	132,004	9/25/15	$26.10	116,223
8/4/15	$26.23	129,075	9/28/15	$26.06	67,848
8/5/15	$26.25	146,329	9/29/15	$25.95	125,071
8/6/15	$26.20	94,308	9/30/15	$25.87	121,832
8/7/15	$26.05	233,717	10/1/15	$25.86	88,029
8/10/15	$26.17	78,098	10/2/15	$25.90	154,797
8/11/15	$26.22	140,542	10/5/15	$25.98	122,907
8/12/15	$26.25	76,772	10/6/15	$25.95	163,343
8/13/15	$26.32	74,915	10/7/15	$26.07	90,692
8/14/15	$26.41	89,243	10/8/15	$26.20	62,872
8/17/15	$26.44	42,140	10/9/15	$26.11	58,170
8/18/15	$26.40	59,423	10/12/15	$26.17	17,698
8/19/15	$26.32	67,097	10/13/15	$26.20	97,722
8/20/15	$26.30	101,485	10/14/15	$26.25	104,147
8/21/15	$26.17	165,195	10/15/15	$26.27	147,460
8/24/15	$25.86	416,432	10/16/15	$26.25	274,380
8/25/15	$26.01	99,437	10/19/15	$26.17	166,432
8/26/15	$26.17	86,584	10/20/15	$26.27	50,114
8/27/15	$26.17	132,178	10/21/15	$26.25	105,680
8/28/15	$25.77	117,417	10/22/15	$26.38	107,040
8/31/15	$25.91	116,873	10/23/15	$26.37	105,712
9/1/15	$25.77	123,544	10/26/15	$26.38	108,776

Exhibit 4
Barclays Bank PLC
Series 5 Preferred ADS
Closing ADS Price and Volume
4/11/08 – 11/30/15

Date	Closing ADS Price	Volume
10/27/15	$26.25	311,395
10/28/15	$26.25	104,877
10/29/15	$26.27	116,121
10/30/15	$26.28	91,376
11/2/15	$26.35	107,544
11/3/15	$26.32	193,623
11/4/15	$26.40	129,536
11/5/15	$26.48	92,732
11/6/15	$26.29	171,157
11/9/15	$26.34	130,805
11/10/15	$26.46	119,963
11/11/15	$26.51	67,660
11/12/15	$26.56	87,109
11/13/15	$26.60	171,758
11/16/15	$26.52	96,981
11/17/15	$26.53	87,203
11/18/15	$26.48	153,601
11/19/15	$26.50	58,740
11/20/15	$26.51	135,794
11/23/15	$26.52	189,481
11/24/15	$26.63	102,862
11/25/15	$26.70	84,123
11/27/15	$26.40	131,237
11/30/15	$26.45	84,312

Source: *Bloomberg*

Exhibit 5
Barclays Bank PLC Series 5 Preferred ADS
Closing ADS Price vs. NYSE Composite and Preferred Stock Index
4/11/08 – 1/14/10

Source: *Bloomberg*; *S&P Dow Jones Indices*

Note:
[1] The Preferred Stock Index is a value-weighted index composed of financial securities in the S&P U.S. Fixed Rate Preferred Stock Index as of 12/31/08. Financial securities were identified using the issuing company's Global Industry Classification Standard (GICS) classification. The Preferred Stock Index excludes securities that were issued by Barclays. The Preferred Stock Index is pegged to $25, Barclay's closing Series 5 ADS price on 4/11/08.
[2] The NYSE Composite Index is pegged to $25, Barclay's closing Series 5 ADS price on 4/11/08 using dividend-adjusted returns.

Exhibit 6

Preferred Stock Index [1]

Security Weightings

As of 12/31/08

	Security	Index Weight [2]
1.	Wells Fargo Cap IV 7% Cap Secs	4.95%
2.	MetLife Inc 6.5%'B'Pfd	3.95%
3.	Citigroup Cap VIII 6.95%'TruPS	3.70%
4.	J.P. Mor Chase Cap X 7% Secs	3.66%
5.	Citigroup Cap XVI 6.45% E	3.46%
6.	J.P. Mor Chase Cap XI 5.875% S	3.21%
7.	BAC Cap Tr II 7.0% Cap Secs	2.85%
8.	BAC Cap Tr X 6.25% Cap Secs	2.80%
9.	ABN AMRO Cap Fdg Tr VII 6.08%	2.76%
10.	Wachovia Cap Tr IV 6.375%	2.63%
11.	USB Cap Tr XI 6.60%'J'Pfd	2.60%
12.	Citigroup Cap IX 6.0%'TruPS'	2.47%
13.	Deutsche Bk Cap Fndg Tr IX 6.6	2.34%
14.	Wachovia Pfd Fdg 7.25% Exch Pf	2.33%
15.	Wachovia Cap Tr IX 6.375%'C'Pf	2.22%
16.	Mor Stan Cap Tr III 6.25% Cap Se	2.15%
17.	Natl City Cap TrII 6.625% TruP	2.13%
18.	ABN AMRO Cap Fdg Tr V 5.9% Pfd	2.09%
19.	U.S. Bancorp 7.875% Ser D Dep	2.06%
20.	KeyCorp Cap X 8% Tr Pfd Secs	1.85%
21.	BANK ONE Cap VI 7.20% Pfd	1.81%
22.	Mor Stan Cap Tr VI 6.6% Cap Se	1.79%
23.	Public Storage 7.25%'I'Dep Pfd	1.76%
24.	Santander Fin Pfd S.A. 6.5% Pf	1.74%
25.	USB Cap Tr XII 6.30%'K'Pf	1.73%
26.	PNC Cap Tr E 7.75% TruPS	1.71%
27.	JPMorChase Cp XVI 6.35% Secs	1.64%
28.	Wells Fargo Corp IX 5.625%'TOP	1.61%
29.	Wells Fargo Cap VII 5.85%'TruP	1.60%
30.	Deutsche Bk Cap Fndg Tr VIII 6	1.58%
31.	Public Storage 7.25%'K'Dep Pfd	1.56%
32.	HSBC Finance 6.36%'B'Dep Pfd	1.55%
33.	Fleet Cap Tr VIII 7.20% Pfd	1.48%
34.	Santander Fin Pfd S.A. 6.8% Pf	1.46%
35.	Natl City Cap Tr IV 8% En TruP	1.46%
36.	Mor Stan Cap Tr IV 6.25% Secs	1.43%
37.	Public Storage 6.625%'M'D	1.43%
38.	Royal Bk Scotland Ser'N'ADS	1.40%
39.	Natl City Cap Tr III 6.625% Tr	1.39%
40.	M&T Capital Tr IV 8.5% EnTruPS	1.35%
41.	HSBC USA 6.50% Dep Pfd	1.33%
42.	Royal Bk Scotland Pfd 'M' ADS	1.26%

Exhibit 6

Preferred Stock Index [1]

Security Weightings

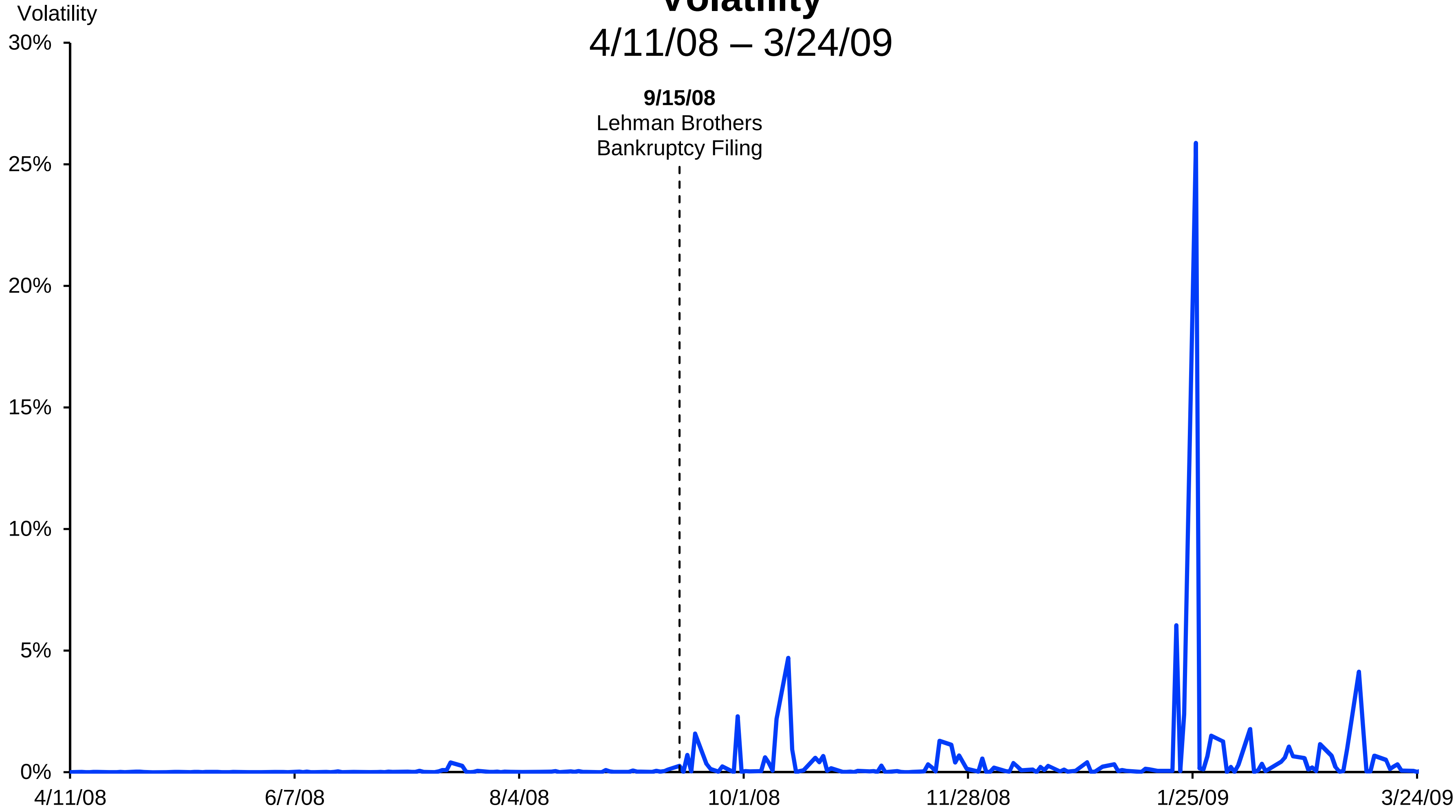
As of 12/31/08

	Security	Index Weight [2]
43.	USB Cap Tr VIII 6.35%'G'Pfd	1.24%
44.	KeyCorp Cap IX 6.75% Tr P	1.17%
45.	Royal Bk Scotland Pfd 'L' ADS	1.04%
46.	Zions Cap Tr B 8% Cap Secs	0.97%
47.	Capital One Cap II 7.5%'TruPS'	0.90%
48.	Capstead Mtge $1.26 Cv'B'	0.80%
49.	CIT Group 7.5% Equity Uts	0.78%
50.	RenaissanceRe Hldgs 6.6%'	0.77%
51.	CIT Group 6.35%'A'Pfd	0.70%
52.	Duke Realty 8.375%'O'Dep Pfd	0.66%
53.	Hospitality Prop Tr 7%'C'	0.64%
54.	Maguire Prop 7.625%'A'Pfd	0.04%

Source: *S&P Dow Jones Indices*

Note:
[1] The Preferred Stock Index is a value-weighted index composed of financial securities in the S&P U.S. Fixed Rate Preferred Stock Index as of 12/31/08. Financial securities were identified using the issuing company's Global Industry Classification Standard (GICS) classification. The Preferred Stock Index excludes securities that were issued by Barclays.
[2] The index weight for a given security is the market capitalization of that security divided by the total market capitalization of all securities in the index. Index weights are calculated for each day based on the prior trading day's market capitalizations.

Exhibit 7
Barclays Bank PLC Series 5 Preferred ADS
Volatility
4/11/08 – 3/24/09



Source: *Bloomberg; S&P Dow Jones Indices*

Note: Volatility is estimated as the square of Barclays Bank PLC Series 5 Preferred ADS residual returns. Residual returns are calculated using the regression model described in Exhibit 8.

Exhibit 8
Regression Summary
Analysis Period: 4/11/08 – 3/24/09 [1]

	Analysis Period: 4/11/08 – 9/14/08		Analysis Period: 9/15/08 – 3/24/09	
Independent Variables	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**
Preferred Stock Index [2]	0.935	14.358	1.311	10.016
Constant	0.001	0.461	0.002	0.321
Number of Observations	108		132	
Adjusted R-Squared	65.40%		52.50%	
Root Mean Square Error	1.21%		7.77%	

Source: Second Consolidated Amended Complaint dated 9/16/13; *Bloomberg*; *S&P Dow Jones Indices*

Note:
[1] Indicator variables are included to remove any effect of the days alleged in the Complaint to have been affected by allegation-related news or events (5/15/08, 5/16/08, 6/25/08, 8/7/08, 10/13/08, 10/31/08, 11/18/08, 11/24/08, 1/13/09, 2/17/09, and 3/24/09).
[2] The Preferred Stock Index is a value-weighted index composed of financial securities in the S&P U.S. Fixed Rate Preferred Stock Index as of 12/31/08. Financial securities were identified using the issuing company's Global Industry Classification Standard (GICS) classification. The Preferred Stock Index excludes securities that were issued by Barclays.

Exhibit 9
Residuals Summary
Analysis Period: 4/11/08 – 3/24/09

Date	Barclays Bank PLC Series 5 Preferred ADS Close	Volume	Return	Preferred Stock Index Return [2]	Residual Return [3]	T-statistic [4],[5]
4/11/08	$25.00	6,440,755	0.00%	0.05%	-0.10%	-0.09
4/14/08	$24.89	2,019,738	-0.44%	-0.96%	0.40%	0.33
4/15/08	$24.92	3,642,237	0.12%	0.08%	-0.01%	-0.01
4/16/08	$25.10	7,595,780	0.72%	0.57%	0.14%	0.11
4/17/08	$25.15	4,239,429	0.20%	0.55%	-0.37%	-0.31
4/18/08	$25.35	2,990,464	0.80%	1.22%	-0.40%	-0.33
4/21/08	$25.15	2,177,013	-0.79%	-0.84%	-0.06%	-0.05
4/22/08	$25.00	1,795,912	-0.60%	-0.52%	-0.17%	-0.14
4/23/08	$25.00	1,299,736	0.00%	-0.24%	0.17%	0.14
4/24/08	$25.05	1,472,064	0.20%	0.64%	-0.45%	-0.37
4/25/08	$25.12	1,050,850	0.28%	0.39%	-0.14%	-0.11
4/28/08	$25.60	1,235,952	1.91%	0.27%	1.61%	1.32
4/29/08	$25.35	1,512,440	-0.98%	0.09%	-1.12%	-0.92
4/30/08	$25.35	1,120,821	0.00%	-0.08%	0.02%	0.02
5/1/08	$25.25	1,211,176	-0.39%	-0.14%	-0.32%	-0.26
5/2/08	$25.40	1,283,166	0.59%	0.58%	0.00%	0.00
5/5/08	$25.15	637,181	-0.98%	-1.01%	-0.10%	-0.08
5/6/08	$25.30	869,988	0.60%	-0.08%	0.61%	0.51
5/7/08	$25.40	1,261,239	0.40%	0.16%	0.19%	0.16
5/8/08	$25.35	468,795	-0.20%	0.35%	-0.58%	-0.48
5/9/08	$25.26	677,605	-0.36%	0.27%	-0.66%	-0.54
5/12/08	$25.11	651,433	-0.60%	-0.44%	-0.24%	-0.20
5/13/08	$25.20	730,190	0.36%	-0.38%	0.66%	0.54
5/14/08	$25.17	839,974	-0.12%	0.26%	-0.42%	-0.34
5/15/08[1]	$25.23	888,372	0.24%	0.22%	-0.02%	-0.02
5/16/08[1]	$25.19	2,244,260	-0.16%	0.45%	-0.63%	-0.52
5/19/08	$25.16	570,288	-0.12%	-1.05%	0.81%	0.67
5/20/08	$25.20	813,888	0.16%	-0.22%	0.31%	0.26
5/21/08	$25.18	884,628	-0.08%	-0.22%	0.07%	0.06
5/22/08	$25.25	1,290,719	0.28%	-0.10%	0.32%	0.26
5/23/08	$25.21	444,647	-0.16%	0.31%	-0.50%	-0.42
5/27/08	$25.25	533,961	0.16%	0.05%	0.06%	0.05
5/28/08	$25.08	961,618	-0.67%	-0.48%	-0.28%	-0.23
5/29/08	$25.05	1,107,529	-0.12%	0.03%	-0.20%	-0.17
5/30/08	$25.17	719,488	0.48%	0.03%	0.39%	0.32
6/2/08	$25.08	1,126,907	-0.36%	-1.05%	0.57%	0.47
6/3/08	$24.95	1,511,489	-0.52%	-0.66%	0.04%	0.03
6/4/08	$25.01	499,793	0.24%	-0.64%	0.78%	0.64
6/5/08	$25.07	329,113	0.24%	0.61%	-0.39%	-0.32
6/6/08	$25.02	375,900	-0.20%	-0.51%	0.22%	0.18
6/9/08	$25.02	743,000	0.00%	-1.35%	1.21%	0.99
6/10/08	$24.91	702,263	-0.44%	-0.82%	0.27%	0.23
6/11/08	$24.73	341,185	-0.72%	-1.76%	0.86%	0.71
6/12/08	$24.93	322,422	0.81%	0.18%	0.59%	0.48
6/13/08	$25.08	376,810	0.60%	0.20%	0.36%	0.30
6/16/08	$24.98	291,830	-0.40%	0.13%	-0.57%	-0.47
6/17/08	$25.00	369,303	0.08%	0.10%	-0.06%	-0.05
6/18/08	$25.00	231,885	0.00%	-0.84%	0.73%	0.61
6/19/08	$24.97	225,057	-0.12%	-1.63%	1.35%	1.11
6/20/08	$24.97	313,942	0.00%	-0.41%	0.32%	0.27
6/23/08	$24.71	251,220	-1.04%	-1.69%	0.48%	0.40

Exhibit 9
Residuals Summary
Analysis Period: 4/11/08 – 3/24/09

Date	Barclays Bank PLC Series 5 Preferred ADS Close	Volume	Return	Preferred Stock Index Return [2]	Residual Return [3]	T-statistic [4],[5]	
6/24/08	$24.80	248,005	0.36%	-0.30%	0.59%	0.48	
6/25/08[1]	$24.96	490,566	0.65%	0.69%	-0.05%	-0.04	
6/26/08	$24.80	224,738	-0.64%	-1.47%	0.67%	0.56	
6/27/08	$24.72	287,122	-0.32%	-0.63%	0.21%	0.17	
6/30/08	$24.59	438,808	-0.53%	-1.29%	0.62%	0.52	
7/1/08	$24.25	250,340	-1.38%	-1.49%	-0.05%	-0.04	
7/2/08	$24.07	224,256	-0.74%	0.44%	-1.21%	-1.00	
7/3/08	$24.25	92,265	0.75%	-0.19%	0.87%	0.72	
7/7/08	$24.26	954,382	0.04%	-1.18%	1.09%	0.90	
7/8/08	$24.30	236,986	0.16%	-0.45%	0.53%	0.43	
7/9/08	$24.36	235,489	0.25%	0.47%	-0.24%	-0.20	
7/10/08	$24.25	168,459	-0.45%	-2.18%	1.53%	1.26	
7/11/08	$23.35	237,341	-3.71%	-3.56%	-0.44%	-0.36	
7/14/08	$20.85	249,417	-10.71%	-7.95%	-3.33%	-2.75	*
7/15/08	$20.01	597,977	-4.03%	-4.60%	0.21%	0.18	
7/16/08	$21.99	293,017	9.90%	9.57%	0.90%	0.74	
7/17/08	$22.90	440,597	4.14%	5.25%	-0.82%	-0.68	
7/18/08	$22.31	685,024	-2.58%	2.68%	-5.14%	-4.24	*
7/21/08	$22.12	940,983	-0.85%	3.06%	-3.77%	-3.11	*
7/22/08	$22.75	502,698	2.85%	1.34%	1.54%	1.27	
7/23/08	$23.59	1,333,966	3.69%	2.28%	1.50%	1.24	
7/24/08	$23.10	442,157	-2.08%	-1.25%	-0.96%	-0.79	
7/25/08	$23.42	349,369	1.39%	-0.81%	2.08%	1.72	
7/28/08	$23.16	337,950	-1.11%	-1.41%	0.15%	0.13	
7/29/08	$23.75	562,600	2.55%	1.28%	1.30%	1.07	
7/30/08	$23.74	314,076	-0.04%	0.93%	-0.97%	-0.80	
7/31/08	$23.90	235,518	0.67%	0.25%	0.39%	0.32	
8/1/08	$24.37	203,153	1.97%	0.42%	1.52%	1.25	
8/4/08	$24.22	351,530	-0.62%	-0.07%	-0.61%	-0.50	
8/5/08	$24.45	339,370	0.95%	0.89%	0.07%	0.05	
8/6/08	$24.69	404,983	0.98%	0.14%	0.79%	0.65	
8/7/08[1]	$24.46	223,086	-0.93%	-0.19%	-0.81%	-0.66	
8/8/08	$24.50	269,257	0.16%	0.61%	-0.46%	-0.38	
8/11/08	$24.65	306,485	0.61%	-0.39%	0.92%	0.76	
8/12/08	$24.63	239,949	-0.08%	-1.38%	1.15%	0.95	
8/13/08	$24.44	5,548,264	-0.77%	-1.69%	0.75%	0.62	
8/14/08	$24.02	278,476	-1.72%	0.12%	-1.89%	-1.55	
8/15/08	$24.22	457,102	0.83%	0.78%	0.05%	0.04	
8/18/08	$24.45	120,554	0.95%	-0.73%	1.58%	1.30	
8/19/08	$24.30	159,906	-0.61%	-1.48%	0.71%	0.59	
8/20/08	$24.46	228,024	0.66%	-1.26%	1.78%	1.47	
8/21/08	$24.31	150,312	-0.61%	0.01%	-0.68%	-0.56	
8/22/08	$24.45	204,680	0.58%	1.02%	-0.43%	-0.36	
8/25/08	$24.57	266,273	0.49%	-0.15%	0.58%	0.48	
8/26/08	$24.75	190,432	0.73%	0.53%	0.18%	0.15	
8/27/08	$24.35	308,943	-1.62%	0.75%	-2.38%	-1.96	
8/28/08	$24.60	184,969	1.03%	1.86%	-0.77%	-0.63	
8/29/08	$24.74	134,235	0.57%	0.97%	-0.39%	-0.32	
9/2/08	$24.77	222,463	0.12%	0.78%	-0.66%	-0.55	
9/3/08	$24.50	1,398,552	-1.09%	0.97%	-2.05%	-1.69	
9/4/08	$24.00	764,392	-2.04%	-0.63%	-1.51%	-1.24	

Exhibit 9
Residuals Summary
Analysis Period: 4/11/08 – 3/24/09

Date	Barclays Bank PLC Series 5 Preferred ADS Close	Volume	Return	Preferred Stock Index Return [2]	Residual Return [3]	T-statistic [4],[5]	
9/5/08	$23.80	2,389,612	-0.83%	0.19%	-1.07%	-0.88	
9/8/08	$23.57	790,818	-0.97%	-1.54%	0.41%	0.34	
9/9/08	$22.81	600,742	-3.22%	-4.34%	0.78%	0.64	
9/10/08	$21.72	604,697	-4.78%	-2.85%	-2.17%	-1.79	
9/11/08	$20.06	1,339,312	-7.64%	-4.53%	-3.47%	-2.86	*
9/12/08	$20.90	512,756	4.19%	0.58%	3.59%	2.96	*
9/15/08	$18.68	411,900	-10.62%	-12.13%	5.06%	0.65	
9/16/08	$17.55	514,636	-6.05%	-5.50%	0.93%	0.12	
9/17/08	$16.56	513,508	-5.64%	-10.88%	8.41%	1.08	
9/18/08	$19.84	475,246	19.81%	16.33%	-1.83%	-0.24	
9/19/08	$19.76	573,615	-0.40%	9.11%	-12.58%	-1.62	
9/22/08	$20.01	283,082	1.27%	-3.59%	5.75%	0.74	
9/23/08	$20.26	163,924	1.25%	-1.92%	3.54%	0.46	
9/24/08	$20.02	210,897	-1.18%	0.93%	-2.62%	-0.34	
9/25/08	$21.07	171,798	5.24%	2.72%	1.46%	0.19	
9/26/08	$20.80	225,852	-1.26%	-4.85%	4.87%	0.63	
9/29/08	$16.94	409,573	-18.58%	-14.55%	0.28%	0.04	
9/30/08	$17.10	236,799	0.95%	12.11%	-15.15%	-1.95	
10/1/08	$17.83	335,630	4.27%	3.58%	-0.64%	-0.08	
10/2/08	$17.00	181,245	-4.66%	-2.11%	-2.12%	-0.27	
10/3/08	$18.24	230,263	7.29%	3.97%	1.87%	0.24	
10/6/08	$16.25	381,297	-10.91%	-6.90%	-2.08%	-0.27	
10/7/08	$13.50	688,398	-16.92%	-7.13%	-7.79%	-1.00	
10/8/08	$12.59	1,145,382	-6.74%	-0.57%	-6.21%	-0.80	
10/9/08	$11.55	739,701	-8.26%	-8.32%	2.43%	0.31	
10/10/08	$9.10	590,572	-21.21%	-5.06%	-14.80%	-1.91	
10/13/08[1]	$13.87	463,172	52.42%	23.28%	21.67%	2.58	*
10/14/08	$17.45	802,027	25.81%	12.16%	9.64%	1.24	
10/15/08	$16.94	321,151	-2.93%	-2.23%	-0.23%	-0.03	
10/16/08	$16.52	285,609	-2.49%	-0.50%	-2.06%	-0.26	
10/17/08	$16.52	159,872	0.02%	1.97%	-2.78%	-0.36	
10/20/08	$16.39	329,959	-0.79%	5.06%	-7.65%	-0.98	
10/21/08	$17.59	201,653	7.32%	0.57%	6.35%	0.82	
10/22/08	$16.01	726,116	-8.98%	-0.83%	-8.11%	-1.04	
10/23/08	$16.10	1,014,004	0.56%	-1.45%	2.25%	0.29	
10/24/08	$15.64	174,596	-2.86%	0.72%	-4.03%	-0.52	
10/27/08	$15.32	114,499	-2.05%	-1.06%	-0.88%	-0.11	
10/28/08	$15.50	345,242	1.17%	-0.06%	1.03%	0.13	
10/29/08	$15.87	276,450	2.39%	0.66%	1.30%	0.17	
10/30/08	$16.25	654,940	2.39%	1.76%	-0.14%	-0.02	
10/31/08[1]	$16.12	498,932	-0.80%	0.99%	-2.33%	-0.30	
11/3/08	$16.70	295,672	3.60%	1.25%	1.74%	0.22	
11/4/08	$17.53	660,003	4.97%	2.13%	1.95%	0.25	
11/5/08	$17.39	378,649	-0.80%	-0.21%	-0.75%	-0.10	
11/6/08	$17.95	419,068	3.22%	-1.68%	5.20%	0.67	
11/7/08	$18.08	282,486	0.72%	0.60%	-0.29%	-0.04	
11/10/08	$18.39	225,075	1.71%	-0.38%	1.99%	0.26	
11/11/08	$18.36	187,979	-0.16%	0.21%	-0.67%	-0.09	
11/12/08	$17.52	1,126,656	-4.58%	-4.02%	0.47%	0.06	
11/13/08	$17.25	189,544	-1.54%	-1.63%	0.38%	0.05	
11/14/08	$17.20	186,608	-0.29%	0.42%	-1.07%	-0.14	
11/17/08	$16.99	75,042	-1.22%	-2.35%	1.64%	0.21	

Exhibit 9
Residuals Summary
Analysis Period: 4/11/08 – 3/24/09

	Barclays Bank PLC Series 5 Preferred ADS			Preferred Stock Index	Residual		
Date	Close	Volume	Return	Return [2]	Return [3]	T-statistic [4],[5]	
11/18/08[1]	$15.56	379,630	-8.42%	-2.25%	-5.69%	-0.73	
11/19/08	$13.00	335,714	-16.45%	-9.37%	-4.39%	-0.57	
11/20/08	$11.39	334,605	-12.38%	-10.89%	1.67%	0.22	
11/21/08	$12.50	364,086	9.75%	-1.37%	11.32%	1.46	
11/24/08[1]	$13.44	800,542	7.52%	13.66%	-10.61%	-1.33	
11/25/08	$13.55	404,207	0.82%	5.23%	-6.27%	-0.81	
11/26/08	$13.07	601,889	-3.54%	3.46%	-8.30%	-1.07	
11/28/08	$13.91	123,548	6.43%	1.88%	3.73%	0.48	
12/1/08	$13.25	334,326	-4.74%	-2.66%	-1.48%	-0.19	
12/2/08	$12.50	903,243	-5.66%	1.22%	-7.48%	-0.96	
12/3/08	$12.60	1,450,349	0.80%	1.23%	-1.03%	-0.13	
12/4/08	$12.65	414,700	0.40%	-0.39%	0.68%	0.09	
12/5/08	$12.20	707,834	-3.56%	0.31%	-4.18%	-0.54	
12/8/08	$12.69	303,045	4.02%	1.35%	2.02%	0.26	
12/9/08	$12.90	641,273	1.65%	-0.02%	1.46%	0.19	
12/10/08	$13.60	498,046	5.43%	-0.67%	6.08%	0.78	
12/11/08	$14.10	558,466	3.68%	-1.04%	4.81%	0.62	
12/12/08	$13.70	242,625	-2.84%	-0.22%	-2.77%	-0.36	
12/15/08	$14.00	429,325	2.19%	-0.95%	3.21%	0.41	
12/16/08	$14.48	360,184	3.43%	2.44%	0.01%	0.00	
12/17/08	$15.50	462,441	7.04%	1.72%	4.57%	0.59	
12/18/08	$15.35	490,182	-0.97%	1.30%	-2.90%	-0.37	
12/19/08	$14.64	296,827	-4.63%	0.18%	-5.09%	-0.66	
12/22/08	$14.38	325,191	-1.78%	-0.20%	-1.73%	-0.22	
12/23/08	$14.15	272,940	-1.60%	1.09%	-3.25%	-0.42	
12/24/08	$14.43	125,904	1.98%	0.30%	1.36%	0.18	
12/26/08	$14.86	169,676	2.98%	0.46%	2.15%	0.28	
12/29/08	$13.99	1,103,167	-5.85%	0.23%	-6.38%	-0.82	
12/30/08	$14.25	470,656	1.86%	1.65%	-0.52%	-0.07	
12/31/08	$15.02	336,489	5.40%	2.83%	1.47%	0.19	
1/2/09	$16.37	316,454	8.99%	3.08%	4.72%	0.61	
1/5/09	$18.20	536,071	11.18%	4.02%	5.69%	0.73	
1/6/09	$18.96	796,396	4.18%	1.53%	1.95%	0.25	
1/7/09	$18.99	393,633	0.16%	-2.20%	2.82%	0.36	
1/8/09	$19.25	340,759	1.37%	-0.83%	2.23%	0.29	
1/9/09	$19.80	284,681	2.86%	0.48%	2.00%	0.26	
1/12/09	$19.23	445,045	-2.88%	-1.66%	-0.93%	-0.12	
1/13/09[1]	$18.29	319,263	-4.89%	-1.06%	-3.73%	-0.48	
1/14/09	$18.08	367,118	-1.15%	-3.62%	3.38%	0.43	
1/15/09	$16.74	604,783	-7.41%	-3.64%	-2.87%	-0.37	
1/16/09	$16.01	668,900	-4.36%	-1.84%	-2.18%	-0.28	
1/20/09	$13.23	576,274	-17.36%	-11.70%	-2.24%	-0.29	
1/21/09	$10.35	1,522,658	-21.77%	1.97%	-24.57%	-3.16	*
1/22/09	$9.52	1,148,821	-8.02%	-4.67%	-2.11%	-0.27	
1/23/09	$8.02	831,901	-15.76%	-0.38%	-15.48%	-1.99	*
1/26/09	$12.60	935,676	57.11%	4.58%	50.88%	6.55	*
1/27/09	$13.40	332,998	6.35%	1.68%	3.93%	0.51	
1/28/09	$14.40	354,382	7.46%	8.15%	-3.45%	-0.44	
1/29/09	$12.59	241,265	-12.57%	-3.61%	-8.06%	-1.04	
1/30/09	$14.00	194,631	11.20%	-0.98%	12.26%	1.58	
2/2/09	$12.00	285,238	-14.29%	-2.49%	-11.25%	-1.45	
2/3/09	$11.57	231,037	-3.57%	-3.03%	0.18%	0.02	

Exhibit 9
Residuals Summary
Analysis Period: 4/11/08 – 3/24/09

	Barclays Bank PLC Series 5 Preferred ADS			Preferred Stock Index	Residual		
Date	**Close**	**Volume**	**Return**	**Return [2]**	**Return [3]**	**T-statistic [4],[5]**	
2/4/09	$10.59	244,127	-8.49%	-3.10%	-4.65%	-0.60	
2/5/09	$10.59	361,335	0.00%	0.29%	-0.60%	-0.08	
2/6/09	$11.69	228,737	10.39%	3.60%	5.44%	0.70	
2/9/09	$13.45	662,907	15.06%	1.16%	13.31%	1.71	
2/10/09	$13.03	314,443	-3.12%	-3.11%	0.73%	0.09	
2/11/09	$13.45	209,916	3.22%	0.35%	2.54%	0.33	
2/12/09	$12.38	259,222	-7.96%	-1.81%	-5.81%	-0.75	
2/13/09	$11.95	136,248	-3.47%	-1.31%	-1.98%	-0.25	
2/17/09[1]	$10.00	233,731	-16.32%	-7.62%	-6.55%	-0.83	
2/18/09	$9.45	515,170	-5.50%	-10.32%	7.82%	1.01	
2/19/09	$9.20	1,112,825	-2.65%	-10.00%	10.24%	1.32	
2/20/09	$8.51	553,990	-7.50%	0.28%	-8.09%	-1.04	
2/23/09	$7.40	312,840	-13.04%	-4.30%	-7.62%	-0.98	
2/24/09	$8.88	369,980	20.00%	12.60%	3.26%	0.42	
2/25/09	$8.80	210,193	-0.90%	2.43%	-4.31%	-0.55	
2/26/09	$9.13	695,859	3.75%	4.31%	-2.12%	-0.27	
2/27/09	$7.57	403,772	-17.09%	-5.03%	-10.71%	-1.38	
3/2/09	$6.80	578,816	-10.17%	-14.17%	8.19%	1.05	
3/3/09	$6.30	293,204	-7.35%	-2.23%	-4.65%	-0.60	
3/4/09	$6.84	491,723	8.57%	5.22%	1.50%	0.19	
3/5/09	$6.02	739,041	-11.99%	-10.89%	2.07%	0.27	
3/6/09	$6.11	898,817	1.50%	-6.52%	9.83%	1.27	
3/9/09	$4.95	351,113	-18.99%	0.85%	-20.32%	-2.62	*
3/10/09	$6.89	321,303	39.19%	18.97%	14.09%	1.81	
3/11/09	$7.40	235,617	7.40%	4.28%	1.56%	0.20	
3/12/09	$7.98	240,984	7.84%	7.20%	-1.83%	-0.24	
3/13/09	$9.00	254,248	12.78%	3.33%	8.19%	1.06	
3/16/09	$10.15	384,439	12.78%	4.20%	7.05%	0.91	
3/17/09	$10.10	187,789	-0.49%	2.14%	-3.52%	-0.45	
3/18/09	$10.00	397,760	-0.99%	2.74%	-4.80%	-0.62	
3/19/09	$10.68	250,385	6.80%	0.74%	5.61%	0.72	
3/20/09	$10.03	105,862	-6.09%	-2.88%	-2.54%	-0.33	
3/23/09	$11.13	192,027	10.95%	6.37%	2.37%	0.31	
3/24/09[1]	$11.38	252,498	2.26%	1.10%	0.60%	0.08	

Source: Second Consolidated Amended Complaint dated 9/16/13; *Bloomberg*; *S&P Dow Jones Indices*

Note:
[1] Indicator variables are included to remove any effect of the days alleged in the Complaint to have been affected by allegation-related news or events are excluded from the regression (5/15/08, 5/16/08, 6/25/08, 8/7/08, 10/13/08, 10/31/08, 11/18/08, 11/24/08, 1/13/09, 2/17/09, and 3/24/09).
[2] The Preferred Stock Index is a value-weighted index composed of financial securities in the S&P U.S. Fixed Rate Preferred Stock Index as of 12/31/08. Financial securities were identified using the issuing company's Global Industry Classification Standard (GICS) classification. The Preferred Stock Index excludes securities that were issued by Barclays.
[3] For non-indicator days, BCS Residual Return = BCS Actual Return – [0.001 + 0.935*(Preferred Stock Index Return)] for the period 4/11/08 – 9/14/08 and BCS Residual Return = BCS Actual Return – [0.002 + 1.311*(Preferred Stock Index Return)] for the period 9/15/08 – 3/24/09. For indicator days, the Residual Return is the coefficient of the indicator variable.
[4] For non-indicator days, T-statistics are calculated by dividing the Residual Return as specified in [3] above by the Root Mean Square Error calculated over the period 4/11/08 – 9/14/08 or 9/15/08 – 3/24/09. For indicator days, the T-statistics are calculated using the Residual Return as specified in [3] above and the standard error of the coefficient of the indicator variable.
[5] * Denotes significance at the 5% significance level, using a two-tailed test.

EXHIBIT 32

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In re BARCLAYS BANK PLC SECURITIES LITIGATION	Master File No. 1:09-cv-01989-PAC

DECLARATION OF DR. JOSEPH R. MASON

December 15, 2015

I. Introduction and Summary of Opinions

1. I am the Hermann Moyse, Jr./Louisiana Bankers Association Endowed Chair of Banking at Louisiana State University's E. J. Ourso College of Business.[1] I have been retained by Plaintiffs' counsel to provide an opinion regarding the change in the capital position of Barclays Bank PLC ("Barclays") between December 31, 2007 and the date of the issuance of the Series 5 preferred shares (the "Securities") pursuant to the prospectus supplement dated April 8, 2008.

2. In summary, I am of the opinion that the change in Barclays' capital position between December 31, 2007 and April 2008, when the Securities were issued to investors, coupled with the FSA's requirement that Barclays raise its Tier 1 equity ratio to 5.25% by year-end 2008, presented a significant risk that Barclays would have to raise additional capital and/or sell assets in unfavorable market conditions.

3. My qualifications are described generally in Section II of this report. In Sections III and IV, I provide brief overviews of capital generally and preferred stock specifically. Section V is an overview of the Basel regulatory framework. Finally, in Section IV I discuss the developments in the market generally and Barclays specifically in the first quarter of 2008 and the significance of those developments.

II. Qualifications

4. I am Professor of Finance and the Hermann Moyse, Jr./Louisiana Bankers Association Endowed Chair of Banking at the Ourso School of Business, Louisiana State University, and Senior Fellow at the Wharton School at the University of Pennsylvania. I teach undergraduate, Masters, and Ph.D. courses in Financial Institutions, Risk Management, and Investments.

5. I am also an Academic Affiliate at Economists Inc. My consulting practice specializes in applying financial, economic, valuation, and statistical analyses to complex commercial litigation and corporate strategic decision-making. I have provided expert consulting services and testimony in a broad range of banking and financial services industry matters.

6. I am a recognized expert in structured finance and financial crises. I have testified on topics related to financial markets before numerous House and Senate committees, the European Parliament, and the Federal Reserve Board and have advised the U.S. Congress Joint Economic Committee, the U.S. Government Accountability Office, the Congressional Research Service, the

[1] A full statement of my qualifications can be found at the end of this report.

Federal Reserve Bank of Richmond, the Public Company Accounting Oversight Board, and the Financial Crisis Inquiry Commission on issues related to structured finance.

7. I also have experience advising corporations, government agencies, financial institutions, and research institutions on risk management issues; reviewing risk management systems and internal models; and advising on myriad issues related to contemporary finance. I was previously a senior financial economist at the Office of the Comptroller of the Currency and a visiting scholar at the Federal Reserve Banks of Atlanta and Philadelphia, the Federal Deposit Insurance Corporation, and the International Monetary Fund.

8. My research and economic commentary has been cited on numerous occasions by media throughout the world, including the Wall Street Journal, the New York Times, the Washington Post, the Financial Times, the Economist, Barrons, Business Week, die Zeit, Neue Zürcher Zeitung, Forbes, Fortune, Bloomberg Magazine, and the American Banker, and on press syndicates such as the Associated Press, Reuters, Bloomberg, KnightRidder, and MarketWatch-Dow Jones Newswire. I have been a frequent guest on CNBC, Bloomberg Television, and Fox Business News and have appeared on NBC News, CNN Headline News, CNBC Asia, National Public Radio, BBC Radio, Bloomberg Radio, and NBC Radio.

9. I hold a Ph.D. and a M.S. in Economics from the University of Illinois at Urbana-Champaign. A list of all cases in which I have testified at trial or deposition in the last four years appears in Appendix A. A list of all publications that I have authored in the last ten years also appears in Appendix A.

10. Economists Inc. is being compensated for my work in this matter at my standard hourly rate of $850 per hour. Other Economists Inc. professionals who, at my direction, performed supporting work and analyses in connection with my preparation of this report will be compensated for their work at their customary hourly rates. Neither my nor Economists Inc.'s compensation is contingent in any way upon the outcome of this matter or the opinion expressed. The opinions expressed in this report are my own.

III. Capital

11. Financial capital is defined as "borrowed sums or equity with which the firm's assets are acquired and its operations are funded."[2] Capital can also act as a buffer to adverse financial events. For instance, if a firm has to pay out an unexpected sum, the money would come from cash

[2] BusinessDictionary.com

on the asset side and capital on the liabilities and equity side of the balance sheet. Similarly, if a bank has to write off bad assets – again, on the asset side of the balance sheet – capital will be eroded.

12. Once the capital buffer is eroded, the firm is insolvent, and will most likely not be able to survive, *i.e.*, pay amounts due to all of its creditors in liquidation. In this way, a firm's capitalization is an important measure of its financial health.

13. A firm that has a strongly-capitalized balance sheet is better able to withstand fluctuations in market conditions. Conversely, a firm that is less well-capitalized may be forced to raise capital at times when it is difficult to do so and therefore quite costly (or, otherwise, fail). An example of this is the various government bailouts both in the United States and Europe during the financial crisis that saved firms from collapsing, but often with significant losses for existing stakeholders.

14. Understanding and analyzing a firm's current and future capital position is therefore a critical component of the analysis of securities by existing and potential investors. The firm's capital position and expectations as to how it might change in the future directly affect the risk/return profile of the securities issued by that firm. While the magnitude of the risk is different for different securities in the firm's capital structure, all stakeholders bear some risk.[3] Equity investors are the most at risk.

IV. Preferred Stock

15. Preferred stock shares represent an equity (or ownership) interest in the firm. Preferred stock pays a dividend like some common stock but the dividend is fixed and the stock is callable by the issuer. There is limited upside to the price of preferred shares because, unlike common stock, they have no claim on the additional excess earnings of the issuer.[4]

16. Consistent with their hybrid nature, preferred shares fit between debt and common equity in the issuer's capital structure – senior to common stock but subordinated to other debt issuances. In the event of a company's liquidation, preferred stockholders enjoy priority distribution

[3] The capital structure refers to the levels of seniority/subordination of the various securities that make up the firm's capitalization. Common equity is typically the most subordinated form of capital, which means that it takes the first losses in bankruptcy, whereas debt-holders only take losses once equity-holders are wiped out. There is also often subordination within a company's debt, with some (senior) bonds above and other (subordinated or junior) bonds below.

[4] Similar to a bond, preferred shares can trade above par due to favorable interest rate or credit risk developments.

of the company's assets over the common shareholders, but behind the debt holders.[5] As such, the price movements for preferred stock are on the one hand typically less volatile than those of common stock, but on the other hand, more sensitive to solvency concerns than secured or otherwise senior debt of the issuer. Accordingly, information regarding any risk that may impact the solvency of the issuer is important in valuing preferred shares.

17. Just like common stock, the value of preferred shares issued by a bank can be affected by any concentrated risk exposures in the bank. The results of stress tests on that asset portfolio along with other similar metrics are important – the reason being that the risk that future dividends and/or the principal amount invested will be threatened by potential insolvency of the bank is important to preferred share valuation.

18. Similarly, borrowing additional debt, especially in a situation of potential insolvency, may push the preferred stock (and common stock) investor further down the capital structure, putting the investment principal at further risk.[6]

19. The credit risk of the bank's assets is a primary determinant of the overall risk of the bank, and therefore the risk borne by the investors in that bank's preferred stock.

V. The Basel Accords

A. Background

20. The Basel Committee on Banking Supervision (then called the Committee on Banking Regulation and Supervisory Practices) was formed in 1974 by the G10 countries in response to disruptions in international financial markets. The goal of the committee was to enable the member countries to better coordinate their supervision and regulation of banks.[7]

21. One way in which that was accomplished was to move toward standardizing bank supervision. The Basel Committee initially moved to standardize developed-country supervisory approaches by developing a metric focused on each bank's capitalization by viewing capital as a ratio of bank assets.

22. In order to provide several measures of capital, various categories or "tiers" of capital were defined to be used in ratios of capital to assets that would help identify the strength of a

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[5] Frank K. Reilly and Keith C. Brown, *Investment Analysis and Portfolio Management*, The Dryden Press, Sixth Edition, 2000, p. 82; Richard A. Brealey, Stewart C. Myers, and Franklin Allen, *Principles of Corporate Finance*, McGraw-Hill, 2011, Tenth Edition, p. 350

[6] For example, bailouts by the government can adversely affect the standing of all investors – equity and debt.

[7] See http://www.bis.org/bcbs/history.pdf.

bank's balance sheet and its ability to withstand various adverse events. For example, Equity capital is simply the bank's stockholders' equity. Tier 1 capital was defined to include the bank's retained earnings, common stock and qualifying perpetual preferred stock (as well as goodwill and minority interests in subsidiaries) but excludes debt issued by the bank. Tier 2 capital includes all forms of preferred stock and certain subordinated debt.[8] Each of those successive measures is a broader definition of capital, inclusive of a wider array of financial instruments that stand last in line to receive funds in the event of insolvency and liquidation.

23. Bank supervisors also sought various measures of bank assets. In 1988, the Basel I Accords introduced the notion of calculating capital ratios by weighting the assets according to their risk – specifically, at least initially, credit risk. Risk-weighted assets ("RWAs") are a measure of the assets held by a bank weighted by the risk of those assets. The safest assets are given a weight of 0% (which means that they are effectively not included in RWAs), while the riskier assets are weighted more heavily – in some cases over 100% – depending on the level of risk.

24. The risk weights are determined by asset class and in certain cases by the credit rating or other metric of a given security within an asset class. For example, in the U.K., for residential mortgages, the risk weight for the first 80% of the value of the mortgaged property can be assigned a risk-weight of 35%, while the remainder can, if it meets other requirements, be weighted at 75%.[9]

25. There are a number of rules regarding how to classify and weight assets in the determination of total RWAs, but the overall objective is simple – assets that are deemed to have greater risk (credit risk, market risk, operational risk) are to be weighted more heavily than those assets that are deemed to have relatively less risk. Therefore, a given asset's contribution to a bank's RWAs is determined by two things – the amount of the asset held by the bank and its level of risk.

26. RWAs can change over time based on the acquisition or disposition of assets and/or any change in the level of risk associated with held assets that changes their weighting in the RWA calculation. In other words, there doesn't have to be a change in the quantity of a bank's Tier 1 Capital or its assets for its RWAs, and therefore its capital ratios, to change.

27. RWAs are used as the denominator in calculating several key capital ratios. For example, the Tier 1 capital ratio is calculated as its Tier 1 Capital (defined above) divided by its

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[8] Anthony Saunders and Marcia Cornett, *Financial Markets and Institutions*, Business and Economics, Fifth Edition, 2012, at p. 426-427.

[9] https://www.handbook.fca.org.uk/handbook/BIPRU/3/4.html.

RWAs. Similarly, a company's equity ratio has equity as the numerator and RWAs as the denominator.

28. Since a bank's capital position, in particular its capital ratios, are important indicators of the health of the bank, these measures of capital and RWAs are tracked closely by regulators.

29. In the U.S., the FDIC has had prompt corrective action regulations in place since 1991 that specified clear regulatory actions that would be taken if a bank's capital ratios fell below certain thresholds.[10] However, in the U.K., there were no such pre-specified triggers during the relevant time period that required clear action on the part of regulators, making the relationships with regulators and the specific content of the discussions in some ways more significant.[11]

B. Managing Capital Ratios

30. As discussed above, a bank's capital ratios are typically calculated as one of the measures of capital (numerator) divided by RWAs (denominator). Thus, in order to improve its capital ratios, there are two options available to a bank: (1) increase capital; or (2) decrease RWAs.

31. When a company loses money (or expects to lose money) or otherwise suffers losses on its assets, those losses and writedowns translate into a reduction in capital and assets. Thus, a bank's capital ratios can be negatively impacted by writedowns of its assets.

32. Additionally, if market conditions are such that a bank's assets become exposed to more risk (*e.g.*, credit risk), the risk weights that are assigned to those assets increase and therefore RWAs increase. Increasing RWAs decreases capital ratios, *ceteris paribus*.

33. Therefore, in an environment in which asset prices are falling and risk is increasing, capital ratios face downward pressure from both the numerator (capital) and denominator (RWAs). As a result, how a company is managing capital ratios in times of economic stress and financial turmoil is particularly important.

34. Indeed, bank capital ratios take on increasing significance to investors and regulators in times of market stress because it is in times of market stress that the solvency of a bank can become threatened (hence the concept of "stress-testing" a balance sheet). A declining capital ratio may indicate to the market that a bank will need to either (1) raise capital (to increase the numerator

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[10] https://www.fdic.gov/regulations/laws/rules/2000-4500.html. For example, if a bank is determined to be "critically undercapitalized" (has tangible equity to total assets of 2.0 percent or less), it is prevented from taking certain actions without FDIC approval, including extending credit for any highly leveraged transaction, making a material change in accounting methods, and making any principal or interest payment on subordinated debt beginning 60 days after becoming critically undercapitalized.

[11] http://www.publications.parliament.uk/pa/cm200708/cmselect/cmtreasy/56/5608.htm.

of its capital ratios), or (2) sell assets in order to shed RWAs (to reduce the denominator of its capital ratio). As testified to by former Barclays CEO (at the time, CEO of Barclays Capital) Bob Diamond, "One possibility, rarely the leading one, is to raise more capital. Another possibility is to manage RWAs and equity in different ways than we had been."[12]

35. Both options can negatively affect the future profitability of a bank. Raising capital has a cost, whether through periodic interest payments that must be made to debt-holders or future dividends payable to equity-holders. Assets are revenue-generating (generally generating more revenue if they are exposed to more risk) and therefore selling assets to reduce RWAs can reduce a bank's future profitability.

VI. 2007 and the First Quarter of 2008

36. Beginning in early 2007, among other market developments, New Century Financial Corporation – a subprime mortgage lender –filed for bankruptcy, the rating agencies placed hundreds or mortgage-backed securities on credit watch, Bear Stearns liquidated two of its RMBS-focused hedge funds, and American Home Mortgage Investment Corporation – another subprime mortgage lender – filed for bankruptcy. In August of 2007, a crisis erupted in asset backed commercial paper ("ABCP") and structured investment vehicle ("SIV") markets and the Federal Reserve declared that the "downside risks to growth have increased appreciably."[13] By the end of 2007, while the financial crisis had yet to hit its peak, it was well underway.

37. The problems of 2007 were not limited to the US. In February of 2008, the British government nationalized Northern Rock – a bank that was heavily exposed to the mortgage securitization market – after a run on the bank.[14] The next month, the Federal Reserve facilitated the sale of Bear Stearns to J.P. Morgan by assuming the risk of $29 billion of Bear Stearns' less-liquid assets[15], as liquidity for securitized assets, especially those assets backed by residential mortgages, was quickly drying up.

38. In this context, Barclays, in its 2007 annual report, reported that its "Equity Tier 1 ratio was 5.0% under Basel I… and 5.1% under Basel II."[16] Barclays was contacted in early March 2008 by the British Financial Services Authority (FSA) regarding "particular concern" that Barclays'

[12] Diamond November 13, 2015 deposition transcript at 246:21-25.
[13] https://www.stlouisfed.org/financial-crisis/full-timeline.
[14] https://www.nao.org.uk/report/hm-treasury-the-nationalisation-of-northern-rock/.
[15] http://www.nytimes.com/2008/03/17/business/17bear.html?pagewanted=all.
[16] Barclays Form 20-F – 2007 Annual Report at p. 5.

"equity ratio is only 4.6%,"characterizing that equity ratio as "alarming," and inquiring "as a matter of urgency" as to Barclays' "contingency plans for raising new equity capital should there be a further precipitate fall in asset values."[17] In a meeting with Barclays' Chairman of the Board, the FSA directed Barclays to raise its Tier 1 Equity Ratio to an "interal target" of 5.25% by year-end 2008.[18] In response, Barclays contemplated on March 20, 2008 "com[ing] back to the fsa [sic] after the april board meeting with proposals as to our capital plan that are directed at addressing your concerns."[19]

39. During this time, record ratings downgrades and declines in mortgage values arising from historically unprecedented delinquencies and foreclosures across the mortgage and RMBS sector were causing Barclays' RWAs to grow at a rapid pace (increasing RWAs lead to decreasing capital ratios, *ceteris paribus)* and resulted in the firm reevaluating its capital plan. Barclays management was asking by March 7, 2008, "Is the current level of capital adequate and should we consider de-gearing the balance sheet and raising capital," and "are the targets for capital still appropriate in the current environment?"[20] At a Barclays board meeting on March 20, 2008, "accelerated growth of RWAs, both planned and as a result of market conditions" was noted, and as a result "the revised capital plan shows the equity ratio at 4.5% in June 2008…"[21] The forecasted equity ratio was well below the target of 5.25% communicated earlier in the month to the FSA.[22] Earlier in March, in a presentation titled "2008 Capital Plan Update", it was noted that in order to get to an equity ratio of 5.0% for June 2008 after already-proposed capital raises, including the Series 5 offering, either RWAs would need to be reduced by GBP 23B or equity would need to be increased by GBP 1.2B.[23] By the March 20 board meeting, those figures had increased to GBP 38B and GBP 1.9B, respectively.[24] By April 8, in preparation for the April board meeting, it was acknowledged that RWAs had increased by GBP 42B "as a result of market conditions."[25] Again, an increase in RWAs leads to a decrease in capital ratios, *ceteris paribus*.

40. Reducing RWAs in an already illiquid and deteriorating environment, such as the one that existed at that time, for RMBS and related securities was quite difficult. Selling assets into an

[17] BARC-ADS-00931097 (Diamond exhibit 485).
[18] BARC-ADS-01288544 (Diamond exhibit 486) "… they will be expecting us to be moving toward our target of 5.25. (Please remember that Callum [FSA] also added that they are reserving judgment on whether they might ask for more.)"; See also BARC-ADS-01601045 (Varley exhibit 389)
[19] BARC-ADS-01288544 (Diamond exhibit 486).
[20] BARC-ADS-00819845 (Broadbent exhibit 411).
[21] BARC-ADS-01601059 (Diamond exhibit 487).
[22] BARC-ADS-00931097 (Diamond exhibit 485).
[23] BARC-ADS-01551745 at p. 8.
[24] BARC-ADS-01601059 (Diamond exhibit 487).
[25] BARC-ADS 00928337 at p. 4.

illiquid market in which prices were already depressed would mean taking significant losses.[26] At a February 14, 2008 Board meeting, it was noted that "The credit crunch and subsequent liquidity crisis had hit BarCap in a number of different areas."[27] An April 2008 Board presentation titled "Barclays Capital – Update" noted the "continued liquidity crunch" and "continued closure of US mortgage securitization markets".[28] Indeed, as noted by Bob Diamond in his deposition, in describing that time, "it would be wonderful to sell positions, but the liquidity in the markets was less."[29]

41. By early 2008, Barclays was therefore in a situation in which: (i) it knew its capital ratios were deteriorating and likely to deteriorate further, (ii) it was facing increased regulatory scrutiny from the FSA, which was specifically inquiring about its equity ratio, (iii) its RWAs were increasing more rapidly than had previously been projected, and (iv) the market into which they could sell such assets was highly illiquid.

42. It is in this context that the Series 5 preferred shares were issued by Barclays. I understand that none of the known issues identified above relating to developments within Barclays in the first quarter of 2008 were specifically disclosed to investors.

43. It is my opinion that these developments – the declining capital ratios, the FSA's requirement that Barclays raise its Tier 1 equity ratio to 5.25% by year-end 2008, and Barclays' growing RWAs – reflected a significant capital constraint on Barclays that was not present at year-end 2007 and increased the risk that Barclays would need to sell assets at distressed prices and/or raise expensive capital from additional investors.

Signed by me on this day, December 15, 2015,

Joseph R. Mason

[26] Even if those assets were held, they would need to be marked to market, and their price declines (less any liquidity discount) realized.

[27] BARC-ADS-01602612 (Broadbent exhibit 409).

[28] BARC-ADS-00928337 at p. 24.

[29] Diamond November 13, 2015 deposition transcript at 194:17-25. "… And that Barclays continued to manage their exposures quite tightly and appropriately. Q. And when you say 'manage their exposures,' what do you mean? Were they trying to get rid of exposures? A. In all senses. But I think – again, I don't mean to be pejorative. But it would be wonderful to sell positions, but the liquidity in the markets was less."

Appendix A

DR. JOSEPH R. MASON
PUBLICATIONS IN PAST TEN YEARS AND
TESTIMONY IN PAST FOUR YEARS

EXPERT WITNESS TESTIMONY:

Federal Home Loan Mortgage Corporation v. Deloitte & Touche LLP, United States District Court, Southern District of Florida, Miami Division, Case No. 1:14-CV-23713-CIV-UNGARO. (Deposed November 2015.)

Deutsche Bank National Trust Company, as Trustee For Morgan Stanley ABS Capital I Inc. Trust 2007-HE6 v. Decision One Mortgage Company, LLC. In The Circuit Court of Cook County, Illinois, County Department—Law Division, Civil Action No: 2013 L 005823. (Deposed May 2015.)

NECA-IBEW Health & Welfare Fund v. Goldman, Sachs & Co. United States District Court, Southern District of New York. Civil Action No. 1:08-cv-10783-MGC. (Deposed May 2015.)

Lavastone Capital LLC v. Coventry First LLC et al., United States District Court, Southern District of New York. 14 Civ. 7139 (JSR). (Deposed May 2015.)

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Appendix B – Materials Relied Upon

Case Record

Diamond November 13, 2015 deposition transcript
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BARC-ADS 00928337
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EXHIBIT 33

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In re BARCLAYS BANK PLC SECURITIES LITIGATION	Master File No. 1:09-cv-01989-PAC

REPORT OF FIACHRA T. O'DRISCOLL
SUBMITTED ON BEHALF OF LEAD PLAINTIFF

116. Additionally, Barclays disclosed £12,339 million in commercial mortgage-related positions at year-end 2007.[144] But, internal documents[145] show a further undisclosed exposure to commercial mortgages, CMBS and "CRE CDOs" – CDOs of subordinated commercial mortgages – through negative basis trades of $4,895 million at November 2007, equivalent at year-end to £2,444 million. Thus, Barclays' actual exposure was more than 20% greater than its disclosed gross exposure. Essentially all of this added exposure was linked to CDS with monoline insurers, all of which subsequently defaulted.[146]

117. None of the £21.5 billion in negative basis trade monoline exposures were included within the £29,100 million in total "Barclays Capital credit market positions" disclosed in the 2007 20-F. Instead, the 2007 20-F's only disclosure relating to Barclays' monoline exposures and negative basis trades stated the following: "Barclays Capital held assets with insurance protection or other credit enhancement from monoline insurers. The value of exposure to monoline insurers under these contracts was £1,335 [million] (30th June 2007: £140m). There were no claims due under these contracts as none of the underlying assets were in default."[147]

118. Barclays' disclosure that it held £1,335 million "in value of exposure to monoline insurers" did not disclose the actual risks it faced from £21 billion in negative

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[144] 2007 20-F at p. 53.

[145] PX 356.

[146] *See* **Exhibit 5**.

[147] 2007 20 F at p. 53.

basis trades with monoline insurers. Barclays measured the "value of exposure" by reference to the diminution in the fair value of the notional monoline exposure as of year-end 2007. This expression of exposure is termed "current exposure" and is one of six metrics used to measure exposure to a counterparty.[148] The other metrics include: Counterparty Exposure (essentially replacement cost), Potential Future Exposure (potential maximum exposure), Expected Exposure (average exposure on a future date), Expected Positive Exposure (the Expected Exposure in a given time interval), and Right-way/Wrong-way Exposures (exposures that are positively/negatively correlated with the credit quality of the counterparty, i.e. the worse the exposure gets the less likely the counterparty is to be able to pay). Of these six measures for exposure, Current Exposure is the method that produces the lowest exposure, and that is the measure that Barclays chose to share with its investors.

119. However, when Barclays identified its monoline exposure to its primary regulator, the United Kingdom's Financial Services Authority (the "FSA") in November 2007, it used a very different metric, disclosing that: "Barclays exposure to monolines is c$7.3bn (plus c$1.5bn headroom), and is largely in the form of negative basis trades (credit protection on securities held) – the notional value of these trades is c[irca] $40 [billion]."[149] Thus, Barclays expressed its monoline exposure to the FSA by referencing

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[148] *See, e.g.,* Canabarro, Eduardo; Duffie, Darrell, "Asset/Liability Management of Financial Institutions, Euromoney Books, 2003; *see also* Bielecki, T.; Brigo, D.; Patras, F., "Credit Risk Frontiers: Subprime Crisis, Pricing and Hedging, CVA, MBS, Ratings, and Liquidity" Bloomberg Financial/ Wiley 2011, p.398 *et. seq.*

[149] BARC-ADS-00833240.

both the notional value of these positions and their "Potential Future Exposure" or "PFE" – not the smaller exposure figure it disclosed in the 2007 20-F.

120. Risk Magazine, et al., the primary journal for banking quantitative risk analysts, defines PFE as "The potential maximum value of a portfolio over its lifetime. PFE is a measure used primarily for credit risk measurement to assess the expected exposure to a counterparty."[150] Cannabaro and Duffie explain PFE in more detail as "the maximum amount of exposure expected to occur on a future date with a high degree of statistical confidence. For example, the 95% PFE is the level of potential exposure that is exceeded with only 5% probability."[151]

121. Furthermore, a much larger monoline exposure was provided to the Board Risk Committee, which on December 5th, 2007, was informed that "[a] potential new area of concern is the exposure to monoline insurers … Credit equivalent exposure[152] to these monolines is $7.8bn"[153] Further reflecting the risks associated with Barclays' exposure to monoline insurers, Steve Pearson, who at the time was Barclays Capital's Chief Credit Officer for Structured Credit and Commercial Real Estate during the relevant time period, said in an email on the topic: "Our credit view on the monolines is

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[150] *Available at*: http://www.risk.net/energy-risk/glossary/2270593/potential-future-exposure-pfe.

[151] Canabarro, Eduardo; Duffie, Darrell. "Asset/Liability Management of Financial Institutions, Euromoney Books, 2003.

[152] Credit Equivalent Exposure is a regulatory standard measure of Current Exposure plus Potential Future Exposure, discussed above.

[153] PX 385.

negative We are particularly concerned about Ambac and FGIC out of the top 4 monolines".[154]

122. Finally, the 2007 20-F again references monoline insurers where it states, in relation to the £6,018 million in disclosed ABS CDO positions that were not negative basis trades, that "[n]one of the above hedges of ABS CDO Super Senior exposures as at 31st December 2007 were held with monoline insurer counterparties."[155] As shown above, however, Barclays held an additional £ 5.1 billion in undisclosed ABS CDO positions that were hedged entirely with monoline insurer counterparties.

123. In summary, instead of disclosing to investors its notional exposure to monoline insurers of £21.5 billion, the $7.3 billion (approximately £3.7 billion) exposure it disclosed to the FSA, or the exposure it reported to the Board Risk Committee ($7.8 billion, approximately £ 3.9 billion), Barclays provided the lowest exposure measure, the £1,335 million of current exposure. This lowest measure understated Barclays' risk exposure to monoline insurers because it did not disclose the likely future exposure and maximum potential exposure to monoline insurers in a turbulent credit market, in which monoline insurers were being downgraded and collapsing. In reality, the maximum exposure of £21.5 billion was over 16 times greater than the disclosed exposure, and Barclays' PFE was approximately three times greater. In my opinion, disclosing PFE or

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[154] PX 354.

[155] *Ibid.*

another measure would have provided a more complete assessment of Barclays' exposure to monoline insurers.

C. BARCLAYS EXPOSURE TO STRUCTURED INVESTMENT VEHICLES

124. Barclays disclosed that Barclays Capital had exposure to SIVs in the form of bank liquidity facilities and trading positions. The liquidity facilities to SIVs and SIV-Lites totaled $933 million[156] at year-end 2007 and were provided to eight SIVs. In addition, Barclays Capital had bond trading positions of $101 million.[157]

125. However, this disclosure of Barclays' SIV exposure was not complete as of the time of the Offering. Barclays Global Investors ("BGI"), Barclays PLC's asset management arm, also had a SIV exposure that was not disclosed. As mentioned above, much of the SIVs' BGI held notes issued by SIVs and monoline-wrapped ABCP with a total invested amount of $3.5 billion.[158] Among these were Cheyne, Whistlejacket, Links, Parkland, Sigma and K2.[159] BGI's funds held approximately $1.8 billion of Whistlejacket paper alone.[160] Of this, $975 million was repurchased by Barclays Global Investors[161] to reduce the risk of fund net asset values "breaking the buck" – allowing the money market funds' redemption value, through losses, to fall below $1.00. Barclays'

[156] $635 million to SIVs and $298 million to [Golden Key], a SIV-Lite. BARC-ADS-00889582-86.

[157] *Ibid.*

[158] BARC-ADS-01551355-58.

[159] BARC-ADS-00903614.

[160] BARC-ADS-01601045.

[161] PX413.

decision to provide this support appears to have been taken on February 4, 2008, well before the Offering.

XI. CONCLUSION

126. In its 2007 20-F filing Barclays disclosed £ 29,100 million in credit market positions as of year-end. My review of the evidence demonstrates that Barclays held more than £ 20 billion in additional undisclosed credit market positions. It also understated the loss provisions it had taken with respect to its credit market positions. Barclays represented that it was actively reducing its risk positions, particularly with respect to CDOs, when in fact it had grown its positions in 2007. Barclays' understatement of its credit market positions and losses on those positions concealed the true risk from investors in the Offering.

127. Barclays also failed to disclose the adverse trends that had developed in relation to these positions in the first quarter of 2008 prior to the commencement of the Offering. Further, Barclays failed to disclose that its own traders were substantially marking down Barclays' credit market exposures between year-end 2007 and the Offering.

The opinions and statements set forth herein represent my conclusions based upon the information available and provided to me through December 15, 2015. I reserve the right to supplement, refine or add to my opinions and statements based on any additional information, such as deposition testimony and additional documents. I also reserve my

EXHIBIT 34

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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In re BARCLAYS BANK PLC SECURITIES LITIGATION	:	Master File No. 1:09-cv-01989-PAC

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EXPERT REPORT OF JOHN H. DOLAN

FEBRUARY 2, 2016

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I. Introduction

A. Qualifications

1. I am the founder and sole employee of Second Order Strategies, Inc., a firm that provides consulting on risk analysis as well as expert testimony and consulting services in litigation.

2. I received my B.A. *cum laude* in Economics and Mathematics from Union College in 1975 and received my M.B.A. in Finance with a focus on financial markets from the Wharton Graduate Business School at the University of Pennsylvania in 1977.

3. I have over thirty years of experience in trading, structuring, investing in, and valuing collateralized debt obligations ("CDOs"), agency and non-agency residential mortgage-backed securities ("RMBS"),[1] agency collateralized mortgage obligations ("CMOs"), whole loans, and commercial mortgage-backed securities ("CMBS").

4. I have held executive and senior-level positions at large portfolio managers and investment banks, as described below. I was certified as a Financial Risk Manager and Energy Risk Professional by the Global Association of Risk Professionals, and have passed General Securities Representative (Series 7), Uniform Securities Agent State Law (Series 63), and National Commodity Futures (Series 3) exams. I have served as President of the Fixed Income Analysts Society, a Board Member of the Public Securities Association ("PSA"),[2] and Chairman

[1] The term "agency RMBS" refers to securities issued by government-sponsored enterprises that include the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac"). Non-agency or "private-label" refers to securities backed by loans that are typically backed by loans not guaranteed by those agencies. See Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, 2nd ed., Hoboken: John Wiley & Sons, pp. 10–24.

[2] The PSA is now part of the Securities Industry and Financial Markets Association ("SIFMA"). See "History," *SIFMA*, http://www.sifma.org/about/history.

of the PSA's Mortgage-Backed Securities ("MBS") Division. I have also appeared on CNBC and testified before a Congressional Committee during the thrift crisis.

5. Prior to forming Second Order Strategies, Inc., I served as Chief Investment Officer of Hyperion-Brookfield Asset Management ("HBAM"), Managing Director at Bankers Trust Global Investment Management, Managing Director at Salomon Brothers, and the head of the MBS Trading Desk at Citibank. In addition, I have been retained as an independent consultant by Pentalpha Group and MF Global. In these roles my experience included:

- trading MBS (both RMBS and CMBS);
- overseeing the structuring and trading of new-issue CMOs and MBS;
- marketing and trading one of the first private label RMBS deals employing a senior/subordinate credit structure;
- valuing the cash flows of credit-sensitive mortgage-related securities from numerous issuers as both a trader and investor;
- trading Resolution Trust Corporation ("RTC") whole loan pools and RMBS securitized by mortgage loans obtained by the RTC through its receivership or conservatorship of failed financial institutions;
- managing a residential whole loan mortgage conduit, a process that involved buying, selling, and pricing whole loans;
- evaluating, trading, and modeling securities collateralized by prime,[3] subprime,[4] and Alt-A[5] residential mortgage loans, as well as agency CMOs and CDOs;

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[3] "The majority of loans originated are underwritten to high credit standards, where the borrowers have strong employment and credit histories, income sufficient to pay the loans without compromising their creditworthiness, and substantial equity in the underlying property. These loans are broadly classified as ***prime loans,*** and have historically experienced relatively low incidences of delinquency and default." See Fabozzi, F.J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, 2nd ed., Hoboken: John Wiley & Sons, Inc., p. 5.

[4] "[S]ubprime mortgages are typically made to borrowers with blemished credit history or who provide only limited documentation of their income or assets." "Nonprime Mortgage Conditions in the United States: Technical Appendix," *Federal Reserve Bank of New York* ("Nonprime Mortgage Conditions in the United States"), http://www.newyorkfed.org/regional/techappendix_spreadsheets.html.

[5] Alt-A mortgages "are typically higher-balance loans made to borrowers who might have past credit problems—but not severe enough to drop them into subprime territory—or who, for some reason (such as a desire not to document income) chose not to obtain a prime mortgage." See Nonprime Mortgage Conditions in the United States.

- managing leveraged investments and credit-sensitive RMBS for publicly traded mutual funds, as well as a real estate investment trust;
- overseeing portfolio managers investing in RMBS collateralized by prime, subprime, and Alt-A residential mortgage loans from a variety of originators;
- serving as a CDO collateral manager; and,
- investing in both cash and synthetic instruments, including credit default swaps ("CDS") and mortgage-related indices.

6. I have lectured at several colleges and universities on the subjects of the residential mortgage loan and securities markets. Since 2010, I have been the sole independent market maker of Case-Shiller home price index futures traded on the Chicago Mercantile Exchange. I maintain a blog[6] dedicated to home price index futures, and I have organized an industry-wide conference on issues related to home price forecasting.

7. Since 2007, I have consulted and/or testified on several litigation and valuation assignments. My work has included estimation of defaults and loss severities on mortgage loans and RMBS, reviews of risk reports, and an analysis of the use of leverage and valuation methodologies for RMBS, CDOs, and synthetic super senior CDO exposures. home price index futures, and I have organized an industry-wide conference on issues related to home price forecasting.

8. My current resume, which contains a list of my publications and speaking engagements, is attached as Exhibit 1. A list of matters in which I have testified as an expert at trial or by deposition over the past four years is attached as Exhibit 2.

B. Assignment

9. I have been retained by counsel for Barclays PLC, Barclays Bank PLC ("Barclays"), and the Individual Defendants to evaluate (a) the opinions of Fiachra T. O'Driscoll, as articulated in

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[6] "Home," *Home Price Futures*, http://homepricefutures.com/blog.

his report dated December 15, 2015 ("O'Driscoll Report"), regarding the appropriateness of Barclays' valuations of certain assets as reported in Barclays' 2007 Form 20-F and subsequently, and (b) the opinions of D. Paul Regan, as articulated in his report dated December 15, 2015 ("Regan Report"), regarding Barclays' disclosures of its exposure to monoline insurers.

10. I am being compensated for my work in this matter at the rate of $700 per hour. I have been assisted in my work by the staff of Cornerstone Research ("Cornerstone"), who worked under my direction. I receive compensation from Cornerstone based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter nor my compensation from Cornerstone is in any way contingent or based on the content of my opinion or the outcome of this or any other matter.

11. The materials that I have considered in forming my opinions are cited in this report and/or listed in Exhibit 3.[7]

II. Allegations and Plaintiff's Experts' Opinions

12. Plaintiff alleges that, prior to Barclays' Series 5 offering in April 2008, Barclays did not properly disclose certain of its credit market exposures and losses.[8] Specifically, with respect to Barclays' valuations of the assets at issue (*i.e.*, whole loans, RMBS, CDOs, Structured Investment Vehicles ("SIVs"), CMBS, exposures to monoline insurers, and leveraged finance exposures), the Complaint alleges that Barclays' disclosures about its exposures in its 2007 Form

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[7] I also had access to an electronic database containing documents produced in discovery in this case.

[8] Second Consolidated Amended Complaint, *In re Barclays Bank PLC Securities Litigation*, Master File No. 1:09-cv-01989-PAC, dated September 13, 2013 ("Complaint"), ¶ 10. The Memorandum of Law in Support of Lead Plaintiff's Motion for Class Certification, *In re Barclays Bank PLC Securities Litigation*, Master File No. 1:09-cv-01989-PAC, dated December 9, 2015 (the "Class Certification Memorandum"), which I have also reviewed, contains similar allegations.

20-F were false and misleading and that Barclays did not properly value or write down those assets.[9]

13. The O'Driscoll Report contains opinions regarding Barclays' valuations and disclosures. In particular, according to Mr. O'Driscoll, Barclays' 2007 Form 20-F provided an "incomplete and inaccurate disclosure" of the bank's credit market positions as of year-end 2007, and understated both Barclays' losses on various positions as well as the risks associated with its credit market portfolio:[10]

- Mr. O'Driscoll asserts that Barclays had £21.5 billion in undisclosed credit market positions that arose from negative basis trades ("NBTs") with monoline insurers and other entities on Asset-Backed Securities ("ABS") CDOs, Collateralized Loan Obligations ("CLOs"), and commercial mortgages;[11]
- Mr. O'Driscoll claims that Barclays did not in fact reduce its CDO exposure during 2007, as reported in Barclays' 2007 Form 20-F;[12]
- Mr. O'Driscoll argues that Barclays' disclosures regarding the risk from its CDO positions were misleading because the positions were described as "High Grade," which he claims implied that any losses from those positions would be "modest;"[13]
- Mr. O'Driscoll alleges that Barclays "overvalued its CDO liquidity facilities" because the valuation of those facilities "relied on a fragile, problematic set of assumptions, some of which were proven false even before the [Series 5 Preferred Share] Offering commenced;"[14]
- Mr. O'Driscoll asserts that Barclays' disclosed writedowns understated the risk of the positions because the approximately £3 billion in writedowns were netted against £706 million in income and hedges on the affected asset classes and £658 million in gains from widening of credit spreads, and only the net figure was disclosed;[15]
- Mr. O'Driscoll claims that Barclays' disclosures of its SIV exposures were not complete as of the time of the Series 5 offering, because Barclays Global Investors ("BGI") "held

[9] Complaint, ¶¶ 12, 13, 133–135.

[10] O'Driscoll Report, ¶ 12.

[11] O'Driscoll Report, ¶¶ 103–105, 115–116.

[12] O'Driscoll Report, ¶¶ 107–108.

[13] O'Driscoll Report, ¶¶ 109–110.

[14] O'Driscoll Report, ¶ 111.

[15] O'Driscoll Report, ¶ 114; Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 45.

notes issued by SIVs and monoline-wrapped ABCP [asset-backed commercial paper] with a total invested amount of $3.5 billion," and BGI had repurchased $975 million of the "Whistlejacket paper" in February of 2008; and[16]

– Mr. O'Driscoll also states that Barclays failed to disclose "adverse trends" affecting the bank's positions in early 2008 and that these trends resulted in certain exposures increasing significantly in the first quarter of 2008.[17] He further claims that "Barclays failed to disclose that its own traders were substantially marking down Barclays' credit market exposures between year-end 2007 and the Offering."[18]

14. Mr. Regan is a Certified Public Accountant ("CPA"), and from my review of his report, his opinions appear to relate primarily to accounting and disclosure requirements of the International Financial Reporting Standards ("IFRS") and the Securities and Exchange Commission ("SEC").[19] I am not a CPA and I am not an expert in SEC disclosure requirements. However, I have been asked to address Mr. Regan's assertions about the economic nature of Barclays' exposures to monoline insurers (which is within my expertise). In that regard, Mr. Regan opines that (1) Barclays' 2007 Form 20-F failed to fully disclose Barclays' exposure to monoline insurers, because it failed to disclose the notional amount of NBT assets insured with monolines[20] and that (2) notional amounts reflected the true measure of exposure.[21] He also claims that Barclays improperly failed to disclose certain trends relating to its monoline exposures.[22]

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[16] O'Driscoll Report, ¶ 125.

[17] O'Driscoll Report, ¶¶ 12, 127.

[18] O'Driscoll Report, ¶ 127.

[19] Regan Report, ¶¶ 1, 7.

[20] Regan Report, ¶¶ 89–91.

[21] Regan Report, ¶¶ 35–36.

[22] Regan Report, ¶¶ 88–89.

III. Summary of Opinions

15. Based on my analysis, Mr. O'Driscoll's and Mr. Regan's conclusions regarding Barclays' valuations and disclosures are unfounded and flawed.

16. **<u>Mr. O'Driscoll and Mr. Regan incorrectly claim that Barclays' NBT positions were not disclosed.</u>** Mr. O'Driscoll and Mr. Regan claim that "Barclays held a total of £21.5 billion in undisclosed credit market positions that had been insured by monoline insurance companies and other entities," and particularly that "Barclays held an undisclosed ABS CDO position of £6.2 billion. . . ."[23] However, Mr. O'Driscoll and Mr. Regan are wrong to state that these positions, which I understand were part of Barclays' NBT book, were not disclosed. These positions were in fact disclosed at fair value, which in my opinion was consistent with their underlying economic structure.

17. Furthermore, Mr. O'Driscoll does not provide any analysis to show that Barclays' valuations of the monoline exposures as of December 31, 2007 were incorrect or inadequate. He merely asserts that the majority of monoline insurers "would default or have to be bailed out over the following two years," which relies on hindsight and does not provide evidence to claim that Barclays' valuations at the time they were made were wrong.[24] Indeed, market valuations and credit ratings of these insurers as of December 31, 2007 show that the market and rating agencies did not expect the monolines to default. Similarly, year-end 2007 market valuations and credit ratings of major mortgage and structured finance market participants that failed during 2008 such

[23] O'Driscoll Report, ¶ 115. See also, Regan Report, ¶¶ 87–91.

[24] O'Driscoll Report, ¶ 104.

as AIG, Bear Stearns, Lehman Brothers, Fannie Mae and Freddie Mac indicate that the equity markets and rating agencies did not expect the level of distress that ultimately occurred.[25]

18. **<u>Mr. O'Driscoll and Mr. Regan incorrectly focus on notional values as measures of exposure.</u>** Mr. Regan claims that "the exposure to monoline counterparties represented the full notional value of the assets they insured"[26] and Mr. O'Driscoll similarly focuses on notional exposure.[27] However, these measures do not represent the underlying economic exposures of the NBTs. Instead, Barclays reported NBT exposures at fair value, which is consistent with the economic nature of the underlying exposure.

19. **<u>Contrary to Mr. O'Driscoll's claim, Barclays did in fact take steps to reduce its CDO exposure during 2007.</u>** Barclays reduced its exposure by entering into hedge transactions. In addition, Barclays' reported overall exposure to ABS CDO super senior positions was lower as of December 31, 2007 than as of June 30, 2007.

20. Mr. O'Driscoll does not address hedging at all, which is a natural and common way to reduce risk exposure in the financial services industry, and he also makes an error when calculating the amount of new CDO positions that Barclays allegedly took on in 2007.

21. **<u>Describing CDOs as "High Grade" was not misleading.</u>** Mr. O'Driscoll's assertion that Barclays' disclosures regarding the risk of its CDO positions were misleading because the positions were described as "High Grade" is unfounded because market participants at the time generally understood the term "High Grade" (as applied to CDOs) to indicate that such CDOs were backed by highly rated collateral at origination—and *not* whether a CDO could suffer

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[25] All five companies had investment grade credit ratings according to Standard & Poor's, Moody's, and Fitch as of December 31, 2007. See *Bloomberg*.

[26] Regan Report, ¶ 36.

[27] O'Driscoll Report, ¶ 123.

loss.[28] Therefore, there is no basis for Mr. O'Driscoll to conclude that investors would have been misled by Barclays' use of a commonly used term. Tellingly, Mr. O'Driscoll does not present any evidence that these "High Grade" CDO positions were incorrectly valued by Barclays in its 2007 Form 20-F.

22. **<u>Barclays' valuations of its credit assets—including CDOs—were reasonable.</u>** The valuation of the assets at issue is inherently complex, subjective, and typically requires the use of valuation models that can yield a range of values for a given asset at a given point in time. The approaches adopted and models used by Barclays were consistent with those commonly adopted and used by participants in the structured finance industry at that time. In particular, Barclays' approaches were consistent with those I have seen used or used myself as a participant in the mortgage markets at the time.

23. In particular, I have examined Barclays' CDO valuation methodologies as of December 2007 and conclude that they were reasonable and not based on "fragile" or "problematic" assumptions, as Mr. O'Driscoll claims based on the benefit of hindsight in pointing to events that occurred after the close of the fiscal year 2007.[29] In addition, Mr. O'Driscoll's claims regarding CDO valuations contain conceptual errors.

24. Furthermore, Barclays' auditor, PricewaterhouseCoopers ("PwC"), a major accounting firm with a global presence whose clients include over 80% of the Fortune Global 500,[30] concurred that the valuations in Barclays' 2007 Form 20-F were appropriate after conducting an inquiry into Barclays' CDO and other mortgage-related asset valuations.

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[28] O'Driscoll Report, ¶ 109. Indeed, as I discuss later, High Grade CDOs, as a class, generally had lower amounts of subordination (credit protection) than so-called "mezzanine CDOs," which were backed by lower-rated collateral.

[29] O'Driscoll Report, ¶ 111.

[30] PricewaterhouseCoopers International Limited 2015 Annual Review, p. 1.

25. **<u>Mr. O'Driscoll has not articulated a standard for what information allegedly should have been disclosed.</u>** Mr. O'Driscoll's opinions about the adequacy of Barclays' public disclosures are not well founded for the additional reason that he fails to articulate the standard that he is applying in his analysis.

26. **<u>Many of the allegedly "undisclosed" trends that Mr. O'Driscoll and Mr. Regan discuss were publicly known.</u>** Both Mr. O'Driscoll and Mr. Regan claim that Barclays allegedly failed to disclose certain trends that occurred in early 2008. However, many of these trends were well known to the public at the time they occurred.

IV. Overview of the Assets at Issue

27. As discussed above, Plaintiff's Complaint asserts that Barclays' portfolio of credit securities and assets declined in value in 2007 and 2008, which was allegedly not properly disclosed to investors. Specifically, the Complaint contests Barclays' valuations of the following:[31]

- **Whole Loans** (mortgage loans);
- **Residential Mortgage-Backed Securities ("RMBS") including Residuals**, which are a type of mortgage-backed obligations secured by pools of residential whole loans;
- **Collateralized Debt Obligations ("CDOs")**, which are securities collateralized by reference portfolios of debt securities of varying credit quality, such as loans, bonds, or asset-backed securities ("ABS"), such as RMBS;
- Exposures in the form of **Negative Basis Trades** to **Monoline Insurers** and other entities that provided guarantees to issuers of various securities in order to enhance the credit quality of the asset at issue;
- **Commercial Real Estate Loans** and **Mortgage-Backed Securities ("CMBS")**, which are a type of mortgage-backed obligations secured by commercial real estate loans;

[31] Complaint, ¶¶ 133–135.

– **Structured Investment Vehicles (“SIVs”)**, which are pools of investment assets that “[borrow] for the short-term by issuing commercial paper to invest in long-term assets like [RMBS and ABS];”[32] and

– **Leveraged Finance Products**, which involve extension of a “proportionally large amount of debt relative to a ‘normal’ corporate capital structure” to a company or business unit, in order to facilitate acquisitions, capital expenditures, or share repurchases.[33]

28. Barclays’ exposure to the mortgage markets was largely through Barclays Capital’s ownership of whole loans, RMBS, and CDOs.[34] Barclays’ valuation methodologies for the credit assets I reviewed, as well as my conclusions that those methodologies and valuations were reasonable and appropriate, are described in more detail in Appendix A to this report.

V. Mr. O’Driscoll and Mr. Regan Incorrectly Claim that Barclays’ NBT Positions Were Not Disclosed.

29. Barclays had exposure to monoline insurers and other financial institutions through NBTs that involved “the ownership of a bond and the purchase of credit guarantee.”[35] Mr. O’Driscoll and Mr. Regan claim that Barclays failed to disclose the notional amount of this exposure to monoline insurers and other entities that sold credit guarantees, and thereby concealed additional exposure to CDOs, CLOs, and commercial mortgages.[36] However, Mr. O’Driscoll and Mr. Regan are wrong to state that these positions, which I understand were part of Barclays’ NBT

[32] SIVs typically invest proceeds from the issuance of commercial paper (continuously renewed and rolled over) in longer maturity assets (with less liquidity but higher yields). “Structured Investment Vehicle,” *Nasdaq Financial Glossary*, http://www.nasdaq.com/investing/glossary/s/structured-investment-vehicle.

[33] Leveraged finance is generally focused on issuing debt in the high-yield bond market or the leveraged loan market. Antczak, S. J., D. J. Lucas, and F. J. Fabozzi (2009), *Leveraged Finance: Concepts, Methods, and Trading of High-Yield Bonds, Loans, and Derivatives*, Hoboken: John Wiley & Sons, Inc., pp. 1–2.

[34] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[35] BARC-ADS-01589111–18 at 14.

[36] O’Driscoll Report, ¶¶ 104, 115, 116, 123; Regan Report, ¶¶ 89–91. See also Complaint, ¶¶ 71–74; Class Certification Memorandum, pp. 10–11.

book, were not disclosed. These positions were in fact disclosed at fair value consistently with their underlying economic structure.

30. NBT positions involve entering into a credit exposure and hedging that exposure with insurance in the form of a CDS contract purchased from a third party such as a monoline insurer. Given the hedged nature of the exposures, absent a default of the insurer, the positions are essentially immune from credit risk as any defaults on the underlying asset would be reimbursed by the writer of insurance.

31. When Mr. O'Driscoll claims that "internal documents show that Barclays held a further undisclosed exposure to ABS CDOs and CDOs of CDOs of up to $12,391 million, as of November 2007,"[37] he is referring specifically to the NBTs discussed in this section. As I explain below, these exposures were fundamentally different from standalone CDO exposures in that they would only experience loss in case of "double default"—a loss on the underlying asset and a default by the protection seller (*e.g.*, the monoline insurance company). It is therefore incorrect to claim that Barclays had undisclosed CDO exposures given that the NBTs were in fact reported consistently with their economic structure. Similarly, Mr. O'Driscoll's claims about "undisclosed exposure to CLOs of US$24,383 million"[38] and "undisclosed exposure to commercial mortgages, CMBS and 'CRE CDOS' . . . of $4,895 million,"[39] similarly refer to the NBTs discussed in this section, and are flawed for the same reason.

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[37] O'Driscoll Report, ¶ 103.

[38] O'Driscoll Report, ¶ 115.

[39] O'Driscoll Report, ¶ 116.

A. Overview of Barclays' Exposures to Monoline Insurers through NBTs

32. Barclays held a number of NBT positions.[40] The underlying assets included, but were not limited to, High Grade ABS CDOs, mezzanine ABS CDOs, CDOs-squared, CDOs backed by commercial real estate, CLOs and CLOs-squared, and Trust Preferred securities.[41] The exposure was primarily to AAA rated CLOs (67%) with commercial real estate (13%), U.S. High Grade ABS CDOs (7%), and U.S. mezzanine ABS CDOs (3%) accounting for most of the remaining amount.[42] Credit guarantees on these assets were provided both by other banks and monoline insurers, with assets wrapped by monoline insurers accounting for 77% of the total notional value of the NBTs.[43] Of the trades wrapped by monoline insurers, 95% of the underlying assets were rated AAA.[44] In addition, as of December 31, 2007, all but one of the monoline insurer counterparties to Barclays' NBTs were rated AAA or AA by Standard & Poor's and/or Aaa or Aa2 by Moody's.[45] Even as late as December 31, 2008, no claims had been made against the monoline insurers, "as none of the underlying assets were in default."[46]

B. The NBT Positions Were Disclosed on the Balance Sheet Consistently with Their Economic Exposure.

33. Generally, an NBT position seeks to profit from the difference in the price of the protection on the asset and the yield from the underlying asset. These trades produced a near

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[40] BARC-ADS-01378154, p. 3.

[41] BARC-ADS-01026160.

[42] BARC-ADS-01378154, p. 8.

[43] BARC-ADS-01378154, p. 8.

[44] BARC-ADS-01378154, p. 8.

[45] See Exhibit 4. Barclays did have some exposure to assets wrapped by ACA, but these accounted for less than .1% of the total notional of the NBT portfolio wrapped by monoline insurers. See BARC-ADS-01554693, p. 13; BARC-ADS-01378154, p. 8.

[46] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, pp. 98-104.

arbitrage opportunity as the investor would collect a profit (the difference between the asset's yield and the cost of protection) and would face the risk of loss only in the case of a double default.[47] Barclays was thus exposed to risk on its NBTs only if (i) the underlying asset suffered a loss or defaulted (depending on the asset type), *and* (ii) the insurer (or other protection seller) defaulted and did not fulfill its obligation to make up the loss. Moreover, in some cases, I understand that Barclays *also* purchased single-name CDS on the monoline counterparty in an NBT, which would eliminate exposure to that monoline.[48] In such cases, Barclays would suffer a loss only in the event of a *triple* default: that of the underlying asset, the monoline insurer, *and* the seller of protection on the monoline insurer.

34. In other words, the nature of NBTs means that the investor (*e.g.*, Barclays) is rarely and only under extreme market stress conditions exposed to losses reaching the entire notional value of the underlying asset, as such a loss only occurs in the case of a double or triple default (with each default yielding zero recovery). Even if *some* losses were anticipated on the underlying asset, and there was *some* risk that the monoline counterparty would default, expected losses on the NBT would be significantly less than the notional value.

35. As described above, Barclays was exposed to the underlying asset *only* in the event of a double (or triple) default. Therefore, when the monolines were financially sound with little default risk, although Barclays may have owned additional assets (such as CDOs) as part of the NBT portfolio, it did not have meaningful exposure to the risks of those assets.

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[47] An internal Barclays' memo also described the rationale behind NBT as "to risk shift the exposure to the Monoline insurer. . . . The Monoline will provide a Financial Guaranty Insurance Policy to guarantee the purchase of the structured asset. BarCap act as an intermediary and take [*sic*] a 'turn' on the purchase and the synthetic risk transfer to the Monoline. The benefit to the Monoline is the ability to raise relatively cheap funding." See BARC-ADS-01177394–95 at 94.

[48] PwC000538–586 at 556.

36. As market conditions worsened and to the extent that the CDS positions were not collateralized, Barclays took a reserve provision (also known as a Credit Valuation Adjustment or "CVA") against this exposure to account for the risk of monoline insurers being unable to pay the claim.[49] This reserve provision consisted of a funding reserve and a counterparty reserve charge and was essentially a writedown of the CDS protection.[50] I understand that Barclays applied a fixed charge for the funding reserve and utilized a model-based approach to calculate the counterparty reserve charge.[51] In sum, Barclays' disclosed exposure to monoline insurers reflected the value of the potential claim against the monoline insurers (*i.e.*, the difference between the notional exposure and the fair value of the underlying asset), less a reserve provision to account for the risk of potential counterparty default.[52] I note that while Barclays monitored its counterparties' default risk, there is no reason to expect that it would have unique insight or information about the monolines' likelihood of default beyond what was publicly available in the market. In fact, emails cited by Mr. O'Driscoll indicate that Barclays did not expect the monolines to experience the level of distress that subsequently occurred.[53] The rating agencies and the market as a whole similarly did not expect such distress, as shown by the monolines' credit ratings and equity values in Exhibit 4.

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[49] Reserve provision is the term used in many of the documents discussing the methodology for calculating the reserve set aside to account for risk of counterparty default. This provision is alternatively referred to as a credit valuation adjustment ("CVA") in the 2008 20-F, or a reserve charge in other cases. The three terms are used here interchangeably. Note that this charge was taken when there was "no credit support agreement to mitigate counterparty risk." See BARC-ADS-00917229–243 at 238. A credit support agreement is a standard agreement for collateral to be posted against market movements in the underlying derivative exposure.

[50] BARC-ADS-00890240–43 at 41.

[51] Prior to December 2007, Barclays took a funding reserve of 5bps against the NBTs which were assumed to be funded at 3 month LIBOR + 5bps. However, Barclays reviewed its actual funding cost in previous two years, and determined that the desk was funding these positions below LIBOR. Therefore, Barclays stopped taking this funding reserve. See BARC-ADS-890240–43 at 41; BARC-ADS-00877655–668 at 664.

[52] BARC-ADS-00897205–218 at 214.

[53] BARC-ADS-00582828–29 at 28 (PX 354).

37. As with other exposures, Barclays' NBT valuation processes and inputs, including the resulting reserve provisions or CVAs, were reviewed by PwC. The auditors price tested the valuations used to calculate exposure, and reviewed the reserve methodology. PwC analyzed the NBTs "to ensure that the price levels were moving in accordance with market benchmarks of similar collateral."[54] PwC's review of the NBTs covered the ABS, CMBS, and Corporate CDO assets wrapped by monoline insurers.[55]

38. After performing their benchmarking analysis, PwC concluded that the "direction and magnitude of the movement in BarCap's prices is not inconsistent with the referenced indices index within a reasonable range of fair value."[56] In addition to the review of the pricing of the underlying assets, PwC reviewed the reserve provision methodology, and concluded that "it is consistent with [the] prior year and compliant with IFRS."[57]

C. Mr. O'Driscoll does not provide any analysis to show that Barclays' valuations of the monoline exposures as of December 31, 2007 were incorrect or inadequate.

39. Mr. O'Driscoll points to downgrades of monoline insurers, apparently to suggest that Barclays' 2007 financial statements over-valued the insured assets on Barclays' balance sheet.[58] However, the Complaint points to only three actual downgrades of monoline insurers: ACA (from A to CCC on December 20, 2007), Ambac (AAA to AA on January 18, 2008), and FGIC (from Aaa to A3 on February 14, 2008).[59] Two of these downgrades occurred *after* the end of

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[54] PwC000538–586 at 556.

[55] PwC000538–586 at 557.

[56] PwC000538–586 at 562.

[57] PwC002893–2902 at 2896.

[58] O'Driscoll Report, ¶¶ 104–106, 123.

[59] Complaint, ¶¶ 198, 200, 207.

the reporting period for Barclays' 2007 Form 20-F. In fact, on December 14, 2007, nearly all of the monoline insurer counterparties to Barclays' NBTs had their Aaa ratings affirmed by Moody's.[60] Moreover, these three insurers represented only 30% of Barclays' total exposure to monolines as of December 31, 2007 and the downgrades to Ambac and FGIC's ratings were still to investment grade ratings.[61] Barclays' exposure to ACA was very small, accounting for less than 0.1% of the total exposure, and Barclays had a collateral agreement in place with ACA, requiring ACA to post collateral against its potential exposure to Barclays.[62] In addition, Ambac raised $1.5 billion in an equity offering in the first quarter of 2008 (shortly after the downgrade of Ambac Assurance), of which $1.3 billion went to support Ambac Assurance.[63]

40. Mr. O'Driscoll ignores that Barclays took the downgrades in credit ratings into account and concluded that monoline insurer defaults, and therefore losses on the NBT positions, were unlikely. Internal emails indicate that in January 2008, Barclays understood that the actual losses incurred were not exceeding the monolines' ability to pay and that the ratings agencies were not forecasting that the monolines would be unable to pay.[64] Stephen King, a senior credit trader at Barclays, testified that "I don't remember monolines failing as being any more than Lehman failing being kind of on anybody's radar in early 2008."[65] An internal email cited by Mr. O'Driscoll, while discussing a negative outlook on monoline credit ratings as of November 2007,

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[60] "Moody's Announces Rating Actions on Financial Guarantors," *Moody's Investors Service*, December 14, 2007, https://www.moodys.com/research/Moodys-announces-rating-actions-on-financial-guarantors--PR_146377. Some ratings were affirmed and put under review for possible downgrades.

[61] BARC-ADS-01378154, p. 8.

[62] BARC-ADS-01554693, p. 14; BARC-ADS-00933320, p. 4.

[63] Ambac Financial Group Inc. Form 10-Q, filed May 12, 2008, p. 19.

[64] BARC-ADS-00784174–76 at 75 (PX 101).

[65] Deposition of Stephen J. King, October 1, 2015 ("King Deposition"), 239:13–18.

specifically notes that the writer was "not suggesting that we expect [the monolines] to default. . . ."[66]

41. Additionally, Barclays noted that much of its NBT exposure was in "lev[eraged] loans, other clo's, etc[.] which aren't in trouble and generally have a big cushion," indicating that it expected any claims against monoline insurers for those assets to be small.[67] In a memo to the Financial Services Authority ("FSA") concerning profit before tax ("PBT") volatility, Barclays classified the monoline exposure business as an area "likely to have [a] relatively small impact on PBT volatility on a monthly basis even under a scenario of severe stress," citing that "some monolines, including MBIA and AMBAC have been recapitalised and thereby retain their AAA ratings."[68]

42. In addition, Mr. O'Driscoll asserts that some counterparty protection sellers who were not monoline insurers (such as Goldman Sachs) needed to be "bailed out" by the government in 2008.[69] However, in late 2007 and early 2008 the market viewed the probability that a highly rated entity like Goldman Sachs would default on a payment obligation under these contracts as extremely low and therefore Mr. O'Driscoll seems to be advocating that these exposures should have been valued assuming a severe and unprecedented financial crisis scenario as of December 31, 2007. As I explain in the report, events that occurred later in 2008 were unexpected by most market participants. In addition, Mr. O'Driscoll has cited no evidence that Goldman Sachs did not meet its obligations under the CDS contracts.

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[66] BARC-ADS-00582828–29 at 28 (PX 354).

[67] BARC-ADS-00937789–790 at 789.

[68] BARC-ADS-01544307–312 at 307–308.

[69] O'Driscoll Report, ¶ 105, Exhibit 4.

VI. Mr. O'Driscoll and Mr. Regan Incorrectly Focus on Notional Values as Measures of Exposure.

43. Mr. O'Driscoll claims that Barclays failed to disclose "to investors its notional exposure to monoline insurers of £21.5 billion."[70] Similarly, Mr. Regan claims that Barclays failed to disclose "the full extent of its exposure to monoline insurers,"[71] which allegedly was "represented [by] the full notional value of the assets they insured."[72]

44. However, these measures do not represent the underlying economic exposures of the NBTs. The notional value or gross exposure would be an accurate measure of economic exposure only assuming that the underlying credit asset defaults <u>and</u> produces zero recovery, <u>and</u> that these losses could not be recovered (even in part) from the monoline counterparties. This represents an extreme loss scenario. Even if one were to assign no value to the monoline protection (which would not have been appropriate given that most had AAA ratings), it would be the fair value of the underlying credit exposures (rather than the notional value of those assets) that would be the relevant measure of economic exposure.

45. As I explained previously, the NBT positions were valued and recorded consistently with their underlying structure on the balance sheet, which included exposures to the credit assets that were *hedged* through CDS insurance protection purchased from third parties, including monoline insurers. Absent a third-party insurer default, the positions were hedged from risk as any defaults on the credit asset would be reimbursed by the writer of insurance. This hedge feature

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[70] O'Driscoll Report, ¶ 123. Mr. O'Driscoll also notes that Barclays discussed notional amounts and other information concerning its monoline-insured positions with the FSA and at the Board Risk Committee. O'Driscoll Report, ¶¶ 119, 121. In my experience, however, investors and other market participants understand that companies do not publicly disclose all matters that they discuss with their regulators or at board of directors or board committee meetings, and do not expect such disclosure.

[71] Regan Report, ¶ 89.

[72] Regan Report, ¶ 36.

made these positions fundamentally different from the standalone exposures in terms of the underlying risk because there was little or no exposure to the underlying credit risk unless the hedges failed (an event deemed unlikely by the agencies that provided high credit ratings to the monoline insurers as of December 31, 2007, as shown in Exhibit 4). From an economic standpoint, Mr. O'Driscoll's and Mr. Regan's claims that these should have been disclosed as the notional values of the underlying CDO or CLO positions does not make sense.

46. In addition, as explained above, PwC reviewed Barclays' accounting for monoline exposures and concluded that it was appropriate. In fact, in a May 2008 report by PwC to Barclays' Board Audit Committee, PwC explained that "[Barclays'] exposure [to monoline insurers] represents the current fair value loss on the assets [underlying the NBTs] which, in the event of a default on those assets, would be recoverable from the monoline."[73] Douglas Summa, one of the PwC partners who worked on the Barclays engagement and was identified by PwC as being part of a group of "valuation specialists,"[74] testified that Barclays disclosure was appropriate because the relevant value for exposure to monolines is the fair value exposure and that, contrary to the opinions of Mr. O'Driscoll and Mr. Regan, "[t]he notional [value] is not a real meaningful number."[75]

47. Moreover, Barclays publicly disclosed that it used fair value to express its monoline exposures. For example, Barclays stated in a February 2008 earnings call following the release of its 2007 year-end results:

> In terms then of the individual categories, you can go down them line by line, but probably the one that will catch your eye, and let me just touch

[73] BARC-ADS-01550739–745 at 743.

[74] PwC000463–470 at 464 (PX 517).

[75] Deposition of Douglas Summa, December 16, 2015 ("Summa Deposition"), 211:15–19.

> on for a second is the monoline insurers. That is the mark-to-market of – to the extent we rely on the monoline insurers for their guarantees or credit wrappers that they've applied to individual assets. **We take the mark-to-market because we believe it's the best proxy for our exposure**, but as with any mark-to-market, is not a realized loss. For example, when we look at the underlying assets, there are no defaults and no losses in the underlying assets. This is if you like the estimate we have of the market value of the support that we have reflected.[76]

VII. Contrary to Mr. O'Driscoll's Assertions, Barclays Did In Fact Take Steps to Reduce its CDO Exposures During 2007.

48. Mr. O'Driscoll points to a statement in Barclays' 2007 Form 20-F that "our risks in these portfolios were identified in the first half [of 2007] and management actions were taken to reduce limits and positions. . . . Our ABS CDO Super Senior positions were reduced during the year."[77] Mr. O'Driscoll claims that this statement was false because he has seen no evidence that Barclays reduced its CDO exposures during 2007, and "a writedown does not constitute a reduction of a position," and further claims that CDO exposures actually increased in 2007 due to new positions added.[78] Mr. O'Driscoll's argument is flawed, because it ignores, among other things, Barclays' efforts to hedge its CDO positions.

49. I have examined changes to Barclays' reported ABS CDO exposure. In the first half of 2007, Barclays added approximately $4.0 billion in liquidity facilities (not $5.6 billion as Mr. O'Driscoll claims, as I explain below). However, I have seen no evidence of increases in liquidity facilities due to new issuance in the second half of 2007.[79] On the contrary, the value of Barclays' hedges increased by approximately $2.0 billion (in large part due to new hedge

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[76] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008, pp. 11–12 (emphasis added).

[77] O'Driscoll Report, ¶ 107. See also Regan Report, ¶ 47.

[78] O'Driscoll Report, ¶ 108.

[79] This is consistent with Mr. O'Driscoll's Exhibit 5.

positions) during the second half of the year, and Barclays wrote down approximately $3.5 billion of the value of these positions yielding a net decrease in the reported balance sheet exposure to CDOs.[80]

50. Indeed, I understand based on numerous internal documents that Barclays made a concerted effort to reduce its ABS CDO exposure during the second half of 2007. For example, an action plan sent in a July 12, 2007 email within Barclays' CDO desk outlined several steps to reduce the bank's positions, including adding hedges on several ABS CDO positions, selling others if possible, and evaluating the possibility of restructuring some deals.[81] Additionally, an email between senior management (Robert Diamond and John Varley) later that year (on October 26, 2007) specifically referenced the ABS CDO positions, earlier losses, and "effective hedging" undertaken since then.[82] Finally, a response from Barclays to S&P about events after the bank's November 15, 2007 trading update described how the bank had "significantly increased the level of our [ABS CDO and RMBS warehouse] hedging activity."[83] "As a result of the increased hedging activity and further writedowns," the update continued, "Barclays Capital's net exposure to ABS CDOs and other subprime exposures is lower than that reported in mid November."[84] Finally, in its 2007 fourth-quarter earnings conference call, Barclays' Group Finance Director specifically noted that, with respect to ABS CDO super senior exposures, "we've managed our exposures carefully and taken selective hedging opportunities."[85]

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[80] BARC-ADS-01633167–69.

[81] BARC-ADS-00289082–83.

[82] BARC-ADS-00931713–14 at 13.

[83] BARC-ADS-00935818–19 at 18.

[84] BARC-ADS-00935818–19 at 18.

[85] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008.

51. Mr. O'Driscoll does not address hedging, which is a natural way to reduce exposures in OTC and illiquid positions. Investors can hedge their exposures using various different methods, including CDS contracts. For instance, consider an investor who purchased a 5-year bond issued by Company X with a par value of $1,000 and a coupon interest amount of $100 each year, but does not want to have exposure to Company X (*i.e.*, he wants to eliminate his credit risk). The investor can enter into a CDS contract with Bank Y by agreeing to pay Bank Y $10 each year. In return, Bank Y agrees to pay the investor the par value of the bond as well as the lost interest in the event of Company X's default. With this CDS contract, the investor obtains protection against Company X's default, and eliminates his exposure to the credit risk. Mr. O'Driscoll does not address hedging at all when he states that Barclays did not reduce its positions.

52. Moreover, Mr. O'Driscoll incorrectly calculated Barclays' new liquidity facility issuance in 2007 as $5.6 billion when in fact it in fact was $4.0 billion, thereby overstating the amount of new liquidity facilities. In Mr. O'Driscoll's Exhibit 5, Mr. O'Driscoll appears to have confused the issuance date of Liberty Harbour I, a CDO issued in 2005 to which Barclays was exposed through a liquidity facility, with that of Liberty Harbour II, a CDO which was issued in 2007 but had a liquidity facility agreement with Merrill Lynch, not Barclays.[86] Therefore, he appears to have incorrectly included the notional amount of Liberty Harbour I as part of the new exposure he claims that Barclays took on in 2007.

53. Apart from the confusion in the issuance date of the liquidity facility, Mr. O'Driscoll's Exhibit 5 also indicates that all of the new liquidity facility issuances were in the first half of 2007. This is consistent with Barclays' statement in its 2007 Form 20-F that the bank identified

[86] O'Driscoll Report, Exhibit 5; *Bloomberg*; "Moody's Rates the Liberty Harbour II CDO Ltd. Offering From Barclays Capital," *Moody's Investors Service*, March 30, 2007.

risks related to CDOs in the first half of 2007 and then took action to mitigate them during the remainder of the year:

> The results of severe disruption in the US sub-prime mortgage market were felt across many wholesale credit markets in the second half of 2007, and were reflected in wider credit spreads, higher volatility, tight liquidity in interbank and commercial paper markets, more constrained debt issuance and lower investor risk appetite. Although impairment and other credit provisions in Barclays Capital rose as a consequence of these difficult subprime market conditions, our risks in these portfolios were identified in the first half and management actions were taken to reduce limits and positions. Further reductions and increased hedging through the rest of the year continued to bring net positions down and limited the financial effect of the significant decline in market conditions. . . .[87]

54. While Mr. O'Driscoll claims that "a writedown does not constitute a reduction of a position,"[88] the fact that Barclays netted writedowns against exposures and reported a net exposure was disclosed in Barclays' 2007 Form 20-F. Mr. O'Driscoll selectively cites from the document and omits this information (highlighted in bold below):

> Our ABS CDO Super Senior positions were reduced during the year **and our remaining exposure reflected netting against writedowns, hedges, and subordination.** At the end of the year, market conditions remained difficult with reduced liquidity in cash and securitised products, and reflected stress at some counterparties such as the monoline insurers.[89]

55. In fact, reporting the remaining exposure net of writedowns makes sense because writedowns do in fact reduce balance sheet exposure. For instance, a 100 percent writedown of an asset implies that there would be no further downside risk given that there could be no additional losses in value to be written off.

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[87] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 65.

[88] O'Driscoll Report, ¶ 108.

[89] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 65.

56. It is also important to note that Barclays' 2007 Form 20-F reported a lower ABS CDO exposure as of December 31, 2007 than as of June 30, 2007, a fact that Mr. O'Driscoll does not address or claim was incorrect.[90] These exposures are consistent with Barclays' statement in its 2007 Form 20-F that Barclays identified risks related to CDOs in the first half of 2007 and then took action to mitigate those risks during the remainder of the year.

VIII. Contrary to Mr. O'Driscoll's Claim, Describing CDOs as "High Grade" Was Not Misleading.

57. Mr. O'Driscoll claims that "Barclays' description of its ABS CDO positions did not relay the full extent of Barclays' risk because it gave the impression that any potential losses would be modest because the majority of its ABS CDO assets were characterized 'High Grade.'"[91] This claim is unfounded because market participants at the time (including myself) generally understood the term "High Grade" as applied to CDOs to indicate that such CDOs were backed by collateral that was highly rated at the time of the CDO's issuance, as opposed to being immune from loss.[92]

58. For example, analysts at Credit Suisse—where Mr. O'Driscoll was employed at the time—recognized that the term "High Grade" referred to the ratings of a CDO's collateral at the time of issue. A Credit Suisse publication from 2006 explained that "[t]he collateral for high grade SF [Structured Finance] CDOs is . . . typically rated at least Single-A with an average rating of double A."[93] Mr. O'Driscoll also states that Barclays' "High Grade" CDOs had "far

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[90] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[91] O'Driscoll Report, ¶ 109.

[92] O'Driscoll Report, ¶ 109. Indeed, High Grade CDOs, as a class, generally had lower amounts of subordination (credit protection) than so-called "mezzanine CDOs," which were backed by lower-rated collateral.

[93] "Cash Flow CDO Handbook: Structures, Insights & Strategies," *Credit Suisse*, March 31, 2006, p. 26. Merrill Lynch also notes in its 2007 10-K that "[h]igh-grade super senior [CDO] positions . . . are ABS CDOs with

less protection against default (on average 10.5% of CDO notes subordinate to Barclays' exposure) than the supposedly more risky mezzanine CDOs," but this does not establish that any disclosures were misleading.[94] On the contrary, it was well recognized, including again by analysts at Credit Suisse, that the "high credit quality of the collateral [of High Grade CDOs] affords a lower subordination or a larger senior tranche" relative to mezzanine CDOs.[95]

59. Mr. O'Driscoll's report provides no evidence whatsoever to conclude that investors would have expected losses on "High Grade" CDOs to be modest. In fact, readers of Barclays' 2007 Form 20-F could have inferred that Barclays took writedowns on the "High Grade" CDOs as of December 2007.[96] In addition, Mr. O'Driscoll himself acknowledges in his report the troubles of "High Grade" CDOs that were publicly known in 2007. For instance, he mentions that the Bear Stearns *High Grade* Structured Credit Strategies ("HGSC") fund failed to meet margin calls in June 2007.[97] He also cites an article that discusses the fact that "High Grade" CDOs experienced Events of Default ("EOD") in November 2007, which is inconsistent with a claim that these products were immune from losses.[98] He also discusses widespread downgrades

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underlying collateral having an average credit rating of Aa3/A1 at inception of the underwriting." Merrill Lynch & Co., Inc. Form 10-K, filed February 25, 2008, p. 36. See also, "Insured MBS and CDO Portfolio as of September 30, 2007," *Financial Guaranty Insurance Company*, October 30, 2007, p. 31.

[94] O'Driscoll Report, ¶ 110.

[95] O'Driscoll Report, ¶ 110; "Cash Flow CDO Handbook: Structures, Insights & Strategies," *Credit Suisse*, March 31, 2006, p. 32. See also, Thompson A., E. Callahan, C. O'Toole and G. Rajendra (2007) "Global CDO Market: Overview and Outlook," *Deutsche Bank*, p. 9.

[96] Barclays' total writedowns on CDOs (*i.e.*, writedowns on "High Grade" plus writedowns on mezzanine CDOs) were almost three times as large as the reduction in the mezzanine CDO exposure before hedging, which is consistent with a significant portion of the total writedowns being taken on the "High Grade" positons. Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[97] O'Driscoll Report, ¶ 41.

[98] O'Driscoll Report, ¶ 48.

of RMBS, which collateralized "High Grade" CDOs; these downgrades were public information.[99]

60. Finally, I have seen no evidence, and Mr. O'Driscoll does not cite any, that Barclays' statement in its 2007 Form 20-F that it was *primarily* exposed to "High Grade" CDOs was inaccurate. In fact, about 80% of Barclays' exposure was to "High Grade" CDOs as of December 31, 2007.[100]

61. In addition, Mr. O'Driscoll cites no evidence that the "High Grade" CDO positions were improperly valued by Barclays. His statement that "a review of internal documents concerning Barclays High Grade CDOs revealed that Barclays' High Grade CDO positions were collateralized by underlying CDO notes that were poised to wipe out its entire subordination protection"[101] is given without explaining or disclosing the underlying analysis that would be required to support it, and in any case does not imply that Barclays' valuations were improper or that Barclays did not take the value of the underlying collateral into account. Importantly, the only "internal document[]" Mr. O'Driscoll cites is as of March 31, 2008, and Mr. O'Driscoll does not take into account whether that document incorporated developments subsequent to the December 31, 2007 valuation date.[102] Similarly, Mr. O'Driscoll's statement that "subprime assets and downgraded assets underlying the CDOs ***could*** wipe out the subordination and result in imminent losses"[103] (emphasis added) provides no evidence of inappropriate valuation. In addition, Mr. O'Driscoll has not provided any analysis to determine the likelihood that any

[99] O'Driscoll Report, ¶ 44, citing a *Bloomberg* article and a Moody's press release.

[100] BARC-ADS-01554693, pp. 6, 8.

[101] O'Driscoll Report, ¶ 110.

[102] O'Driscoll Report, ¶ 110; BARC-ADS-00898760. I also note that two of the CDOs Mr. O'Driscoll includes in his table illustrating the high-grade CDOs (Tourmaline I and Tourmaline II) were actually classified by Barclays as mezzanine CDOs. See BARC-ADS-01554693, p. 8.

[103] O'Driscoll Report, ¶ 110.

downgrades or declines in value on subprime assets that he is referring to would lead to a "wipe out" of the subordination.

62. In fact, as explained in the following section of my report, Barclays' CDO valuations were reasonable and based upon consideration of appropriate factors. Mr. O'Driscoll has provided no evidence to the contrary.

IX. Barclays' Valuations of its Credit Assets—Including its CDOs—Were Reasonable.

A. Valuation of the assets at issue is inherently complex, subjective, and typically requires the use of valuation models that can yield a range of values for a given asset at a given point in time.

63. The assets at issue—whole loans, RMBS, CDOs, SIVs and SIV-lites, commercial mortgages, and CMBS—are all complex instruments for which readily-observable market prices were typically not available during the relevant period. Each such instrument has unique credit characteristics and typically references unique underlying collateral, complicating its valuation. In fact, these instruments are sometimes thinly traded and/or tailored for their purchasers (in terms of the credit quality of underlying assets and/or capital structure) such that no two identical assets may be held by multiple entities in the marketplace. Thus, either the assets at issue need to be valued in reference to other similar but rarely identical assets (which themselves may not be frequently traded), and/or valuation models must be used.

64. Because the assets have unique credit characteristics that diminish their fungibility, the usefulness of market prices of similar products is inherently limited and often requires model-based transformations. Furthermore, reliable market prices of similar assets may not be available at all, especially as liquidity dries up during times of financial distress. For instance, prior to the financial crisis, market participants may have used, among other data, prices from independent vendors (such as IDC or Bloomberg) in order to obtain valuations of various structured products

including RMBS, CDOs, etc. Such vendor prices were informed by observed transactions in the market. As the number of observed transactions fell, prices provided by vendors became increasingly model-based. Moreover, in addition to the fact that there were few observed transaction prices, differences in collateral (*e.g.*, among loans of different vintages) became more pronounced, further limiting the number of observed transaction prices that may have been relevant.

65. When market prices (or vendor provided prices based on observed transactions) are not available for valuation, the next method to assess the value of an asset would be the use of valuation models that rely on observable market inputs. This is consistent with how Barclays described its approach in its 2007 Form 20-F where it stated that "models used . . . are calibrated against industry standards, economic models and to observed transaction prices where available" and recognized that "various factors influence the availability of observable inputs" including "the depth of activity in the relevant market, the type of product, whether the product is new and not widely traded in the market place, the maturity of market modelling and the nature of the transaction."[104]

66. Indeed, as early as October 2007, Ben Bernanke, the Chairman of the Federal Reserve, highlighted concerns about illiquidity in credit markets, saying that "forced sales of illiquid assets will drive the prices of those assets well below their longer-term fundamental values."[105] In a speech delivered January 10, 2008, Mr. Bernanke similarly noted that "well-functioning

[104] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 48.

[105] "The Recent Financial Turmoil and its Economic and Policy Consequences," *Board of Governors of the Federal Reserve System*, October 15, 2007 http://www.federalreserve.gov/newsevents/speech/bernanke20071015a.htm.

secondary markets [for certain securities] no longer existed."[106] Similarly, a publication by the St. Louis Federal Reserve discussed the consequences of the market illiquidity, explaining that "[i]n the absence of a liquid market for these products from which to determine a current price, the best possible solution was to attempt to predict prices—so mark-to-market was replaced by mark-to-model."[107]

67. A key step in model-based valuation involves the selection of an appropriate model. In many instances, more than one model could be used for a given asset and therefore judgment is required to select an appropriate model. Moreover, when financial models are used, because such models typically require a number of inputs (many of which are forecasts of unknown future events), the application of subjective judgment is further required. Barclays recognized in its 2007 Form 20-F that when the "valuation is based on models or inputs that are not observable in the market, the determination of fair value can be more subjective," and that the "effect of changing the assumptions for those financial instruments for which the fair values were measured using valuation techniques that are determined in full or in part on assumptions that are not supported by observable inputs to a range of reasonably possible alternative assumptions, would be to provide a range of £1.2bn (2006: £0.1bn) lower to £1.5bn (2006: £0.1bn) higher than the fair values recognised in the financial statements."[108]

68. Naturally, the level of judgment required is further heightened when observable data are limited. This restriction may take the form of a limitation on available data (such as few observed transactions), as described above, or when observable historical data is not directly

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[106] "Financial Markets, the Economic Outlook, and Monetary Policy," *Board of Governors of the Federal Reserve System*, January 10, 2008, http://www.federalreserve.gov/newsevents/speech/bernanke20080110a.htm.

[107] Mizen, P. (2008) "The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses," *Federal Reserve Bank of St. Louis Review*, Vol. 90, No. 5, pp. 531–568 at 545

[108] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 48.

relevant. Barclays acknowledged this in its 2007 Form 20-F, noting that the size of the range of possible valuations "will vary over time in response to market volatility, market uncertainty and changes to benchmark proxy relationships of similar assets and liabilities."[109]

69. For example, prior to the financial crisis, U.S. home prices (a key factor in projecting the performance of residential mortgage loans and RMBS) had been on an upward trend since before 1990.[110] It is well understood that the performance of mortgage loans depends to a significant extent on whether home prices are increasing or falling.[111] As home prices began to decline in 2007, even if one could observe the historical relationships between mortgage loan performance and observable characteristics of the underlying loans, it was difficult to predict what that data would imply for the future of these relationships as the housing market was very different than previously observed. This is because relationships between loan characteristics and performance would be expected to differ significantly between an environment of increasing house prices and one where house prices were falling dramatically.

1. The valuation of different asset types at issue was also impacted by accounting considerations and objectives.

70. Barclays' year-end 2007 financial statements indicated that the valuations were prepared using different approaches corresponding to different accounting treatment: (1) financial instruments recorded at fair value with changes in value recognized in the income statement; (2) loans and receivables recorded at amortized cost and assessed for impairment; (3) assets held

[109] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 48.

[110] Based on non-seasonally-adjusted S&P/Case-Shiller United States Home Price Index Monthly data from January 1987 to December 2006. See *Bloomberg*.

[111] See, for example, Foote, C., K. Gerardi, L. Goette, and P. Willen (2010), "Reducing Foreclosures: No Easy Answers," *NBER Macroeconomics Annual 2009*, Vol. 24, pp. 89–90; McDonald, D. and D. Thornton (2008), "A Primer on the Mortgage Market and Mortgage Finance," *Federal Reserve Bank of St. Louis Review*, Vol. 90, No. 1, pp. 31–46 at 31.

to maturity recorded at amortized cost and assessed for impairment; and (4) available for sale financial assets recorded at fair value and assessed for impairment.[112]

71. Assets in the first category (financial instruments recorded at fair value with changes in value recognized in the income statement) were classified in this category if they were "held for trading, or if they [were] designated by management under the fair value option."[113] It is my understanding that financial instruments may be classified in this category at inception and that a financial asset cannot be transferred into another category in the future. Any gains or losses stemming from changes in the fair value of assets in this category were included directly in the income statement as profit or loss.[114]

72. Assets in the second category (loans and receivables recorded at amortized cost and assessed for impairment) were classified in this category if they were "non-derivative financial assets with fixed or determinable payments that [were] not quoted in an active market and which were not classified as available for sale." These assets were initially recognized at fair value and subsequently valued at amortized cost. The assets were assessed for impairment on a regular basis. The amount of impairment, if any, was determined by "the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate."[115]

73. Assets in the third category (assets held to maturity recorded at amortized cost and assessed for impairment) were classified in this category if they were "non-derivative financial assets with fixed or determinable payments that [Barclays'] management had the intention and

[112] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, pp. 150–152.

[113] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 150.

[114] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 150.

[115] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, pp. 150–152.

ability to hold to maturity." These assets were initially recognized at fair value and subsequently valued at amortized cost. Similar to loans and receivables, held to maturity investments were assessed for impairment using the methodology described above.[116]

74. Assets in the fourth category (available for sale financial assets recorded at fair value and assessed for impairment) were classified in this category if they were "non-derivative financial assets that [were] designated as available for sale and [were] not categorized into any of the other [three] categories." These assets were initially and subsequently recognized at fair value. However, unlike assets in the first category, gains and losses arising from changes in fair value were included separately in equity (as opposed to flowing through the income statement) until sale and then the cumulative gain or loss was transferred to the income statement. In addition, Barclays also assessed these instruments for impairment.[117]

75. Therefore, different valuation techniques may be required depending on an individual asset's particular accounting treatment. In addition, it is my understanding that Barclays' financial statements show that various assets in the same asset class were valued differently according to which of the four categories they belonged. For example, within ABS CDO super senior facilities, some were recorded at fair value while others were accounted for as loan facilities held on the balance sheet and therefore recorded at amortized cost and assessed for impairment.[118]

76. Such distinctions in accounting treatment and between mark-to-model and amortized cost approaches are particularly important during times of market distress and low liquidity, because, depending on the approach, the reported valuation can be different for similar assets when they

[116] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, pp. 150–152.

[117] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 151.

[118] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, pp. 48–49, 51.

are valued using different approaches. For example, assets held for sale and accounted at fair value may be more likely to reflect temporary reductions in market liquidity that may not be reflected in the valuations of assets held at amortized cost and assessed for impairment.

77. As an asset manager, a number of my clients had their assets valued under mark-to-market or mark-to-model accounting treatment, whereas others held assets according to the amortized cost approach. Therefore, it would have been possible for me to observe two different clients that own the same security but record the value of that security at different levels due to the different accounting treatments.

78. Furthermore, assets accounted for at fair value for financial reporting purposes are often marked more frequently by financial institutions for other purposes such as collateral valuation. However, these changes in the market may or may not reflect changes in the fundamental credit value of the asset, and can vary significantly based on market conditions at a given point in time. It is important to recognize that these changes in value are not the same as realized losses.

2. The reported valuations of different asset types at issue would have been impacted by hedging.

79. It is also important to recognize the impact of hedging on reported asset valuations. Hedging is not only a common practice, but an important element of prudent risk management that allows dealers and other market participants to reduce exposure to sharp profit and loss swings, particularly under uncertain or volatile market conditions (as was the case in late 2007 and 2008). When market participants enter a hedge, they may not be expressing a belief about that security's outright performance, but instead, primarily seeking to reduce their exposure to that security, sector, or market. The mechanics of a hedge transaction are such that one would

expect the hedge to experience mark-to-market gains when the underlying assets experience mark-to-market losses and vice-versa.

80. It is my understanding that in Barclays 2007 Form 20-F, Barclays reported valuations net of hedges for some of the assets at issue in their financial statements.[119] When value net of hedges is reported in times of deteriorating market conditions, an investor would expect that the net value would be less volatile than the underlying assets alone if the position is hedged. In other words, an investor would expect that large negative changes in value of the underlying asset would be at least partially offset by opposite positive changes in the value of the hedges.[120] Indeed, Barclays communicated to investors in an earnings call that its disclosed credit market exposures were "consciously shown net of hedging and net of write-downs."[121]

81. Moreover, PwC's Douglas Summa testified that he has "seen it as a common practice" that disclosures would be "net," rather than gross, figures,[122] in contrast to Mr. O'Driscoll's claim that Barclays' "presentation of [its] ABS CDO writedowns and charges also understated the true risk of these positions because the disclosed writedowns had been netted against income earned on Barclays' ABS CDO positions."[123] Mr. Diamond also explained why the disclosure was appropriate in his view.[124]

82. Mr. O'Driscoll does not explain why he believes that reporting net figures was misleading to investors, or what standard he is using to apparently conclude that disclosing net figures was not appropriate. In fact, despite the fact that Mr. O'Driscoll seems to opine on the

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[119] See, for example, Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[120] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 153.

[121] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008, pp. 11–12.

[122] Summa Deposition, 20:18–21:13.

[123] O'Driscoll Report, ¶ 114.

[124] Deposition of Robert E. Diamond, November 13, 2015 ("Diamond Deposition"), 232:7–236:9.

adequacy of Barclays' disclosures, the O'Driscoll Report fails to articulate any objective standard for evaluating disclosures.

B. Regulators regularly discussed valuations with Barclays.

83. It is my understanding that Barclays had communications and met with its primary regulator, the FSA, in 2007 and 2008 concerning (among other things) its credit market exposures.

84. In June 2007, the FSA had a week-long business overview meeting to review Barclays' ABS CDO positions as well as other credit market positions.[125] In November 2007, in light of market developments, the FSA sent a questionnaire to various financial institutions (including Barclays) to explore the strengths and weaknesses of their risk management practices, and Barclays prepared a response for the FSA.[126] In addition, Barclays updated its stress test processes for various assets based on the FSA's requests.[127]

85. Barclays continued to communicate with the FSA in 2008. In late January 2008, Barclays met with the FSA to review its valuation and stress test methodologies for various assets (including CDOs, CMBS, RMBS, and monoline exposures).[128] Furthermore, in March 2008, Barclays prepared a memorandum for the FSA in which the bank discussed various business areas (including CDOs and leveraged finance) and their impact on earnings.[129]

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[125] BARC-ADS-01230170–77.

[126] BARC-ADS-00833279–282; BARC-ADS-01292180–2210. In addition, in November 2007, Barclays provided information on its monoline exposure per the FSA's request. See BARC-ADS-00833285–89.

[127] For instance, an internal Barclays' email indicates that, per an FSA instruction, the bank increased its cumulative loss assumptions for whole loan stress tests by 100% in order to align the stress parameters with the ones that the bank used in testing its super senior ABS CDO positions. BARC-ADS-01271410.

[128] BARC-ADS-01313000–02 at 00.

[129] BARC-ADS-01544307–312 at 307, 309–310.

Between March and May 2008, Barclays met with FSA representatives several times to discuss various exposures.[130] Barclays also provided information on valuation and stress tests of CDOs and other Alt-A and subprime assets to the FSA.[131] In September 2008, after an industry-wide requirement for information relating to cash and derivative exposures was implemented, the FSA requested quarterly reports from Barclays.[132] Finally, in December 2008, Barclays gave a presentation to the FSA discussing CDOs and CLOs including valuation methods, data sources, and price testing methodologies.[133]

C. The approaches adopted and models used by Barclays were consistent with those commonly adopted and used by participants in the structured finance industry at that time.

86. The approaches adopted and models used by Barclays were consistent with those commonly adopted and used by participants in the structured finance industry at that time. In particular, Barclays' approaches were consistent with the approaches I have seen used or used myself as a participant in the mortgage markets at the time.

87. The details of Barclays' valuation methodologies for selected credit assets (including CDO assets) and how those methodologies compared to industry standards are described in Appendix A to this report.

88. I show specifically that the approach taken by Barclays was common in the industry. For instance, the Bond Market Association's CDO primer, published with contributions from several of Barclays' peers, observed that it was industry standard to assess CDOs' value via a discounted

[130] BARC-ADS-00875806–07; BARC-ADS-01139415–17; BARC-ADS-01403915–19; BARC-ADS-01402314–15.

[131] BARC-ADS-01313165–66.

[132] BARC-ADS-01384885–86.

[133] BARC-ADS-01632930–32; BARC-ADS-01632992.

cash flow ("DCF") model or, "[i]n situations where liquidation is a possibility," to use a Net Asset Value ("NAV") approach to value the underlying collateral, much as Barclays did.[134]

89. In addition, the thematic approaches Barclays used (*e.g.*, projecting cash flows from the underlying collateral, running those cash flows through a payment waterfall, subjecting the cash flow allocation to triggers, and then discounting the cash flows) was consistent with my experience in valuing CDOs while at HBAM. HBAM's analytics group (which I chaired) first dealt with CDO valuation in a portfolio review of 8–12 CDO equity classes for a large insurance company during 1999–2002. Our approach was broadly the same as Barclays and even included an NAV calculation. Later, we invested in a small number of CDOs and faced the challenge of valuing them as market liquidity dried up in 2007. Our approach was similar to that of Barclays (*i.e.*, performing credit work on the underlying collateral, projecting cash flows, and then discounting those cash flows to estimate a price).

90. As detailed in Appendix A, my conclusions that Barclays' valuation approaches were consistent with those used by other industry participants also apply to other credit assets whose valuations I reviewed, including whole loans, RMBS and residual exposures.

91. In fact, neither Mr. O'Driscoll nor Mr. Regan provides any basis for concluding that any of Barclays' valuation models or resulting valuations were inappropriate. The two reports only contain generic descriptions of the markets and statements made with the benefit of hindsight about developments in 2008 that ultimately affected values of the assets at issue. Neither of them performs any detailed analysis of Barclays' valuation of the credit assets at issue.

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[134] "CDO Primer," *The Bond Market Association*, 2004, p. 31.

D. Barclays' Auditor PwC Concluded that the Bank's Valuations Were Appropriate.

92. Based on documents I have seen, PwC appears to have closely reviewed and was therefore very familiar with Barclays' valuation methodologies as part of its role in auditing Barclays' financial statements.

93. Indeed, as a result of the "significant disruption" in the financial markets in 2007 and because financial institutions had been "challenged with estimating the fair value of financial instruments impacted by the credit crunch in the absence of readily observable prices," PwC identified the review of Barclays' valuation methodologies as a "critical matter" in connection with its audit.[135] Accordingly, PwC undertook a "deep-dive" into Barclays' valuation of its credit market assets and staffed an engagement team of "PwC valuation experts" to "develop a deeper understanding of [Barclays'] U.S. credit business" and "identify any issues in advance of [the] year end audit."[136] This "deep-dive" included an initial review of Barclays' credit market exposures, discussions with members of the bank's Product Control Group to understand valuation methodologies, and review of several specific components of those methodologies (*e.g.*, the roll rates and loss severities that went into loss estimation in the ABS CDO super senior Cash Flow Present Value ("CF PV") valuation model).[137] A PwC valuation review team led by Douglas Summa reviewed the prices of several asset categories, including CDOs, ABS, and the NBT portfolio.[138] Mr. Summa's team concluded that the "direction and magnitude of the movements" in prices of the assets reviewed were "consistent with referenced indices," that any

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[135] PwC000513–534 at 513–516.

[136] PwC000513–534 at 520.

[137] PwC000513–534 at 520–521, 526–527.

[138] PwC000538–586.

identified outliers "were appropriately explained," and that "no systematic bias was detected," conclusions which Mr. Summa testified he continues to stand by.[139] At the conclusion of its "deep-dive," PwC reached the conclusion that, "based on our controls work and substantive procedures, we believe that the fair value of credit financial instruments is within a range of acceptable values."[140]

94. For example, as described in more detail in Appendix A, PwC reviewed Barclays' methodology for valuing CDOs in late 2007. It is my understanding that Barclays met with PwC on November 13, 2007 to explain how it valued its ABS CDO super senior liquidity facilities and to describe its portfolio. Shortly thereafter, at a meeting of the Board Audit Committee on November 14, 2007, a partner at PwC described Barclays' CDO valuation methodology as "more thorough and detailed than any other bank had provided."[141] Further review by PwC, as summarized in its findings as of February 7, 2008, covered several aspects of Barclays' methodology, including Barclays' assessment of which CDOs were likely to suffer an EOD as well as the NAV and CF PV valuation methodologies.[142]

95. Similarly, as detailed in Appendix A, I have seen documents that confirm that PwC also reviewed Barclays' valuations of other credit assets whose valuations I reviewed, including whole loans, RMBS and residuals, and commercial real estate exposures. The documents show that PwC ultimately concluded that the valuations were appropriate and that the disclosed financial statements "present[ed] fairly, in all material respects, the financial position of Barclays

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[139] PwC000538–586 at 556, 562, 570, 576, 581, 583, 586; Summa Deposition, 203–205, 212, 216–217, 219–220.

[140] PwC000513–534 at 531.

[141] BARC-ADS-01601539–551 at 541.

[142] PwC000513–534.

PLC."[143] Finally, I note that Barclays took writedowns on all the asset types at issue for the fiscal year 2007,[144] which is consistent with taking into account in its valuations the deterioration in the markets that occurred during 2007. As described throughout my report, Plaintiff's experts have not presented evidence that shows that Barclays' judgments when it valued the assets and the resulting valuations were wrong as of December 2007. To the contrary, PwC concluded that the valuations were reasonable.

E. Barclays' CDO Valuations Were Reasonable and Not Based on "Fragile" or "Problematic" Assumptions as Mr. O'Driscoll Claims.

1. Barclays' Valuation of Its CDOs was Based on Reasonable Assumptions that Were Reviewed and Accepted by PwC, and Mr. O'Driscoll's Arguments Regarding those Assumptions Are Flawed.

96. At the end of 2007, the majority of Barclays' CDO exposure was in the form of super senior liquidity facilities. These were loan commitments in which Barclays agreed to provide funding to a CDO in the event that the CDO's financial obligations to its counterparties or investors exceeded its available cash reserves. Mr. O'Driscoll claims that Barclays "overstated the value and understated the risk" of its CDO positions.[145] In particular, he claims that Barclays' CDO valuation was based on a "fragile, problematic set of assumptions."[146] However, the only such assumption that he discusses in his report is Barclays' assessment of the likelihood of a future event of default with respect to certain CDOs,[147] and the only evidence that he provides in support of his claim that Barclays' determination was incorrect are events that

[143] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 147.

[144] BARC-ADS-01016055.

[145] O'Driscoll Report, ¶ 111. See also Complaint, ¶¶ 70, 135(a), 150; Class Certification Memorandum, pp. 8–9.

[146] O'Driscoll Report, ¶ 111.

[147] O'Driscoll Report, ¶ 111.

occurred subsequent to the December 31, 2007 valuation date.[148] Mr. O'Driscoll's conclusions are wrong, for several reasons.

97. First, PwC's review and conclusions contradict Mr. O'Driscoll's assertion regarding the likelihood of an EOD; in fact, PwC had specifically reviewed Barclays' assessment and concurred with it.[149]

98. Second, Mr. O'Driscoll states that the subsequent default (in March and April of 2008) of two of these vehicles, Tourmaline I and Tourmaline II, demonstrated that Barclays' valuation assumptions were "proven wrong."[150] The fact that Tourmaline I and Tourmaline II would later default does not demonstrate that, as of the end of 2007, Barclays' assessment that those CDOs were unlikely to suffer an EOD was unreasonable. Rather, it demonstrates only that this assessment later turned out to be incorrect, which is consistent with the worsening economic conditions in the first quarter of 2008. Therefore, there is no basis for Mr. O'Driscoll's conclusion that Barclays' assessments of EOD likelihoods were unreasonable or led to the overvaluation of its ABS CDO super senior liquidity facilities at the end of 2007. Mr. O'Driscoll has also provided no justification for extrapolating any implications of events affecting Tourmaline I and Tourmaline II to other CDOs.

99. Third, Mr. O'Driscoll asserts that "Tourmaline I defaulted on April 3, 2008, and Tourmaline II defaulted on March 31, 2008."[151] However, Tourmaline I and II were both structured with two triggers, an EOD trigger and a "supersenior liquidation trigger."[152] A failure

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[148] O'Driscoll Report, ¶¶ 112–113.

[149] PwC000513–534 at 524.

[150] O'Driscoll Report, ¶¶ 111, 112.

[151] O'Driscoll Report, ¶ 112.

[152] BARC-ADS-01603475.

of the EOD trigger did not provide Barclays with the rights to liquidate the deal, as those rights were only exercisable upon the failure of the supersenior liquidation trigger.[153] Barclays determined that while failing the EOD trigger did give Barclays the right to accelerate and stop the reinvestment period, this "[did] not impact the cashflows/waterfall."[154] Barclays therefore concluded that because "the acceleration [*i.e.*, the EOD trigger] does not impact the cash flows, the right to liquidate [*i.e.*, the supersenior liquidation trigger] should be the trigger for control [*i.e.*, the relevant trigger for valuation purposes]."[155] Therefore, Barclays continued to value these positions using a DCF (as opposed to marking them to market, as Mr. O'Driscoll wrongly asserts that the "defaults required Barclays" to do), until such time as the deals were projected to fail the second, in this context more meaningful, EOD trigger within one year.[156] Indeed, Barclays continued to monitor the deals for proximity to the liquidation trigger, and changed the valuation approach when the deals were projected to fail triggers within one year.[157]

2. Mr. O'Driscoll's Claims Regarding CDO Valuations Contain Conceptual Errors.

100. Mr. O'Driscoll claims that the mark-to-market mezzanine portion of the ABS CDO super senior portfolio was written down to 16% as of the end of 2007.[158] This is incorrect, due to

[153] BARC-ADS-01603475.

[154] BARC-ADS-01603475.

[155] BARC-ADS-01603475.

[156] O'Driscoll Report, ¶ 112.

[157] As of April 2008, neither Tourmaline I nor Tourmaline II was projected to fail the second trigger within one year. See BARC-ADS-01603475. However, for the results announcement for the first half of 2008, Tourmaline II was moved from a CF PV valuation to a NAV approach, and Tourmaline I was moved to a NAV approach in the third quarter of 2008, based on Barclays' assessments regarding the timing of a second EOD for each deal. See BARC-ADS-01554547, p. 6; BARC-ADS-01023841, p. 42.

[158] O'Driscoll Report, ¶ 111.

Mr. O'Driscoll mistakenly using an exposure number that is net of hedges. In fact, these positions were marked at 53% as of the end of 2007.[159]

101. Mr. O'Driscoll also contends that, "if Barclays' liquidity facilities had been valued in conformity with its mark-to-market CDOs, they should have been written down by approximately $3.6 billion at year end in accordance with observed trading prices."[160] I disagree. First, Mr. O'Driscoll does not appear to claim, and he certainly has not established, that Barclays was required to change its accounting treatment and mark these CDOs to market as opposed to using the accounting treatment based on discounted cash flows. Second, Mr. O'Driscoll's calculation, as shown in his Exhibit 6, suffers from a fundamental flaw. He assumes that, had the CF PV portions of the High Grade and mezzanine portfolios been marked-to-market, these would have been written down at the same respective rates as the NAV portions of the portfolios. However, the O'Driscoll Report provides no evidence that marking the entire portfolio to market would have been appropriate. In addition, Mr. O'Driscoll's calculation ignores the differences in collateral characteristics that motivated these different valuation methodologies in the first place. As I discuss in Appendix A, the CF PV portion of the ABS CDO super senior portfolio referenced different, higher grade collateral, and so one could expect those assets to outperform the NAV portion of the portfolio even if both were marked-to-market. Mr. O'Driscoll's Exhibit 6 thus provides an inappropriate, inaccurate comparison and provides no basis to conclude that, had the CF PV ABS CDOs been marked-to-market, this would have resulted in an additional $3.6 billion writedown. To the contrary, an internal Barclays document shows the bank's own stress tests as of December 2007, which indicated that, had its CF PV

[159] BARC-ADS-01633167–69.

[160] O'Driscoll Report, ¶ 113 & Exhibit 6.

CDOs instead been marked-to-market, it would have resulted in an additional writedown of approximately $1.4 billion on those positions, or less than 40% of the $3.6 billion additional writedown that Mr. O'Driscoll assumes.[161]

3. Barclays Considered Market Inputs Such as the ABX and TABX Indices in Valuing CDOs.

102. Plaintiff's Class Certification Memorandum cites internal emails purporting to show that Barclays' CDO valuation did not "reflect the steep declines in observable market inputs (i.e., the ABX and TABX indices)."[162] Similarly, both Mr. O'Driscoll and Mr. Regan point to declines in these indices.[163] The Complaint alleges that "[t]he collapse of the ABX and TABX indices" in late 2007 indicated that Barclays' writedowns were inadequate,[164] but fails to recognize the appropriate inclusion by Barclays of the ABX indices as factors in certain valuation models as described in Appendix A. For example, Barclays did use the ABX indices as valuation inputs for the subprime RMBS collateral of its CDO portfolio, using index prices for a portion of the portfolio, and index collateral performance for the remainder (see Appendix A).[165] Thus, Barclays did not "disregard . . . this market index in the Company's mark-to-market valuations,"

[161] BARC-ADS-01026160. This document reports that, for the CF PV portion of the ABS CDO portfolio, a CF PV valuation results in a $641 million decrease from the notional value while a NAV valuation results in a $2,067 million decrease from the notional. The difference between a CF PV valuation and a NAV valuation is therefore estimated at $1,426 million.

[162] Class Certification Memorandum, p. 9.

[163] See, *e.g.,* O'Driscoll Report, ¶¶ 19, 26, 37–38, 111; Regan Report, ¶ 84(b).

[164] Complaint, ¶ 185.

[165] I note that this differs from, but is not inconsistent with, Barclays' valuation of its subprime whole loan portfolio, for which the bank determined that the ABX was not an appropriate valuation input due to observed differences in loan origination standards and performance. I describe this in Appendix A.

as the Complaint alleges,[166] and there is no economic basis to claim that declines in the indices demonstrate that Barclays' valuations were inadequate or inappropriate.

103. Similarly, the Complaint alleges that the "TABX index . . . provides a benchmark for the valuation of senior CDO positions such as those owned by Barclays."[167] The TABX indices represent tranched exposures to the BBB and BBB- ABX indices—in other words, tranched exposure to subprime RMBS certificates—and would therefore be of less relevance in valuing CDOs backed by non-subprime collateral, and/or collateral from 2005 and earlier (*i.e.*, collateral issued before the deals referenced by the TABX). More than half of Barclays' CDO exposure to Alt-A and subprime deals referenced collateral from 2005 and earlier.[168]

4. The CDO Writedowns Taken by Other Financial Institutions Do Not Indicate that Barclays' CDO Writedowns Were Inadequate.

104. The Complaint alleges that the 2007 writedowns of five other financial institutions (RBS, UBS, Merrill Lynch, Morgan Stanley, and Citigroup) were larger than those taken by Barclays, and argues that these writedowns "provided Barclays with clear evidence . . . that the fair value of its assets were seriously impaired."[169] However, these comparisons are misleading, not meaningful, and do not support the conclusion that Barclays' valuations were inappropriate.

105. First, the Complaint has in many instances overstated the writedowns taken by other institutions. For example, the Complaint alleges that as of December 31, 2007, "UBS wrote down its CDO portfolio by 67%" (compared to Barclays' writedown of 23%).[170] However, the

[166] Complaint, ¶ 99.

[167] Complaint, ¶ 101.

[168] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

[169] Complaint, ¶ 185.

[170] Complaint, ¶ 184.

Complaint appears to be including writedowns taken by UBS in the first quarter of 2008 in this calculation, rather than comparing the 2007 writedowns taken by the two institutions.[171] Similarly, it appears that the Complaint has overstated the writedown taken by RBS when alleging that "[a]t the time of [Barclays'] 2007 20-F . . . Royal Bank of Scotland had wrote off its subprime assets by £5.9 billion, including 75% from its CDOs. . . ."[172] However, 2007 year-end average marks for RBS High Grade and mezzanine CDOs were 84% and 70%, respectively.[173] This translates to an overall percentage writedown of approximately 21%—very similar to the 23% that the Complaint alleges Barclays took.[174] Finally, the Complaint alleges that "[i]n October 2007, Merrill Lynch announced that it would write down its ABS CDOs by $12.4 billion."[175] However, Merrill Lynch's October 24, 2007 SEC filing reports that its writedowns "across CDOs and U.S. sub-prime mortgages" were $7.9 billion, not $12.4 billion.[176]

106. Second, in order to use comparisons between institutions in an attempt to draw conclusions about the appropriateness of Barclays' valuations, one would (at a minimum) have to account for differences in the risks and characteristics of the underlying portfolios. A review of financial statements shows that the portfolios of each of the five other financial institutions differed from Barclays' portfolio in potentially significant ways, as described below. In fact,

[171] See UBS AG Form 20-F, filed March 17, 2008, pp. 11, 50; UBS AG Form 6-K, filed May 6, 2008, p. 9. The 2007 filing reports write-downs of $9.2B and $2.8B on its super senior RMBS CDOs and its warehouse and retained RMBS CDOs, respectively. As a percentage of total exposure ($25.4B) to those two asset classes (before writedowns), the writedowns were 47%. Only by adding first-quarter 2008 net losses of $5.1B to the writedowns taken in 2007 can one claim that UBS took a 67% write-down.

[172] Complaint, ¶ 184.

[173] The Royal Bank of Scotland Group PLC Form 20-F, filed May 14, 2008, p. 8.

[174] Complaint, ¶ 184.

[175] Complaint, ¶¶ 116.

[176] Merrill Lynch & Co., Inc. Form 8-K, filed October 24, 2007, p. 1. It appears that the Complaint is adding to this $7.9 billion figure the $4.5 billion amount of *preliminary* writedowns that Merrill Lynch had estimated at its earnings pre-release in order to claim that Merrill Lynch took writedowns of $12.4 billion.

Barclays' senior management cautioned about such comparisons in a call with investors, explaining that "risk is not generic . . . don't assume that all the banks in the world are running identical risk."[177] Moreover, to the extent that the other banks used a different accounting treatment than Barclays, this could have also led to differences in writedowns. Therefore, without properly accounting for the differences in the risks and accounting treatment of the underlying assets and how those differences could affect reported writedowns, there is no basis to claim that any observed differences in reported writedowns indicate that Barclays' valuations were incorrect.

107. Based on my review of the compared banks' public financial statements, the CDOs of all five banks were backed by collateral that was generally understood to have different risk than the reference assets of Barclays' CDOs. In fact, Barclays' senior management specifically noted in an earnings call with investors that "frankly, you can't compare our positions to Merrill or to Citi. They're very, very different."[178]

- Citigroup: At least 82% of Barclays' super senior ABS CDO reference collateral was rated investment grade,[179] whereas only 60% of Citigroup's super senior ABS CDO reference collateral was rated investment grade and 25% was rated CCC.[180]
- Morgan Stanley: Morgan Stanley's "primary exposure to ABS CDOs [was] to . . . 'mezzanine CDOs.'"[181] In contrast, less than 20% of Barclays' CDO exposure was to mezzanine CDOs.[182] In other words, most of Morgan Stanley's CDOs referenced tranches of other securitizations, such as RMBS, that were originally rated BBB,

[177] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008, p. 14.

[178] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008, p. 14.

[179] 91% of Barclays' RMBS collateral was rated investment grade, and 90% of Barclays' ABS CDO super senior exposure was backed by RMBS collateral. See Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, pp. 95–96.

[180] Citigroup Form 10-K, filed February 22, 2008, p. 91.

[181] Morgan Stanley Form 10-K, filed January 28, 2008, p. 52.

[182] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

whereas over 80% of Barclays' CDOs referenced tranches with higher original ratings.

- Merrill Lynch: Approximately 32% of Merrill Lynch's U.S. super senior ABS CDO exposure in 2007 was to mezzanine CDOs.[183] In contrast, as explained above, less than 20% of Barclays' CDO exposure was to mezzanine CDOs.[184] Similarly, the underlying collateral of Merrill Lynch's CDO portfolio was "primarily subprime residential mortgage loans" while only half of Barclays' CDO collateral was subprime assets.[185] Additionally, PwC explained to Barclays' Board Audit Committee that "[t]he losses of Merrill Lynch [on its CDO portfolio were] relatively higher [than those of Barclays] and this may be because of a higher concentration of 2006 and 2007 vintage mortgages which are the worst performing."[186]
- RBS: RBS's CDO portfolio had relatively more mezzanine exposure than Barclays (roughly 33% at RBS versus 20% at Barclays).[187] It also had more exposure to subprime assets than Barclays had (69% of High Grade and 91% of mezzanine, compared to 46% and 62% at Barclays).[188] Finally, of the subprime collateral in RBS's CDO portfolio, only 24% was to loans from the relatively better performing 2005 and earlier vintages (versus 54% at Barclays).[189]
- UBS: "[A]round one-third of UBS's positions in super senior RMBS CDOs [in 2007] referred to mortgage loans of vintage 2005 or earlier,"[190] compared to over half of Barclays' CDO exposure backed by subprime or Alt-A collateral.[191]

108. These differences in assets among the banks make it inappropriate, without performing substantial additional analysis, to use those banks' reported writedowns to draw conclusions about the appropriateness of Barclays' writedowns at the end of 2007.

[183] Merrill Lynch & Co., Inc. Form 10-K, filed February 25, 2008, p. 37.

[184] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[185] Merrill Lynch & Co., Inc. Form 10-K, filed February 25, 2008, p. 36; Barclays Form 20-F, filed March 24, 2009, p. 95.

[186] BARC-ADS-01297226–254 at 232.

[187] The Royal Bank of Scotland Group PLC Form 20-F, filed May 14, 2008, p. 9; Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

[188] The Royal Bank of Scotland Group PLC Form 20-F, filed May 14, 2008, p. 9; Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

[189] The Royal Bank of Scotland Group PLC Form 20-F, filed May 14, 2008, p. 9; Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

[190] UBS AG Form 20-F, filed March 17, 2008, p. 12.

[191] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

109. The limitation of these comparisons is further compounded by the fact that the other banks used different accounting treatments for these assets. As explained previously, the accounting methodologies under which assets are recorded in financial statements, in particular whether securities are carried at fair value (marked-to-market or marked-to-model) or carried at amortized cost and assessed for any impairments, can impact the reported valuation. I understand that, all else equal, one would expect securities that are marked to market to show lower values (and higher writedowns) as of December 31, 2007 than securities accounted for at amortized cost. For example, Merrill Lynch explained that the fair value of its CDO exposure "reflected [both] unprecedented market illiquidity and the deterioration in the value of the underlying sub-prime mortgage collateral."[192] It is my understanding, however, that the value of assets carried at amortized cost should generally *not* be affected by such factors as temporary declines in market liquidity. As a result, it is potentially misleading to compare writedowns on assets held at fair value with writedowns on assets carried at amortized cost less impairments, even if the assets are similar. The five other financial institutions cited in the Complaint all appear to have carried their CDOs at fair value, whereas Barclays accounted for less than half of its CDO exposure in this fashion, with the majority being carried at amortized cost.[193] In fact, a Barclays employee comparing super senior exposures across institutions specifically noted that Citibank, UBS, and Merrill Lynch were using "'fair-value'-based figures on their supersenior [sic] exposure, so they aren't comparable to all the Barclays numbers."[194]

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[192] Merrill Lynch & Co., Inc. Form 10-K, filed February 25, 2008, p. 36.

[193] BARC-ADS-00114575; Morgan Stanley Form 10-K, filed January 28, 2008, pp. 52–53; The Royal Bank of Scotland Group PLC Form 20-F, filed May 14, 2008, p. 24; Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 51; UBS AG Form 20-F, filed March 17, 2008, p. 22; Merrill Lynch & Co., Inc. Form 10-K, filed February 25, 2008, pp. 104–106; Citigroup Form 10-K, filed February 22, 2008, pp. 168–169.

[194] BARC-ADS-00114575.

110. Furthermore, both Barclays and its auditor were aware of other institutions' writedowns, and discussed Barclays' own valuations in the context of the other firms' disclosures. A report by PwC to Barclays' Board Audit Committee on 2007 financials independently reviewed—and approved of—Barclays' valuations of its super-senior CDO exposure and, separately, evaluated Barclays' writedowns in the context of writedowns taken at other institutions:

> We also compared the losses to those reported by US institutions which have announced fourth quarter results. It is important to realize that information about the collateral types and deal characteristics for other institutions was limited. Nevertheless, this high level comparison provides a reasonable basis on which to compare the magnitude of Barclays' provisions. We noted that the provisions are broadly consistent.[195]

111. Similarly, an internal document shows a chart depicting the "distribution of sub-prime and CDO write-downs" across 15 financial institutions. Barclays noted that four banks—all of which are among the five cited in the Complaint—had taken writedowns over $10 billion, and that "[t]his subset of banks accounts for about 70% of sub-prime/CDO write-downs disclosed to date."[196] Moreover, Barclays determined that its "sub-prime related write-downs . . . [were] in line with the majority of [Barclays'] peer banks," and that the "distribution and magnitude of the write-downs [was] consistent with publicly available information on the overall size of banks' business franchises in this market and changes in risk appetite during the course of 2007."[197]

112. Indeed, the document also highlights the fact that the Complaint has selected only a small subset of banks with significant subprime exposure for comparison to Barclays. For example, although the Complaint mentions that Bank of America took a write-down of $3 billion in

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[195] BARC-ADS-01297226–254 at 232.

[196] BARC-ADS-01173196.

[197] BARC-ADS-01173196.

November 2007, it does not actually compare Bank of America's writedowns to those of Barclays.[198] Indeed, the Complaint ignores that as of December 31, 2007, Barclays wrote down 21% of high-grade CDO values,[199] significantly higher than Bank of America's 11%. Bank of America also had significant exposure to CDO-squared securities, which it wrote down by 42%.[200] Overall, Barclays' super-senior CDO writedowns were 23%, similar to Bank of America's 26%.[201]

5. The Complaint Misinterprets Barclays' CDO Research.

113. The Complaint alleges that "[by] the end of 2007, Barclays' own research analysts were estimating that even the top classes of CDOs were worth only 20-30 cents on the dollar."[202] However, the analyst report that the Complaint appears to reference ("SF CDO Super Senior Tranches," published on December 5, 2007), does not say that.[203] Instead, it reports—based on the construction of seven sample CDOs—weighted average pricing of 60-90% for the super senior tranches of the High Grade CDOs (with recoveries between 50 and 75%), and 40-66 % for the super senior tranches of mezzanine CDOs (with recoveries between 40 and 55%).[204]

114. Moreover, the Complaint has again failed to account for important differences in collateral between the sample CDOs used in the research report and Barclays' own exposures.

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[198] Complaint, ¶ 117.

[199] BARC-ADS-01554693, pp. 6, 8.

[200] Bank of America Corporation Form 10-K, filed February 28, 2008, p. 29.

[201] Bank of America Corporation Form 10-K, filed February 28, 2008, p. 29; Complaint, ¶ 184; BARC-ADS-01554693, pp. 6, 8.

[202] Complaint, ¶ 12.

[203] "SF CDO Super Senior Tranches: Current NAV Indicates Low Recoveries," *Barclays Capital Research*, December 5, 2007.

[204] "SF CDO Super Senior Tranches: Current NAV Indicates Low Recoveries," *Barclays Capital Research*, December 5, 2007, p. 5.

For example, the analyst report notes that "vintage exposure of the sample . . . CDO collateral pools is heavily weighted toward 2005-07 transactions," with over half of the subprime and Alt-A collateral being of 2006 or 2007 vintage.[205] In contrast, over half of Barclays' CDO exposure, as discussed above, referenced 2005 or earlier vintage Alt-A or subprime deals.[206] Therefore, the Complaint's assertions do not support the conclusion that Barclays' valuations were inconsistent with its research analysts' publication.[207]

X. Mr. O'Driscoll Does Not Articulate Any Standard for What Information Should Have Been Disclosed.

115. Mr. O'Driscoll makes various assertions about Barclays' public disclosures, but I understand that he is neither an accountant nor a securities law expert, and he does not articulate what standard he is applying when opining on the appropriateness of Barclays' disclosures. My opinions address whether Barclays' valuations and disclosures were appropriate based on the economic nature of the assets at issue, market practice, and relevant developments in the credit markets at the time, and I disagree with Mr. O'Driscoll's conclusions.

116. For example, Mr. O'Driscoll argues that disclosing the notional amount of Barclays' assets with monoline or similar protection, or various other metrics regarding such assets, "would have provided a more complete assessment of Barclays' exposure to monoline insurers."[208] But Mr. O'Driscoll does not explain whether or how Barclays' disclosures were misleading to investors. In addition, Mr. O'Driscoll does not articulate any standard he is using

[205] "SF CDO Super Senior Tranches: Current NAV Indicates Low Recoveries," *Barclays Capital Research*, December 5, 2007, pp. 1, 7.

[206] Barclays and Barclays Bank PLC Form 20-F, filed March 24, 2009, p. 95.

[207] I also note that this publication notes "significant limitations to using [the] ABX and CMBX as . . . pricing benchmarks." See "SF CDO Super Senior Tranches: Current NAV Indicates Low Recoveries," *Barclays Capital Research*, December 5, 2007, p. 2.

[208] O'Driscoll Report, ¶ 123.

to assess whether a disclosure is "complete," and absent such a standard *any* disclosure arguably could have been "more complete" simply by providing more information. This is at odds with my general experience with industry practice and with my general understanding of the governing accounting and disclosure standards and rules.

117. Mr. O'Driscoll also claims that Barclays' disclosures of its SIV exposures were not complete as of the time of the Series 5 offering by asserting that Barclays Global Investors ("BGI") "held notes issued by SIVs and monoline-wrapped ABCP [asset-backed commercial paper] with a total invested amount of $3.5 billion," and that Barclays had made the decision to repurchase $975 million of "Whistlejacket paper" in February of 2008.[209] However, Mr. O'Driscoll only references internal documents in his report and does not even discuss what Barclays did disclose on this subject. In addition, as discussed above, Mr. O'Driscoll has not articulated what standard he is using to claim that any of these exposures should have been disclosed. In his report, he only points to subsequent events that occurred in 2008 (Barclays' decision to "repurchase" $975 million of Whistlejacket paper from BGI's funds, which according to Mr. O'Driscoll was made on February 4, 2008).[210] He does not provide any basis for his apparent opinion that Barclays should have disclosed this information. I note that the $975 million figure represented less than 0.04% of Barclays' reported total assets of £1,227,361 million as of December 31, 2007.[211]

[209] O'Driscoll Report, ¶ 125.

[210] O'Driscoll Report, ¶ 125.

[211] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 7.

XI. Many of the Allegedly "Undisclosed" Trends that Mr. O'Driscoll and Mr. Regan Discuss Were Public Information.

118. Both Mr. O'Driscoll and Mr. Regan claim that Barclays failed to disclose certain trends to investors. However, Mr. O'Driscoll does not even articulate in his report what specific "adverse trends" supposedly developed in early 2008 that were not disclosed.[212] Instead, he makes broad statements—such as "the credit worthiness of . . . monolines deteriorated beginning in early 2008. . . ."[213]—without doing any analysis whatsoever to determine whether any incremental information was supposedly hidden from investors who had access to widespread public information from a variety of sources about the markets and "trends" affecting the assets at issue. Likewise, Mr. Regan discusses a number of "trends" in his report (*e.g.*, "ongoing sub-prime driven credit dislocations during 2008"[214] and "risk trends in monoline counterparty credit risk"[215]) that were public information at the time they occurred.

119. In particular, Sections IV through IX of the O'Driscoll Report contain descriptions of RMBS, CDOs, CDS and monoline exposures, leveraged loans and CLOs, commercial mortgages and CMBS, and SIVs and SIV-lites, as well as the purported "risks" of these instruments in 2007 and 2008. Mr. O'Driscoll's discussion of these asset types is based almost exclusively on public sources of information that would have been available to investors at the time. It is not apparent from Mr. O'Driscoll's report whether Sections IV through IX were intended to express any opinions relevant to this case or how the information described therein supports Mr. O'Driscoll's stated opinions. I do note, however, that Sections IV through IX do not provide any evidence

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[212] O'Driscoll Report, ¶ 1.

[213] O'Driscoll Report, ¶ 104.

[214] Regan Report, ¶ 67(a).

[215] Regan Report, ¶ 79(c).

that Barclays' specific valuations or disclosures were inappropriate. I reserve the right to address any future opinions that Mr. O'Driscoll may offer based on this information.

120. I agree that after December 31, 2007, credit market conditions continued to worsen, and the effects of this deterioration expanded beyond subprime markets to the broader economy. These consequences, many of which Mr. Regan characterizes as supposedly "omitted known risk trends,"[216] were widely reported when they occurred, in both industry publications and the public press. For example, Mr. Regan points to "significant 2008 declines in AAA rated [ABX indices] and further declines in the already plummeting BBB indices,"[217] increasing subprime delinquencies,[218] the downgrades of AMBAC and potential for other monoline downgrades,[219] and widening monoline credit spreads.[220] Similarly, Mr. O'Driscoll claims that many monolines "would default or have to be bailed out" during 2008 or 2009,[221] that "the credit worthiness of those monolines deteriorated beginning in early 2008,"[222] and that the "Credit Suisse Leveraged Loan Index Average" "plung[ed]" and the CMBX declined in 2008.[223] These developments were public events that were highly visible to market observers as they occurred.

121. Many of the developments in 2008 were unexpected, and throughout the period there was considerable uncertainty regarding the future conditions of the markets. As Federal Reserve Chairman Ben Bernanke commented, "[a]lmost universally, economists failed to predict the

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216 Regan Report, ¶ 16(b).

217 Regan Report, ¶ 84(b).

218 Regan Report, ¶ 84(b).

219 Regan Report, ¶ 88(a).

220 Regan Report, ¶ 35.

221 O'Driscoll Report, ¶ 104.

222 O'Driscoll Report, ¶ 104.

223 O'Driscoll Report, ¶¶ 71, 77.

nature, timing, or severity of the crisis; and those few who issued early warnings generally identified only isolated weaknesses in the system, not anything approaching the full set of complex linkages and mechanisms that amplified the initial shocks and ultimately resulted in a devastating global crisis and recession."[224] Some of the developments that occurred after December 31, 2007 include the failures of Bear Stearns in March of 2008,[225] IndyMac in July of 2008,[226] Fannie Mae and Freddie Mac,[227] Merrill Lynch,[228] Lehman Brothers,[229] Washington Mutual,[230] and AIG[231] in September of 2008, and Wachovia[232] in October of 2008, as well as the enactment of the Troubled Asset Relief Program[233] and the bailout of General Motors and Chrysler in December.[234]

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[224] "Implications of the Financial Crisis for Economics," *Board of Governors of the Federal Reserve System*, September 24, 2010, http://www.federalreserve.gov/newsevents/speech/bernanke20100924a.htm.

[225] "JP Morgan Pays $2 a Share for Bear Stearns," *The New York Times*, March 17, 2008, http://www.nytimes.com/2008/03/17/business/17bear.html. The sales price was later increased to $10 per share. See "JP Morgan Raises Bid for Bear Stearns to $10 a Share," *The New York Times*, March 24, 2008. http://www.nytimes.com/2008/03/24/business/24deal-web.html.

[226] "Federal Regulators Seize Crippled IndyMac Bank," *LA Times*, July 12, 2008, http://articles.latimes.com/print/2008/jul/12/business/fi-indymac12.

[227] "FHFA as Conservator of Fannie Mae and Freddie Mac," *Federal Housing Finance Agency*, http://www.fhfa.gov/Conservatorship/pages/history-of-fannie-mae--freddie-conservatorships.aspx.

[228] "Bank of America to Purchase Merrill Lynch," *Associated Press*, September 15, 2008, http://www.nbcnews.com/id/26708958/ns/business-us_business/t/bank-america-purchase-m#.VqaeAnn2aUk.

[229] "Lehman Files for Bankruptcy; Merrill Is Sold," *The New York Times*, September 14, 2008, http://www.nytimes.com/2008/09/15/business/15lehman.html.

[230] "WaMu Is Seized, Sold Off to J.P. Morgan, In Largest Failure in U.S. Banking History," *The Wall Street Journal*, September 26, 2008, http://www.wsj.com/articles/SB122238415586576687.

[231] "U.S. to Take Over AIG in $85 Billion Bailout; Central Banks Inject Cash as Credit Dries Up," *The Wall Street Journal*, September 16, 2008, http://www.wsj.com/articles/SB122156561931242905.

[232] "Wells Fargo to Buy Wachovia in $15.1 Billion Deal," *The New York Times Dealbook*, October 3, 2008, http://dealbook.nytimes.com/2008/10/03/wells-fargo-to-merge-with-wachovia/.

[233] "Bailout Is Law," *CNN Money*, October 4, 2008, http://money.cnn.com/2008/10/03/news/economy/house_friday_bailout/.

[234] "Full Timeline," *The Federal Reserve Bank of St. Louis*, https://www.stlouisfed.org/financial-crisis/full-timeline.

122. The Complaint alleges that Barclays' disclosures later in 2008 revealed the truth about Barclays' actual exposures at year-end 2007.[235] However, the additional writedowns taken throughout 2008 occurred in the midst of these worsening macroeconomic and market conditions. In fact, Barclays had communicated to investors in February of 2008 that it expected the first half of 2008 to be "extremely challenging," and that 2008 overall would be "a much less benign year" than recent ones.[236] The Complaint's assertion that these later writedowns should have been taken at year-end 2007 fails to account for these deteriorating market conditions in 2008.

123. Mr. O'Driscoll states that many of Barclays' NBT counterparties "would default or have to be bailed out" in 2008 or later.[237] To the extent that he is suggesting that Barclays should have anticipated these defaults and therefore that Barclays' year-end 2007 valuations were incorrect, his argument is fundamentally flawed. A number of key participants in the mortgage and structured finance markets ultimately failed in 2008 but had significant market capitalizations and investment grade credit ratings as of the end of 2007, indicating that the equity markets did not expect that they would fail.

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[235] Complaint, ¶ 195.

[236] Transcript of Barclays Bank PLC Q4 2007 Earnings Call, February 19, 2008, pp. 8, 10. See also Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 92.

[237] O'Driscoll Report, ¶¶ 104–105.

Company	2008 Event / Date[238]	Market Value on 12/31/2007 ($ millions)[239]
AIG	Seized by federal government: September 16, 2008	$147,863
Bear Stearns	Acquired (at a substantial discount) by JPMorgan with support from the Federal Reserve: March 12, 2008	$10,189
Fannie Mae	Placed into conservatorship: September 7, 2008	$39,107
Freddie Mac	Placed into conservatorship: September 7, 2008	$22,539
Lehman Brothers	Filed for bankruptcy: September 15, 2008	$34,808

Moreover, the monoline counterparties to Barclays' NBTs were highly-rated entities with significant market capitalizations as of the end of 2007, as shown in Exhibit 4, indicating that the rating agencies viewed their default risk as low and the market expected these companies to have value to their shareholders, whose claims are subordinate to those of their policyholders. These ratings and equity values indicate that the rating agencies and the market at large did not, as of December 31, 2007, expect the credit crisis to expand to the point that these companies would collapse. Therefore, the subsequent "defaults" of some counterparties provides no evidence that the valuations as of December 31, 2007 were incorrect or unreasonable; to the contrary, market data suggest that these subsequent events were unanticipated as of the end of 2007.

Executed this 2nd day of February, 2016.

John H. Dolan

[238] "U.S. to Take Over AIG in $85 Billion Bailout; Central Banks Inject Cash as Credit Dries Up," *The Wall Street Journal*, September 16, 2008, http://www.wsj.com/articles/SB122156561931242905; "JP Morgan Pays $2 a Share for Bear Stearns," *The New York Times*, March 17, 2008, http://www.nytimes.com/2008/03/17/business/17bear.html; "FHFA as Conservator of Fannie Mae and Freddie Mac," *Federal Housing Finance Agency*, http://www.fhfa.gov/Conservatorship/pages/history-of-fannie-mae--freddie-conservatorships.aspx; "Lehman Files for Bankruptcy; Merrill Is Sold," *The New York Times*, September 14, 2008, http://www.nytimes.com/2008/09/15/business/15lehman.html.

[239] *CRSP*.

APPENDIX A

Barclays' Valuation Methodologies

I. Whole Loans

1. Barclays was exposed to the whole loan market through its portfolios of subprime, Alt-A, and prime whole loans.[1] The Complaint alleges that the disclosed values of Barclays' subprime and Alt-A positions in the 2007 Form 20-F were misleading and that the bank failed to properly write down exposures at year-end 2007.[2] However, neither Mr. O'Driscoll nor Mr. Regan establishes any basis for these allegations in their reports.

2. Barclays valued its whole loan portfolios using fair value accounting. In its 2007 Form 20-F filing, Barclays described its whole loan valuation methodology as follows:

> The fair value of mortgage whole loans are determined using observable quoted prices or recently executed transactions for comparable assets. Where observable price quotations or benchmark proxies are not available, fair value is determined using cash flow models where significant inputs include yield curves, collateral specific loss assumptions, asset specific prepayment assumptions, yield spreads and expected default rates.[3]

3. As described in Barclays' 2007 Form 20-F, in the absence of prices for identical assets, Barclays first used observable prices on similar or comparable assets when determining the fair value of whole loans. When such observable prices were not available, Barclays used valuation models (*i.e.*, a discounted cash flow model commonly referred to as the "DCF model") that incorporated observable and unobservable inputs.

[1] BARC-ADS-01554693, p. 10.

[2] Complaint, ¶¶ 12, 135(a).

[3] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

APPENDIX A

A. Description of Whole Loans

4. Whole loans, or mortgage loans, are loans taken out by an individual borrower and "secured" by the collateral of underlying property (*e.g.*, a house). Borrowers receive cash up front—often in order to purchase a residential property such as a house—and then make a series of payments, consisting of a portion of the principal and interest, over a set time period, also called the loan term, until the debt is paid in full. If the borrower defaults on his or her obligation, the lender is entitled to repossess the collateral through the foreclosure process. In foreclosure, the bank attempts to recover the balance of a loan by selling the underlying property.

5. There are a number of key attributes that characterize mortgage loans. In addition to the loan term, mortgages can be characterized by lien status (*e.g.*, first- or second-lien),[4] interest rate structure (*e*.g., fixed or variable),[5] amortization type,[6] purpose of the loan (*e.g.*, purchase or refinance), type of property (*e.g.*, primary residence, vacation or weekend home, or investment property), loan balance, loan to value ("LTV") ratio,[7] and prepayment agreements and penalties.

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[4] "The lien status dictates a loan's seniority in the event of forced liquidation of a given property due to default. A first lien implies that a creditor would have the first call on the proceeds of the liquidation of the property if it were to be repossessed," while second liens (also called junior loans) are utilized as a means of liquefying the value of a home in order to provide cash for home improvements or household expenditures (such as medical bills). Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, 2nd ed., Hoboken, NJ: John Wiley & Sons, Inc., pp. 4–5.

[5] For fixed rate mortgages, the interest rate is constant and set at the closing of the loan. The interest rate for adjustable rate mortgages changes over the life of the loan, and is based on the movement of an underlying rate, or index, and the spread (or margin) over the index, subject to caps and floors at the time of the rate reset. See Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques,* 2nd ed., Hoboken, NJ: John Wiley & Sons, Inc., pp. 8–9.

[6] Traditionally, both fixed and adjustable rate mortgages are fully amortizing, "indicating that the obligor's principle and interest payments are calculated in equal increments to pay off the loan over the stated term." However, loans can also be originated with nontraditional amortization schemes, such as interest-only loans whereby only interest is paid for a predetermined term, or lockout period, after which such loans are recast to amortize over the remaining term of the loan. Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques,* 2nd ed., Hoboken, NJ: John Wiley & Sons, Inc., pp. 8–10.

[7] The LTV ratio is the fraction of the value of the property being financed by the mortgage loan. Generally speaking, the higher the LTV ratio, the riskier the loan, *ceteris paribus*. A high LTV ratio means that the borrower

Loans also differ by characteristics of the borrower, such as his or her credit score,[8] income, and other available assets—factors which determine a loan's credit classification as prime, subprime, or Alt-A.

6. These credit attributes are indicative of the risk profile of a loan. Loans made to borrowers with "strong employment and credit histories, income sufficient to pay the loans without compromising their creditworthiness, and substantial equity in the underlying property," are broadly classified as prime loans, and "historically experienced relatively low incidences of delinquency and default."[9] Subprime mortgages "are typically made to borrowers with blemished credit history or who provide only limited documentation of their income or assets."[10] Alt-A mortgages are typically made to borrowers with better credit histories than subprime borrowers, but who take out higher-balance loans, exhibit higher debt-to-income ratios, or who, "for some reason (such as a desire not to document income), chose not to obtain a prime mortgage."[11]

7. Historically, a typical mortgage had a fixed interest rate on a 30-year loan term and was made to a borrower with high credit quality. Yet a wide variety of mortgages with differing

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has little equity in the property being financed, making it more likely that this equity could be lost and increasing the incentive of the borrower to default on the loan. This is reflected in the fact that loans with LTV ratios in excess of 80% ("without an eligible form of credit enhancement, which in practice generally takes the form of private mortgage insurance") do not meet Fannie Mae and Freddie Mac underwriting guidelines. See "Systemic Risk: Fannie Mae, Freddie Mac and the Role of OFHEO," Office of Federal Housing Enterprise Oversight, February 4, 2003, p. 49.

[8] A credit score, such as FICO, "is a number that summarizes a consumer's credit risk, based on a snapshot of their credit report at a particular point in time." FICO scores range from 300 to 850, where "the higher the score, the lower the risk." "FICO® Score Fact Sheet," *FICO*, February 2014, http://www.fico.com/en/node/8140?file=6158.

[9] Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, 2nd ed., Hoboken, NJ: John Wiley & Sons, Inc., p. 5.

[10] "Nonprime Mortgage Conditions in the United States: Technical Appendix," Federal Reserve Bank of New York, http://www.newyorkfed.org/regional/techappendix_spreadsheets.html ("Nonprime Mortgage Conditions in the United States")

[11] See Nonprime Mortgage Conditions in the United States; Goodman, L.S., S. Li, D. J. Lucas, T. A. Zimmerman, and F. J. Fabozzi (2008), *Subprime Mortgage Credit Derivatives*, Hoboken, NJ: John Wiley & Sons, Inc., p. 9.

characteristics were issued, particularly in the years leading up to the credit crisis when loans were increasingly made to subprime borrowers. It is now understood that loans originated when home prices were at their peak generally had worse performance than earlier vintages, a phenomenon that is often attributed both to a relaxation of underwriting standards in the mid-2000s as well as the dramatic decline in house prices that occurred during the crisis that had the biggest impact on those who borrowed at peak home prices.[12]

8. The performance of an individual loan is ultimately dependent on the borrower's ability and willingness to make scheduled mortgage payments, which may be affected by a number of factors, including macroeconomic factors (*e.g.*, housing prices, interest rates, and unemployment rates) and characteristics of the loans themselves. As discussed, these attributes include the LTV ratio, the credit quality of the borrower, and whether or not a second mortgage, or second lien, was taken out on the property.[13]

B. Valuation of Barclays' Subprime Whole Loan Portfolio

1. Observable Prices of Similar Assets

9. The first set of inputs Barclays considered in the valuation of the subprime whole loan portfolio was observable prices of similar assets. Barclays considered several sources within this category, including whole loan sales, recent securitizations, and the ABX indices, but ultimately

[12] Goodman, L.S., S. Li, D. J. Lucas, T. A. Zimmerman, and F. J. Fabozzi (2008), *Subprime Mortgage Credit Derivatives*, Hoboken, NJ: John Wiley & Sons, Inc., pp. 302–303; Haughwout A., R. Peach, and J. Tracy (2008), "Juvenile Delinquent Mortgages: Bad Credit or Bad Economy?," *Federal Reserve Bank of New York Staff Report*, No. 341, pp. 21–22.

[13] See, for example, Demiroglu C., E. Dudley, and C. M. James (2014), "State Foreclosure Laws and the Incidence of Mortgage Default," *Journal of Law and Economics*, Vol. 57, No. 1, pp. 225–280 at pp. 236–237; Haughwout A., R. Peach, and J. Tracy (2008), "Juvenile Delinquent Mortgages: Bad Credit or Bad Economy?," *Federal Reserve Bank of New York Staff Report*, No. 341, pp. 9, 14.

concluded that none of these were appropriate for marking its subprime whole loan portfolio at the end of 2007.

10. Barclays had entered the whole loan subprime business in 2004 and had generally securitized one subprime mortgage transaction per month.[14] The bank had used securitizations of similar mortgage assets in the primary market to obtain observable prices to be used as a basis for the valuation of its subprime whole loan portfolio.[15] However, the decline in transaction volume and liquidity in the subprime mortgage securitization market in 2007 hampered the availability of observable prices of assets with similar credit characteristics. When Barclays valued its subprime whole loan portfolio at the end of 2007, the bank's last securitization available as a potential input was SABR 2007-BR5, securitized six months prior in June 2007.[16] Exhibit 5 illustrates the marked decline in subprime securitization transaction volume in the second half of 2007.

11. Other market sources in addition to Barclays also indicated that the number of securitizations in the market had declined dramatically. For instance, Structured Finance Watch, a pricing service accessible via Bloomberg, reported that there were only four securitizations priced in the fourth quarter of 2007.[17] Moreover, the pricing data indicated that none of these

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[14] BARC-ADS-00863067–091 at 072.

[15] BARC-ADS-00863067–091 at 072; BARC-ADS-01291600.

[16] In addition to its own securitizations, Barclays had been managing mortgage securitizations for third party clients. However, due to decline in transaction volume and liquidity, the bank had not completed any securitization for a third party client since March 2007. See BARC-ADS-00863067–091 at 072.

[17] BARC-ADS-00863067–091 at 072.

four transactions had any security issued with a rating below A+, indicating that issuers were retaining the more junior tranches, presumably due to the illiquidity in the market.[18]

12. The decline in the securitization market also caused a delay in the launch of the 08-1 tranche of the ABX.HE index.[19] Consistent with these market developments, Barclays concluded that the prices of subprime securitizations were not appropriate to use as observable prices to value the subprime whole loan portfolio because of the lack of recent observations.[20]

13. Barclays also considered whole loan bids as an alternative source of prices for its valuation of the subprime whole loan portfolio.[21] Although the whole loan bid market was an over-the-counter market which presents potential challenges in acquiring price data, as an active player in this market since mid-2004, Barclays would likely have had access to some bid information.[22]

14. However, Barclays concluded that the illiquidity in the securitization market also affected whole loan bids, limiting market participants' ability to price portfolios effectively as there were only a limited number of whole loan portfolio trades in the market to use as data points for valuation purposes.[23]

15. In particular, Barclays considered some of its own whole loan sales or potential sales during this time period. These included a sale to Freddie Mac at 101.93 and a bid from

[18] RMBS typically include classes of bonds rated from AAA through BBB minus or BB. Hull, J. and A. White (2010), "The Risk of Tranches Created from Mortgages," *Financial Analysts Journal*, Vol. 66, No. 5, pp. 54–67 at p. 55; BARC-ADS-00863067–091 at 072-073.

[19] The ABX.HE is "a synthetic tradable index referencing a basket of 20 subprime mortgage-backed securities." See "ABX," Markit, 2015, http://www.markit.com/product/abx. On December 19, 2007, Markit announced that the issuance of Markit ABX.HE 08-1 had been postponed for three months due to a lack of eligible RMBS deals to include in the index. See BARC-ADS-00863067–091 at 088.

[20] BARC-ADS-00863067–091 at 073.

[21] BARC-ADS-00863067–091 at 073.

[22] BARC-ADS-00863067–091 at 073–74.

[23] BARC-ADS-00863067–091 at 074.

American General at 102.[24] An internal Barclays email indicates that the bank compared the collateral characteristics of its portfolio of whole loans originated by EquiFirst with recent Fannie and Freddie transactions and concluded that "the EquiFirst collateral characteristics [were] as good or better. . . ."[25] In addition, Barclays reviewed a "Freddie Mac matrix of loan characteristics/WACs to produce above par pricing" and concluded that "Of $430M Sept and Oct Equifirst Production $181M (42%) qualify under Freddie Mac's whole loan purchase guideline for a Servicing Retained price of 101.84 prior to purchasing MI on > 80 LTV."[26]

16. Barclays also considered a whole loan bid it received from American General as another potential source of observable prices for valuation purposes. Barclays received a bid for $99 million of non-conforming subprime whole loans from American General at a price of 102, which it considered a complement to the Freddie Mac sale and another indication of demand for non-conforming whole loans from its portfolio.[27] Barclays also considered the ABX index, specifically the ABX.HE 07-2, as a potential similar asset with an observable price for the valuation of its subprime whole loan portfolio. However, Barclays concluded that the ABX index did not represent a similar asset for pricing purposes due to material differences in the quality of the underlying loans as described below.[28]

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[24] BARC-ADS-00863067–091 at 080. In addition, Barclays sold £53 million whole loans to Freddie Mac at 101.125 in January 2008. See BARC-ADS-01020283, p. 15.

[25] BARC-ADS-00403587–88 at 88.

[26] BARC-ADS-00403587–88 at 88.

[27] BARC-ADS-00863067–091 at 080.

[28] BARC-ADS-00863067–091 at 076–077. I note that this differs from, but is not inconsistent with, Barclays' valuation of its CDOs for which the bank used the ABX index as an input when valuing collateral of similar rating and vintage. See Section IX.E.3 of the Report and Section VI.C of this Appendix. As described above, Barclays determined that the ABX was not an appropriate valuation input for valuing its whole loans due to what Barclays concluded were significant differences in loan characteristics, underwriting standards and observed performance.

17. I understand that the “significant majority” of Barclays’ subprime whole loan portfolio was originated by EquiFirst,[29] an originator Barclays acquired in April 2007 so that it could, according to Paul Menefee, “originate a sustainable amount of loans that performed to [its] expectations.”[30] The bank considered this collateral to have been originated to higher standards than the loans underlying the ABX.HE 07-2. In particular, the bank compared the ABX.HE 07-2 collateral against several months of EquiFirst’s 2007 loan production, and identified clear differences between the two portfolios’ quality. These included a substantially higher percentage of borrowers with full documentation in the EquiFirst portfolio and recent loss performance data that indicated a greater overall delinquency rate in the ABX collateral.[31] Exhibit 6 illustrates these different delinquency rates that Barclays observed. Additionally, Barclays observed that the ABX.HE 07-2 collateral was originated in the fourth quarter of 2006 and first quarter of 2007, at times “which market observers pointed to as the worst time periods in terms of underwriting quality” while Barclays’ own portfolio was originated in March 2007 or later with tightened underwriting standards.[32] For instance, all second lien originations were eliminated, and the maximum CLTV was reduced to 90% for all purchase and investor properties, among other changes.[33] Together, Barclays took these differences in collateral quality and performance as evidence that the ABX indices were not an appropriate source of observable prices.

18. To summarize, it is my understanding that Barclays considered the recent securitization market, whole loan sales and bids, and the ABX indices as potential sources of observable prices

[29] BARC-ADS-00863067–091 at 076.

[30] Deposition of Paul Menefee, July 11, 2015 (“Menefee Deposition”), 48:13–15.

[31] BARC-ADS-00863067–091 at 089–091.

[32] BARC-ADS-00863067–091 at 076.

[33] BARC-ADS-00863067–091 at 077.

for valuation purposes. However, due to the decline in transaction volume, the illiquidity it observed in the market, and the differences in quality it identified between the ABX indices' underlying loans and its own portfolio, Barclays concluded that these potential sources were not appropriate to use directly for the valuation of its whole loan portfolio at the end of 2007.

2. Valuation Model

19. Given its conclusion that the market lacked reliable, observable prices for identical or similar assets, Barclays marked its subprime whole loan portfolio using a model. This valuation model included a number of inputs, described below, some of which were directly observed while others were derived from other available market data.

20. In particular, Barclays utilized a DCF model to value its whole loan portfolio.[34] A DCF model assesses the value of an asset by projecting its future expected cash flows and discounting those proceeds to determine a present value.[35] Barclays' DCF model for its subprime whole loan portfolio incorporated several inputs to project the loans' future cash flows and to discount them accordingly in order to calculate their present value.[36]

21. First, the DCF model used cumulative loss assumptions to account for some portion of the loan portfolio defaulting and causing a loss of cash flow. Barclays sourced these cumulative loss expectations from loss projection models provided by S&P and Moody's and used an average of the two models to project the portfolio's expected cumulative losses.[37] For example, S&P's loss projection model, called LEVELS, calculated foreclosure frequencies for individual

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[34] BARC-ADS-00054343, p. 6.

[35] Hitchner, J. R. (2003), *Financial Valuation: Applications and Models*, Hoboken, NJ: John Wiley & Sons, Inc., p. 12.

[36] BARC-ADS-00054343, p. 6.

[37] BARC-ADS-00054343, pp. 10–12.

loans or pools of loans based on a number of factors, including the credit quality of the borrower, the LTV ratio, the type of secured property, the purpose of the loan, the occupancy status, the maturity of the loan, the loan's size, the loan's documentation, whether the loan was an ARM, and the size of the overall loan pool.[38] For example, S&P's model assumed that loans with a FICO score under 699 and an LTV between 80% and 90% would default at 1.5 times the rate as those with the same FICO score and an LTV under 80.[39] S&P's loss model also estimated loss severities for loans based on similar factors.[40] Loss severity "measures the face value [or expected value] of the loss on a loan after foreclosure is completed," and is used to generate loss-adjusted yields and returns for a pool of loans.[41] Moody's loss model similarly calculated different loss expectations for loans of different characteristics.[42] Both S&P and Moody's updated their models in November 2007, in order to capture the performance of recent collateral, significantly increasing expected loss rates for loans with a CLTV or LTV over 85%, loans with limited or stated documentation, second lien loans, and loans to borrowers with lower FICO scores.[43] Barclays subsequently incorporated these adjustments into its own valuation before filing the 2007 20-F form.[44] Additionally, Barclays' internal price testing group benchmarked

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[38] BARC-ADS-00881407, p. 4; BARC-ADS-00690229; BARC-ADS-00690230–0416 at 0256–0261; BARC-ADS-01270613–621.

[39] BARC-ADS-00690229; BARC-ADS-00690230–0416 at 0262.

[40] BARC-ADS-00690229; BARC-ADS-00690230–0416 at 0273–0285.

[41] "Since the lender has a lien on the borrower's property, some of the value of the loan can be recovered through the foreclosure process." Fabozzi, F. J., A. K. Bhattacharya and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, Hoboken, NJ: John Wiley & Sons, Inc., p. 21.

[42] BARC-ADS-00050502–07.

[43] BARC-ADS-00054343, p. 10.

[44] BARC-ADS-00054343, p. 10.

these cumulative loss projections via separate estimates based on the observed performance of loans in Barclays' HomEq loan servicing portfolio, which contained 280,000 loans.[45]

22. Second, the DCF model incorporated a constant prepayment rate ("CPR") assumption to account for some portion of the loan portfolio repaying a portion of its outstanding principal each year. Barclays determined prepayment rates based on historical data for loans originated in 2003 and 2004, which it also used to price and distribute its Securitized Asset Backed Receivables ("SABR") series of RMBS issuances.[46] Typically, the calculation of CPR uses older vintage loans' historical performance, since more recently originated loans do not provide sufficient history to project prepayments one or two years into the future. However, the use of loans originated in 2003 and 2004 captured a period "flush with refinancing options for borrowers and strong HPA [home price appreciation]," two characteristics that Barclays recognized were "not consistent with the current market."[47] Accordingly, in reaction to observed voluntary prepayment rates slowing across loans originated in 2006 and earlier in 2007, Barclays reduced its original prepayment expectations by 20%.[48] This adjustment would have resulted in higher estimated defaults and lower loan value, as prepaid loans cannot default. By contrast, overestimating the prepayment rate in a period of increasing defaults will underestimate the loans' default rate.

23. Finally, Barclays derived discount rates to discount the expected future cash flows of its subprime whole loan portfolio back to a present value. The discount rate used was the risk free

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[45] BARC-ADS-01554693; PwC012957–968 at 960. HomEq was a mortgage servicer that Barclays had previously acquired. See BARC-ADS-01618462–497 at 464.

[46] BARC-ADS-00863067–091 at 081; BARC-ADS-00054343, p. 8.

[47] BARC-ADS-00054710, p. 6.

[48] BARC-ADS-00054343, p. 8.

rate, approximated by the LIBOR rate, plus an additional spread to capture current mortgage market conditions plus a further adjustment depending on the vintage of the underlying loans.[49]

24. While discount rates were not directly observable in the market or the portfolio's performance, Barclays calculated them based on market transactions. To value subprime whole loans originated in August 2007 and later, Barclays used as a starting point the average spread from its most recent securitization, SABR 2007-BR5 from June 2007, which was LIBOR plus an additional spread of 153.76 basis points.[50] Barclays then adjusted this discount rate, stressing it by approximately 150%, to LIBOR plus 225 basis points to reflect prevailing market conditions and the collateral characteristics of its loan portfolio.[51] Barclays utilized it for the valuation of its subprime whole loans originated in August 2007 or later.

25. Barclays utilized a different, higher discount rate to value the portion of its subprime whole loan portfolio originated between March and July of 2007.[52] In order to account for the difference in collateral characteristics and to reflect the liquidity premium that existed in the market for older collateral, Barclays stressed the discount rate of LIBOR plus 225 basis points by an additional 33%, for a discount rate of LIBOR plus 300 basis points.[53] After benchmarking this second discount rate using ratings agencies' loss and bond sizing models, Barclays concluded that LIBOR plus 300 basis points was a valid discount rate to value the portion of its subprime whole loan portfolio originated between March and July of 2007.[54] Therefore, as of December 2007, Barclays utilized two different discount rates in the valuation of its subprime

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[49] BARC-ADS-00057956, p.3; BARC-ADS-00863067–091 at 079.

[50] BARC-ADS-00863067–091 at 078.

[51] BARC-ADS-00863067–091 at 078.

[52] BARC-ADS-00863067–091 at 078.

[53] BARC-ADS-00863067–091 at 078.

[54] BARC-ADS-00863067–091 at 078–079.

whole loan portfolio – LIBOR plus 300 basis points for loans originated prior to August 2007 and LIBOR plus 225 basis points for loans originated since then, for a weighted average discount rate of about 285 basis points.[55]

26. In sum, using its valuation model, as of December 2007, Barclays valued its recent subprime EquiFirst-originated collateral (post August 2007 originations) at 101%.[56] The valuation is generally consistent with the price reflected by the Freddie Mac sale (101.93%) and the improved loan quality of recent originations (*i.e.*, higher coupons, lower "loan to values", etc.) due to tightened underwriting standards.[57] In addition, Barclays valued its older vintage EquiFirst-originated collateral at 95%, and third party-originated collateral at 84%.[58] For its older vintage EquiFirst-originated and third party-originated collateral, Barclays wrote down £65 million and £51 million, respectively.[59] As a result, Barclays valued its combined subprime whole loan portfolio at 95% for a total current market value of £3 billion and wrote down £116 million in total.[60]

C. Valuation of Barclays' Alt-A and Prime Whole Loan Portfolios

27. Consistent with its conclusions regarding subprime whole loans, Barclays also concluded that the severe disturbances in the Alt-A whole loan market made it difficult to use observable

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[55] BARC-ADS-00863067–091 at 078.

[56] BARC-ADS-01554693, pp. 10–11.

[57] BARC-ADS-00863067–091 at 080. These recent loans were originated after various regulators made a "Joint Statement on Subprime Mortgage Lending" on June 29, 2007, which created stricter underwriting standards in response to subprime lending risks. See "Statement on Subprime Mortgage Lending," *Federal Deposit Insurance Corporation Press Release*, available at https://www.fdic.gov/news/news/press/2007/pr07055a.html, accessed December 21, 2015.

[58] BARC-ADS-01554693, pp. 10–11.

[59] BARC-ADS-01554693, pp. 10–11.

[60] BARC-ADS-01554693, pp. 10–11.

prices for identical or similar assets to determine the fair value of its Alt-A and prime whole loan portfolios. Therefore, the bank used a valuation model (also a DCF model) that relied on inputs similar to those utilized in the valuation of its subprime whole loan portfolio.[61]

28. To estimate the expected future losses on Alt-A whole loans, Barclays used the same S&P LEVELS loss projection model utilized in subprime whole loan valuation.[62] In conjunction with the S&P model's loss projections, Barclays' price testing group reviewed multiple internal and external sources in order to calibrate its loss projections to other industry participants' expectations, such as Wachovia, UBS, and Goldman Sachs.[63] If Barclays' own loss projections derived from the S&P model fell below industry participants' expectations, then Barclays would run stress tests on its Alt-A portfolio, assessing its value in scenarios where cumulative losses rose to other market participants' expectations.[64]

29. To account for the portion of the Alt-A loans that would repay its outstanding principal each year, Barclays based its prepayment assumptions on "historical prepayment data [of] similar collateral type and on the recent prepayment performance of the pool itself."[65] Barclays made adjustments to the CPR curves to account for prepayment speed spikes upon the reset of rates and the overall speed slowdown in the market due to tightened credit standards.[66] Additionally, Barclays' price testing group tested the impact of several different prepayment

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[61] BARC-ADS-00227000–027 at 003–005.

[62] BARC-ADS-00227000–027 at 004.

[63] BARC-ADS-00227000–027 at 004, 014–015; PwC005597–5618 at 5613.

[64] BARC-ADS-00227000–027 at 004; PwC005597–5618.

[65] BARC-ADS-00227000–027 at 003.

[66] BARC-ADS-00227000–027 at 003.

rates on the valuation of the portfolio, and found that the "market value did not significantly change."[67]

30. To discount the estimated cash flows of its Alt-A whole loan portfolio to present value, Barclays employed a discount rate of 294 basis points over the SWAP curve. I understand that the bank used the SWAP curve, rather than the LIBOR, because it was market convention at the time to price Alt-A products this way. As of the 2007 year end valuations, Barclays' price testing group derived the most recent discount rate of SWAP plus 294 basis points "using the latest month-end pricing and deriving a nominal spread," which was then widened by approximately 40% to reflect observed spread movements.[68] The price testing group also benchmarked this discount rate against the most recent observable Alt-A securitization and available market indices.[69]

31. In addition, Barclays also concluded that its valuations were reasonable in part by comparing the characteristics of its prime and Alt-A whole loan portfolio with those of its peers' portfolios. Reviewing its Alt-A whole loan portfolio, the bank noted that it contained no second liens or "Alt-B" loans, that less than 2% of the loans were "no-doc" and that only 8.35% were "Investor" loans.[70] Furthermore, Barclays compared the characteristics of its Alt-A and prime whole loan portfolios with the industry average.[71] While 38% of the loans in Barclays' Alt-A

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[67] PwC005597–5618 at 5613.

[68] BARC-ADS-00227000–027 at 004. The spread levels that Barclays tracked included various benchmarks that could be obtained using external data sources. These benchmarks included 15 and 30 year Agency Yield Spreads, AAA HEL, AAA Floaters and ABX Index. Barclays used this benchmark with different weights, and certain benchmarks may have had greater weight in their analyses. See BARC-ADS-00227000–027 at 016.

[69] PwC005597–5618 at 5613–5615.

[70] BARC-ADS-00227000–027 at 005.

[71] BARC-ADS-00227000–027 at 005.

and prime whole loan portfolio had full documentation, the industry average was only 17%.[72] The table also detailed delinquencies in the different portfolios. 95.2% of Barclays' portfolio's payments were current, with only 2.3% 30 days delinquent, 1.0% 60 days, and 1.5% 90 days or more. Meanwhile, for the industry average, only 90.1% were current, with 3.6% 30 days delinquent, 1.6% 60 days, and 4.7% 90 days or more.[73]

32. In sum, using its valuation model, as of December 2007 Barclays valued its non-conforming prime whole loan portfolio at 98%, its performing Alt-A portfolio at 94%, and its non-performing Alt-A portfolio at 67%.[74] Barclays wrote down £4 million in its prime portfolio and wrote down £47 million in its Alt-A portfolio.[75] Overall, Barclays valued its combined prime and Alt-A whole loan portfolio at 95% for a total current market value of £911 million and wrote down £51 million in total.[76]

D. Auditors Reviewed Barclays' Valuation Models

33. Barclays' whole loan portfolio valuation methodologies and inputs also received review, comments, and suggestions from PricewaterhouseCoopers ("PwC"). As of November 2007, at the outset of its "deep-dive" audit into Barclays valuation methodologies, PwC had reviewed Barclays' whole loan valuation at "a high level," and concluded that, "although [the loans were] clearly a difficult asset class to value," it did not agree with the "the current valuation basis of

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[72] BARC-ADS-00227000–027 at 005.

[73] BARC-ADS-00227000–027 at 005.

[74] BARC-ADS-01554693, pp. 10–11.

[75] BARC-ADS-01554693, pp. 10–11.

[76] BARC-ADS-01554693, pp. 10–11. A series of emails from 1/2/08 discuss these write-downs, and an Excel file from 12/31/07 indicates that most of the losses related to non-performing Alt-A pools originated by Countrywide Financial. See BARC-ADS-00221665; BARC-ADS-01139435; BARC-ADS-01139437.

whole loans"[77] However, by early 2008, PwC "agreed with the process as well as the levels for the whole loan marks" and had concluded that the December 31 valuations were "reasonable and supportable."[78] The process that ultimately led to PwC's conclusions that the valuations were reasonable is described below.

34. After November 2007, PwC continued to review Barclays' whole loan valuation methods in greater detail and requested that the bank document the valuation difficulties it faced as the result of deterioration in the subprime whole loan market and its solutions. In addition, PwC requested that Barclays provide "fair values in accordance with IAS 39" instead of "economic valuations."[79] In response, Barclays drafted a detailed memo in December 2007 that described the state of the market, detailed the absence of reliable, visible prices, and described its valuation methodology and the sources of its inputs that the bank used to calculate fair values. PwC reviewed the memo and gave a number of comments that Barclays then implemented.[80] According to the principal author of the memorandum, PwC considered this memo to be "the most complete and thorough evaluation that they had seen," and "the best memo of its kind."[81]

35. PwC appears to have commented in November 2007 that it thought that the discount rate of LIBOR plus 150 basis points for the subprime whole loan portfolio was not "defendable."[82] By December 2007, however, Barclays had substantially revised the discount rate it used for subprime whole loan valuation to LIBOR plus 225 basis points (or 300 basis points for older

[77] BARC-ADS-01286577–78 at 77; Pwc000513–534 at 520.

[78] Pwc005597–5618 at 5603–5604, 5618; BARC-ADS-00854071.

[79] BARC-ADS-00221592; BARC-ADS-00221594–96 at 94; BARC-ADS-01286577–78 at 77.

[80] BARC-ADS-00060803; BARC-ADS-00060804-822; BARC-ADS-00054685.

[81] Menefee Deposition, 195:15–22.

[82] BARC-ADS-00841934–36 at 34.

collateral, resulting in approximately 285 basis points on a weighted basis), as discussed above. This revision resulted in lower valuations.[83]

36. PwC drafted a summary memo on Barclays' valuation methods in February 2008.[84] In this memo, PwC concluded that the whole loan products were at the higher end of valuations when compared to similar vintage products by other market participants. However, because Barclays used industry standard models with inputs from loan level data or used observable indices to value its products, and PwC agreed with Barclays that the subprime whole loans did indeed have "distinct risk characteristics from the ABX HE index" and the Alt-A whole loans were of higher quality compared to competitors, PwC "concluded that the fair value for all product areas described . . . [was] reasonable and supportable."[85]

37. Finally, PwC noted in a March 2008 presentation that it had "performed detailed work on [Barclays' 2007 year-end] valuation methodologies and assumptions" and concluded that, although "a wide range of valuations exist in the market," and that though "the valuation of these loans is more difficult to validate," and "there remain[ed] downside risk," the "provisions [were] adequate."[86]

E. Barclays' Valuation Methodologies Were Consistent with Industry Standards

38. Barclays' whole loan portfolio valuation methodologies and inputs were generally consistent with those of its peers and with industry standard methodologies. For instance, Morgan Stanley, in calculating its subprime mortgage loan exposures, took into consideration

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[83] BARC-ADS-00863067–091; Pwc012957–968 at 965.

[84] Pwc005597–5618.

[85] Pwc005597–5618 at 5618.

[86] BARC-ADS-01644890, p. 5.

observable transactions and other market developments, including updated cumulative loss data. Morgan Stanley also noted the "continued deterioration in market conditions" for the subprime market.[87]

39. Barclays noted that the S&P and Moody's models it used for cumulative loss projection in its cash flow analysis were "widely used throughout the industry."[88] PwC agreed when it noted that both S&P and Moody's were "market accepted platforms for projecting cumulative loss rates and [were] utilized by market participants in securitization decision making."[89]

40. In addition, while reviewing the reasonableness of Barclays' valuation assumptions, PwC commented that Barclays "used industry standard models and inputs sourced from actual loan level data or correlated observable indices."[90] For instance, PwC concluded that Barclays' methodology for adjusting prepayment spikes based on product type to be reasonable based on its comparison to other market participants. PwC stated that "other market participants have taken similar haircuts to prepayment speeds to account for slowdowns due to limited refinancing opportunities."[91] Furthermore, PwC concluded that "the prepayment and loss assumptions used in the model have been sourced from actual loan data and adjusted current market conditions in a manner consistent with other market participants."[92]

41. Finally, Barclays' process for valuing its whole loan portfolio is consistent with my experience in trading while both at Citibank and at Salomon Brothers. Citibank operated whole loan origination platforms and our role on the securitization desk, which I managed, was to

[87] "Morgan Stanley Provides Information Regarding Subprime Exposure," *Morgan Stanley*, November 7, 2007.

[88] BARC-ADS-00863067–091 at 081.

[89] Pwc005597–5618 at 5609.

[90] Pwc005597–5618 at 5618.

[91] Pwc005597–5618 at 5609.

[92] Pwc005597–5618 at 5609.

facilitate the distribution of packages of whole loans via RMBS. The execution of the RMBS deal was a key input in the pricing of future whole loan originations. In addition to RMBS sales, the Citibank trading desk later got into purchase and sale of whole loan packages. Our approach to valuing potential whole loan deals involved a review of the credit of the underlying loans (similar to Barclays' approach) and an understanding of how to value exceptions.

42. Later, when I moved to Salomon Brothers, one of my responsibilities was to manage a residential conduit. That business bought loans to securitize. As such, we had to know both how to value loans that went into securitizations, as well as those loans that might be rejected. Our experience was grounded in years of dealing with loan packages (often from distressed lenders) from the RTC (Resolution Trust Corporation) after the Savings & Loan crises.[93] Finally, in securitizing RMBS deals, I had to structure, value and distribute residual tranches. All of these roles required an approach to valuing whole loans. I find that the considerations that Barclays reviewed (e.g. credit, securitization prices, discounted value of cash flows) are similar to the approaches we used at Citibank and Salomon Brothers.

F. The allegation that Subprime and Alt-A Whole loans were overvalued is incorrect

43. Plaintiff alleges—without offering specifics—that disclosures related to subprime whole loan and Alt-A positions were "materially misleading, in part, because Barclays' subprime whole loan and Alt-A positions were worth far less than the 2007 20-F represented."[94]

[93] The Resolution Trust Corporation was a government-run company created in 1989 in response to the Savings and Loan Crisis to resolve distressed savings associations. One of RTC's responsibilities was the liquidation of distressed loans, real estate, and other assets. See Resolution Trust Corporation Annual Report, filed October 15, 1991, pp. vii, 2–4.

[94] Class Certification Memorandum, pp. 5–6.

44. Plaintiff cites emails that discuss PwC's involvement as well as deposition testimony in an attempt to support the contention that Barclays' subprime whole loan portfolio was overvalued and that PwC had recommended significant additional writedowns in late 2007 (when PwC first commenced its "deep-dive" with respect to these asset classes).[95] However, these documents predate the process I described above that led to PwC's ultimate conclusion that Barclays' methodology as of the end of 2007 was "reasonable and supportable."[96] For instance, as I described above, Barclays revised its discount rate from LIBOR plus 150 basis points, which PwC considered too low, to 225 basis points (or 300 basis points for older collateral) which PwC considered "reasonable and supportable."[97]

45. Additionally, I understand that Plaintiff alleges Barclays' subprime whole loan portfolio was improperly valued as evidenced by the declines in the ABX indices.[98] While both Mr. O'Driscoll and Mr. Regan discuss ABX declines in their reports,[99] neither one performs any analysis that would support the claim that Barclays' whole loan valuations were too high.

46. In fact, it is important to note that there is not a single "ABX Index"—there are actually four index vintages of the ABX—2006-1, 2006-2, 2007-1, and 2007-2—each with five sub-indices based on the ratings of the underlying RMBS collateral. Each index referenced twenty subprime RMBS deals issued in the prior six months (*e.g.*, the 2006-1 index referenced twenty

[95] Class Certification Memorandum, pp. 5–6; Pwc000513–534 at 520.

[96] Pwc005597–5618 at Pwc005618.

[97] BARC-ADS-00841934–36 at 34; BARC-ADS-00863067–091 at 078; Pwc005597–5618 at 5618.

[98] Complaint, ¶ 150.

[99] See, *e.g.*, O'Driscoll Report, ¶¶ 26, 111, and Regan Report, ¶ 84b.

deals issued in the second half of 2005) with each sub-index corresponding to a rating of the underlying collateral (AAA, AA, A, BBB, and BBB-).[100]

47. The differences among the indices are not merely theoretical. Indeed, both expected and realized performance would differ based on vintage and rating differences of the collateral.

48. For example, from June 30, 2007 to June 30, 2008 the ABX.HE 2006-1 AAA index declined by approximately 8% to 91.8, whereas the 2006-2 AAA index had fallen by over 30% to 69.3.[101] The slightly-lower rated AA tranche of the 2006-1 index was at 60.6, with the 2006-2 AA index even lower.[102]

49. Given these differences in performance across various ABX indices, Plaintiff's experts have not shown which of the indices, if any, have relevance to Barclays' loan portfolios. In fact, I am not aware of a methodology that would directly map a particular index vintage to a specific Barclays' portfolio without making adjustments for the characteristics of the underlying collateral. When comparing Barclays' valuations to benchmarks such as the ABX, PwC would compare collateral characteristics in order to determine whether any differences from the benchmark were consistent with these collateral differences.[103]

50. In fact, Plaintiff's experts have not considered whether Barclays' portfolios differed from the loans underlying the 20 RMBS deals that comprised the ABX indices. If there were meaningful differences in the underlying collateral, then it would be inappropriate to rely on changes in ABX levels to mark Barclays' subprime whole loan portfolio. As described

[100] Fender, I. and M. Scheicher (2008), "The ABX: How do the markets price subprime mortgage risk?," *BIS Quarterly Review*, pp. 68-69.

[101] Fender, I. and M. Scheicher (2008), "The ABX: How do the markets price subprime risk," *BIS Quarterly Review*, p. 74.

[102] Fender, I. and M. Scheicher (2008), "The ABX: How do the markets price subprime risk," *BIS Quarterly Review*, p. 74.

[103] Pwc000538–586.

previously, Barclays studied its whole loan portfolios and determined that the ABX index was not an appropriate input for the valuation of its whole loan portfolios, based on the stricter guidelines used in originating the loans Barclays held (which were mostly originated by EquiFirst) and based on an observed performance difference between the loans underlying the ABX indices and Barclays' own loan portfolio.[104] Furthermore, Barclays' auditor, PwC, specifically agreed with this conclusion.[105]

51. In sum, even if an index (or certain of the indices) had relevance to Barclays' portfolio, it would not mean that Barclays' portfolio should be marked at the same level as the index. The ABX indices, to the extent they were relevant at all, could—like many other sources—have been used as data points but would not have provided a definitive valuation of any particular Barclays' portfolio. Moreover, some research suggests that the ABX indices may have understated the value of the underlying assets.[106]

52. Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing whole loans, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches

[104] BARC-ADS-00863067–091 at 076–077, 090.

[105] Pwc005597–5618 at 5618.

[106] See, for example, Stanton and Wallace (2011), "The Bear's Lair: Index Credit Default Swaps and the Subprime Mortgage Crisis," *Review of Financial Studies*, pp. 3250–3280. For example, at times, the ABX indices traded at lower levels than the portfolios of the 20 CDS reference obligations underlying them. An identified reason for this was that the ABX indices were a tool for hedgers looking to short RMBS exposures that they could not otherwise short. Furthermore, at times, the value of the synthetic RMBS exposures (e.g. the 20 reference obligations) traded at lower levels than the cash instruments they referenced as some investors could only invest in cash bonds thereby driving yields of the cash instruments lower.

common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

II. RMBS

53. Barclays was exposed to the RMBS market through its positions in RMBS securities, the majority of which were collateralized by Alt-A loans, and rated AAA/AA at the end of 2007.[107] The Complaint alleges that Barclays improperly valued its mortgage-backed assets, and failed to properly write down its exposure to RMBS.[108] However, neither Mr. O'Driscoll nor Mr. Regan establish any basis for these allegations in their reports.

54. Barclays valued its RMBS portfolio using fair value accounting. In its 2007 Form 20-F filing, Barclays described its RMBS valuation as follows:

> [A]sset backed securities (ABS) (residential mortgages, credit cards, auto loans, student loans and leases) are generally valued using observable information. Wherever possible, the fair value is determined using quoted prices or recently executed transactions. Where observable price quotations are not available, fair value is determined based on cash flow models where the significant inputs may include yield curves, credit spreads, prepayment rates. Securities that are backed by the residual cash flows of an asset portfolio are generally valued using similar cash flow models. The fair value of home equity loan bonds are determined using models which use scenario analysis with significant inputs including age, rating, internal grade, and index prices.[109]

55. As described in Barclays' 2007 20-F, in the absence of prices for identical assets, Barclays first used observable prices of similar or comparable assets when determining the fair

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[107] BARC-ADS-01554693, p. 21.

[108] Complaint, ¶¶ 135(a), 150.

[109] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

value of RMBS.[110] When such observable prices were not available, Barclays used valuation models (*i.e.*, a DCF model) that incorporated observable and unobservable inputs.

A. Description of RMBS Securities

56. After origination, whole loans may be retained by the lender or sold to others. If sold, the purchaser, in turn, may keep these loans or securitize them into mortgage-backed securities which will be resold to investors. In the initial stage of the mortgage securitization process, originators (such as Wells Fargo or Countrywide), submit bundles of mortgage loans with similar loan characteristics (*e.g.*, a set of Alt-A loans, or a group of only second lien mortgages) for purchase by government agencies, government-sponsored enterprises ("GSEs"), or large financial institutions.[111]

57. The "sponsor" of an RMBS, typically a financial institution (such as Morgan Stanley or Deutsche Bank), then sells a pool of mortgage loans to a trust or special purpose vehicle ("SPV").[112] The SPV then issues securities (*i.e.*, RMBS), and the aggregate interest and principal payments on the underlying mortgages then pass through to the holders of the RMBS certificates.[113] These certificates are also known as "classes" or "tranches" of the RMBS deal and can have different priorities of payment of principal and interest, and allocation of losses (as

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[110] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

[111] Loan pools purchased by non-government agencies are typically securitized in private-label transactions by subsidiaries of investment banks and financial institutions that issue mortgage securities. See Fabozzi, F. J., A. K. Bhattacharya and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, Hoboken, NJ: John Wiley & Sons, Inc., p. 11; Fabozzi, F. J. and S. V. Mann (2005), *The Handbook of Fixed Income Securities*, McGraw-Hill, p. 648.

[112] According to Regulation AB of the U.S. Securities and Exchange Commission, the sponsor of a securitization transaction such as an RMBS is "the person who organizes and initiates an asset-backed securities transaction by selling or transferring assets, either directly or indirectly, including through an affiliate, to the issuing entity." See 17 CFR. §229.1101, Securities Act of 1933, http://www.gpo.gov/fdsys/pkg/CFR-2012-title17-vol2/pdf/CFR-2012-title17-vol2-sec229-1101.pdf.

[113] Gorton, G. and A. Metrick (2010), "Haircuts," *Federal Reserve Bank of St. Louis Review*, Vol. 92, No. 6, pp. 507–520 at 510.

defined in the "waterfall" section of the documents governing the security). The number of RMBS tranches issued and their relative sizes and priorities are collectively referred to as the "capital structure" of the RMBS.[114]

58. Any payments or losses are distributed by a trustee to the holders of the tranches. The "equity tranches" (also sometimes called "income notes"" or "residuals") are generally not rated and suffer the first losses but offer the highest potential returns. The senior tranches are highly rated (*e.g.*, AAA or Aaa) and typically suffer losses only after all of the principal of the lower-rated subordinate tranches has been written down. The senior tranches also tend to be offered with the lowest yields. Mezzanine tranches lie between income notes and senior tranches in terms of risk and return. As mentioned above, the exact distribution of cash flows and the allocation of losses and prepayments across tranches are detailed in an RMBS's waterfall structure, which is disclosed in its offering materials.[115]

59. In addition to the tranche subordination structure, RMBS may have additional features that provide credit enhancement to the senior tranches. These can include performance

[114] Goodman, L.S., S. Li, D. J. Lucas, T. A. Zimmerman, and F. J. Fabozzi (2008), *Subprime Mortgage Credit Derivatives*, Hoboken: John Wiley & Sons, Inc., p. 270 ; "CDO Primer," *The Bond Market Association*, 2004, pp. 14–15.

[115] As a simplified hypothetical example, assume that four "classes" or "tranches" of RMBS are issued by a trust against a $1.0 billion mortgage pool: (1) Class A ($700 million), (2) Class B ($200 million), (3) Class C ($50 million), and (4) "equity" ($50 million). Interest and principal payments collected by the trust are typically first used to pay the holders of the Class A securities, then the holders of the Class B and Class C securities, with any excess left for the "equity" tranche. This means that, in the event that the underlying mortgages provide insufficient cash flows for all investors to be paid in full, the holders of the Class A securities will be paid first and the holders of the equity will be paid last (if at all). While interest and principal payments are prioritized to be paid "top down" (*i.e.*, first to Class A, then Class B, etc.), losses are allocated "bottom up" (i.e., first to equity, then—in this example—to Class C, etc.). As such, losses in excess of $50 million will begin to impact the Class C securities and losses of $100 million or more will completely wipe out the Class C securities. Because of the waterfall structure and other possible credit enhancements, a credit rating agency, such as Standard & Poor's, might provide a AAA rating for Class A, an A rating for Class B, and a BBB rating for Class C, while the equity tranche would not be rated and would be labeled as NR.

triggers,[116] initial overcollateralization,[117] credit derivatives,[118] and financial guarantees or "credit wraps" on specific tranches. In structuring an RMBS, a sponsor may engage a monoline insurance company (such as PMI Mortgage Insurance Co. and Ambac Assurance Corporation) to provide a "credit wrap" on a given tranche. Such credit wraps are frequently "unconditional guarantee[s] of timely interest payments and ultimate repayment of principal on [particular tranches]."[119] Beyond guaranteeing cash flows to certificate holders, the insurance contracts may also provide capital coverage to achieve AAA ratings for wrapped tranches.

60. The performance of a particular RMBS certificate is therefore a function of both the capital structure of the trust (including credit enhancements such as the "credit wrap") and the performance of the underlying mortgages, while the performance in aggregate of all the securities issued by the trust is primarily determined by ability and willingness of the mortgage borrowers' to make their mortgage payments on the pool of loans underlying an RMBS deal.[120]

B. Valuation of Barclays' RMBS Portfolio

61. As discussed previously, due to a decline in both market liquidity and the number of transactions in the RMBS market in 2007, Barclays concluded that it would have been

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[116] Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, Hoboken, NJ: John Wiley & Sons, Inc., pp. 104–105.

[117] "Overcollateralization is achieved through investment in more collateral than is required to meet the CDO's static cash flow requirements." Tavakoli, J. M. (2008), *Structured Finance and Collateralized Debt Obligations*, Hoboken, NJ: John Wiley & Sons, pp. 119–120. See also Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, Hoboken, NJ: John Wiley & Sons, Inc., pp. 104–105.

[118] Fabozzi, F. J., A. K. Bhattacharya, and W. S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, Hoboken, NJ: John Wiley & Sons, Inc., pp. 24, 203–204.

[119] Fabozzi, F. J. and S. J. Mann (2005), *The Handbook of Fixed Income Securities*, McGraw-Hill, pp. 608-609.

[120] Some of the primary factors that may affect a borrower's likelihood of making mortgage payments are described above in the section on whole loans.

challenging if not impossible to obtain recent observable prices of similar assets to value an RMBS portfolio. Thus, Barclays marked its RMBS positions using a model.

62. Specifically, Barclays used a DCF model, which projects the expected cash flow of the RMBS, and discounts the future value generated to calculate the present value.[121] Models of uncertain future cash flows that are then discounted to arrive at a valuation were a commonly used method for valuing RMBS.[122] The cash flow projections were "based on statistical analysis of historical performance of similar assets" and from parameters that "[could] be derived or observed from the market" using Intex.[123] The DCF model used a number of inputs to value Barclays' RMBS portfolio.

63. The first sets of inputs to the model were the Compound Default Rate ("CDR") and loss severity projections. A CDR accounts for some portion of the underlying assets defaulting and causing a loss of cash flow. The CDR projections were built through "a series of steps to ensure that it capture[d] available market data relevant to the particular pool."[124] Each month, delinquency data was published by the servicers to determine the performance of the underlying mortgages. The CDR then used a Roll Rate Matrix to convert delinquency data into expected losses.[125]

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[121] BARC-ADS-01022308, p.17.

[122] Fabozzi, F. J., A. K. Battacharya, and W.S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, John Wiley & Sons, pp. 211–229.

[123] BARC-ADS-01022308, p.8; Pwc005597–5618 at 5616. Intex is analytical software used worldwide to derive cashflows from a variety of structured fixed-income products, and, according to Barclays, is considered a market standard tool. See BARC-ADS-01554693, p. 9; "INTEX Company Overview," *INTEX*, https://www.intex.com/main/company.php.

[124] BARC-ADS-01377460–61 at 60.

[125] The Roll Rate Matrix was based on historical performance of the pool or similar pools. While constructing its own Roll Rate Matrix, Barclays reviewed and consolidated Roll Rate Matrices produced by other sources such as Moody's, UBS, and the FSA. See BARC-ADS-01022308, p.13. Roll rates are "the percentage of [loans in] delinquency buckets expected to default (defined as liquidation) over an 18 month period" as a percent of

64. Barclays used a standard CDR curve that was common across various credit market products.[126] The standard curve was created by various parties within Barclays.[127] For RMBS in particular, the CDR curve was fitted to the observed points for each security pool in order to determine the total expected losses through the remaining life of an RMBS. This curve was periodically reviewed based on changing underlying collateral performance in the market.[128]

65. In addition, Barclays specified loan loss severities based on the distribution of loan balances in the pool, and used them to "transform the delinquency ladder into expected losses."[129] According to Barclays, average loss severity was projected to be 40 percent for subprime first lien RMBS, and 30 percent for Alt-A or option ARM RMBS.[130] Barclays updated loss severity inputs periodically based on servicer data when Barclays detected a divergence in current or expected trends from historical trends.[131]

66. The second of these model parameters was the CPR. As discussed previously for whole loans, the CPR forecasts the percentage of outstanding principal repaid each year, and is estimated for the underlying loan pool based on individual characteristics of the underlying loans.[132] In the valuation of asset-backed securities, including RMBS, the model assumed that the principal would be prepaid throughout the life of the security instead of at maturity.[133]

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respective notional balance. See BARC-ADS-00419777–782 at 779. Pwc also confirmed that "[t]he typical period from delinquency to foreclosure is 18 months and this an industry standard." See Pwc000513–534 at 527.

[126] "For the purposes of the BarCap trading desk valuations a standard [CDR] curve is used across the desks to ensure consistency of risk and valuation." BARC-ADS-01022308, p.14.

[127] BARC-ADS-00881407, p. 10.

[128] BARC-ADS-01020283, p. 5.

[129] BARC-ADS-01020283, p. 5.

[130] BARC-ADS-00419777–782 at 782.

[131] BARC-ADS-01020283, p. 5.

[132] BARC-ADS-01377460–61 at 60.

[133] BARC-ADS-01377460–61 at 60.

Barclays initiated CPR calculations using pricing speeds in the market and then adjusted these values according to the recent performance of the RMBS deals. Prepayment information for the RMBS deals, which Barclays obtained from servicer data, was updated monthly.[134]

67. The third set of inputs to the valuation model was credit spreads that accounted for the yield premium of a risky investment. Credit spreads were applied as a spread or incremental yield over the LIBOR for subprime RMBS and the SWAP curve for Alt-A RMBS and were used to discount the projected cash flows.[135] Barclays derived credit spreads from market observations, such as prices or indices (*i.e.*, the ABX Index). Additionally, Barclays updated the credit spreads daily based on the ABX transactions observable in the market.[136]

68. In addition to these components, certain valuation parameters were defined based on the security itself.[137] For instance, the priority to cash flow payments, which was based on the specific waterfall structure for a given RMBS, affected the valuation of a security in the event of a principal shortfall. Another security-specific parameter was the deal-specific credit protection features. Finally, Barclays also used the underlying coupon payments to the security as an input for its valuation model.

[134] BARC-ADS-01020283, p. 5. If available, Barclays used a Blackrock Loan Prepayment Model. Otherwise, Barclays used constant speeds of 25 conditional payment on balloon ("CPB") for pass-through securities and 15 CPR for floating securities. PwC confirmed that these were "acceptable assumptions that are used by other market participants." See PwC005597–5618 at 5616. CPB refers to a model where there is a constant prepayment of a fixed percentage until a period at which a mortgage resets and results in a full prepayment of the remaining notional. See BARC-ADS-00228432, p. 65.

[135] BARC-ADS-00860690–0715 at 0713.

[136] BARC-ADS-01020283, p. 5.

[137] BARC-ADS-01022308, pp. 8, 16.

C. Auditors Reviewed Barclays' Valuation Methodologies

69. As with their other exposures, Barclays' RMBS inventory valuation processes and inputs were reviewed by PwC. The auditors price tested Barclays' 2007 ABS positions (including subprime RMBS), using evidence from pricing services, recent trades, and analysis of comparable securities when possible. Other analyses were performed on assets with little or no supporting price data.[138] Similarly, PwC derived fair values for Barclays' 2007 Alt-A positions, using external prices when available and cash flow modeling (using delinquency, severity, prepayment, and default assumptions) when observable inputs were unavailable ("[they] tested management's prices to third party sources and reviewed the internal models").[139] In their Board Audit Committee Report for 2007, PwC confirmed that "[they] concur with the conclusions of management," with regards to Barclays' valuations of its Alt-A securities portfolio.[140]

70. In February of 2008, after auditing Barclays' Alt-A valuation methodology, PwC concluded that Barclays "has used an acceptable valuation technique and management's approach to determining assumptions is consistent with other market participants and attempts to correlate to observable data points".[141]

71. Barclays also regularly conducted internal reviews of its mark-to-market valuations. In price testing and benchmarking, the bank benchmarked RMBS securities to external prices provided by industry data vendors (*e.g.*, FTIDC, Markit, Street Software) when such data was available. In the absence of such external prices, bonds were proxied to similar bonds or relevant

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[138] BARC-ADS-01297226–254 at 234–235.

[139] BARC-ADS-01297226–254 at 235.

[140] BARC-ADS-01297226–254 at 234–235.

[141] Pwc005597–5618 at 5617.

ABX indices, and the derived parameters were the inputs to a standard cash flow model (like Intex) to derive an independent price.[142]

D. Barclays' Valuation Methodologies Were Consistent with Industry Standards

72. Barclays' RMBS portfolio valuation methodologies and inputs were generally consistent with those of its peers and with industry standard methodologies. Other investment banks also relied on observable inputs from securities sales and indices (such as the ABX), as well as cash flow models to mark their RMBS portfolios. For instance, in justifying its valuation rationale for subprime RMBS and CDOs (which triggered a $1.8 billion collateral call to AIG on July 27, 2007), Goldman Sachs cited a number of factors used in their RMBS valuations: these included Goldman Sachs' own sales of comparable products, publically available information on CDO trades, and the ABX index.[143]

73. Factors used in Morgan Stanley's RMBS valuations were detailed in its 2009 Form 10-K. The filing indicated that Morgan Stanley considered indices for benchmarking purposes.[144] Morgan Stanley noted that RMBS were generally valued using prices from similar or comparable assets, but that valuation models are appropriate if external prices or significant spread inputs are unobservable. In these cases, Morgan Stanley used models of expected future cash flows. Inputs to these models included market spreads, forecasted credit losses, default rates, and prepayment rates.[145]

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[142] BARC-ADS-01604853, p. 16.

[143] "Valuation & Pricing Related to Initial Collateral Calls on Transactions with AIG," *Goldman Sachs*, http://www.goldmansachs.com/media-relations/in-the-news/archive/response-to-fcic-folder/valuation.pdf.

[144] Morgan Stanley Form 10-K, filed February 26, 2010, p. 135

[145] Morgan Stanley Form 10-K, filed February 26, 2010, p. 135.

74. Additionally, rating agencies also use similar strategies in assessing RMBS securities to which they assigned ratings. An S&P release in 2007, which detailed how the agency developed their default curve for US subprime RMBS, highlighted the importance of default models as an input to cash flow based valuation models.[146]

75. Furthermore, from personal experience, I faced many of these same valuation challenges in my capacity as Chief Investment Officer while at Hyperion-Brookfield Asset Management ("HBAM"). HBAM owned RMBS tranches from deals similar to those owned by Barclays (and other structured products) and was faced with the challenge of providing values that drove publicly-traded mutual fund NAV calculations, and client performance for separate accounts. From 2004 to 2007, I chaired the HBAM Valuation Committee which was charged with creating, and abiding by, a process to value exposures when trading observations were limited. Our process included many of the same inputs that Barclays appears to have used (*e.g.*, estimates of future CPR, CDR, severity, and decisions as to appropriate discount rates.) We also took into consideration estimates of prepayments, defaults and loss severity from multiple sources (*e.g.*, the rating agencies, dealer forecasts, and our own observations of historical results on deals we held and a large sample of a universe of comparable securities). We also used Intex, Trepp, and our own proprietary cash flow models for prioritizing cash flow payments across tranches. On balance, I find the approach Barclays used to be similar to ours.

76. Finally, plaintiff's experts do not review Barclays' procedures and methodologies used in valuing RMBS, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are

[146] BARC-ADS-00620131–140.

consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

III. Subprime and Alt-A RMBS Residuals

77. Barclays was exposed to the subprime and Alt-A markets through its positions in subprime and Alt-A residuals at the end of 2007. These included Net Interest Margin ("NIM") and Post-NIM Residual ("PNR") securities on subprime and Alt-A collateral. Plaintiff alleges that Barclays overvalued its NIM and post-NIM residuals.[147] However, neither Mr. O'Driscoll nor Mr. Regan establishes any basis for these allegations in their reports.

78. In its 2007 Form 20-F filing, Barclays described its valuation of ABS and related residuals as follows:

79. [A]sset backed securities (ABS) (residential mortgages, credit cards, auto loans, student loans and leases) are generally valued using observable information. Wherever possible, the fair value is determined using quoted prices or recently executed transactions. Where observable price quotations are not available, fair value is determined based on cash flow models where the significant inputs may include yield curves, credit spreads, prepayment rates. Securities that are backed by the residual cash flows of an asset portfolio are generally valued using similar cash

[147] Class Certification Memorandum, pp. 6–7.

flow models. The fair value of home equity loan bonds are determined using models which use scenario analysis with significant inputs including age, rating, internal grade, and index prices.[148]

80. As described in Barclays' 2007 Form 20-F filing, in the absence of prices for identical assets, Barclays used valuation models (*i.e.*, DCF models) to determine the fair value of subprime and Alt-A residual securities. [149]

A. Description of Subprime & Alt-A Residual Securities

81. An RMBS structure typically includes an equity tranche, or residual, that is positioned subordinate to all other bonds "at the lowest point of the waterfall with respect to cash flow priority."[150] RMBS sponsors often retain these residuals but sometimes, as Barclays Capital did with its SABR series of RMBS, elect instead to securitize the residuals as NIM or PNR bonds, which can be either sold or retained. NIMs receive payment from a combination of cash flows in excess of the amount owed to all senior bonds and prepayment penalties received from the underlying collateral and PNRs receive payment from the same sources but subordinate to the NIMs.[151]

B. Valuation of Barclays' Subprime and Alt-A Residuals Portfolio

1. Subprime

82. As mentioned above, due to both a decline in the number of transactions in the RMBS markets in 2007 and the "always . . . highly illiquid" nature of subprime NIM and PNR

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[148] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

[149] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

[150] Fabozzi, F. J., A. K. Battacharya, and W.S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, John Wiley & Sons, pp. 195–196.

[151] Fabozzi, F. J., A. K. Battacharya, and W.S. Berliner (2011), *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques*, John Wiley & Sons, pp. 204–205; BARC-ADS-00836422–434.

securities, it is my understanding that Barclays concluded that there were "no observable prices or reliable data to determine fair value" available for Barclays' valuation purposes.[152] Thus, at the end of 2007, the bank marked its subprime NIM and PNR securities using a DCF model. Barclays' DCF model projected the cash flow of the NIM and PNR securities and then discounted the proceeds to determine a present value.[153] The projection of future cash flows was based on several parameters. Because the subprime PNR securities were "among the most scrutinized assets in [Barclays'] credit trading book" and their value was often "highly sensitive to yield, default and prepayment assumptions," Barclays' Product Control Group benchmarked and tested the model inputs and played an active role in the valuation of these assets.[154]

83. The first of these model parameters was the estimated cumulative loss, which accounted for some portion of the securities' collateral loans defaulting and causing a loss to the cash flow. To estimate default rates for NIM and PNR securities' collateral, Barclays utilized a roll rate analysis, which expressed a given borrower's probability of default given a stage of delinquency.[155] Barclays calculated its roll rates as a six month average based on data obtained from its HomEq loan servicing portfolio, which contained 280,000 loans.[156] Barclays then combined these estimated default rates with a projected loss severity of 35% in order to project cumulative losses.[157] Earlier in 2007, Barclays had adjusted its subprime PNR valuation

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[152] Pwc005597–5618 at 5610.

[153] BARC-ADS-01554693, p. 13; Pwc005597–5618 at 5610.

[154] BARC-ADS-00836422–434 at 427; Deposition of Richard Landreman, October 22, 2015 ("Landreman Deposition"), 95:22–25; BARC -ADS-01273392.

[155] BARC-ADS-01554693, p. 13; Pwc005597–5618 at 5611.

[156] BARC-ADS-01554693; Pwc005597–5618 at 5611. See BARC-ADS-1618500.

[157] Pwc005597–5618 at 5611. PwC's review of Barclays' subprime PNR valuation noted the use of a 35% loss severity with the exception of four positions that had pool level mortgage insurance and were accordingly valued using a loss severity of 15%. See Pwc005597–5618 at 5611.

methodology to estimate losses separately by vintage in reaction to the poor performance of more recent 2006 collateral.[158] Additionally, Barclays' internal price testing group benchmarked these cumulative loss projections against estimates from S&P and Moody's.[159]

84. The second parameter was the estimated prepayment curve, which accounted for some portion of the securities' collateral loans prepaying part of their outstanding principal each year.[160] Barclays based the initial shape of its forecasted prepayment curve on historical prepayment data from 2003 and 2004 vintage loans.[161] Earlier in 2007, Barclays had reduced its base prepayment assumptions in order "to reflect for decreased housing price appreciation and the inability of subprime borrowers to refinance given tighter lending standards."[162]

85. Finally, Barclays derived the third parameter, the discount rate, based on the original yields used to price the deals and, as of December 31st, 2007, stressing these yields by 40% to account for changes in market conditions.[163]

86. In sum, using its subprime residuals valuation model, as of December 2007, Barclays priced its subprime NIM and PNR portfolios at 24% each, for market values of £110 million and £121 million respectively. For its subprime NIM and PNR portfolios, Barclays wrote down £106 million and £367 million, respectively. Barclays valued its combined subprime NIM and PNR securities portfolio at 24% for a total current market value of £231 million and wrote down £473 million in total.[164]

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[158] Deposition of Grant Kvalheim, October 19, 2015, 191:16–192:21; BARC-ADS-00935939–940.

[159] BARC-ADS-01554693, p. 13; Pwc012957–968 at 960.

[160] BARC-ADS-01554693, p. 13.

[161] Pwc005597–5618 at 5611.

[162] Pwc005597–5618 at 5611; BARC-ADS-01294727–28; BARC-ADS-01294729; BARC-ADS-00850678–79.

[163] Pwc005597–5618 at 5610.

[164] BARC-ADS-01554693, p. 12.

2. Alt-A

87. It is my understanding that, as with the subprime residuals portfolio, Barclays concluded that there were “no observable trades in the market” for Barclays’ portfolio of Alt-A residuals.[165] Thus, Barclays marked its Alt-A NIM and PNR securities using a DCF analysis. Barclays’ DCF model projected the cash flow of these securities and discounted the proceeds to determine a present value, incorporating model inputs similar to those it used for subprime residuals valuation.[166]

88. As with the subprime residuals portfolio, these model inputs included an estimated default rate, estimated prepayment curve, and a discount rate. Similarly, Barclays calculated these inputs based on a combination of loss performance data obtained from its HomEq portfolio, historical prepayment data, and a discount rate that reflected observable spreads with an additional stress to account for the absence of a liquid market.[167]

89. Using its Alt-A residuals valuation model, as of December 2007, Barclays valued its combined Alt-A NIM and PNR securities portfolio at 66% for a current market value of £25 million and wrote down £13 million in total.[168]

C. Auditors Reviewed Barclays’ Valuation Methodologies

90. Barclays’ residuals portfolio valuation methodologies and inputs also received review, comments, and suggestions from PwC. As of November 2007, PwC had reviewed Barclays’ subprime PNR valuation methodology at “a high level,” and concluded that it did not agree with

[165] BARC-ADS-01554693, p. 13.

[166] BARC-ADS-01554693, p. 13.

[167] BARC-ADS-01554693, p. 13.

[168] BARC-ADS-01554693, p. 12.

the "current valuations in respect of the Post NIMs."[169] However, by early 2008, PwC had concluded that the December 31 valuations were "acceptable and supportable."[170] The process that ultimately led to PwC's conclusions that the valuations were reasonable is described below.

91. After November 2007, PwC continued to review Barclays' subprime PNR valuation methodology. As part of this effort, Barclays drafted a detailed memo that described the value of its subprime PNR securities, the available sources of data for valuation purposes, and how it tested and stressed its model inputs and valuation assumptions.[171] PwC summarized its detailed review of Barclays' valuation methods in its own memo in February 2008.[172] After its review of Barclays' subprime PNR valuation methodology, PwC found that the prepayment and loss assumptions used in the subprime residuals valuation model were "sourced from actual loan data and adjusted for current market conditions in a manner consistent with other market participants."[173] Although PwC noted that Barclays' valuation of its NIMs and PNRs was on the higher end among its peers and there was "significant downside risk remaining in the residuals," PwC also acknowledged "the extremely subjective nature of the estimate and believe there [was] a wide range of fair values due to the illiquidity in the market."[174] In the end, PwC concluded that the estimate of fair value for the subprime NIMs and PNRs was "acceptable and supportable."[175]

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[169] BARC-ADS-01286577–78 at 77.

[170] Pwc005597–5618 at 5612.

[171] BARC-ADS-00836422–434.

[172] Pwc005597–5618.

[173] Pwc005597–5618 at 5612.

[174] Pwc005597–5618 at 5612.

[175] Pwc005597–5618 at 5612.

92. PwC also reviewed Barclays' valuation of its Alt-A residuals portfolio. PwC examined Barclays' estimated default and prepayment model inputs, and found them to be consistent with those in use by other market participants.[176] PwC also reviewed Barclays' discount rate and, although it noted that the rate used for the valuation of more senior Alt-A securities was above the range it considered normal, it is my understanding that PwC raised no exceptions with respect to the discount rate used in the valuation of the Alt-A residuals portfolio.[177] Separately, PwC acknowledged "the extremely subjective nature of the estimate and believe[d] there [was] a wide range of fair values due to the illiquidity in the market."[178] However, PwC concluded overall that, for the Alt-A residuals portfolio, "[Barclays] has used an acceptable valuation technique and management's approach to determining assumptions [was] consistent with other market participants. . . ."[179]

D. Barclays' Valuation Methodologies Were Consistent with Industry Standards

93. As described above, I understand that PwC's conducted a detailed audit of Barclays' subprime PNRs. The audit included a review of the source data, roll rates, and loss severities used to value the subprime PNRs.[180] After this detailed review of the cumulative loss estimates, PwC concluded that "no exceptions were noted," and that the model's loss assumptions were

[176] Pwc005597–5618 at 5616.

[177] Pwc005597–5618 at 5615–17.

[178] Pwc005597–5618 at 5617.

[179] Pwc005597–5618 at 5617.

[180] BARC-ADS-01286577–78; Pwc005597–5618 at 5610–5612.

"sourced from actual loan data and adjusted for current market conditions in a manner consistent with other market participants."[181]

94. Moreover, everything described in how Barclays valued NIMs is consistent with my experience structuring and marketing residuals during the period when I was trading RMBS at Salomon Brothers, and the analytical approaches we used at Hyperion when we invested in and tranched NIMs. In both cases, it was important to forecast how the collateral might prepay and how defaults (and eventually losses) would impact cash flows, as well as to have a good understanding of the cash flow waterfall. In both cases I appreciated that NIMs (and other tranches with similar cash flows) were very sensitive to changes in anticipated collateral performance, and I recall that bid/offer spreads on these products were quite wide (in percentage terms).

E. Plaintiff's allegation that NIMs and post-NIM residuals were overvalued is incorrect

95. Plaintiff alleges that Barclays "overvalued its high-risk subprime-backed net interest margin securities ("NIMs") and post-NIM residuals."[182] Specifically, in an attempt to support this contention, the memorandum cites emails that discuss valuation of post-NIMs as well as the deposition testimony of Joseph Kaczka.[183]

96. However, I do not agree that Mr. Kaczka's deposition testimony demonstrates that Barclays overvalued its subprime NIM or PNR portfolios. While Mr. Kaczka asserts that he believed there should be more significant writedowns on the portfolios but was met with unspecified "pushback," I understand that this pushback was part of ongoing "debate and

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[181] BARC-ADS-01286577–78; Pwc005597–5618 at 5611–5612.

[182] Class Certification Memorandum, p. 6.

[183] Class Certification Memorandum, pp. 6–7.

dialogue" at Barclays and Mr. Kaczka himself considered this pushback "a function of [his and the desk's] respective roles," that such pushback ultimately subsided, and that the NIMs and PNRs were written down by 76% by year end 2007, as I describe above.[184] Indeed, Richard Landreman, another member of Barclays' Product Control Group, agreed that by the end of 2007, these securities were "written down in accordance with what [he] had recommended,"[185] following "a fair amount of debate and dialogue" earlier in 2007.[186]

97. Additionally, an internal Barclays email from October of 2007 stated that when NIMs and PNRs were valued "too far from independent price reviews," Barclays would take the more conservative figure.[187] Furthermore, PwC agreed that, despite other peers writing down residual positions to zero, a complete reduction in Barclays' NIM and post-NIM residuals was not appropriate "given that positive cash-flows were still being received."[188]

98. Finally, plaintiff's experts do not review Barclays' procedures and methodologies used in valuing subprime and Alt-A RMBS residuals, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described

[184] Deposition of Joseph C. Kaczka, September 22, 2015, 81:10–12; Landreman Deposition, 93:18–97:12; BARC-ADS-01554693, p. 12.

[185] Landreman Deposition, 96:3–7.

[186] Landreman Deposition, 95:22–25.

[187] BARC-ADS-01288383–86 at 83.

[188] BARC-ADS-01602655–667.

throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

IV. Exposures to Monoline Insurers through Negative Basis Trades

99. A detailed description of Barclays' monoline exposures and negative basis trades ("NBTs") can be found in the body of my expert report. This section provides additional details on Barclays' monoline valuation model and methodology.

A. Barclays' Valuation of Monoline Exposure

100. The value of exposure to monoline insurers was determined by the fair value of the loss on the underlying assets that would be recoverable from the monolines in the event of default on those assets.[189] This loss amount was then reduced by a counterparty reserve charge (also referred to as the Credit Valuation Adjustment or "CVA") that accounted for the possibility that full recovery would not be possible.[190]

101. The valuation methodology for calculating the counterparty reserve charge depended on the duration of the exposure. Short dated exposures employed "a double default model and observable Monoline credit spreads."[191] For longer dated exposures, Barclays' methodology for calculating the reserve provision was based on Credit Risk Management's Risk Tendency ("RT")

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[189] BARC-ADS-01550739–745 at 743. See also Barclays PLC and Barclays Bank PLC Form 6-K, filed August 7, 2008, p. 35.

[190] BARC-ADS-00890240–43 at 42.

[191] BARC-ADS-01554693, p. 13. The double default model was based on a two-dimensional Gaussian copula that accounted for correlated risk of default by the CDS counterparty and the risk of default of the underlying asset. Inputs into this model were "[i]ssuer and monoline spreads, maturity date and the correlation between monoline and issuer." See BARC-ADS-00890240–43 at 41, BARC-ADS-00897030.

model to evaluate counterparty exposures where the Monoline credit spread is not observable. The RT model incorporated several inputs to calculate the reserve provision.[192]

102. The first input considered in the RT model was the expected exposure to the counterparty in each period.[193] The second parameter of the RT model was the present value of the marginal expected default frequency ("EDF").[194] The marginal EDF estimated the likelihood that the counterparty defaults on the payment, and was a function of both the default grade ("DG") and the maturity of the trade ("tenor").[195] These internal ratings were informed by public ratings of the counterparties, and while they were generally in line with the public ratings, the internal ratings were occasionally more negative.[196] The final input into the RT model was the expected recovery given default, which for the NBTs was assumed to be zero.[197] Therefore the reserve was equal to the product of the NPV of the exposure of to the monoline insurer and the present value of the marginal EDF.[198]

103. In the 2007 20-F, Barclays disclosed Barclays Capital's exposure to monoline insurers as £1,335 million, and further stated that "[t]here were no claims due under these contracts as none of the underlying assets were in default."[199] In addition to the review of the pricing of the

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[192] BARC-ADS-01554693.

[193] BARC-ADS-00890240–43 at 42.

[194] BARC-ADS-00890240–43 at 42; BARC-ADS-00917229–243 at 238.

[195] BARC-ADS-00917229–243 at 238.

[196] Deposition of Patrick Clackson, December 10, 2015 ("Clackson Deposition"), 139:10–140:12. GFRM also created tables demonstrating the relationship between DG and public ratings. See BARC-ADS-00933320, p. 10.

[197] BARC-ADS-00890240–43 at 42.

[198] BARC-ADS-00890240–43 at 42.

[199] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

underlying assets, PwC reviewed the reserve provision methodology and concluded that "it is consistent with prior year and compliant with IFRS."[200]

104. Finally, Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing NBTs, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

V. Commercial Real Estate Loans & CMBS

105. Barclays was exposed to the commercial real estate market through positions in commercial real estate loans and CMBS.[201] Commercial real estate loans were whole loans backed by commercial real estate that were classified as either "take and hold" or securitizable based on exit strategy. "Take and hold" loans were unique loans originated due to their relatively large carry margin and fee income. These loans had a maturity of one to three years with an exit strategy of syndication, refinancing, take-out, or redemption at maturity.[202] Plaintiff alleges that Barclays failed to properly value and take proper writedowns on its commercial real

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[200] PwC002893–2902 at 2896; PwC000538–586 at 556.

[201] BARC-ADS-01554693, pp. 23–24.

[202] BARC-ADS-01554693, p. 24.

estate and CMBS exposures, and therefore Barclays misrepresented its commercial real estate and CMBS exposure.[203]

106. Barclays valued its CMBS portfolio using fair value accounting. In its 2007 Form 20-F filing, Barclays described its CMBS valuation as follows:

> Commercial mortgage backed securities and asset backed securities (ABS) (residential mortgages, credit cards, auto loans, student loans and leases) are generally valued using observable information. Wherever possible, the fair value is determined using quoted prices or recently executed transactions. Where observable price quotations are not available, fair value is determined based on cash flow models where the significant inputs may include yield curves, credit spreads, prepayment rates. Securities that are backed by the residual cash flows of an asset portfolio are generally valued using similar cash flow models. The fair value of home equity loan bonds are determined using models which use scenario analysis with significant inputs including age, rating, internal grade, and index prices.[204]

107. As described in Barclays' 2007 20-F, in the absence of prices for identical assets, Barclays used valuation models (*i.e.*, a DCF model) that incorporated observable and unobservable inputs.

A. Description of Commercial Real Estate Loans & CMBS

108. Commercial real estate loans are similar to residential whole loans, but are mortgages secured by commercial properties rather than residential homes. Correspondingly, CMBS are securities backed by commercial real estate loans, which are pooled and transferred to a trust, which then issues securities for different tranches in a sequential "waterfall" payment structure similar to that of an RMBS.[205]

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[203] Complaint, ¶ 195.

[204] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

[205] "Borrower Guide to CMBS," *Commercial Mortgage Securities Association*, 2004, http://www.sunstonemhc.com/docs/CMBSBorrowersBro_FINAL.pdf, pp. 1–2.

B. Valuation of Barclays' Commercial Real Estate Exposures & CMBS

1. Commercial Real Estate Exposures

109. As mentioned above, Barclays' portfolio of commercial real estate loans consisted of a securitizable portfolio, which contained loans originated with the intent of securitization, and "take and hold" loans, which contained loans issued with the intent to retain them as part of the desk's portfolio.[206] For both of these portfolios, Barclays reported a relative scarcity of observable trades in the market, and relied on a combination of property-specific estimates of expected losses and observed market spreads.[207]

110. Barclays' securitizable portfolio of commercial real estate loans was hedged through CMBS total return index swaps. These loans were accounted for at fair value and marked to market "based on recent trades, market conditions, and [the desk's] best assessment of fair market value at the time."[208]

111. Barclays also accounted for its "take and hold" portfolio of commercial real estate loans at fair value. Barclays also marked this portfolio to market, with an initial mark down to reflect the origination fee it received and Barclays continuously monitored the properties' performance with the assistance of an outside asset manager. In the event that a property's performance deteriorated, the loan would be elevated to a Credit Watch List and then marked down if the LTV exceeded 100% or Barclays deemed a loss likely based on borrower/asset circumstances. Barclays incorporated credit spreads into its fair value estimation for the "take and hold" portfolio, using "credit spreads that would have been demanded by a third party buyer at

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[206] BARC-ADS-00843381–399 at 392.

[207] BARC-ADS-01495121, pp. 4, 25.

[208] BARC-ADS-01554693, p. 24; BARC-ADS-00845467–480 at 467–468; BARC-ADS-00843381–399 at 392–393.

12/31/07," but noted that they were "not the significant driver in the Fair Value of the [take and hold] loans."[209]

2. CMBS

112. In addition to its portfolio of commercial real estate loans, Barclays also held a portfolio of CMBS as of December 31, 2007, which it marked to model using a cash flow model. These inputs included loss assumptions specifically estimated on the collateral composition of each deal, asset prepayment estimates that were specific to the composition of each deal, and yields informed by observable market spread information.[210]

C. Auditors Reviewed Barclays' Valuation Methodology

113. As with other assets, PwC reviewed and commented on Barclays' CMBS valuation methodology. Specifically, PwC benchmarked Barclays' valuations for its CMBS portfolio to observed market indices, and found that Barclays' valuations of its CMBS positions were not inconsistent with available index prices.[211]

D. Barclays' Valuation Methodologies Were Consistent with Industry Standards

114. Moreover, Barclays' procedures for valuing CMBS were consistent with the ones we used when I managed RMBS and CMBS portfolios at Hyperion. During 2003-2007, Hyperion was one of approximately ten subordinate CMBS investors that would routinely buy the entire capital structure below bonds rated BBB. As such, we had a well-staffed, experienced team that

[209] BARC-ADS-01554693, p. 24; BARC-ADS-00845467–480 at 480; BARC-ADS-00843381–399 at 394–395.

[210] BARC-ADS-01512787–791 at 790; BARC-ADS-01554693, p. 23.

[211] PwC000538–586 at 586.

would perform intensive analysis on CMBS bonds that operated under my supervision as the Chief Investment Officer and as the Chairman of the Valuation Committee. On balance, Barclays' CMBS valuation process was generally consistent with the process that we used at Hyperion.

E. Plaintiff's allegations related to Commercial Real Estate Exposures and CMBS

115. The Complaint alleges that "Barclays failed to disclose the total fair value losses and total gross losses pertaining to . . . commercial real estate; commercial mortgages (*i.e.*, commercial MBS and CMBS wrapped by monoline insurers)."[212] Similarly, in the Class Certification Memorandum, Plaintiff argues that "[t]he Offering Materials . . . understated Barclays' exposure to commercial mortgages. . . ."[213] He cites internal documents that purportedly show "additional undisclosed exposure to commercial mortgages, CMBS and CRE CDOs through negative basis trades as of year-end 2007."[214]

116. Furthermore, in his expert report, Mr. O'Driscoll discusses CMBS and the risks that these assets posed in 2007 and 2008.[215] Moreover, similar to the argument that Plaintiff raised in the Class Certification Memorandum, Mr. O'Driscoll argues that Barclays failed to disclose its exposure to "commercial mortgages, CMBS and 'CRE CDOs' . . . through negative basis trades. . . ."[216]

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[212] Complaint, ¶ 195.

[213] Class Certification Memorandum, p 10.

[214] Class Certification Memorandum, p 10.

[215] O'Driscoll Report, ¶¶ 73–77.

[216] O'Driscoll Report, ¶ 116.

117. As detailed in my discussion of the monoline insurer exposures in the NBT book, these assertions are unfounded and Barclays did in fact disclose its negative basis trade positions consistent with the economic nature of those positions.

118. However, neither Plaintiff nor his experts review Barclays' CMBS valuation procedures and his experts provide no opinion with respect to these procedures.

119. Finally, Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing commercial real estate loans and CMBS, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

VI. CDOs

A. Description of CDOs

120. Just as an RMBS deal is composed of a pool of whole loans, Collateralized Debt Obligations ("CDOs") are composed of a pool of securities, such as RMBS certificates. In the same way that an RMBS references a portfolio of residential whole loans tranched into various classes of credit risk, a CDO is a securitized product, collateralized by a pool of debt

instruments.[217] Like RMBS, CDOs issue notes (or synthetic classes in derivative form[218]) known as tranches with different risks, credit ratings, and interest payments. Further, as in an RMBS deal, payments and losses of a given CDO tranche are a function of the cash flows from the underlying pool of debt instruments (referred to as "reference obligations" or collectively as the "reference portfolio") and allocated to the CDO's tranches according to the waterfall structure as disclosed in the CDO's offering documents.

121. CDOs are frequently characterized by the asset type of the underlying collateral.[219] For example, a CDO collateralized by RMBS tranches may be referred to as an RMBS CDO, or a mortgage-backed CDO. RMBS CDOs (or other ABS CDOs) can also be characterized by the ratings of their collateral. For example, as I noted in the body of my expert report, the term "High Grade" is typically used for CDOs backed primarily by AAA, AA, or A rated RMBS, while the term "Mezzanine" is typically used for CDOs backed by BBB or BB rated RMBS

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[217] A CDO is a "generic term for a subset of securitizations" which "can be backed by any type or combination of types of debt: tranches of other [CDOs], asset-backed bonds . . . hedge fund obligations, bonds, loans, future receivables, or any other type of debt." Tavakoli, J. M. (2008), *Structured Finance and Collateralized Debt Obligations*, Hoboken, NJ: John Wiley & Sons, p. 2. When CDOs were first introduced in 1987 the reference portfolios were typically composed of high-yield bonds. In 1989, issuers began to issue CDOs backed by corporate and real estate loans, which came to be known as collateralized loan obligations ("CLOs"). In the 1990s, the collateral backing CDOs expanded to include the debt of sovereign governments and emerging market corporations, RMBS, CMBS, and ABS. See Lucas, D. J., L. S. Goodman, F. J. Fabozzi, and R. J. Manning (2007), *Developments in Collateralized Debt Obligations*, Hoboken, NJ: John Wiley & Sons, Inc., p. 4.

[218] In derivative form, a CDO investor does not actually buy a note from the CDO but enters into a credit default swap with the CDO which allows the investor to achieve the same exposure without making a large initial payment.

[219] CDOs can be further categorized as one of three types: cash, synthetic, or hybrid. In a cash CDO, the CDO actually holds the reference assets (such as corporate bonds or RMBS tranches). Synthetic CDOs, on the other hand, are collateralized by a portfolio of credit default swaps ("CDS"). In a CDS, a credit protection buyer agrees to make periodic payments to a credit protection seller, who agrees to pay the protection buyer a lump sum if a referenced instrument (such as a corporate bond) or group of instruments (the "reference obligation(s)" or "reference portfolio") defaults. The payments that the protection buyer makes to the protection seller mimic the cash flows of the reference obligations, thereby giving the protection seller a synthetic long position in the reference obligations and the protection buyer a synthetic short position in the reference obligations. Unlike cash CDOs where the CDO sponsor sells the reference portfolio to the CDO at closing, in a synthetic CDO, a highly rated subsidiary of the sponsor transfers the synthetic long position to the CDO by serving as the "credit protection buyer." A hybrid CDO holds a mix of cash assets and synthetic positions. See Tavakoli, J. M. (2008), *Structured Finance and Collateralized Debt Obligations*, Hoboken, NJ: John Wiley & Sons, pp. 4, 194.

exposures.[220] CDOs that held as collateral tranches of other CDOs are referred to as "CDOs-squared" (or "CDO^2" or "CDO^2").[221]

B. Overview of Barclays' ABS CDO Super Senior Exposures

122. At the end of 2007, the majority of Barclays' CDO exposure was in the form of super senior liquidity facilities. These were loan commitments in which Barclays agreed to provide funding to a CDO in the event that the CDO's financial obligations to its counterparties or investors exceeded its available cash reserves. Plaintiff and Mr. O'Driscoll allege that Barclays failed to properly value and write down its CDO positions, thereby misrepresenting its CDO exposures.[222]

123. Even though the common goal of these facilities was to provide liquidity for a CDO, Barclays categorized them into three groups based on their structure and the presence of event of default triggers within the structure.[223]

124. The first of these three categories was retained mark-to-market high grade super senior exposure, which included the Markov, Pampelonne I, and Pampelonne II CDOs.[224] These CDOs were largely synthetic, which meant the CDOs bought and sold credit protection on the

[220] Goodman, L.S., S. Li, D. J. Lucas, T. A. Zimmerman, and F. J. Fabozzi (2008), *Subprime Mortgage Credit Derivatives*, Hoboken, NJ: John Wiley & Sons, Inc., p. 270.

[221] "CDOs-Squared Demystified," *Nomura Fixed Income Research*, February 4, 2005, p. 1.

[222] Complaint, ¶¶ 70, 135(a), 150; O'Driscoll Report, ¶ 103; Class Certification Memorandum, pp. 8–9.

[223] An event of default ("EOD") trigger is a preset deterioration threshold incorporated into a CDO structure in order to protect the senior notes. These triggers can either be a ratings agency downgrade or deterioration past a preset level of market value. For instance, the Markov CDO suffered an EOD on November 16, 2007 due to ratings downgrades on its underlying portfolio of collateral. An EOD gives the senior note holder three options: to do nothing, to redirect all cash flows to the senior notes until paid off, or to liquidate the CDO's collateral portfolio and pay down the notes in order of descending seniority. See BARC-ADS-01554693, p. 4; "Moody's Downgrades Ratings of Notes Issued by Markov CDO I, Ltd.," *Moody's Investors Service*, December 11, 2007.

[224] BARC-ADS-01030680; BARC-ADS-01475724–26 at 24.

underlying collateral in the form of credit default swaps ("CDS").[225] However, as synthetic instruments, the CDOs did not initially issue super senior notes and were only partially funded, typically up to 20% of the capital structure.[226] Thus, in the event that losses exceeded this amount, these CDOs would be unable to meet all of their derivatives exposure obligations to credit protection buyers.[227] Barclays served as an intermediary to these CDOs, buying credit protection from the CDO and in turn selling protection to other counterparties; in the case of a trigger event, Barclays would make up the shortfall between the value of the CDOs' small amounts of cash collateral at liquidation and the derivatives exposure of the CDOs.[228] Barclays thus took on risk "when, conditional on certain triggers crossed or tests failed, the value of the underlying pool [was] less than the outstanding notional of the super senior."[229]

125. As these facilities were embedded within the CDS settlement agreements for the CDOs, Barclays accounted for these securities as derivatives and marked them to market.[230] In other words, these facilities were held as trading book assets, and "marked to market through [profit and loss]."[231] Approximately half of the collateral for these CDOs was composed of subprime ABS rated AAA (1%), AA (9%), and A (43%). Most of the remaining collateral was in the form

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[225] BARC-ADS-00090980–990 at 980; BARC-ADS-00096639–6706 at 6643–6644; BARC-ADS-00235427–491 at 431–432; BARC-ADS-00297152–7218 at 7156–7157.

[226] BARC-ADS-00090980–990 at 980.

[227] BARC-ADS-00090980–990 at 980.

[228] BARC-ADS-01475724–26 at 24. See BARC-ADS-01020283, p. 8 for an illustration. These triggers were set in the form of an overcollateralization ratio on the tranche below the super senior notes, which when breached gave Barclays the right to unwind the CDO transaction and liquidate the collateral. See BARC-ADS-00090980–990 at 980.

[229] BARC-ADS-00090980–990 at 980.

[230] In cases "[w]here the economic characteristics and risks of the embedded derivatives are not closely related to those of the host contract, and the host contract itself is not carried at fair value through profit or loss, the embedded derivative is bifurcated and reported at fair value." See Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 151.

[231] BARC-ADS-01554693, p. 6; BARC-ADS-1475724–26 at 24.

of cash CDO/CLOs (21%) and bespoke synthetic CDOs (12%) (i.e. some of the mark to market high grade super senior were CDOs-squared).[232]

126. Prior to the second half of 2007, the bank valued its mark-to-market high grade super senior risk via a gap risk model. The gap risk model captured the risk of a timing difference between the valuation and sale of the collateral portfolio to unwind the CDO and the rating changes that would cause a trigger event. Barclays was taking on gap risk when the value of collateral continued to deteriorate and cross the subordination level of the super senior tranche before the trades could be unwound upon the breach of triggers.[233] But with the deterioration of the market in the second half of the 2007, these assets were valued using an NAV approach, which Barclays concluded more appropriately captured the valuation of these assets in the likely event of their liquidation.[234]

127. The second of these three categories was exposure in the form of liquidity facilities to mezzanine ABS CDOs, which included the Camber VI, Stack 2005-2, Tourmaline I, Tourmaline II, Silverton, and Tenorite CDOs.[235] These CDOs were also partially synthetic and not fully funded, with only a small cash reserve account to cover their derivative exposures.[236] The liquidity facilities for these CDOs were structured as standalone facilities and, in the event that the CDOs' derivatives settlements exceeded their cash reserve accounts, would be drawn to fund

[232] See Exhibit 7A.

[233] BARC-ADS-1475724–26 at 24. See BARC-ADS-01165476 for more information on the gap risk model.

[234] BARC-ADS-01475724–26 at 25.

[235] BARC-ADS-01030680; BARC-ADS-1475724–26 at 24.

[236] BARC-ADS-00090980–990 at 980.

the CDOs' derivatives obligations.[237] Once drawn, these facilities had rights similar to those of a senior note.[238]

128. Because these facilities were standalone and not structured as part of an embedded CDS settlement agreement, they were "accounted for as Loan Commitments with related impairment charges" and held on the banking book.[239] However, due to the deterioration in the markets and widespread ratings downgrades in the last quarter of 2007, most of these deals were close to triggers that would cause them to unwind and potentially cause a draw against the liquidity facility. In that event, Barclays would take control of the CDO.[240] In order to represent the value that would be assigned to the mezzanine structure when a trigger occurred, Barclays utilized a valuation approach similar to that for the mark-to-market super senior positions.[241] The collateral for these CDOs was, in general, initially rated at BBB and most of the assets were subprime RMBS in the form of cash assets or single name ABS CDS.[242] Most of the collateral consisted of BBB-rated subprime ABS (47%), cash CDOs/CLOs (19%), and Alt-A securities (9.47%).[243]

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[237] BARC-ADS-00090980–990 at 980.

[238] BARC-ADS-01554693, p. 4.

[239] BARC-ADS-01554693, p. 6. Internal Barclays accounting analysis indicates that, as these liquidity facilities were drawn, they were accounted for at fair value. See BARC-ADS-00087972–982 at 972.

[240] BARC-ADS-01475724–26 at 25.

[241] As I describe below, two mezzanine CDOs were exempt from this valuation method due to the quality of their collateral portfolios. For the remaining four CDOs, Barclays had calculated the values using its cash flow present value model, which I discuss in further detail below, and determined that valuing these CDOs using that model would have resulted in approximately $600 million fewer in writedowns than the NAV model they ultimately used. See BARC-ADS-00238918. This document reports that, for the Silverton, Camber, Stack, and Tenorite CDOs, a CF PV valuation results in a $394 million decrease from the notional value while a NAV valuation results in a $1,003 million decrease from the notional. The difference between a CF PV valuation and a NAV valuation is therefore estimated at $608 million.

[242] BARC-ADS-00090980–990 at 980.

[243] See Exhibit 7A.

129. The final of these three categories was exposure in the form of liquidity facilities to high grade ABS CDOs, which included the Buckingham I, Buckingham II, Buckingham III, Citius I, Citius II, and Liberty I CDOs.[244] Most of the assets for these CDOs were cash bonds, the purchase of which was funded via the issuance of short-term Asset-Backed Commercial Paper ("ABCP"). The liquidity facilities for these transactions were structured as standalone facilities and, in the event that the CDOs were unable to refinance the ABCP, the liquidity facilities would be drawn to fund the repayment of the ABCP.[245] As with the mezzanine super senior facilities, once drawn, these facilities had rights similar to those of a senior note.[246]

130. Because these facilities were standalone and not structured as part of an embedded CDS settlement agreement, they were "booked as Loan Commitments and [were] Accrual Accounted with impairment assessments."[247] These facilities were structured without explicit EOD triggers and could thus default only in the event of a missed payment to certain tranches.[248] The collateral for these CDOs was, in general, initially rated at A and above. Most of the assets were cash bonds, and the CDOs tended to have a greater percentage of non-subprime RMBS and CMBS.[249] Most of the collateral consisted of A, AA, and AAA-rated subprime ABS (35%), Alt-A securities (27%), and Cash CDOs/CLOs (9%).[250]

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[244] BARC-ADS-01030680; BARC-ADS-01475724–26 at 24.

[245] BARC-ADS-01475724–26 at 24; BARC-ADS-00090980–990 at 980.

[246] BARC-ADS-01554693, p. 4.

[247] BARC-ADS-01554693, p. 9.

[248] BARC-ADS-01554693, p. 8.

[249] BARC-ADS-00090980–990 at 980.

[250] See Exhibit 7A.

C. Valuation of Barclays' ABS CDO Super Senior Portfolio

131. In 2004, the Bond Market Association reviewed valuation methodologies used in practice in the CDO market, with contributions from Bank of America, Bear Stearns, Citigroup, Credit Suisse, Merrill Lynch, and Morgan Stanley.[251] This survey found that because of the complexities of CDOs and the diverse pools of collateral that backed them, there was no single, uniform industry standard method of CDO valuation. Often, market participants would use more than one approach to ensure their valuation was robust to multiple valuation techniques. However, the survey did find that it was a common practice to utilize a DCF model to project collateral cash flows and discount them to a present value as an approximation of a CDO's value. Other methodologies were also appropriate in certain cases. In situations where liquidation was possible due to a trigger event, the use of an NAV approach could often be more appropriate.[252]

132. In its 2007 Form 20-F filing, Barclays described its CDO valuation as follows:

> The valuation of collateralised debt obligations (CDOs) notes is first based on an assessment of the probability of an event of default occurring due to a credit deterioration. This is determined by reference to the probability of event of default occurring and the probability of exercise of contractual rights related to event of default. The notes are then valued by determining appropriate valuation multiples to be applied to the contractual cash flows. These are based on inputs including the prospective cash flow performance of the underlying securities, the structural features of the transaction and the net asset value of the underlying portfolio.[253]

133. As described in the filing, Barclays valued its CDO positions with reference to an assessment of whether a CDO would experience an EOD in the next twelve months.

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[251] "CDO Primer," *The Bond Market Association*, 2004.

[252] "CDO Primer," *The Bond Market Association*, 2004, p. 31.

[253] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 49.

134. If an EOD was deemed likely in the next twelve months, then Barclays valued its exposure using an NAV approach.[254] As of December 31, 2007 this included all mark-to-market high grade super senior risk and all mezzanine CDOs except for Tourmaline I and Tourmaline II.[255] Tourmaline I and Tourmaline II, while classified as mezzanine CDOs, held higher quality collateral and Barclays did not believe they were likely to experience an EOD in the next twelve months.[256] The underlying collateral for CDOs valued using this methodology was generally riskier, consisting mostly of BBB-rated subprime ABS (56%), cash CDOs/CLOs (25%), and Alt-A securities (5%).[257] Exhibit 7B further illustrates the underlying collateral for CDOs valued using this methodology.

135. If a position was "considered not likely to have an EOD," or did not have explicit EOD triggers, then Barclays valued its exposure using a Cash Flow Present Value ("CF PV") approach.[258] As of December 31, 2007 this included all high grade CDOs and Tourmaline I/II.[259] Tourmaline I and Tourmaline II, while classified as mezzanine CDOs, held far less BBB-rated subprime ABS and cash CDO/CLO collateral than the other mezzanine CDOs and due to the relative quality of their portfolios were considered unlikely to breach EOD triggers and were valued using a CF PV approach.[260] The underlying collateral for CDOs valued using this

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[254] BARC-ADS-00090980–990 at 982; BARC-ADS-01554693, p. 4.

[255] BARC-ADS-01475724–26 at 24; BARC-ADS-01554693, p. 6.

[256] BARC-ADS-01554693, p. 8.

[257] See Exhibit 7B.

[258] BARC-ADS-00090980–990 at 982. The absence of an explicit EOD trigger meant that the deal structure did not specify a ratings agency downgrade or deterioration past a set market level that would trigger the acceleration or liquidation rights of the senior note holders. Instead, the CDO was considered to default only in the event of a missed interest payment to certain tranches. See BARC-ADS-01554693, p. 9.

[259] BARC-ADS-01554693, p. 8.

[260] BARC-ADS-01030680; BARC-ADS-01554693, p. 8. BBB-rated subprime ABS and cash CDO/CLO collateral constituted between 64% and 90% of each of the other mezzanine CDOs' portfolios but no more than 40% of the portfolios in Tourmaline I and Tourmaline II. See Exhibit 7C.

methodology was generally of higher quality, consisting mostly of A, AA and AAA-rated subprime ABS securities (30%), Alt-A securities (25%), and unrated subprime ABS securities (10%).[261] Exhibit 7B further illustrates the underlying collateral for CDOs valued using this methodology.

1. Net Asset Value / Mark-to-Market Valuations

136. To review, Barclays' exposure to CDOs valued using this methodology was in the form of liquidity facilities to fund required cash flows associated with derivatives contracts. Losses that exceeded the cash raised via capital notes or the liquidation of collateral were drawn from these facilities.[262] The NAV for these CDOs was calculated as the total value of the deals' collateral portfolio, which represented all funds available to settle the obligations of a CDO in the event that EODs forced the CDO to unwind or liquidate. In case this value represented losses greater than the value of the issued capital notes, then the super senior note holder (or facilities provider) would bear the losses. The bank considered this valuation to represent a worst case scenario, since competitive bids at liquidation could return greater funds to the senior notes.[263]

137. Barclays assessed the value of the CDOs' collateral portfolios based on available market data. Barclays valued securitized collateral assets (*e.g.*, RMBS, Alt-A) according to the ABX index price of the same vintage and rating.[264] Barclays assumed the portions of the NAV ABS

[261] See Exhibit 7B.

[262] BARC-ADS-01554693, p. 7.

[263] BARC-ADS-01554693, p. 7.

[264] BARC-ADS-00087772–73 at 72. For more information, see BARC-ADS-00551795–1805.

CDOs that were invested in another RMBS-backed CDO (*i.e.* the portion of the CDO that was a CDO-squared) possessed zero value.[265]

2. Cash Flow Present Value Valuation

138. To review, Barclays' exposure to these CDOs was in the form of facilities to fund required cash flows associated with ABCP in case the CDO was unable to refinance that paper. Because these CDOs either did not have explicit EOD triggers or their triggers were deemed unlikely to occur within the next twelve months, the value of these CDOs was based on their estimated future cash flows rather than the NAV of the collateral portfolio in the event of liquidation.[266] Similar to the NAV calculation, this model assumed RMBS backed CDO collateral and second lien collateral possessed zero value.[267]

139. In order to value these CDOs, Barclays used a DCF model based on market standard tools such as Intex to project future cash flows. This model incorporated several inputs sourced from market data to calculate cash flows and discount them to a present value.[268] At a first stage, Barclays estimated the cash flows of the CDOs' collateral portfolio assets, and then used their projected cash flows to estimate the total future cash flows of the CDOs themselves and discount those cash flows to a present value.

140. First, the DCF incorporated a CDR curve to account for some portion of the collateral assets' underlying loans defaulting and causing a loss to the expected cash flows. Barclays calculated the CDR from a combination of a default curve based on historical performance data

[265] BARC-ADS-01522443–47 at 43. In addition, Barclays also wrote the second lien collateral "down to zero." See Barclays PLC and Barclays Bank PLC Form 6-K, dated November 15, 2007, p. 2.

[266] BARC-ADS-1554693.00008; BARC-ADS-1475724.00002.

[267] BARC-ADS-01522443–47 at 43; Barclays PLC and Barclays Bank PLC Form 6-K, dated November 15, 2007, p. 2.

[268] BARC-ADS-01022308, p. 17; BARC-ADS-01554693, p. 9

and roll rates calculated from recent, up-to-date data from the market. The CDR curve's shape was taken from a curve that captured "the historical performance of similar ABS," which was then fitted based on roll rate assumptions, which expressed a given borrower's probability of default within 18 months given a stage of delinquency (*i.e.* loans currently 30 days delinquent had a 15% chance of default within 18 months).[269]

141. Barclays calculated these roll rate assumptions from historical servicer data and re-calculated them each month based on remittance data on delinquencies and losses from RMBS servicers.[270] The remittance data used was recent; for instance, Barclays' valuation analysis from January 4, 2008 references roll rate calculations from remittance data from October 25, 2007, November 25, 2007, and December 25, 2007.[271] Once calculated, these roll rate assumptions were used to arrive at a projection for cumulative losses 18 months in the future, and the CDR curve's given shape was fitted to coincide with that cumulative loss projection.

142. Second, the DCF incorporated a CPR to account for some portion of the collateral assets' underlying loans repaying part of its outstanding principal each year. Barclays calculated the CPR by averaging actual observed deal prepayment rates in a particular issuance each month from issuance until the previous month's data, and then projected this observed rate forward based on the vintage and general market conditions.[272] For instance, collateral from the second half of 2005 was assumed to prepay at a constant 20% after 27 months of seasoning before

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[269] BARC-ADS-01022308, pp. 11–15.

[270] BARC-ADS-01020283, p. 5.

[271] BARC-ADS-0904033–37 at 35.

[272] BARC-ADS-00090980–990 at 983.

dropping to 10% at month 75 and 5% at month 87 and thereafter.[273] Barclays re-calculated the CPR each month using remittance data sourced from RMBS servicers.[274]

143. Barclays' valuation model projected future cash flows for the CDOs' reference assets' loans, which the bank then used to estimate the cash flows of the reference assets themselves. The desk valued the CDOs' reference assets with the assumption that all of their performance triggers would fail. This meant that none of the subordinate bonds in their structures would receive cash flows until the AAA bonds were paid off. The order in which those AAA bonds received cash flows was specific to each deal in the CDOs' portfolios.[275] If Barclays estimated that a particular first-lien subprime, Alt-A, or Option ARM RMBS tranche in a CDO's collateral portfolio would suffer an initial writedown, then it assumed for valuation purposes that the same tranche would suffer a simultaneous 100% writedown. It also assumed this 100% loss rate for other collateral asset classes such as ABS CDO, non-RMBS CDOs rated BBB and below, and Prime RMBS rated BBB and below. For other assets such as A, AA, or AAA-rated Prime RMBS or CMBS, the desk assumed loss severities of 0%.[276]

144. Based on the CPR, CDR, and assumptions about the CDOs' reference assets' loss severities and performance triggers, Barclays thus first estimated future cash flows for the CDOs in aggregate, without consideration for the subordination of the notes. Second, Barclays then incorporated the cash flow waterfall structure of each CDO to account for the order in which notes were paid.[277]

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[273] BARC-ADS-00090980–990 at 983.

[274] BARC-ADS-01020283, p. 5. Based on this document, BARC-ADS-01022308, p. 12, and BARC-ADS-00904033–37 at 34, it seems that the remittance data was from the reference RMBS of the ABX indices.

[275] BARC-ADS-00090980–990 at 983; BARC-ADS-01022308, p. 16.

[276] BARC-ADS-00090980–990 at 986.

[277] BARC-ADS-01022308, p. 16.

145. Barclays then discounted the estimated future cash flows of the notes back to a present value at a discount rate that combined the LIBOR with an additional credit spread. For the LIBOR portion of the discount rate, which represented a risk-free baseline rate, Barclays used historical LIBOR data to value the notes from origination to present and forward LIBOR rates from the present date forward.[278] For the credit spread portion of the discount rate, which represented the premium from the riskiness of the asset, the desk derived a spread from market observations that included trade prices and indices such as the ABX.[279]

146. In order to assess impairment on those liquidity facilities valued using a CF PV approach, Barclays used the same valuation process with the following exceptions. For impairment assessment Barclays assumed a constant prepayment rate of zero, discounted the losses at a risk free rate with no additional credit spread, and simplified the cash flow waterfall to a "hurdle subordination level," or an absolute level of loss after which the super senior tranche would start to take losses.[280] Given the differences, the main driver of impairment assessments was the construction of the CDR curve, which in turn relied on the actual loss performance observed in remittance data each month.[281]

147. Based on its NAV and CF PV valuation models, as of December 2007 Barclays valued its total ABS CDO super senior exposure at £4.7 billion net of hedges and writedowns, consisting of £1.1 billion of mark-to-market high grade super senior exposure, £1.2 billion of mezzanine super

[278] BARC-ADS-01022308, p. 17; BARC-ADS-00090980–990 at 983.

[279] BARC-ADS-01022308, p. 10.

[280] BARC-ADS-01022308, p. 18. There was a discussion with PwC in November 2007 "as to the appropriateness of using Libor as the discount rate." Stephen King responded that "he understood the discount rate could not be below Libor given it is a starting point for discounting, yet it shouldn't be above Libor as this reflects their expected cost of funding." See PwC000416–18 at 18.

[281] BARC-ADS-01022308, p. 18.

senior exposure, £3.8 billion of high grade super senior exposure, and £1.3 billion of hedges.[282] As of December 2007, Barclays had written down £1.0 billion against its mark to market high grade super senior portfolio, £487 million against its mezzanine super senior portfolio, and £290 million against its high grade portfolio, for a total £1.8 billion writedown against its ABS CDO super senior portfolio.[283]

D. Auditors Reviewed Barclays' Valuation Methodologies

148. Barclays' ABS CDO super senior valuation methodologies were reviewed by PwC in late 2007. Barclays met with PwC on November 13, 2007 to explain how it valued its ABS CDO super senior liquidity facilities and to describe its portfolio.[284] Shortly thereafter, at a meeting of the Board Audit Committee on November 14, 2007, a partner at PwC described Barclays' CDO valuation methodology as "more thorough and detailed than any other bank had provided."[285] Further review by PwC, as summarized in its findings as of February 7, 2008, covered several aspects of Barclays' methodology, including Barclays' assessment of which CDOs were likely to suffer an EOD as well as the NAV and CF PV valuation methodologies.[286]

149. PwC's engagement team reviewed Barclays' assessment that those CDOs valued via a CF PV model were not likely to suffer an EOD in the next twelve months. After reviewing Barclays' reported losses on the ABS CDO super senior portfolio, PwC noted that the percentage losses in the CDOs valued via a CF PV model (that is, those that were either considered unlikely to have an EOD or did not have explicit EOD triggers) were "significantly less than the other

[282] BARC-ADS-01554693, pp. 5–6, 8.

[283] BARC-ADS-01554693, p. 5.

[284] Pwc000513–534 at 522.

[285] BARC-ADS-01601539–551 at 541.

[286] Pwc000513–534 at 523–529.

facilities."[287] Additionally, PwC reviewed external legal counsels' analyses of the CF PV CDOs "to determine whether any triggers were identified that would appear to contradict [Barclays'] assertion that EOD is unlikely in the next 12 months."[288] Although PwC noted that it had not modeled all of the EODs and recognized that its review was "subjective," it concluded that "our review did not identify triggers that, given the current loss rates, would suggest EOD is imminent within twelve months."[289]

150. PwC reviewed the NAV valuation model that—as discussed above—Barclays used to value CDOs considered likely to have an EOD in the next twelve months. Specifically, PwC reviewed Barclays' NAV valuation methodology, the prices it produced, and compared those prices (in terms of percentage writedowns) to those of other financial institutions.[290] PwC "concluded that the use of the NAV approach was reasonable and widely used in industry," and that the magnitude of Barclays' High Grade writedowns "appear[ed] in line with other financial institutions."[291]

151. PwC further noted that the mezzanine writedowns, "although considerably less than Citibank and Merrill Lynch, did not appear unreasonable."[292] In reaching that conclusion, PwC reviewed Barclays' valuation of the mezzanine facilities, and noted that two of the four deals (Silverton and Tenorite) had writedowns in line with "Merrill's average writedown."[293] They then compared the collateral of the other two deals (Camber and Stack-05) to the collateral of

[287] Pwc000513–534 at 524.

[288] Pwc000513–534 at 524.

[289] Pwc000513–534 at 524.

[290] Pwc000513–534 at 528.

[291] Pwc000513–534 at 528.

[292] Pwc000513–534 at 528.

[293] Pwc000538–586 at 573.

Silverton and Tenorite "to determine if it was reasonable that Camber and Stack-05 had a smaller writedown."[294] PwC concluded that due to the higher quality collateral in those two deals, "it [was] not unreasonable that Camber's writedown [was] less than Tenorite," and "[it was] not unreasonable that Stack['s] writedown [was] significantly less than Silverton and Tenorite."[295]

152. PwC also reviewed the CF PV valuation model that—as I discussed above—Barclays used to value CDOs considered unlikely to have an EOD or did not have explicit EOD triggers. Specifically, PwC reviewed Barclays' DCF model, its methodological decisions on how to value different reference assets (*i.e.* subprime RMBS versus ABS CDOs), and the inputs to the DCF. After its review, PwC found that the roll rates used were sourced from published data and matched to the most conservative delinquency percentage in each bucket, that Barclays' use of an 18 month period from delinquency to foreclosure was typical and industry standard, that Barclays' loss severity rate of 40% was conservative, and that Barclays' cumulative loss rates were "within an acceptable range of other market participants' assumptions."[296] Overall, PwC concluded that although the assumptions that went into Barclays' CF PV model were "very subjective, they [were] conservative and given the inherent level of imprecision in a projected future cash flow model as it relates to these structured credit products and the fact that the majority of the assets are sub prime and alt-a [*sic*], the assumptions used for other assets were deemed reasonable."[297]

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[294] Pwc000538–586 at 573.

[295] Pwc000538–586 at 573–576. In addition to the collateral analysis, PwC performed their own benchmarking of the underlying collateral to the ABX and TABX, and concluded that "BarCap's price levels of this collateral are not outside an unreasonable range of fair value."

[296] Pwc000513–534 at 527.

[297] Pwc000513–534 at 528.

153. As discussed above, PwC reviewed both of Barclays' valuation methodologies as well as its determination of which CDOs to value using which method, and found the bank's practices consistent with industry standards, conservative at times, and overall reasonable.

E. Barclays' Valuation Methodologies Were Consistent with Industry Standards

154. Barclays' ABS CDO super senior valuation methodologies and inputs were generally consistent with those of its peers and with industry standard methodologies. For instance, as I discuss above, PwC found Barclays' loss projection estimates, roll rates, and loss severities to be either consistent with or more conservative than other financial institutions' inputs.[298]

155. Additionally, the Bond Market's CDO primer, published with contributions from several of Barclays' peers, observed that it was industry standard to assess CDOs' value via a DCF model or, "in situations where liquidation is a possibility," to use a NAV approach to value the underlying collateral.[299]

156. As I explained in the body of my report, the thematic approaches Barclays used (*e.g.*, projecting cash flows from the underlying collateral, running those cash flows through a payment waterfall, subjecting the cash flow allocation to triggers, and then discounting the cash flows) was consistent with my experience in valuing CDOs while at HBAM.

157. Finally, Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing CDOs, and they provide no opinions with respect to these procedures except for Mr. O'Driscoll's erroneous contentions that I address in Section IX.E of my report. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal

[298] Pwc000513–534 at 527.

[299] "CDO Primer," *The Bond Market Association*, 2004, p. 31.

any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

VII. SIV & SIV Lites

A. Description of SIV and SIV Lites

158. Barclays was exposed to SIVs and SIV Lites that were tied to liquidity facilities, undrawn commercial paper backstop facilities, derivatives, and bonds.[300] SIVs and SIV Lites were a form of CDO that differed from traditional CDOs in the nature of documentation, financing and/or investment guidelines.[301] SIVs and SIV Lites used short term financing (generally commercial paper) to fund acquisition of long-term investment collateral. Plaintiff alleges that Barclays failed to disclose all of its SIV and SIV Lite positions, thereby misrepresenting its exposure to these assets.[302] Barclays valued SIVs and SIV Lites using similar methodologies that the bank used in CDO valuation.

159. At the end of 2007, Barclays reported that Barclays Capital had £742 million of SIV and SIV Lite exposure.[303]

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[300] BARC-ADS-01174193.

[301] BARC-ADS-01554693, p. 16.

[302] O'Driscoll Report, ¶¶ 124–125.

[303] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

B. Valuation of Barclays' SIV and SIV Lite Exposures

160. Barclays Capital's SIV liquidity facilities were held in the banking book and subject to impairment assessments. Barclays computed these impairment assessments using cash flow models similar to the model used to value Barclays' non-MTM CDO liquidity facilities.[304] I describe this valuation methodology in further detail above. Barclays Capital was also exposed to SIV and SIV Lites in the form of bonds and derivatives, which it accounted for at fair value.[305]

161. Barclays Capital's SIV Lite positions, on the other hand, were either in liquidation or had been restructured at the end of 2007.[306] Of the three structures to which Barclays provided liquidity facilities, one had been restructured into a cash flow CDO and the remaining two had suffered EODs and could no longer draw on their liquidity facilities.[307] Given their imminent liquidation, Barclays held the remaining SIV Lite positions at the NAV of their underlying portfolio, and valued them using the same methodology as that used for its CDO NAV valuation.[308] I describe this valuation methodology in further detail above.

C. Auditors Reviewed Barclays' Valuation Methodology

162. As with other exposures, Barclays' SIV and SIV Lite valuation methodologies were reviewed by PwC. In February 2008, PwC presented to Barclays its 2007 year-end review of the bank's SIV and SIV Lite exposures. PwC noted that Barclays had taken a full provision against

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[304] BARC-ADS-01554693, p. 16.

[305] BARC-ADS-01020248, p. 6.

[306] BARC-ADS-01305222–23 at 23; BARC-ADS-01554693, p. 16.

[307] BARC-ADS-01305222–23; BARC-ADS-01588905–917 at 908. Barclays had restructured the SIV Lite, Cairn, into a static cash CDO by funding the acquisition of all outstanding commercial paper and converting it into a senior note collateralized by the underlying assets. Subsequently, Barclays purchased credit protection on the note from a third party investment bank. See BARC-ADS-01588905–917 at 908.

[308] BARC-ADS-01554693, p. 16.

its drawn liquidity facility to one of the vehicles and written down exposures to other vehicles based on its internal valuations. Having "reviewed [Barclays'] analysis," PwC concurred with the results of these valuations and the levels of provisions taken.[309]

D. Plaintiff's Allegations Related to SIV and SIV Lites

163. The Complaint alleges that Barclays failed to report its exposure to SIV and SIV Lites.[310] In addition, in his expert report, Mr. O'Driscoll discusses SIV and SIV Lites and the risks that these assets posed in 2007 and 2008.[311] Moreover, Mr. O'Driscoll argues that Barclays failed to disclose that "Barclays Global Investors ("BGI"), Barclays PLC's asset management arm, also had a SIV exposure that was not disclosed."[312]

164. However, Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing SIV and SIV Lites, and they provide no opinions with respect to these procedures. My review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

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[309] BARC-ADS-01297226–254 at 233.

[310] Complaint ¶¶ 78–79.

[311] O'Driscoll Report, ¶¶78–99.

[312] O'Driscoll Report, ¶ 125.

VIII. Leveraged Finance

A. Description of Leveraged Finance

165. Barclays was exposed to leveraged finance through loans extended to companies that already had substantial amounts of debt. Leveraged loans are secured debt with the highest seniority, which means they are senior to any subordinated debt, convertible debt, preferred stock, and equity. These loans are also typically protected by covenants that may include coverage tests, leverage tests, and capital expenditure limitations.[313]

166. Plaintiff alleges that Barclays failed to disclose its exposure to leveraged finance.[314] However, none of the Plaintiff's experts address these valuations or demonstrate that this was in fact the case.

167. At the end of 2007, Barclays Capital had £7.37 billion of drawn leveraged finance positions.[315] Barclays Capital's main leveraged finance exposures were AA Saga (£2.5 billion), Alltel (£2.3 billion), and Boots (£0.7 billion).[316]

168. Barclays also had some exposure to CLOs through NBTs. CLOs are special purpose vehicles funded by the issuance of credit-tranched bonds, like CDOs, but are collateralized by leveraged loans.[317] Exposures to CLOs through NBTs are discussed in section V.A in my report.

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[313] BARC-ADS-00610431–475 at 434–435.

[314] Class Certification Memorandum, p. 10.

[315] Barclays PLC and Barclays Bank PLC Form 20-F, filed March 26, 2008, p. 53.

[316] BARC-ADS-01554693, p. 17.

[317] BARC-ADS-00610431–475 at 449–450.

B. Valuation of Barclays' Leveraged Finance Exposures

169. I understand that leveraged loans were accounted for on an accrual basis, and the leveraged finance portfolio was subject to assessments for impairment.[318]

170. At the end of 2007, Barclays valued the senior tranches at 98% and junior tranches at 95%, resulting in a £58 million impairment reserve, net of fees.[319] According to Barclays, this valuation was later validated by the contingent sale of £2.3 billion of Barclays' Alltel leveraged loan exposure at par.[320] In addition, Barclays reviewed its 2007 leveraged loan impairment charges to ensure they were appropriate, using evidence from secondary trading prices, syndication prices achieved by Barclays Capital, and syndication prices achieved by other banks when possible.[321]

C. Auditors Reviewed Barclays' Valuation Methodology

171. As with the other exposures, Barclays' leveraged loans valuation processes and inputs were reviewed by PwC. In their Board Audit Committee Report for 2007, PwC confirmed that they "reviewed [Barclays'] management's analysis of the borrower performance based on the most recent data and concur[red] with the provision."[322]

172. Finally, Plaintiff's experts do not review Barclays' procedures and methodologies used in valuing leveraged loans, and they provide no opinions with respect to these procedures. Furthermore, as described in this section, my review of Barclays' procedures and methodologies did not reveal any evidence that they were unreasonable or inappropriate. In fact, the documents

[318] BARC-ADS-01554693, p. 17.

[319] BARC-ADS-01554693, p. 17.

[320] BARC-ADS-01554547, p. 20.

[321] BARC-ADS-01554693, p. 17.

[322] BARC-ADS-01297226–254 at 234.

I reviewed are consistent with Barclays taking economic factors and market conditions relevant to valuation of these instruments into account and, based on my experience, relying on models and approaches common to the structured finance industry as described throughout the report. Finally, Barclays' valuation methodologies and conclusions were subject to review and ultimately approved by its auditors.

John H. Dolan

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CURRENT

2007- **Independent Consultant (formed Second Order Strategies in 2009) - Greenwich, Ct.**
Providing litigation-support, product education, and risk-management consulting and expert witness services on structured products capitalizing on 30+ years of real-world buy-side, sell-side, and industry self-regulatory experience. Have advised on issues related to valuation, pricing, credit analysis, leverage, repo funding, cash management practices, Securities Lending, RMBS, CMBS and CDO structuring, securities marketing and risk management. Have been "Translator/Tutor" to law firms since early years of financial crises based on hands-on familiarity with risk reports, models, jargon, incentives. Familiar with Bloomberg, Yield Book, Markit, Trepp, Intex, RiskMetrics. Have filed expert reports, been deposed, and testified before a FINRA panel

Longer-term retainer assignments include:

Pentalpha Group 2007-9: Consulting services
MF Global 2011: Risk management oversight of MBS trading desk
Due Diligence 2014: Advised buyer on potential investment of publicly traded REIT

2010- **CME S&P/Case-Shiller Home Price futures (Sole Market Maker- unaffiliated with CME)**
Leveraging trading experience, Wall St. contacts, and personal capital to rejuvenate an electronic market that benefits the housing-finance industry through greater public price disclosure of forward home price expectations. Maintain markets on ten regions, with up to $15mm in notional value.

Organized an industry-wide conference with >200 attendees, spoke at seven colleges, and presented a paper at Oct. 2010 NBEA (Northeast Business and Economic Assoc.) conference. Maintain a blog of 250+ posts, including monthly recap of activity in CME S&P Case Shiller futures at www.homepricefutures.com Also use other social networking skills (e.g. Twitter, LinkedIn) to increase product awareness of, and provide product education on, trading of home price indices.

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EXPERIENCE

2015 **Manhattanville College –Adjunct (FIN 3108 Corporate Finance) –Purchase, NY**

2011 **Baruch College- Lecturer (RES 4200: "Introduction to Commercial Real Estate") – NYC**

1998-2007 **Hyperion Capital Management (later Hyperion-Brookfield Asset Management) – Partner-NYC**
Chief Investment Officer (2001-2007), CIO–Crystal River (REIT) 2005-2006
Managed a 40-person bond investment team, generating strong outperformance that helped grow AUM from $5 billion to $21 billion. Client base included: insurance companies, state and private pension plans, a central bank, NYSE-listed mutual funds (HTR, HSM), an MBS REIT (CRZ), and CDOs–using both cash and synthetics. Mutual Funds recognized as top-performing within sector. In addition to new-issue marketing, orchestrated rights offering for one of two entities able to raise funds in days post 9/11 (despite having to vacate damaged offices).

As REIT CIO, raised funds in both private and public offering via road trips with 70+ presentations. Was responsible for compliance with REIT guidelines,and quarterly investor call.

Frequent written and oral presentations (across the globe) to clients, boards, rating agencies, industry groups and prospects. Responsible for new product development for structured products and funds. Oversaw Quantitative modeling group that reviewed early CDO and attribution analysis.

1995-1997 **Bankers Trust Global Investment Management (GIM)- Managing Director - NYC**
Head of Active Bond Group – Managed a 9-person team responsible for $7 Billion of primarily ERISA-based, total rate of return, fixed-income assets. Prepared client reviews, new-business presentations and product-education reports. Conducted client reviews and new business presentations in US and Japan. Member of the GIM Investment Committee.

1987-1995 **Salomon Brothers, Managing Director - NYC**
Several senior trading positions with responsibily for new products as they were created. Traded first residential subordinate bonds in 1987, and Agency IO/POs in 1988. Co-head of industry – leading CMO trading desk from 1989-1992 with responsibility for new issuance, new product development and product education. (New products included: PAC and TAC bonds, VADMs, NERDs, Z bonds, semi-annual pay MBS, Jump Z's and others.) Coordinated RTC residential securities underwriting for MBS desk, managed process for securitizing sesonsed pass-throughs of thrift whole loans, and traded >75% of assets for early MBS REIT. Managed a Whole Loan conduit in 1993.

1977-1987 **Citibank - Vice President - NYC**
Head of MBS Trading Desk from 1980-1987 overseeing 12 traders. Traded and promoted all MBS. Managed the distribution of CitiMae conduit- one of the earliest RMBS. Heavily involved in industry self-regulation discussions and standardization of trading rules and new products.

INDUSTRY POSITIONS

2003-2004 **Fixed Income Analysts Society (FIASI) – President.** The FIASI board arranges presentations that allow their Wall St. membership to network and present analysis of timely issues.

1987-1989 **Public Securities Association - Board of Directors**. Served as Chairman of the MBS Division of the PSA for 1988 and as a member of the PSA Board of Directors for 3 years. Helped standardize industry trading practices to include "good delivery", PSA curve (standardizing prepayment analysis) and Agency Pass-Through pool composition. Contributed to evolution of MBSCC (Clearing firm for MBS). Testified before Congress committee during Thrift crises.

EDUCATION

1977 **Wharton Graduate Business School, M.B.A. - Finance (Financial Markets)**

1975 **Union College, B.A. - Economics/Math -cum laude**

INDUSTRY CERTIFICATIONS

GARP (Global Assoc. of Risk Professionals) – Certified FRM (2009), ERP (2010)
Passed Series 7 (twice), 63 (Principal), Series 3 (futures) exams

INDUSTRY PRESENTATIONS

Apr 2009 **GARP (Stamford Chapter) – "**Lessons Learned: Similarities and Differences between residential (RMBS) and commercial (CMBS) credit"
Oct 2009 **ABS East panel–**"Effectively Managing increased litigation and enforcement"
Dec 2009 **S&P Roundtable –**"A roundtable discussion reviewing the Alternative Energy landscape with lessons learned from the sub-prime crises"
Oct 2010 **NEBA conference –**"Observations on the CME Home Price Futures"
Mar 2011 **Bloomberg seminar (moderator) –** "Making Sense of Forward Home Price Forecasts"
Apr 2014 **SQA (Society of Quantitative Analyts, NYC)** –"Outside Bitcoin"
Nov 2014 **NEBA conference** – "Lessons Learned from 4 years of market making

COLLEGE LECTURES

Mar 2009 **University of New Hampshire**
- Housing Finance and the Subprime Crises
- Introduction to CDS

Feb 2010 **Union College**
- Basics of Housing Finance

April 2010 **Baruch College**
- Lessons Learned: Housing and the Subprime Crises

April 2010 **Pace University**
- An Update on Securities Litigation

Nov 2010 **Wagner College**
- The Road to Economic Recovery

Feb 2012 **Johns Hopkins**
- Introduction to Case Shiller Futures

Feb 2012 **Wharton Graduate School of Business (U Penn)**
Issues w/ Home Price Models

Apr 2014 **University of Michigan**
- Understanding Home Price Indices – Looking Backwards and Forwards

Nov 2014 **Manhattanville College**
- Bitcoin vs. bitcoin (Currency vs. Block Chain)

Mar 2015 **Pace University**
- Valuing Land in Commercial Real Estate

PUBLICATIONS

"Observations on the CME Home Price Futures Market: Were These Futures Able to Predict the Home Price Crash?" (Dolan, Hume -2010)

Ongoing blogs: www.homepricefutures.com
Twitter: @HomePriceFuture
Moderator: Linkedin group – CME Case Shiller Home Price Futures

OTHER

Former Board Member/ Education Committee Chair –World Affairs Forum (Stamford, Ct)
Former Chair SolarCoin Foundation (alternative digital currency)
Member Greenwich RTM (Representative Town Meeting)
Unofficial RTM liason to $400mm Greenwich Retirement Board
Moderator Greenwich Library Foreign Affairs Book Club, since 2009
Moderator Rye Library Current Events Book Club, since 2012

Dated: Jan 2016

PRIOR TESTIMONY OF JOHN H. DOLAN IN THE PAST FOUR YEARS

Case Name:	Dodona I, LLC, et al. v. Goldman, Sachs & Co., et al.
Case No.:	Case No. 10-CV-07497 (U.S. District Court for the Southern District of New York)
Date of Testimony:	August, 2013 (Deposition), January, 2014 (Deposition)
Case Name:	National Australia Bank Limited and TSL (USA) Inc. v. Goldman, Sachs & Co., et al
Case No.:	FINRA Dispute Resolution No. 12-04099
Date of Testimony:	April, 2015 (Testimony)
Case Name:	In re Goldman Sachs Group, Inc. Securities Litigation
Case No.:	Case No. 10-CV-03461 (U.S. District Court for the Southern District of New York)
Date of Testimony:	October, 2015 (Deposition)

Documents Considered

ACADEMIC LITERATURE

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- Demiroglu C., E. Dudley, and C. M. James (2014), "State Foreclosure Laws and the Incidence of Mortgage Default," *Journal of Law and Economics*, Vol. 57, No. 1
- Fender, I. and M. Scheicher (2008), "The ABX: How do the markets price subprime mortgage risk?," *BIS Quarterly Review*
- Foote, C., K. Gerardi, L. Goette, and P. Willen (2010), "Reducing Foreclosures: No Easy Answers," *NBER Macroeconomics Annual 2009*, Vol. 24
- Gorton, G. and A. Metrick (2010), "Haircuts," *Federal Reserve Bank of St. Louis Review*, Vol. 92, No. 6, pp. 507–520
- Haughwout A., R. Peach, and J. Tracy (2008), "Juvenile Delinquent Mortgages: Bad Credit or Bad Economy?," *Federal Reserve Bank of New York Staff Report*, No. 341
- Hull, J. and A. White (2010), "The Risk of Tranches Created from Mortgages," *Financial Analysts Journal*, Vol. 66, No. 5
- McDonald, D. and D. Thornton (2008), "A Primer on the Mortgage Market and Mortgage Finance," *Federal Reserve Bank of St. Louis Review*, Vol. 90, No. 1
- Mizen, P. (2008) "The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses," *Federal Reserve Bank of St. Louis Review*, Vol. 90, No. 5
- "Nonprime Mortgage Conditions in the United States: Technical Appendix," *Federal Reserve Bank of New York*, http://www.newyorkfed.org/regional/techappendix_spreadsheets.html
- Stanton and Wallace (2011), "The Bear's Lair: Index Credit Default Swaps and the Subprime Mortgage Crisis," *Review of Financial Studies*, pp. 3250–3280

ANALYST REPORTS

- "Cash Flow CDO Handbook: Structures, Insights & Strategies," *Credit Suisse*, March 31, 2006
- "CDOs-Squared Demystified," *Nomura Fixed Income Research*, February 4, 2005
- "Global CDO Market: Overview and Outlook," *Deutsche Bank*, 2007
- "SF CDO Super Senior Tranches: Current NAV Indicates Low Recoveries," *Barclays Capital Research*, December 5, 2007

BOOKS

- Antczak, S. J., D. J. Lucas, and F. J. Fabozzi (2009), *Leveraged Finance: Concepts, Methods, and Trading of High-Yield Bonds, Loans, and Derivatives*, Hoboken: John Wiley & Sons, Inc.

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- Fabozzi, F. J. and S. J. Mann (2005), *The Handbook of Fixed Income Securities*, McGraw-Hill
- Goodman, L.S., S. Li, D. J. Lucas, T. A. Zimmerman, and F. J. Fabozzi (2008), *Subprime Mortgage Credit Derivatives*, Hoboken: John Wiley & Sons, Inc.
- Hitchner, J. R. (2003), *Financial Valuation: Applications and Models*, Hoboken: John Wiley & Sons, Inc.
- Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading,* New York: John Wiley & Sons, Inc.
- Lucas, D. J., L. S. Goodman, F. J. Fabozzi, and R. J. Manning (2007), *Developments in Collateralized Debt Obligations*, Hoboken: John Wiley & Sons, Inc.
- Tavakoli, J. M. (2008), *Structured Finance and Collateralized Debt Obligations*, Hoboken: John Wiley & Sons, Inc.

DATA

- Bloomberg (RMBS Issuance, CDO Issuance Dates, and Credit Ratings)
- CRSP (Price and Shares Outstanding)
- Moody's (Credit Ratings)
- S&P Capital IQ (Credit Ratings)

DEPOSITIONS

- Deposition of Adam Godden, September 17, 2015
- Deposition of Douglas Summa, December 16, 2015
- Deposition of Eric Yoss, August 28, 2015
- Deposition of Grant Kvalheim, October 19, 2015
- Deposition of John Varley, October 29, 2015
- Deposition of Joseph Kaczka, September 22, 2015
- Deposition of Kristofer R. Kraus, September 24, 2015
- Deposition of Marcus Agius, November 5, 2015
- Deposition of Michael J. Keegan, October 23, 2015
- Deposition of Michael Wade, August 20, 2015
- Deposition of Patrick Clackson, December 10, 2015
- Deposition of Paul Menefee, July 11, 2015
- Deposition of Sir Richard Broadbent, October 30, 2015
- Deposition of Richard Landreman, October 22, 2015
- Deposition of Robert E. Diamond, November 13, 2015
- Deposition of Stephen G. Russell, November 6, 2015
- Deposition of Stephen J. King, October 1, 2015
- Deposition of Thomas Hamilton, October 6, 2015
- Deposition of Thomas J. McCosker, October 14, 2015

PRODUCTION

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- PwC006344
- PwC007171
- PwC007172
- PwC007349
- PwC007431
- PwC007432
- PwC007433
- PwC007434
- PwC007451
- PwC007488
- PwC007512
- PwC007533
- PwC007539
- PwC007749
- PwC007769
- PwC007995

- PwC008012
- PwC009659
- PwC009822
- PwC009845
- PwC009938
- PwC010117
- PwC010120
- PwC010130
- PwC010283
- PwC010364
- PwC010369
- PwC010379
- PwC010382
- PwC010413
- PwC010434
- PwC011491
- PwC012551
- PwC012622
- PwC012748
- PwC012957
- PwC013494
- PwC013524
- PwC013785
- PwC013975
- PwC013987
- PwC013999
- PwC014037
- PwC014144
- PwC014458
- PwC014579
- PwC014583
- PwC014598
- PwC014651
- PwC015107
- PwC015137
- PwC015524
- PwC015614
- PwC015681
- PwC015725
- PwC015753
- PwC015789
- PwC015824
- PwC015826
- PwC015864

- PwC015915
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- PwC016193
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- PwC016527
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- PwC016559
- PwC016568
- PwC016587
- PwC016588
- PwC016601
- PwC016609
- PwC016618
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- PwC016691
- PwC016980
- PwC017144
- PwC017157
- PwC017504
- PwC017516
- PwC017528
- PwC017566
- PwC017757
- PwC018926
- PwC019741
- PwC020978
- PwC021103
- PwC022430
- PwC022570
- PwC023650
- PwC025667
- PwC027567
- PwC027644
- PwC028181
- PwC028389
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- PwC029318
- PwC030178
- PwC030180
- PwC030972

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Barclays' Monoline Counterparties
Market Capitalization and Credit Ratings
($ in millions)

	As of 12/31/07				As of 12/31/08 or Day Prior to Mr. O'Driscoll's Default/Bailout Date [1]				
Counterparty Name	Market Capitalization	S&P Rating [2]	Moody's Rating [3]	Fitch Rating [4]	As of:	Market Capitalization	S&P Rating [2]	Moody's Rating [3]	Fitch Rating [4]
AIG Financial Products [5]	$147,863	AA [13]	Aa2 [13]		10/27/2008	$3,630	A- [13]	A3 [13]	
Ambac Assurance Corporation [6]	$2,617	AAA	Aaa	AAA	12/31/2008	$373	A	Baa1	WD
Assured Guaranty Corporation [7]	$2,109	AAA	Aaa	AAA	12/31/2008	$1,037	AAA	Aa2	AAA
CIFG [8]		AAA	Aaa	AAA	12/31/2008		B	B3	WD
Financial Guaranty Insurance Company		AAA	Aaa	AAA	12/31/2008		CCC	Caa1	WD
Financial Security Assurance Inc. [9]	$29,360		Aaa	AA+ [13]	9/29/2008	$11,802		Aaa	AA+ [13]
MBIA Insurance Corporation [10]	$2,336	AAA	Aaa	AAA	12/31/2008	$1,112	AA	Baa1	NR
Swiss Re Financial Products Corporation [11]	$26,282	AA- [13]	Aa2 [13]	AA- [13]	12/31/2008	$16,562	AA- [13]	Aa2 [13]	NR [13]
XL Capital Assurance Inc. [12]		AAA	Aaa	AAA	8/5/2008		BBB-	B2	CCC

Source: *Bloomberg; CRSP; Moody's; S&P Capital IQ*

Note:

[1] The market capitalization data and ratings are from the earliest of 12/31/08 or the day before a bailout or default by the counterparty, according to Mr. O'Driscoll's Exhibit 4. According to Mr. O'Driscoll, AIG Financial Products was bailed out on 10/28/08, the parent company of Financial Security Assurance Inc., Dexia SA, was bailed out on 9/30/08, and XL Capital Assurance Inc. defaulted on 8/6/08.

[2] S&P credit ratings refer to Financial Strength.

[3] Moody's credit ratings refer to Insurance Financial Strength.

[4] Fitch credit ratings refer to Financial Strength.

[5] AIG Financial Products is a subsidiary of AIG. Market capitalization data was collected for AIG. See "Company Overview of AIG Financial Products Corporation," *Bloomberg Business* , http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=897973.

[6] Ambac Assurance Corporation is a subsidiary of Ambac Financial Group, Inc. Market capitalization data was collected for Ambac Financial Group, Inc. See "Investor Relations," *Ambac* , http://ir.ambac.com/.

[7] Assured Guaranty Corporation is a subsidiary of Assured Guaranty, Ltd. Market capitalization data was collected for Assured Guaranty, Ltd. See "Investor Information," *Assured Guaranty* , http://assuredguaranty.com/investor-information.

[8] In his Exhibit 4, Mr. O'Driscoll did not specify a particular CIFG entity. CIFG Assurance North America Inc. ratings data is shown. See BARC-ADS-01499660.

[9] Financial Security Assurance Inc. was a subsidiary of Dexia SA. Market capitalization data was collected for Dexia SA from Euronext. The market capitalization was converted from Euros to US Dollars at a rate of 1.4589 USD/EUR, the exchange rate as of 12/31/07, and at 1.4435 USD/EUR, the exchange rate as of 9/29/08. See O'Driscoll Report, Exhibit 4; "Dexia Expands Globally," *CNN Money* , March 14, 2000, http://money.cnn.com/2000/03/14/deals/dexia/.

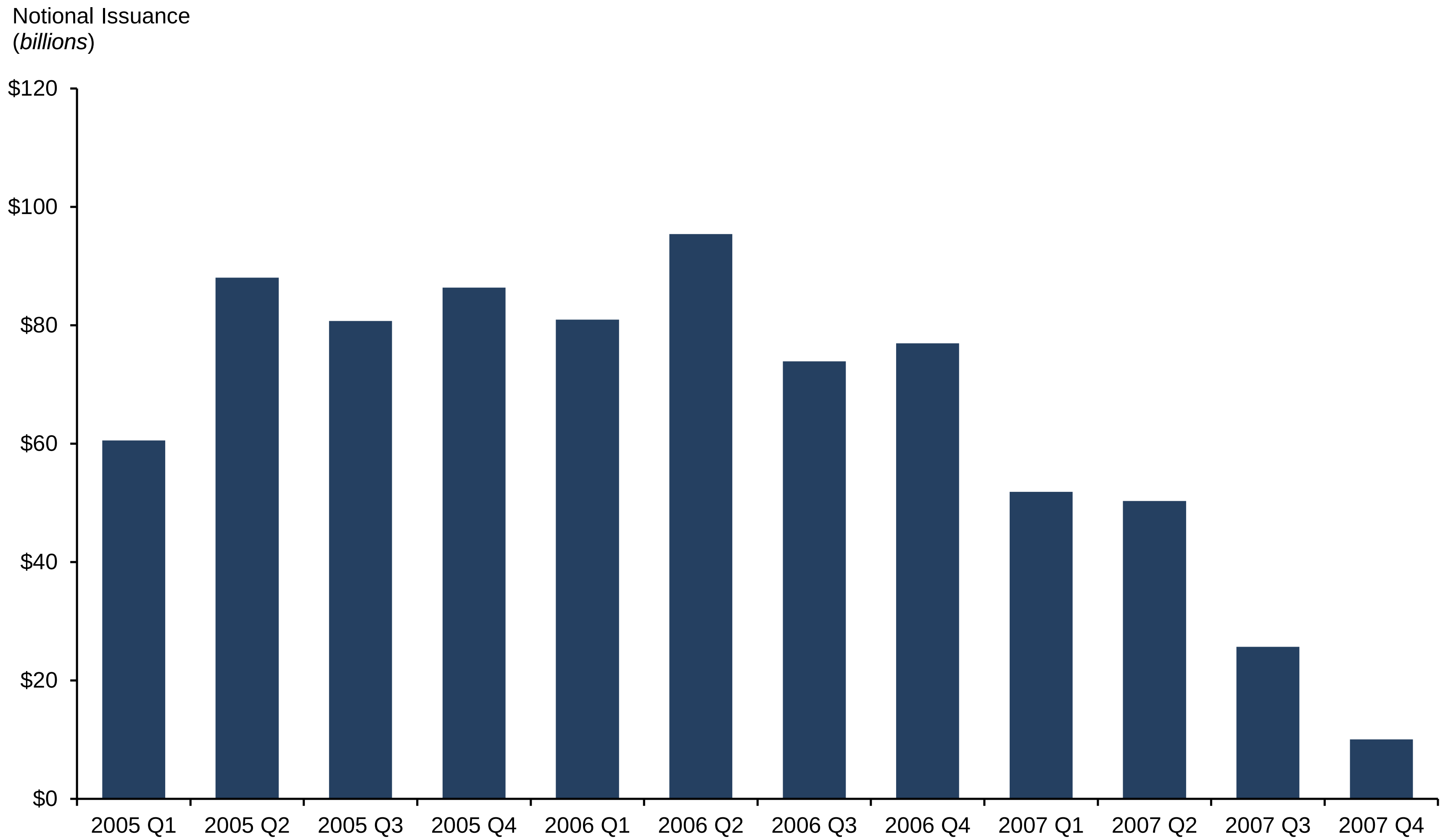
[10] MBIA Insurance Corporation is a division of MBIA Inc. Market capitalization data was collected for MBIA Inc. See "Company Overview of MBIA Insurance Corporation," *Bloomberg Business* , http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapid=8158549.

[11] Swiss Re Financial Products Corporation is a subsidiary of Swiss Reinsurance Company Ltd. Market capitalization data was collected for Swiss Reinsurance Company Ltd. from the SIX Swiss Exchange. The market capitalization was converted from Swiss Francs to US Dollars at a rate of 0.8821 USD/CHF, the exchange rate as of 12/31/2007, and at 0.9326 USD/CHF, the exchange rate as of 12/31/08. See "Company Overview of Swiss Re Financial Products Corporation," *Bloomberg Business* , http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapid=7714652.

[12] XL Capital Assurance Inc. was renamed Syncora Guarantee, Inc. Ratings are shown for Syncora Guarantee, Inc. See "Company Overview of Syncora Guarantee, Inc.," *Bloomberg Business* , http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=4984984.

[13] Financial Strength and Insurance Financial Strength Credit Ratings were unavailable for these counterparties. Financial Strength and Insurance Financial Strength ratings are shown for the parent companies of these counterparties.

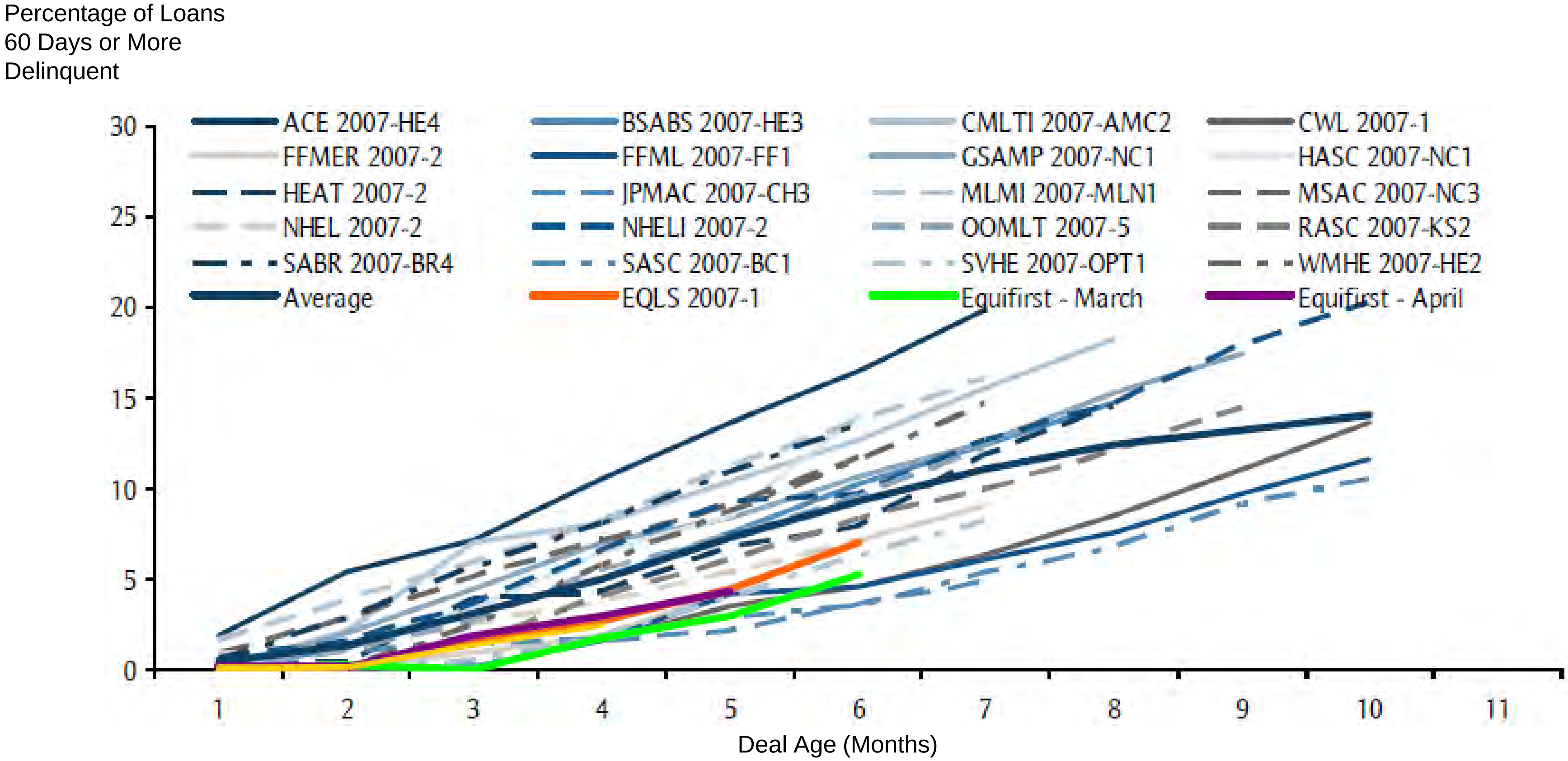
Subprime RMBS Quarterly Issuance
2005–2007



Source: *Bloomberg*

Note: Bloomberg categorizes subprime RMBS issuance as "Res B/C", which are mortgages characterized by loans when one or more previous payments are 30+ days delinquent. Issuance is restricted from 2005 to 2007 according to the settlement date. From 2005 to 2007, there were a total of 1,155 subprime RMBS issuances, which were aggregated by quarter.

Performance of EquiFirst Production vs. 2007-2 ABX Index



Source: BARC-ADS-00850560

Note: The chart above is taken from Appendix E of BARC-ADS-00850560. It illustrates the percentage of loans that are 60 or more days delinquent in the 20 residential mortgage-backed securities that comprise the ABX 2007-2 Index, the average of the 20 constituents, EquiFirst Loan Securitization Trust 2007-1, and the portion of Barclays' subprime whole loans portfolio originated by EquiFirst in March and April of 2007.

ABS CDO Super Senior Portfolio
Collateral Composition
By CDO Classification

Collateral Type	Retained Mark to Market High Grade Super Senior	High Grade ABS CDO	Mezzanine ABS CDO	Total ABS CDO
Bespoke ABS CDO [1]	11.90%	5.46%	1.75%	6.24%
Cash CDO/CLO	20.87%	9.03%	19.30%	14.83%
CMBS	2.06%	3.53%	3.27%	3.07%
Reinvestment [2]	0.90%	1.05%	1.11%	1.02%
Trust Preferred Securities [3]	0.00%	0.34%	0.00%	0.16%
Other	0.01%	1.41%	0.22%	0.73%
Prime	3.21%	6.01%	0.77%	3.92%
ALT A	4.97%	26.73%	9.47%	16.49%
Option ARM RMBS	3.33%	3.35%	0.05%	2.50%
Subprime ABS - 2nd Lien	0.17%	1.57%	0.31%	0.87%
Subprime ABS by Rating	**52.57%**	**41.52%**	**63.75%**	**50.16%**
AAA	0.74%	4.97%	0.00%	2.57%
AA	8.98%	15.15%	0.99%	9.88%
A	42.85%	15.15%	0.34%	18.80%
BBB	0.00%	0.00%	46.67%	11.91%
BB	0.00%	0.00%	2.55%	0.65%
B	0.00%	0.00%	0.00%	0.00%
N/A [4]	0.00%	6.24%	13.20%	6.34%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Source: BARC-ADS-01030680

Note:

[1] Bespoke ABS CDO represents the portion of the collateral portfolio invested into other CDOs, which were constructed with a particular client in mind. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading* , New York: John Wiley & Sons, p. 439.

[2] Reinvestment represents the portion of the collateral portfolio that are cash proceeds that the CDO manager has reinvested. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading* , New York: John Wiley & Sons, p. 201.

[3] Trust Preferred Securities represents the portion of the collateral portfolio invested into trust preferred securities, which are trusts created to hold single assets, often long-term bonds from banks and companies. See “A Question of Trust,” *The Wall Street Journal* , December 12, 2011, http://www.wsj.com/articles/SB10001424052970204770404577080803185437584

[4] For subprime collateral vintages prior to 2005, no ratings information for the underlying collateral is available.

ABS CDO Super Senior Portfolio
Collateral Composition
By Valuation Methodology

Collateral Type	Mark to Market	CF PV	NAV	Total ABS CDO
Bespoke ABS CDO [1]	11.90%	4.68%	2.42%	6.24%
Cash CDO/CLO	20.87%	9.10%	24.60%	14.83%
CMBS	2.06%	4.12%	1.12%	3.07%
Reinvestment [2]	0.90%	1.04%	1.19%	1.02%
Trust Preferred Securities [3]	0.00%	0.28%	0.00%	0.16%
Other	0.01%	1.24%	0.18%	0.73%
Prime	3.21%	5.41%	0.00%	3.92%
ALT A	4.97%	25.29%	5.09%	16.49%
Option ARM RMBS	3.33%	2.82%	0.08%	2.50%
Subprime ABS - 2nd Lien	0.17%	1.32%	0.47%	0.87%
Subprime ABS by Rating	**52.57%**	**44.71%**	**64.84%**	**50.16%**
AAA	0.74%	4.19%	0.00%	2.57%
AA	8.98%	12.76%	1.52%	9.88%
A	42.85%	12.76%	0.53%	18.80%
BBB	0.00%	4.51%	56.41%	11.91%
BB	0.00%	0.13%	3.47%	0.65%
B	0.00%	0.00%	0.00%	0.00%
N/A [4]	0.00%	10.36%	2.91%	6.34%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Source: BARC-ADS-01030680

Note:

[1] Bespoke ABS CDO represents the portion of the collateral portfolio invested into other CDOs, which were constructed with a particular client in mind. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading* , New York: John Wiley & Sons, p. 439.

[2] Reinvestment represents the portion of the collateral portfolio that are cash proceeds that the CDO manager has reinvested. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading* , New York: John Wiley & Sons, p. 201.

[3] Trust Preferred Securities represents the portion of the collateral portfolio invested into trust preferred securities, which are trusts created to hold single assets, often long-term bonds from banks and companies. See “A Question of Trust,” *The Wall Street Journal* , December 12, 2011, http://www.wsj.com/articles/SB10001424052970204770404577080803185437584

[4] For subprime collateral vintages prior to 2005, no ratings information for the underlying collateral is available.

EXHIBIT 7C

ABS CDO Super Senior Portfolio

Collateral Composition

	Retained Mark to Market High Grade Super Senior			High Grade ABS CDO						Mezzanine ABS CDO					
	Pampelonne 1	**Pampelonne 2**	**Markov**	**Buckingham I**	**Buckingham II**	**Buckingham III**	**Citius I**	**Citius II**	**Liberty**	**Camber**	**Tourmaline I**	**Tourmaline II**	**Stack**	**Tenorite**	**BFC**
Valuation Methodology [1]	NAV	NAV	NAV	CF PV	CF PV	CF PV	CF PV	CF PV	CF PV	NAV	CF PV	CF PV	NAV	NAV	NAV
Collateral Type															
Bespoke ABS CDO [2]	10.00%	10.00%	15.00%	10.00%	0.00%	5.00%	4.42%	6.23%	7.50%	3.00%	0.00%	0.88%	0.00%	0.00%	7.50%
Cash CDO/CLO	18.86%	23.01%	20.00%	15.16%	10.42%	13.54%	0.00%	1.36%	18.14%	3.40%	9.94%	9.11%	4.14%	58.82%	2.42%
CMBS	0.56%	5.05%	0.00%	0.37%	3.02%	2.83%	3.02%	8.56%	1.36%	2.81%	9.18%	5.81%	0.00%	0.00%	2.03%
Reinvestment [3]	0.25%	0.23%	1.98%	0.00%	0.05%	0.00%	0.00%	0.00%	5.40%	0.47%	2.26%	0.00%	0.88%	2.04%	0.70%
Trust Preferred Securities [4]	0.00%	0.00%	0.00%	0.00%	2.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.04%	0.00%	0.00%	-0.04%	-0.06%	-0.12%	0.02%	1.80%	5.54%	0.80%	0.54%	0.11%	0.00%	0.00%	-0.02%
Prime	1.64%	5.22%	2.18%	0.92%	3.42%	2.07%	4.49%	13.82%	7.15%	0.00%	0.00%	3.85%	0.00%	0.00%	0.00%
ALT A	9.54%	7.09%	0.00%	20.90%	12.07%	19.97%	37.63%	39.55%	21.51%	2.97%	19.84%	15.93%	17.30%	0.88%	6.10%
Option ARM RMBS	6.05%	1.60%	3.36%	2.00%	14.07%	3.61%	2.85%	0.11%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35%
Subprime ABS - 2nd Lien	0.73%	0.00%	0.00%	0.60%	1.85%	3.62%	0.91%	2.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.33%	1.50%
Subprime ABS by Rating	**52.33%**	**47.82%**	**57.48%**	**50.10%**	**52.74%**	**49.48%**	**46.64%**	**26.19%**	**33.27%**	**86.56%**	**58.23%**	**64.32%**	**77.69%**	**37.93%**	**79.42%**
AAA	0.00%	1.95%	0.00%	11.48%	6.16%	6.84%	3.79%	0.26%	5.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AA	16.40%	0.84%	12.48%	19.91%	27.18%	24.80%	16.85%	6.94%	2.86%	0.00%	0.00%	0.00%	0.00%	3.95%	0.00%
A	35.93%	45.03%	45.00%	12.38%	15.95%	16.50%	26.00%	18.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.64%	1.22%
BBB	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81.47%	30.12%	27.40%	60.46%	31.48%	70.20%
BB	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.71%	0.13%	1.35%	5.00%	0.00%	8.01%
B	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
N/A [5]	0.00%	0.00%	0.00%	6.32%	3.44%	1.34%	0.00%	0.00%	25.24%	1.38%	27.97%	35.57%	12.22%	1.85%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Source: BARC-ADS-01030680

Note:

[1] Valuation Methodology refers to the valuation methodology, Net Asset Value ("NAV") or Cash Flow Present Value ("CF PV"), used to value each deal.

[2] Bespoke ABS CDO represents the portion of the collateral portfolio invested into other CDOs, which were constructed with a particular client in mind. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading*, New York: John Wiley & Sons, p. 439

[3] Reinvestment represents the portion of the collateral portfolio that are cash proceeds that the CDO manager has reinvested. See Kothari, V. (2009), *Credit Derivatives & Structured Credit Trading*, New York: John Wiley & Sons, p. 201

[4] Trust Preferred Securities represents the portion of the collateral portfolio invested into trust preferred securities, which are trusts created to hold single assets, often long-term bonds from banks and companies. See "A Question of Trust," *The Wall Street Journal*, December 12, 2011, http://www.wsj.com/articles/SB10001424052970204770404577080803185437584

[5] For subprime collateral vintages prior to 2005, no ratings information for the underlying collateral is available.

EXHIBIT 35

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

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In re BARCLAYS BANK PLC SECURITIES LITIGATION	:	Master File
	:	No. 1:09-cv-01989-PAC
	:	

- x

EXPERT REPORT OF RENÉ M. STULZ

February 2, 2016

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I. Introduction

A. Qualifications

1. I hold the Everett D. Reese Chair in Money and Banking at The Ohio State University. I am also Director of the Dice Center for Research in Financial Economics at The Ohio State University and a Research Associate of the National Bureau of Economic Research in Cambridge, Massachusetts. Since receiving my Ph.D. in Economics from the Massachusetts Institute of Technology in 1980, I have taught at the Massachusetts Institute of Technology, the University of Rochester, the University of Chicago, and The Ohio State University. I was a Bower Fellow at the Harvard Business School from 1996 to 1997.

2. I am an expert in financial economics. I am a past president of the American Finance Association, a fellow of the American Finance Association and of the Financial Management Association, and a past president of the Western Finance Association. I received a Doctorate Honoris Causa from the University of Neuchâtel in Switzerland and the Risk Manager of the Year award from the Global Association of Risk Professionals ("GARP"). I have also been recognized by a number of organizations for my contributions to financial economics by awards or by invitations to be a keynote speaker. I belong to the editorial boards of more than ten academic and practitioner publications. I was editor of The Journal of Finance for 12 years and co-editor of the Journal of Financial Economics for five years. These are two of the top three journals in the field of financial economics. Thomson Reuters includes me in its list of some of the world's most influential scientific minds. I serve on the board of directors of Banque Bonhôte as well as on the board of trustees of GARP. I have been a consultant for the International Monetary Fund, the World Bank, the New York Stock Exchange, the Federal Reserve Bank of New York, and various corporations and law firms. I have published more than 60 articles on issues in financial economics, authored a textbook on derivatives and risk management, co-authored a book on financial reform, and edited several books.

3. My risk management credentials include the following. I have (a) taught risk management for many years to MBA students and to executives (in North America, Europe and Asia), (b) authored a textbook on risk management, (c) published a number of academic studies that are highly cited in the field of risk management including one that is viewed as seminal, (d)

briefed senior bank supervisors on risk management issues, and (e) consulted on risk management issues. In addition, I am responsible for a worldwide certification examination for risk managers given in more than 50 countries and with more than 40,000 registrants this year; am a trustee and a member of the executive committee of GARP, the leading global association of risk managers; and am chair of the Global Risk Forums organized by GARP together with various central banks to bring together senior risk managers and senior regulators.

4. My credentials on issues relating to capital requirements include the following. I have conducted theoretical and empirical research on the implications of capital requirements. I have been involved in public policy discussions regarding capital requirements, including the publication of a book with various recommendations concerning such requirements. I have been invited to lecture to regulators on issues related to capital requirements in the US, the UK, and continental Europe.

5. A copy of my curriculum vitae is attached as **Appendix A**, which includes a list of my publications. **Appendix B** contains a list of my testimony over the last four years.

B. Assignment

6. I have been retained by counsel for Barclays PLC (“Barclays”), Barclays Bank PLC (“Barclays Bank”), and the Individual Defendants (collectively “Defendants”) to review documents and testimony from discovery in this matter pertaining to (among other things) the valuation of certain assets as reported in Barclays Bank’s financial statements for the year ended December 31, 2007, the write-downs that were taken in arriving at these valuations, and various developments and disclosures leading up to Barclays Bank’s offering in April 2008 of the Series 5 Preference Shares[1] (the “Series 5 shares”) at issue in this matter.[2] I was also asked to assess and respond to certain assertions and opinions in the Expert Report of D. Paul Regan (“Regan

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[1] “Preference shares” is the term used in the UK for securities that in the US are typically referred to as “preferred shares” or “preferred stock.”

[2] Barclays Bank is a 100% owned subsidiary of Barclays. Strictly speaking, the assets in question and related write-downs are recorded in the financial statements of Barclays Bank and then consolidated into the financial statements of Barclays. Generally, I will refer to the write-downs as being “taken by Barclays,” although for certain parts of my analysis (which I clearly indicate), the fact that they were actually taken by Barclays Bank is important. Similarly, I make no distinction between Barclays and Barclays Bank when discussing risk management policies and procedures.

Report"), the Declaration of Dr. Joseph R. Mason ("Mason Report"), and the Report of Fiachra T. O'Driscoll ("O'Driscoll Report"), each of which was submitted on behalf of Plaintiff on December 15, 2015.

7. Specifically, I was asked to consider the impact (if any) of certain allegedly misstated or undisclosed information addressed by Plaintiff's experts on the risks of the Series 5 shares, including:

a. Expectations that Barclays may need to take steps to increase its capital ratios by the end of 2008.

b. Additional write-downs that Plaintiff's experts argue should have been taken in 2007 and/or disclosed prior to the issuance of the Series 5 shares.

c. Barclays' exposure to monoline insurers.

8. I was also asked to provide an assessment of Barclays' risk management infrastructure and practices with respect to the valuation of the assets in question, and to respond to Plaintiff's allegations that various statements about Barclays' risk management in the offering materials for the Series 5 shares were false.

9. The analyses and opinions expressed in this report are my own. I am being compensated at my usual rate of $900 per hour. I have been assisted in this matter by staff at Cornerstone Research ("Cornerstone") who worked under my direction. I receive compensation from Cornerstone based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter nor my compensation from Cornerstone is in any way contingent or based on the content of my opinions or the outcome of this or any other matter.

10. In undertaking this assignment, I have considered documents and data related to the issues in this litigation. These materials are cited in this report and/or listed in **Appendix C**. My work in this matter is ongoing, and I reserve the right to supplement my opinions in the event that additional information or arguments are provided to me or submitted in connection with this litigation.

II. Summary of Opinions

11. The conclusions of Plaintiff's experts are flawed and irrelevant to the question of whether investors were impacted by the allegedly misstated or undisclosed information because they fail to properly account for the economics of the Series 5 shares.

a. Dr. Mason opines that Barclays failed to disclose "developments…in the first quarter of 2008" that "increased the risk that [it] would need to sell assets at distressed prices and/or raise expensive capital from additional investors" in order to achieve its target capital ratios and such actions would adversely affect the Series 5 shares.[3] Dr. Mason's opinion is without foundation and reflects a fundamental misunderstanding of the relationship between Barclays' capital ratios and the riskiness of the Series 5 shares. In fact, raising capital and/or selling risky assets would have had the effect of *reducing* the risks faced by investors in the Series 5 shares.

b. Mr. Regan opines that Barclays knew but failed to disclose "increasing expected and actual losses of at least £800 million" prior to the Series 5 offering and that these losses were "material."[4] I do not express an opinion as to materiality from either a legal or an accounting standpoint. However, from the perspective of a financial economist, to demonstrate that a rational assessment of whether to purchase the Series 5 shares on the terms offered was impacted by the alleged failure to disclose this information, it is necessary to show that this information would have had an impact on the riskiness of these shares and, consequently, on the dividend rate and/or price at which they were issued. Neither Mr. Regan nor any of Plaintiff's other experts has shown this. In fact, I analyze how the riskiness of the Series 5 shares would have been impacted had Barclays disclosed first-quarter credit losses of £800 million and find that the impact (if any) would have been indistinguishable from the normal variation in the riskiness of those

[3] Mason Report, ¶¶42–43.
[4] Regan Report, ¶¶60–61.

shares. Moreover, this analysis is conservative because it assumes that any first-quarter credit losses would have been completely unanticipated and that investors would not have expected Barclays to respond to these losses by issuing additional equity. Yet, there is evidence, completely ignored by Plaintiff's experts, both that investors did expect such credit losses and that they did expect Barclays to issue capital in response to losses if necessary.

12. Mr. O'Driscoll and Mr. Regan claim that Barclays failed to disclose £21.6 billion in "hidden risk" associated with "negative basis trades."[5] This opinion is flawed and unreliable since it completely fails to reflect the nature of hedging and risk management.

13. Contrary to Mr. O'Driscoll's assertions that Barclays "mischaracterized [its] risk management around certain positions, particularly [its] CDO positions"[6] and to Plaintiff's claim that "[Barclays] misrepresented and omitted material facts relating to…[its] risk management practices,"[7] I find that Barclays had a robust set of policies and procedures in place throughout 2007 and 2008 to assess asset write-downs and impairments and to ensure the validity of the valuations reported in its financial statements. These policies and procedures were consistent with industry standards and best practices. Further, the extent to which Barclays' senior management and board of directors were involved in establishing and monitoring these policies and procedures was also consistent with industry standards and best practices.

III. Background

14. Plaintiff alleges, *inter alia,* that investors in the Series 5 shares were misled, and suffered damages, as a result of Barclays' (i) failing to disclose that it anticipated taking action to raise its capital ratios during 2008; (ii) recording inadequate write-downs in its financial statements for the year ended December 31, 2007; and (iii) failing to disclose known or anticipated write-downs

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[5] O'Driscoll Report, ¶¶103–105; Regan Report, ¶97.

[6] O'Driscoll Report, ¶12. "CDO" is the abbreviation for Collateralized Debt Obligation.

[7] Memorandum of Law in Support of Lead Plaintiff's Motion for Class Certification, dated December 9, 2015 ("Plaintiff's Class Certification Motion"), pp. 1–2.

occurring after December 31, 2007 but before the offering of the Series 5 shares.[8] However, any meaningful analysis of whether the allegations, even if true, would have impacted the investors in the Series 5 shares must properly reflect the economics of the Series 5 shares. This is something that Plaintiff's experts have failed to do — in particular, they have failed to recognize that these shares are *preference* shares and that the economics of such shares are quite different from the economics of *ordinary* shares.[9] In this Section, I begin by providing a high-level overview of the economics of preference shares. I then set out the necessary factual background — relating to the specific securities at issue, and other elements of the capital structure[10] of Barclays Bank (the issuer of the Series 5 shares) — to the extent that this background is relevant for my subsequent analysis.

A. Economics of Preference Shares

15. To finance their activities and support the risks they take, publicly traded firms in the UK issue a range of securities.[11] Broadly speaking, these securities can be broken down into three distinct types — debt (senior and subordinated) securities, preference shares, and ordinary shares. These types of securities differ along a number of dimensions, the most important of which is their relative priority with respect to the right to receive periodic coupon or dividend payments and the right to receive proceeds in the event that the firm is liquidated.

16. As the name suggests, senior debt is the most senior of the various security types. Senior debt typically has a fixed maturity date (the date on which the principal or notional amount invested is scheduled to be repaid), and the holders of such a security are contractually entitled to a specified periodic coupon. If the issuing firm does not comply with these terms by, for example, failing to meet either a periodic coupon payment or a scheduled principal repayment, then (in the UK) the debtholders can place a claim on assets of the firm, which may ultimately

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[8] Second Consolidated Amended Class Action Complaint, *In re Barclays Banks PLC Securities Litigation*, Master File No. 1:09-cv-01989-PAC, dated September 13, 2013 ("Complaint"), ¶¶10, 13–15, 135.

[9] "Ordinary shares" is the term used in the UK for securities that in the US are typically referred to as "common stock."

[10] "Capital structure" is the term used within financial economics to describe the composition of the various securities that finance the operations of the firm or organization in question.

[11] Watson, D., and A. Head (2013), *Corporate Finance Principles and Practice*, 6th ed., Harlow, UK: Pearson Education Limited, pp. 36–37.

lead to its liquidation.[12] The holders of the senior debt have first claim on any proceeds. It is only if the firm's outstanding obligations to the senior debtholders are met in full that holders of the more junior securities — subordinated debt, preference shares, and ordinary shares — will receive any of these proceeds.[13]

17. Subordinated debt shares many of the features of senior debt except that, again as the name suggests, it is subordinate or junior to the latter security. In other words, the holders of the subordinated debt rank behind the senior debtholders but ahead of the holders of preference and ordinary shares in terms of priority. Again, if the firm fails to meet either a periodic coupon payment or a scheduled principal repayment, then holders of the subordinated debt can initiate proceedings to claim the firm's assets and potentially place the firm into liquidation.

18. Next in terms of priority — meaning that they rank behind both senior and subordinated debt but ahead of ordinary shares — are the firm's preference shares. Preference shares are often referred to as "hybrid securities" since they have certain features that make them similar to debt securities and other features that make them similar to ordinary shares.[14] For example, they typically carry a specified coupon or dividend rate. However, the holders of preference shares do not have a contractual right to receive any particular scheduled dividend payment and are typically not entitled to place the firm into liquidation in the event that such a payment is not made.[15] If the shares are "cumulative," the firm is unable to pay any dividends on its ordinary shares until any arrears in relation to its preference share dividends are cleared. Preference shares may have a fixed maturity date or may be "perpetual," meaning that there is no fixed date on which the principal amount invested is to be repaid. They may also be "callable," meaning

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[12] See Arnold, G. (2013), *Corporate Financial Management*, 5th ed., Harlow, UK: Pearson Education Limited, p. 428: "[I]f the firm goes into liquidation, the holders of a debt type of financial security are paid back before the shareholders receive anything. … Creditors are often able to claim some or all of the assets of the firm in the event of non-compliance with the terms of the loan. This may result in liquidation."

[13] Watson, D., and A. Head (2013), *Corporate Finance Principles and Practice*, 6th ed., Harlow, UK: Pearson Education Limited, p. 107.

[14] For a more detailed description of the characteristics of preference shares, see Watson, D., and A. Head (2013), *Corporate Finance Principles and Practice*, 6th ed., Harlow, UK: Pearson Education Limited, pp. 125–128.

[15] Barclays Bank had in issue "1,000 Sterling cumulative callable preference shares of £1 each," the holders of which were entitled to "institute proceedings for the winding up of [the company]" in the event that a scheduled dividend payment was not paid in full seven days after the due date for payment. See Barclays PLC and Barclays Bank PLC Form 20-F, dated March 7, 2008 ("Barclays 2007 Annual Report"), p. 257. I ignore this issue since it is not relevant to my report.

that the firm has (subject to meeting certain conditions) the right to repurchase the shares at a pre-specified price. As discussed in more detail below, the Series 5 shares were non-cumulative, perpetual and callable, with a dividend rate of 8.125%.

19. The most junior securities in a firm's capital structure are its ordinary shares.[16] These do not carry a specified dividend rate — rather, any dividends are paid at the discretion of the firm's board of directors and can be paid only when all coupons on senior and subordinated debt, and all preference share dividends, have been paid. Similarly, in the event that the firm is liquidated, the ordinary shareholders are the "residual claimants" who receive the proceeds (if any) that remain after the principal amounts of senior and subordinated debt and preference shares have been repaid.

20. The fact that the ordinary shares represent a residual claim on the firm's profits and assets means that these shares are what can be referred to as the "first loss piece" of the capital structure. To understand this terminology, consider the following (highly simplified) example. Suppose that a firm has assets of 100, senior and subordinated debt with respective principal amounts of 60 and 20, and preference shares with a principal amount of 15.[17] In the event that the firm is liquidated, the proceeds of 100 would be allocated to senior debt (60), subordinated debt (20), preference shares (15), and ordinary shares (5). Now suppose that there is an unexpected reduction in the value of the assets from 100 to 97. In this case, the proceeds allocated to senior debt, subordinated debt, and preference shares would be unchanged, but the proceeds allocated to ordinary shares would fall from 5 to 2. In other words, while the ordinary shares lose 60%, there is no impact on any of the more senior securities. In this example, the firm's assets would have to lose more than 5 (5%) in value before the liquidation proceeds allocated to preference shares would be affected.

21. The key observation from this example is that the ordinary shares act as a "cushion" for the more senior claims in the capital structure, in that they absorb losses first. All other things being equal, the larger is the size of this equity cushion, the less risky are the firm's senior and

[16] For a more detailed description of the characteristics of ordinary shares, see Arnold, G. (2013), *Corporate Financial Management*, 5th ed., Harlow, UK: Pearson Education Limited, pp. 370–372.

[17] For simplicity, for the purposes of this example, I have assumed that the interest and dividend rates on the senior and subordinated debt and preference shares are all zero.

subordinated debt and its preference shares.[18] In the example above, if the principal amount of the preference shares were 10 rather than 15, so that the equity cushion were 10 rather than 5, then the assets would have to lose more than 10% in value before the preference shares would suffer any loss. In all cases, however, the ordinary shares have to lose 100% of their value before the preference shares are affected.

22. As I explain in detail below, the fact that ordinary shares absorb losses ahead of preference shares (so that the greater the equity cushion for given risk of the assets, the less likely it is that preference shares will have to suffer losses) is critical to understanding the extent to which the disclosure of additional write-downs would have impacted the investors in the Series 5 shares. In short, I will demonstrate that, to the extent that Dr. Mason, Mr. Regan, and Mr. O'Driscoll opine that the alleged misstatements and omissions impacted Series 5 investors, their failure to take into account the fact that the Series 5 shares were supported by a sizeable loss-absorbing equity cushion renders any such opinions incorrect.

23. It is important to note that the economics of preference shares imply that an increase in the volatility of the assets of a firm potentially affects the holders of ordinary shares differently from the holders of preference shares.[19] Specifically, the holders of ordinary shares have no limit to the extent that they can benefit from increases in the value of the assets of a firm. Consequently, increases in the volatility of the assets can benefit these shareholders as they make large increases in the value of the assets more likely. In contrast, the holders of preference shares cannot receive more than the liquidation or redemption value of these shares. Hence, if the firm takes risks that potentially could increase the value of the assets substantially but could also lead to large losses, the preference shareholders can be worse off because it becomes more likely that the firm will default. It follows that the interests of the ordinary shareholders and the

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[18] Emanuel, D. (1983), "A Theoretical Model for Valuing Preferred Stock," *The Journal of Finance*, Vol. 38, No. 4, pp. 1133–1155 at 1135–1136, 1147.
[19] Emanuel, D. (1983), "A Theoretical Model for Valuing Preferred Stock," *The Journal of Finance*, Vol. 38, No. 4, pp. 1133–1155.

preference shareholders can be diametrically opposed with respect to changes in the risk of a firm and with respect to the firm's risk-taking decisions.[20]

B. The Series 5 Shares

24. Having discussed the economics of preference shares generally, I now turn to the securities at issue in this case, namely the "106 million US Dollar 8.125% non-cumulative callable preference shares of $0.25 each…represented by 106 million American Depositary Shares, Series 5, [that] were issued [by Barclays Bank] on 11th April 2008 and 25th April 2008 for a total consideration of $2,650 million (£1,345 million)…"[21, 22]

25. The amount of $0.25 per share is the nominal, or par, value of the shares that is recorded within share capital at the time of issuance; the difference between this amount and the issue price of $25 per share is recorded within additional paid-in-capital (or the share premium account using UK terminology). $25 per share is also the liquidation or redemption amount, which is the amount that the preference shareholders receive in the event of a liquidation. The rate of 8.125% specified in the Prospectus Supplement is the dividend rate.[23] Moreover, the non-cumulative feature of the shares means that to the extent all or part of a particular dividend is not paid according to the quarterly schedule, that dividend will not be paid in the future.[24] Finally, as

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[20] Galai, D., and R.W. Masulis (1976), "The Option Pricing Model and the Risk Factor of Stock," *Journal of Financial Economics*, Vol. 3, pp. 53–81 at 56–57.

[21] Barclays PLC and Barclays Bank PLC Form 20-F, dated March 5, 2009 ("Barclays 2008 Annual Report"), p. 296.

[22] Prospectus Supplement to Prospectus dated August 31, 2007, dated April 8, 2008 ("Prospectus Supplement"), p. S-1. The Prospectus Supplement for the issue refers to the issuance of 100 million shares but notes that "[w]e have granted the underwriters an option to purchase…up to an additional [15 million shares] to cover overallotments…If the option is exercised in full, the total Price to Public…will be [$2.875 billion]…" This explains ¶182 of the Complaint which states that the "total price to the public…including over-allotments" was $2.875 billion (i.e., the Complaint incorrectly assumes that 115 million, rather than 106 million, shares were issued). Complaint, ¶182.

[23] Prospectus Supplement, p. S-6: "Dividends will accrue and be payable on each preference share at a rate of 8.125% per year on the amount of $25 per preference share, from and including the date of issuance. Dividends will be payable quarterly in arrear in US dollars on March 15, June 15, September 15 and December 15 of each year, commencing on June 15, 2008…Dividends on the preference shares may be paid only to the extent that payment can be made out of our distributable profits (i.e., profits of Barclays Bank…that are available for distribution and permitted by law to be distributed). We may for any reason not pay in full or in part any dividends on the preference shares in respect of one or more dividend periods."

[24] Prospectus Supplement, p. S-11: "Dividends on the preference shares will also be non-cumulative. If our board of directors does not pay the full amount of the dividend payable on a dividend payment date, then the rights of holders of the preference shares or ADSs to receive any unpaid amount in respect of the relevant dividend period

explained above, the term "callable" refers to the fact that Barclays Bank has the option, subject to the satisfaction of various conditions, of redeeming or repurchasing the shares (at the issue price of $25 per share).[25]

C. Barclays Bank Capital Structure

26. As I explained above, an understanding of the risks faced by investors in the Series 5 shares, and of how those risks may have been affected by the alleged misstatements and omissions cited by Plaintiff and his experts, requires an understanding of the economics of the shares. A key element in this regard relates to the priority of the Series 5 shares relative to other elements of the capital structure of Barclays Bank — specifically, which elements have (i) lower, (ii) equal, or (iii) higher priority than the shares.

27. The element of the capital structure that is of lower priority is comprised of the 2,337,161,000 ordinary shares in issue.[26] This priority extends to both a return of capital[27] and the periodic payment of dividends.[28]

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will be lost. We will have no obligation to pay the dividend accrued for that dividend period or to pay any interest on the dividend, whether or not dividends on the preference shares are paid for any subsequent dividend period."

[25] Prospectus Supplement, pp. S-7–S-8: "Subject to [various conditions], we may redeem some or all of the preference shares on June 15, 2013 and on any dividend payment date thereafter…The redemption price payable on the redemption of preference shares is equal to $25 per preference share plus accrued but unpaid dividends (if any) for the then-current dividend period to the date fixed for redemption."

[26] This is the number of shares in issue as of December 31, 2007, as per p. S-29 of the Prospectus Supplement and the same number is reported on the front page of Barclays 2007 Annual Report. However, these shares have a nominal value of £1 each, implying ordinary share capital of £2,337 million while per Barclays 2007 Annual Report, p. 257, reported ordinary share capital is £2,336 million. This difference is insignificant to any of the analysis that follows.

[27] Barclays 2008 Annual Report, p. 296: "On a winding-up of Barclays Bank PLC or other return of capital (other than a redemption or purchase of shares of Barclays Bank PLC, or a reduction of share capital), a holder of Preference Shares will rank in the application of assets of Barclays Bank PLC available to shareholders…in priority to the holders of ordinary shares and any other shares of Barclays Bank PLC in issue ranking junior to the Preference Shares."

[28] Barclays 2008 Annual Report, p. 296: "If a dividend is not paid in full on any preference shares on any dividend payment date, then a dividend restriction shall apply. This dividend restriction will mean that neither Barclays Bank PLC nor Barclays PLC may (a) declare or pay a dividend (other than payment by Barclays PLC of a final dividend declared by its shareholders prior to the relevant dividend payment date, or a dividend paid by Barclays Bank PLC to Barclays PLC or to a wholly owned subsidiary) on any of their respective ordinary shares, other preference shares or other share capital or (b) redeem, purchase, reduce or otherwise acquire any of their respective share capital, other than shares of Barclays Bank PLC held by Barclays PLC or a wholly owned subsidiary, until the earlier of (1) the date on which Barclays Bank PLC next declares and pays in full a preference dividend and (2) the date on or by which all the preference shares are redeemed in full or purchased by Barclays Bank PLC."

28. The elements of the capital structure that have equal priority with the Series 5 shares can be split into two distinct categories: (i) other preference shares, and (ii) tier one capital notes and reserve capital instruments.

29. ***Other Preference Shares.*** As of the date of issuance of the Series 5 shares, Barclays Bank had eight outstanding preference share issues (Exhibit 1). Of these, two were denominated in Sterling and had a liquidation or redemption value of £750 million, two were denominated in Euros and had a liquidation value of €2,400 million, and four were denominated in US dollars and had a liquidation value of $4,275 million. Using the exchange rates as of April 7, 2008 — the last business day before the date of the Prospectus Supplement — the total liquidation value across all eight issues was £4,796 million. The issuance of the Series 5 shares increased this liquidation value (using the same US$/Sterling exchange rate) by £1,335 million to £6,131 million. All these issues had equal priority with the Series 5 shares with respect to a return of capital[29] and with respect to the payment of dividends.[30]

30. ***Tier One Capital Notes and Reserve Capital Instruments.*** As noted on p. S-11 of the Prospectus Supplement, Barclays Bank had at the date of issuance of the Series 5 shares "previously issued certain tier-one notes, or TONs, and reserve capital instruments, or RCIs."[31] In fact, as of December 31, 2007, nine such securities had been issued, the details of which are set out in Exhibit 2. Exhibit 2 also includes details of an additional RCI issued during 2008 — for the purposes of the analysis that follows, I assume that this security had not been issued by the date of issuance of the Series 5 shares. None of my conclusions are affected by this assumption.[32] Again using the exchange rates as of April 7, 2008, the total liquidation value

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[29] Barclays 2008 Annual Report, p. 296: "On a winding-up of Barclays Bank PLC or other return of capital (other than a redemption or purchase of shares of Barclays Bank PLC, or a reduction of share capital), a holder of Preference Shares will rank in the application of assets of Barclays Bank PLC available to shareholders…equally in all respects with holders of other preference shares and any other shares of Barclays Bank PLC in issue ranking pari passu with the Preference Shares."

[30] This is implied by the reference to "other preference shares" in footnote 28 above and by p. S-11 of the Prospectus Supplement wherein it is stated that "we have previously issued other preference shares. If our board of directors decides not to pay in full dividends on those other preference shares, we will not be permitted to pay dividends on (or redeem or repurchase) any preference shares offered under this prospectus supplement."

[31] Prospectus Supplement, p. S-11.

[32] This assumption is required since the issue date of the additional RCI — the "£3,000m 14% Step-up Callable Perpetual [RCIs]" (see Barclays 2008 Annual Report, p. 296) — does not appear to have been publicly disclosed.

across all nine issues was £4,888 million. Further, the TONs and RCIs had equal priority with the Series 5 shares with respect to a return of capital.[33] Regarding coupon/dividend payments, p. S-11 of the Prospectus Supplement provides that "[i]f we defer any coupon payment on the TONs, we will not be permitted to pay any dividends on (or redeem or repurchase) any preference shares until we make a coupon payment on the TONs. If we defer any coupon payment on the RCIs, we will not be permitted to pay any dividends on any preference shares until we pay the deferred coupon payment."[34] Accordingly, for the purposes of my analysis, I will assume that the TONs and RCIs also have equal priority with the Series 5 shares with respect to the dividend/coupon payments.

31. The remainder of Barclays Bank's capital structure was senior to the Series 5 shares. The total amount of all liabilities senior to the Series 5 shares — which consisted mainly of customer deposits, repurchase agreements, and debt issues — was approximately £1.2 trillion.[35]

IV. Dr. Mason fundamentally misunderstands the relationship between Barclays' capital ratios and the riskiness of the Series 5 Shares, rendering his opinions flawed and unreliable.

32. Dr. Mason claims that certain developments during the first quarter of 2008 concerning Barclays' capital ratios "reflected a significant capital constraint on Barclays that was not present at year-end 2007 and increased the risk that Barclays would need to sell assets at distressed prices and/or raise expensive capital from additional investors."[36] In particular, Dr. Mason claims that, during the first quarter of 2008, Barclays' capital ratios were declining and risk

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[33] Barclays 2008 Annual Report, p. 296: "The holders of the …TONs…and the holders of the …RCIs…would, for the purposes only of calculating the amounts payable in respect of such securities on a winding-up of Barclays Bank PLC, subject to limited exceptions and to the extent that the TONs and the RCIs are then in issue, rank pari passu with the holders of the most senior class or classes of preference shares then in issue in the capital of Barclays Bank PLC. Accordingly, the holders of the preference shares would rank equally with the holders of such TONs and RCIs on such a winding-up of Barclays Bank PLC (unless one or more classes of shares of Barclays Bank PLC ranking in priority to the preference shares are in issue at the time of such winding-up, in which event the holders of such TONs and RCIs would rank equally with the holders of such shares and in priority to the holders of the preference shares)."

[34] Prospectus Supplement, p. S-11.

[35] See Exhibit 3.

[36] Mason Report, ¶43.

weighted assets ("RWAs") were increasing, and the Financial Services Authority ("FSA") had "require[d]" Barclays to raise its Tier 1 equity ratio to 5.25% by year-end 2008.[37] Although Dr. Mason states that these developments were not disclosed to investors in the Series 5 shares, he does not opine that they should have been disclosed or that their alleged nondisclosure impacted the investors or the price or dividend rate of the Series 5 shares; he merely opines that these developments increased the risk that Barclays would have to raise additional capital and/or sell assets in unfavorable market conditions at some unspecified point in the future.[38] Prior to arriving at these opinions, Dr. Mason makes various references throughout his report to the relevance of capital ratios to investors in preference shares and attempts to portray the allegedly undisclosed information as having important and negative implications for investors in the Series 5 shares. I disagree. As I explain in this section, Dr. Mason's arguments both mischaracterize the record and fail to properly take into account the economics of the Series 5 shares. I start by explaining the concepts of capital, capital ratios, and regulatory capital requirements.

A. Capital Ratios

33. In addition to the securities — ordinary shares, preference shares, senior and subordinated debt — discussed above, banks also finance themselves through a variety of other sources, the most important of which is customer deposits. To ensure that banks are safe and sound and that they do not default on such deposits, regulators across the world impose capital requirements, meaning that they require banks to have a minimum amount of capital. Capital includes the securities issued by a bank that are viewed as loss-absorbing securities, so that if the bank becomes distressed, these securities can absorb losses without the bank having to default on deposits or other senior liabilities.

34. Since 1988, capital requirements for large banks such as Barclays have followed prescriptions from the Basel Committee on Banking Supervision ("BCBS").[39] In 1988, the BCBS issued the Basel Accord which put forth a set of regulatory capital requirements known as

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[37] Mason Report, ¶¶41, 43.
[38] Mason Report, ¶¶2, 42, 43.
[39] "A Brief History of the Basel Committee," Basel Committee on Banking Supervision, October 2015.

Basel I.[40] Under Basel I — which applied to what is commonly referred to as the "banking book" *i.e.*, loans and securities not held for trading purposes — bank assets are assigned risk weights depending on their riskiness. For instance, UK sovereign debt has a weight of 0% while UK corporate debt has a weight of 100%.[41] To compute a bank's required capital, the value of each asset is multiplied by its risk weight and the asset values multiplied by risk weights are summed — this sum is referred to as the bank's RWAs.[42] The bank then has to hold capital corresponding to at least 8% of its RWAs, and at least 50% of that capital has to be held in the form of higher quality or "Tier 1" capital — the remainder (no more than 50% of total capital) can be held in the form of lower quality or "Tier 2" capital.[43]

35. Following the guidelines of the BCBS, the regulators in each country that is part of the Accord define which securities can be included in Tier 1 capital and in total capital,[44] although the Accord defines Tier 1 capital broadly to include "*permanent shareholders' equity* (issued and fully paid ordinary shares/common stock and perpetual non-cumulative preference shares) and *disclosed reserves* … [and] minority interests…" and Tier 2 capital to include securities such as hybrid (debt/equity) capital instruments and subordinated debt.[45]

36. In 1996, a market risk amendment to the Basel Accord was issued that imposed additional capital requirements on banks in respect of the so-called "trading book."[46] The trading book comprises trading assets and liabilities *i.e.*, assets and liabilities that a bank holds for the purpose of trading them within a short period of time as opposed to intending to hold them for an extended period of time — such assets and liabilities are important for banks such as

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[40] "International Convergence of Capital Measurement and Capital Standards," Basel Committee on Banking Supervision, July 1988.

[41] See Crouhy, M., D. Galai, and R. Mark (2006), *The Essentials of Risk Management*, New York, NY: McGraw-Hill, p. 60.

[42] "The Standardised Approach to Credit Risk," Basel Committee on Banking Supervision, January 2001, p. 1.

[43] "International Convergence of Capital Measurement and Capital Standards," Basel Committee on Banking Supervision, July 1988, pp. 14–17.

[44] For the period considered in this litigation, Barclays' primary British regulator was the FSA.

[45] "International Convergence of Capital Measurement and Capital Standards," Basel Committee on Banking Supervision, July 1988, pp. 17–18. Barclays Bank's preference shares were included as part of Tier 1 capital. See BARC-ADS-01655081, p. 2.

[46] "Amendment to the Capital Accord to Incorporate Market Risks," Basel Committee on Banking Supervision, January 1996, p. 1; "A Brief History of the Basel Committee," Basel Committee on Banking Supervision, October 2015, p. 3.

Barclays. A key feature of the market risk amendment was that it allowed banks to use their own risk models to determine the amount of regulatory capital they had to hold for their trading book provided that these models were acceptable to the regulators.[47]

37. In 2006, the BCBS published a new framework for capital requirements which is known as Basel II and which Barclays was required to follow from January 1, 2008.[48] Basel II is based on three "pillars," the first of which — "Minimum Capital Requirements" — left essentially unchanged both the definition of the components of capital and the minimum capital requirements set out in Basel I, but changed the way RWAs were to be calculated for the banking book. Specifically, under Basel II, large banks can use their own risk models to calculate RWAs for the banking book, provided that these models are acceptable to the regulators.[49] The FSA reviewed Barclays' models and deemed them to be acceptable for the purpose of Barclays' calculation of RWAs for the banking book under Basel II.[50] In addition to the minimum capital requirements of Pillar 1, Barclays was also subject, under Pillar 2 of Basel II, "to an overall regulatory capital requirement based on individual capital guidance ('ICG') received from the FSA. The ICG imposes additional capital requirements in excess of Pillar 1 minimum capital requirements."[51]

38. As noted above, under both Basel I and Basel II, Tier 1 capital includes ordinary shares/common stock, but also includes disclosed reserves (including retained earnings) and perpetual non-cumulative preference shares. Neither Basel I nor Basel II has an explicit requirement that specifies the amount of common (or tangible) equity — effectively ordinary shares, plus retained earnings — a bank has to hold. In fact, the term "common equity" was only introduced by the BCBS in Basel III.[52] However, with effect from December 31, 2006, the FSA had a requirement that at least 50% of a bank's Tier 1 capital must consist of what it referred to

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[47] "Amendment to the Capital Accord to Incorporate Market Risks," Basel Committee on Banking Supervision, January 1996, pp. 4–6.

[48] See "International Convergence of Capital Measurement and Capital Standards: A Revised Framework," Basel Committee on Banking Supervision, June 2006.

[49] See Barclays 2007 Annual Report, p. 246.

[50] See Barclays 2007 Annual Report, p. 246.

[51] See Barclays 2007 Annual Report, p. 246.

[52] See "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems," Basel Committee on Banking Supervision, December 2010 (Revised June 2011), pp. 12, 28.

as core tier one capital ("CT1").[53] This requirement was therefore equivalent to requiring that banks have a minimum of 2% of RWAs in the banking book in the form of CT1.[54]

39. As the financial crisis evolved, more and more attention was paid by investors and regulators to the ratio of tangible equity to RWAs because equity was better at absorbing losses than other components of Tier 1 capital. During 2008, the FSA started applying a CT1 requirement of 4% for the banking book.[55] After the crisis, the BCBS approved a new standard, the Basel III capital requirements standard, that is in the process of being phased in and that has a capital requirement for tangible equity and also includes a leverage ratio that is computed independently of RWAs.[56]

B. Dr. Mason's conclusions reflect a fundamental misunderstanding of the effects of future possible increases in Barclays' capital ratios on the Series 5 shares.

1. Dr. Mason mischaracterizes Barclays' target capital ratios.

40. Dr. Mason misleadingly implies that Barclays was failing to meet minimal regulatory capital ratios in early 2008. Specifically, in Section V of his report entitled "The Basel Accords," he notes that "RWAs are used as the denominator in calculating several key capital ratios" and that "a company's equity ratio has equity as the numerator and RWAs as the denominator."[57] He then goes on to observe that "Barclays, in its 2007 annual report, reported

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[53] See "General Prudential Sourcebook," FSA ("GENPRU 2"), §2.2.29, available at https://www.handbook.fca.org.uk/handbook/GENPRU/2/2 html?date=2008-01-01&timeline=True (last accessed January 27, 2016 — the "date=2008-01-01&timeline=True" setting ensures that the version accessed is that applicable as of January 1, 2008). Core tier one capital is defined in GENPRU 2 and is essentially the same as common equity under Basel III. GENPRU 2, Annex 2, available at https://www.handbook.fca.org.uk/handbook/GENPRU/2/Annex2 html?date=2008-01-01#D1871 (last accessed January 27, 2016).

[54] "The Turner Review: A Regulatory Response to the Global Banking Crisis," FSA, March 2009 ("Turner Review"), p. 56. As noted in the Turner Review, "Basel 2 rules on quality of capital for market risk capital requirements are different from those for credit risk and more lenient. As a result, a bank with significant trading book activity could face somewhat lower minimum CT1 than 2% and lower minimum Tier1 than 4%." Turner Review, p. 56.

[55] Turner Review, p. 57.

[56] See "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems," Basel Committee on Banking Supervision, December 2010 (Revised June 2011), pp. 2, 27–29, 61–63.

[57] Mason Report, ¶27.

that its 'Equity Tier 1 ratio was 5.0% under Basel I…and 5.1% under Basel II.'"[58] However, he fails to acknowledge that neither Basel I nor Pillar 1 of Basel II has a minimum requirement for the Equity Tier 1 ratio. As discussed above, the FSA at the time interpreted the guidelines of the BCBS for Basel II to mean that 2% of RWAs for the banking book, and a somewhat lower percentage of RWAs for the trading book, should be in the form of common equity and retained earnings. The section of the Barclays Annual Report for 2007 that addresses capital requirements does not discuss a Tier 1 equity requirement because there was no such requirement, nor does this section show data for such a ratio. For those ratios that were subject to minimum requirements — the risk asset ratio and the Tier 1 ratio — Barclays' actual capital position was considerably in excess of these minimum requirements. Specifically, as of December 31, 2007, Barclays had risk weighted assets (under Basel I) of £353,476 million.[59] Its total qualifying Tier 1 capital was £27,408 million, while its total net capital resources were £42,642 million, leading to a Tier 1 ratio of 7.8% and a risk asset ratio of 12.1%, far exceeding the respective minimum requirements of 4% and 8%.

41. Dr. Mason does not claim (nor have I seen any evidence to suggest) that Barclays was in danger of breaching either its Tier 1 or risk asset ratio requirements (which, as noted above, were 4% and 8% of RWAs, respectively, for the banking book and no higher for the trading book). Rather, his claim that Barclays faced a "significant risk" that it "would have to raise additional capital and/or sell assets in unfavorable market conditions"[60] is based solely on the fact that Barclays had an internal target of 5.25% for its Tier 1 equity ratio, was below this internal target in March 2008,[61] and was allegedly under pressure from the FSA to raise the ratio to the target

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[58] Mason Report, ¶38.

[59] Barclays 2007 Annual Report, pp. 40, 43–44.

[60] Mason Report, ¶2.

[61] Dr. Mason apparently ignores that investors were well-aware prior to the Series 5 offering that Barclays' Tier 1 equity ratio was 5.1%, below its target of 5.25%. For example, Barclays CEO John Varley noted during Barclays' earnings conference call following the release of its 2007 results that "In terms of the equity ratio…it is just 5.1; it is just below our target of 5.25." "[Barclays] Q4 2007 Earnings Call," *Bloomberg*, February 19, 2008, pp. 10–11.

level by year-end 2008.[62] I also note that, for those ratios that were subject to a regulatory minimum, Barclays' internal targets were more stringent than these requirements.[63]

42. Moreover, Dr. Mason mischaracterizes the dialogue between Barclays and the FSA. Specifically, he argues that, in March 2008, the FSA was concerned about Barclays' Tier 1 equity ratio and "require[d]"[64] or "directed"[65] Barclays to increase this ratio to 5.25% by year end. However, Dr. Mason cites no official FSA document and instead relies on e-mails reporting a conversation between the Chairman of the Board of Barclays and the head of the FSA. The document Dr. Mason cites actually states that the FSA "will be **expecting** us to be moving toward our target of 5.25%"[66] and that "the FSA would **wish** the Group to achieve **its own target** equity ratio before the end of 2008."[67] Again, it is important to note that Barclays was not in violation of any minimum capital requirements. Indeed, one of Barclays' internal documents cited by Dr. Mason notes that the FSA assured Barclays that "similar meetings were taking place with the chairmen of other major banks" and expresses surprise that the FSA would be fixated on the [Tier 1] equity ratio when "the Tier 1 ratio, not the equity ratio, is the standard to which the regulators pay most attention"[68] (a sentiment consistent with the fact, as explained above, that the most restrictive ratio in the Basel II rules is the one relating to the Tier 1 ratio). In sum, Barclays was not being reprimanded by its primary regulator for violating minimum regulatory capital requirements. Rather, the FSA, in response to well-known market events — such as the nationalization of Northern Rock and the sale of Bear Stearns to J.P. Morgan, to both of which Dr. Mason refers[69] — was unsurprisingly closely monitoring the capital positions of major UK banks, including Barclays, to ensure that they had adequate equity capital as well as contingency plans in place to raise more capital, if necessary, if conditions deteriorated further. It is also

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[62] Mason Report, ¶38.

[63] Specifically, Barclays' target Tier 1 ratio was 7.25%. See BARC-ADS-01647101, p. 41; BARC-ADS-01551245, p. 7. Barclays' target risk asset ratio was 11%. See BARC-ADS-01647101, p. 41; BARC-ADS-01551245, p. 7.

[64] Mason Report, ¶¶2, 43.

[65] Mason Report, ¶38.

[66] BARC-ADS-01288544, p.1 (emphasis added).

[67] BARC-ADS-00160145, p. 58 (emphasis added).

[68] BARC-ADS-00931095, p. 3 (emphasis not reproduced).

[69] Mason Report, ¶37.

worth noting that Dr. Mason is essentially advocating that Barclays should have disclosed the content of an **ongoing** discussion between its chairman and the chairman of the FSA that had yet to reach any resolution. One of the same internal documents to which Dr. Mason points contains the draft of an email from Marcus Agius, group chairman of Barclays, to Callum McCarthy, chairman of the FSA, which includes the following:

> "John [refers to John Varley, the CEO of Barclays] indicated to hector [refers to Hector Sants, the CEO of the FSA] on wednesday that our intention is to do more work ahead of our april board meeting in response to the points made by julian adams and mark wharton to john last week, (which were reiterated by hector on wednesday). This will enable us to come back to the fsa **after the april board meeting** with proposals as to our capital plan that are directed at addressing your concerns."[70]

43. In any event, Dr. Mason's mischaracterization is irrelevant because, as I explain below in the next section, to the extent the FSA was encouraging Barclays to increase its Tier 1 equity capital ratio, doing so would likely <u>reduce</u> the risk of the Series 5 shares and benefit Series 5 shareholders at the expense of ordinary shareholders.

2. Future increases in the Tier 1 Equity ratio would benefit the Series 5 preferred shareholders.

44. Dr. Mason appears to suggest — although he never expressly states — that the disclosure of the supposed "risk" that Barclays would need to increase its Tier 1 equity ratio would have negatively impacted investors' assessment of the Series 5 shares. Dr. Mason's apparent suggestion starts from the premise that in order for Barclays to increase this ratio, it would have needed to "sell assets at distressed prices and/or raise expensive capital from additional investors."[71] As I explain below, Dr. Mason's premise and conclusions are fundamentally flawed.

45. Dr. Mason claims that raising additional capital could be harmful to investors in the Series 5 shares. For example, he notes that "borrowing additional debt…may push the preferred

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[70] BARC-ADS-01288544, p. 2 (emphasis added, errors in original).
[71] Mason Report, ¶43.

stock (and common stock) investor further down the capital structure, putting the investment principal at further risk."[72] However, this is completely irrelevant since "borrowing additional debt" would not increase the Tier 1 *equity* ratio. The only way to increase this ratio by raising additional capital is for that capital to be raised in the form of *equity* or ordinary shares. But, as discussed earlier, increasing the equity cushion formed by the ordinary shares reduces the risk faced by investors in preference shares. Put differently, raising new equity would push the preference shares up, not down, the capital structure, thereby reducing the risk that preference shareholders will suffer any losses.

46. Dr. Mason himself writes that the risk that the "principal amount invested will be threatened by potential insolvency of the bank is important to preferred share valuation."[73] Yet, the very reason that the FSA apparently was encouraging Barclays to meet its Tier 1 equity target was to make Barclays more secure and make insolvency less likely. That issuing additional equity would make a firm more financially secure and less likely to default is widely recognized by academics and analysts alike. In the next Section, I discuss extensively modern credit analysis based on the work of Professor Robert C. Merton. A core result of this analysis is that a firm's default probability falls as its equity increases and indeed academic studies have shown that the issuance of ordinary shares is associated with an increase in the value of debt instruments.[74] Finally, as noted above, since the financial crisis, there has been a considerable push by regulators to require banks' capital structures to include much more equity than they did

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[72] Mason Report, ¶18.

[73] Mason Report, ¶17.

[74] For the short-run effect of the issuance of ordinary shares on debt values, see Elliott, W. B., A. K. Prevost, and R. P. Rao (2009), "The Announcement Impact of Seasoned Equity Offerings on Bondholder Wealth," *Journal of Banking & Finance*, Vol. 33, pp. 1472–1480 at p. 1473: "For bonds, our results indicate that bondholders experience positive abnormal returns on the same [seasoned equity offering ("SEO")] announcement…. Overall, our results are most consistent with a leverage risk reduction interpretation, where SEOs benefit bondholders through a reduction in the costs of financial distress engendered by the decrease in leverage associated with SEOs." For the long-run effect, see Eberhart, A. C., and A. Siddique (2002), "The Long-Term Performance of Corporate Bonds (and Stocks) Following Seasoned Equity Offerings," *The Review of Financial Studies*, Vol. 15, No. 5, pp. 1385–1406 at pp. 1386–1387: "We find a five-year (positive) delayed bond price response to their [firms'] SEOs… We also report evidence of a wealth transfer effect following SEOs. Ceteris paribus, an SEO decreases a firm's debt ratio and consequently its risk of default. Lower default risk …transfers wealth from [common] shareholders to bondholders." Although these studies focus on the impact on debt instruments, the results are more general and can be extended to preference shares — all other things equal, an increase in the size of the equity cushion formed by ordinary shares reduces the risk of more junior claims in a firm's capital structure.

before the financial crisis with the express purpose of making banks safer. Specifically, the Basel III regime has a common equity requirement of 4.5%.[75]

47. Dr. Mason's argument that "a firm that is less well-capitalized may be forced to raise capital at times when it is difficult to do so and therefore quite costly"[76] is equally flawed. Any equity issuance that would be costly because it dilutes existing ordinary shareholders would hurt existing ordinary shareholders but would still benefit preference shareholders. The reason for this is straightforward. Issuing equity at a low price to ensure the success of an equity issue means that the value of existing equity would fall — the existing ordinary shareholders would pay for the discount at which equity is issued. However, the equity issue would still increase the equity cushion that benefits existing preference shareholders and hence would decrease the risk of the preference shares. Dr. Mason's opinion is unfounded because he fails to distinguish properly between the interests of the holders of ordinary shares and the holders of preference shares.

48. Dr. Mason also appears to claim that selling risky assets to increase capital ratios could be harmful to preference share investors.[77] Again, Dr. Mason is wrong because he either ignores or fundamentally misunderstands the economics of preference shares and the critical distinctions between those shares and ordinary shares. Dr. Mason claims that "[a]ssets are revenue-generating (generally generating more revenue if they are exposed to more risk) and therefore selling assets to reduce RWAs can reduce a bank's future profitability."[78] While Dr. Mason is correct that less risky assets will, other things equal, generate lower expected returns, he fails to consider that any profits above those needed to meet promised payments to debt and preference shares accrue to the ordinary shares. In fact, it is widely discussed in the corporate finance literature that conflicts between debt and equity can arise for this very reason. Specifically, because equity holders stand to reap the upside of risky bets, they will choose to hold riskier

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[75] "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems," Basel Committee on Banking Supervision, December 2010 (revised June 2011), Annex 4.

[76] Mason Report, ¶13.

[77] Mason Report, ¶¶35, 43.

[78] Mason Report, ¶35.

assets than bondholders and preference shareholders, who have limited upside, would prefer.[79] It follows that reducing risks by selling assets may benefit debtholders and preference shareholders at the expense of ordinary shareholders.

49. In addition to his erroneous argument that selling risky assets would necessarily adversely affect the holders of preference shares, Dr. Mason also argues that Barclays may have to sell assets at "distressed prices" in order to maintain its capital ratios.[80] Here Dr. Mason's assumption is simply unfounded. Even if RWAs were increasing as a result of a build-up of risky credit assets, reducing RWAs does not necessarily require that Barclays sell risky assets into illiquid markets. First, Barclays could raise capital on acceptable terms. Second, Barclays could (and did) hedge risks rather than sell assets outright. Third, Dr. Mason has done no analysis as to what assets Barclays had available to sell, the extent to which those assets would have been subject to a liquidity discount, or whether such a discount would generate losses sufficient to jeopardize the dividend payments to the preference shares or Barclays' solvency. Barclays' balance sheet included a wide range of liquid assets that could have potentially been sold in order to reduce RWAs[81] — it is wrong to simply assume, as Dr. Mason does, that the only way to achieve such a reduction would have been to sell off its risky credit assets at unfavorable prices.

C. Summary

50. In this Section, I have explained a number of significant flaws in Dr. Mason's arguments. In particular, I have shown that he mischaracterizes the regulatory capital requirements to which Barclays was subject in the 2007 to 2008 time period, fails to understand that the issuance of equity in the form of ordinary shares (whether voluntary or as the result of regulatory pressure)

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79 See, for example: Jensen, M. C., and C. W. Smith (1985), "Stockholder, Manager, and Creditor Interests: Applications of Agency Theory," in *A Theory of the Firm: Governance, Residual Claims and Organizational Form*, Harvard University Press, December 2000, pp. 1–46; and Watson, D., and A. Head (2013), *Corporate Finance Principles and Practice*, 6th ed., Harlow, UK: Pearson Education Limited, p. 15.

80 Mason Report, ¶43.

81 For example, in its analysis of liquidity risk, Barclays disclosed a total of £499 billion of "on demand" financial assets, including £194 billion of trading portfolio assets. See Barclays 2007 Annual Report, p. 241.

would have benefitted preference shareholders, and also fails to acknowledge the options that Barclays would have had if it had wished to reduce its RWAs in response to falling capital ratios.

V. Plaintiff's experts fail to show that the additional credit losses they allege Barclays should have recorded in 2007 or disclosed prior to the Series 5 offering would have impacted investors in the Series 5 shares.

51. Mr. Regan argues that Barclays should have disclosed additional credit losses of at least £800 million based on developments that occurred in the first quarter of 2008, prior to the Series 5 offering.[82] The implication is that had these additional losses been disclosed, investors would not have been willing to purchase the Series 5 shares on the terms at which they actually purchased them.[83] Specifically, investors would have either been willing to pay less than $25 per share and/or demanded a coupon higher than 8.125%. Essentially, Plaintiff's claim appears to be that the additional losses would have increased certain risks faced by investors in the Series 5 shares and that, as compensation for these increased risks, investors would have demanded a higher expected return. However, none of Plaintiff's experts has provided any analysis to support this claim.

52. As a matter of financial economics, an investor in preference shares is buying securities that pay a periodic stream of dividends and that entitle the investor to a payment in the event the firm is liquidated. Thus, a non-trivial and previously unanticipated increase in the risk that investors will not receive the dividend payments and/or the promised liquidation payment should cause the shares to be issued at either a lower price or with a higher dividend rate. In this section, I refer to this risk as the "default risk" of the preference shares. The key word in the previous sentence is "unanticipated" — it is important to stress that the terms on which the shares are issued will depend on what investors know at the time the shares are issued rather than

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[82] Regan Report, ¶¶60, 65, 72, 82.

[83] I note that Plaintiff, in his deposition, testified that the "possibility of write-downs wasn't important to [him] as an investor." See Deposition of Dennis Askelson, September 15, 2015 ("Askelson Deposition"), 258:13–16. In other words, Plaintiff is essentially conceding that he would have been willing to pay the same price of $25 per share and accept the same dividend rate of 8.125%, even if the additional credit losses to which Mr. Regan refers had in fact been disclosed. Indeed, in June 2012, Plaintiff purchased an additional approximately $50,000 of the Series 5 shares at $25.02 per share. Askelson Deposition, 299:2–301:6.

simply on what the firm has disclosed. For example, suppose that a firm has suffered a loss that has not been disclosed by the firm but that investors already know about through other information channels. In that case, the price and dividend rate at which the preference shares are issued will reflect that loss — the terms on which the investors buy the shares will be unaffected by the fact that the loss has not been disclosed.

53. While I was not asked to, nor have I, formed an opinion as to Mr. Regan's claim as a matter of accounting that Barclays' estimated first-quarter losses should have been disclosed to investors prior to the Series 5 offering, I find that, as a matter of economics, neither Mr. Regan nor any of Plaintiff's other experts has performed any analysis to assess whether Barclays' expected first-quarter credit losses that Mr. Regan claims should have been disclosed were anticipated by investors or, to the extent they were not anticipated, how those losses would have affected the riskiness of the Series 5 shares. Consequently, Plaintiff's experts have no basis for concluding, and do not conclude, that such disclosure would have had an impact on the terms on which the Series 5 shares were issued. In this section, I present the results of various analyses I conducted that suggest that had the disclosures been made, they would have either (a) had no impact on the default risk faced by these investors, or (b) had an impact that would not have been distinguishable from the normal variation in the risk of these securities.

A. Results from the Kleidon Report

54. For Mr. Regan's argument — that Barclays failed to disclose estimated first-quarter losses — to have any relevance as a matter of economics, it must follow that such a disclosure would have increased the default risk of the Series 5 shares. Further, to the extent there was such a relationship between the allegedly undisclosed losses and the risk of the Series 5 shares, one would expect that when actual first-quarter losses were disclosed on May 15, 2008, the price of the shares should have fallen to reflect this increase in risk.[84] However, as the analysis of

[84] May 15, 2008 was the date on which Barclays released its Interim Management Statement covering its financial results for the first quarter of 2008. In this, it disclosed that "Barclays Capital credit market exposures resulted in net losses of £1,006m in the first quarter of 2008, due to continuing dislocation in the credit markets" and that "[t]he net losses…comprised: £495m against ABS CDO Super Senior Exposures; and £1,214m against other credit market exposures; partially offset by gains of £703m from the general widening of credit spreads on issued notes held at fair value." See Barclays PLC and Barclays Bank PLC Form 6-K, dated May 15, 2008, p. 6. The £800 million that Mr.

Barclays' expert, Dr. Allan Kleidon, shows, this was not the case.[85] In his report, Dr. Kleidon investigates, *inter alia*, the reaction of the price of the Series 5 shares to disclosures made by Barclays during 2008 and 2009 regarding its exposure to, and losses resulting from, risky credit assets, and concludes that "the price declines [in the Series 5 shares] … are not attributable in whole or in part to any of the alleged misrepresentations" and that "there were no statistically significant price declines in the Series 5 [shares] … on any days when (i) any allegedly corrective information was disclosed to the market, or (ii) any allegedly undisclosed risk materialized."[86] In particular, he notes that "[t]he closing price of the Series 5 ADS on May 15[, 2008] was $25.23, an increase of $0.06 over the closing price of $25.17 on the previous trading day (May 14). The residual return is not statistically significant."[87] In other words, Dr. Kleidon finds that when Barclays' actual first-quarter losses were disclosed — and were larger than the estimated losses that Mr. Regan claims should have been disclosed prior to the Series 5 offering — there was no negative price reaction for the Series 5 shares.

B. Investors' Anticipation of Credit Losses

55. One of the most likely explanations for the lack of a negative Series 5 share price reaction to the disclosure of the additional credit losses is that these losses were partially or completely anticipated. Many of the developments in the markets referred to by Mr. Regan were publicly known before the Series 5 offering and investors could assess their implications for the assets of Barclays. For example, the deterioration in the subprime sector was readily observable through publicly available data cited by Mr. Regan, such as a decline in new private housing unit building permits and an increase in mortgage delinquencies in the first quarter of 2008.[88] Similarly, the public was well aware of major events related to market deteriorations highlighted by Mr. Regan, such as the collapse of the investment bank Bear Stearns and its acquisition by J.P. Morgan in a transaction orchestrated by the Federal Reserve on March 17, 2008, as well as

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Regan claims should have been disclosed therefore represents less than 50% of the total of £1,709 million that was actually disclosed.

85 Expert Report of Allan W. Kleidon, Ph.D., filed on December 15, 2015 ("Kleidon Report").

86 Kleidon Report, ¶¶3, 107.

87 Kleidon Report, ¶54.

88 Regan Report, ¶29.

the failure of Carlyle Capital on March 14, 2008, as "the credit crisis spread[] from sub-prime products to other mortgage-backed investments."[89]

56. Indeed, Barclays highlighted the impact of market deterioration in its public filings prior to the issuance of the Series 5 shares, noting that the "sub-prime driven market dislocation affected performance in the second half of 2007" and that "Barclays Capital's 2007 results reflected net losses related to the credit market turbulence" of over £1 billion in 2007.[90] Barclays also predicted that such conditions would continue in 2008: "Going into 2008, the credit environment reflects concern about weakening economic conditions in our major markets…This environment has led to a more cautious approach to credit assessment, pricing and ongoing control in the financial industry, which we believe will continue through the year."[91]

57. Not surprisingly, equity analysts who followed Barclays and banks more generally in the first three months of 2008 understood that the values of credit assets were continuing to fall and that, consequently, further losses would be disclosed.[92]

58. Prior to the release in February 2008 of Barclays' full year results for 2007, analysts had expressed concerns about possible write-downs, even suggesting write-downs in the billions: "[O]ur analysis on the further slide in risk-asset valuations suggests that writedowns of £1bn in 4Q07 and FY2008 are likely."[93] In Barclays' earnings conference call following the release of its 2007 results, Barclays Capital CEO Bob Diamond expressed further belief that market recovery would be slow: "[T]he market is moving slowly. We think for all the reasons we've said about difficult market conditions in the first six months, it's unlikely that that market is going to be really moving we think before the second half of this year, if earlier maybe at the very end of the second quarter."[94] Following the call, analysts at Deutsche Bank continued to predict that additional write-downs would likely be disclosed: "We do expect further

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[89] Regan Report, Exhibit 1.
[90] Barclays 2007 Annual Report, p. 25.
[91] Barclays 2007 Annual Report, p. 65.
[92] Ordinary equity investors, as residual claimants, would be quite interested in asset write-downs of virtually any magnitude. Investors in preference shares would not; and Plaintiff himself was not, testifying that the "possibility of write-downs wasn't important to [him] as an investor." Askelson Deposition, 258:13–16.
[93] "Barclays: FY 2007 Results Preview," *Deutsche Bank*, February 7, 2008.
[94] "[Barclays] Q4 2007 Earnings Call," *Bloomberg*, February 19, 2008, p. 19.

writedowns – though are happy to be proved too pessimistic – and have included a further £1bn of writedowns into our 2008 forecasts, falling to £200 million in 2009 and 2010."[95] This view was shared by analysts at Panmure Gordon, who warned investors that "Although the headline numbers look solid, we think there is much more exposure to potential further write-downs…[F]urther deterioration in credit markets since 31 December 2007 would trigger additional write-downs."[96]

59. These predictions of further write-downs were re-iterated prior to the release of Barclays' first quarter 2008 results in May. Although analysts' predictions of the exact value of expected write-downs varied, the expectation of additional write-downs was pervasive. For example, on May 6, 2008, Société Générale noted that they "expect additional but contained credit market-related writedowns…of £500m" in the first half of 2008[97] and HSBC stated that eventually, under "relatively benign assumptions, it is difficult for us to see Barclays' additional credit market write-downs coming in at much less than GBP5.5bn."[98]

60. Indeed, when Barclays ultimately disclosed the credit losses for the first quarter of 2008, analysts stated that they were not surprised by the amounts involved. For example, an analyst at Fox-Pitt Kelton noted that "[t]he writedowns are relatively small…[i]t looks as though [Barclays has] come through the real credit turmoil of the first quarter in much better shape than Royal

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95 "Barclays: Strong Trading, Confident on Capital," *Deutsche Bank*, February 19, 2008.

96 "Bank Flash," *Panmure Gordon & Co.*, February 19, 2008.

97 "Barclays: Potentially Strengthening its Balance Sheet with the Help of a Strategic Investor," *Société Générale*, May 6, 2008.

98 "Barclays: Maybe a Rights Issue?" *HSBC*, May 8, 2008. HSBC analysts consistently had some of the most pessimistic expectations for write-offs beginning in early 2008. Following the release of Barclay's fiscal year 2007 results, HSBC expressed concern that "Even though the level of write-offs has increased, the question of whether Barclays has done enough remains." However, HSBC did admit that "ABX indices of RMBS pricing offer some support" for Barclays' claim "[T]hat the RMBS collateral within its CDOs is primarily pre 2006 vintage and therefore not exposed to the 60-70% write-offs witnessed by other institutions" ("RMBS" is the abbreviation for Residential Mortgage Backed Securities). See "Barclays: Relief Bounce, but Risk Exposure Remains," *HSBC*, February 21, 2008. Other analysts expressed understanding of Barclays' valuation of the write-downs, noting the vintages of Barclays' CDO positions and that the riskiest assets were being written down. See, for example, "Barclays: Full-Year Results Prev.," *Société Générale*, February 18, 2008: "[T]he extent of the writedowns will be dependent on the effectiveness of the group's hedges and the appropriateness of the marks taken on its CDO positions (most vintages pre-2006, all RMBS backed and 2nd lien collateral has already been written down to 0)." This approach was further defended after the release of Barclays' first quarter 2008 results. See, for example, "Barclays: Enough is (Probably) Enough – Upgrade to Outperform," *Fox-Pitt Kelton*, June 30, 2008: "[I]n light of the due diligence processes undertaken, comments from management in regard to the involvement of auditors through the year in valuing assets and the recent period of relative stability in global capital markets, the evidence suggests that Barclays has probably taken a defendable level of write-downs."

Bank."[99] Similarly, an analyst at Société Générale noted that "Barclays released its Q1 trading update on 15 May, showing an underlying performance in line with expectations for almost all of Barclays' businesses. Credit market related writedowns were £1.7bn, partially offset by strict cost control in Barclays Capital."[100]

61. All told, there is significant evidence — completely ignored by Mr. Regan — that part or all of the credit losses he claims should have been disclosed prior to the Series 5 offering could have been, and were in fact, anticipated by investors at the time of the issuance. As such, these disclosures would not have affected the risks investors perceived in the Series 5 shares, nor would they have affected the price or the dividend rate at which these shares were issued.

C. Barclays Remained Profitable Despite the Additional Credit Losses.

62. A key flaw in Mr. Regan's arguments is that he implicitly assumes that investors would have cared only about the first-quarter 2008 credit losses in isolation. As a matter of economics, investors in a firm's securities are concerned about the overall profitability of the firm because the value of these securities depends on the total value of the firm, which is the present value of the future cash flows of the firm that accrue to the investors.[101] In the May 15, 2008 Interim Management Statement, Barclays disclosed that "Group profit before tax in January and February was broadly in line with the monthly run rate for 2007. Following tougher capital markets trading conditions in March, Group profit for the first quarter was below that of the very strong prior year period."[102] In other words, despite the additional credit losses, Barclays remained profitable — in fact, as subsequently disclosed, profit before tax for Barclays for the first quarter of 2008 was £1,194 million.[103]

63. Further, Mr. Regan appears to assume that the disclosure that Barclays should have made prior to the issuance of the Series 5 shares would have disclosed only the £800 million of

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[99] "Barclays Writes Down $3.3 Billion on Credit Assets," *Bloomberg*, May 15, 2008.
[100] "Barclays: Still the Best Positioned in Our UK Banking Universe," *Société Générale*, May 16, 2008.
[101] Ross, S., R. W. Westerfield, and J. Jaffe (2002), *Corporate Finance*, 6th ed., New York, NY: McGraw-Hill, p. 94.
[102] Barclays PLC and Barclays Bank PLC Form 6-K, dated May 15, 2008, p. 3.
[103] Barclays PLC and Barclays Bank PLC Form 6-K, dated May 7, 2009, p. 1.

estimated first-quarter credit losses, but would not have disclosed estimated first-quarter profits. That is an implausible assumption, because if Barclays had made any such "off-cycle" disclosure, in all likelihood it would have disclosed the fact that it had remained profitable despite these losses (which is what Barclays did in its off-cycle "Trading Update" disclosure on November 15, 2007).[104] Investors would then have reacted to any *unexpected* components of this disclosure in their totality.

D. Analysis of Series 5 Share Price Movements

64. Even if the additional credit losses *were* unanticipated, it is impossible to assess the potential impact of their disclosure on the risks perceived by investors in the Series 5 shares without a proper and detailed economic analysis of these risks, something that Plaintiff's experts have simply failed to address. In Section E below, I perform such an analysis. In this section, I refer to my previous discussion of how the ordinary shares form an equity cushion that benefits preference shareholders and note that if this cushion is sufficiently sizeable, losses might have little or no discernable impact on the preference shares. Put simply, the larger the equity cushion, the greater the ability to absorb losses and the smaller the fraction of those losses that will be borne by more junior securities such as the preference shares.

65. An analysis of price movements for the Series 5 shares would indeed suggest that, at the time of the April 2008 offering, there was a sizeable equity cushion that substantially insulated these shares from being impacted by shocks to Barclays' asset values. Exhibit 4 plots the price of Barclays' ordinary shares and the price of the Series 5 shares starting from the latter's issuance in April 2008.[105] Despite large declines in the ordinary share price, the price of the Series 5 shares remained close to the issue price (and liquidation or redemption value) of $25 per share. From April 11, 2008 (the first day of trading data for the Series 5 shares) through June 30, 2008, Barclays' ordinary share price dropped by over a third of its value, while over the same

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[104] Barclays PLC and Barclays Bank PLC Form 6-K, dated November 15, 2007, p. 3.

[105] Technically, Exhibit 4 plots the ADR price as traded on the New York Stock Exchange under the ticker "BCS" – rather than the price of the ordinary shares traded on the London Stock Exchange – to avoid mismatched closing times and the need to convert the latter into USD. A graph of the price of the ordinary shares, converted into USD and taking into account the 4:1 conversion ratio into ADRs (see Barclays 2007 Annual Report, p. 267), would look essentially the same as that of the price of the ADRs shown in Exhibit 4.

period, the Series 5 share price stayed relatively stable, reaching a high price of $25.60 per share and a low price of $24.59 per share. As Exhibit 4 also shows, it was only in July 2008, after months of decline in Barclays' ordinary share price, that the price of the Series 5 shares declined briefly to approximately $20 before stabilizing again around $25 after a partial recovery in the ordinary shares at the end of July. Later in 2008 and early 2009, with further deterioration in the financial sector, reduced market liquidity, and the collapse of the investment bank Lehman Brothers, the price of the Series 5 shares declined again and ultimately fell well below $25, but there is no claim by Plaintiff that any of these later developments were known or should have been disclosed before the Series 5 offering. Moreover, the Series 5 shares eventually recovered to trade at or above $25 in and after January 2010, and throughout the credit crisis Barclays always paid timely dividends of the full 8.125% on the Series 5 shares.[106]

E. Economic Analysis of the Default Risk of the Series 5 Shares

66. As explained above, investors in the Series 5 shares bought securities that paid a dividend and involved a payment in the event of Barclays being liquidated.[107] Consequently, the price of the Series 5 shares could change as the risk of the dividend not being paid or the liquidation value not being received changed over time. In addition, the price of the Series 5 shares could change because of changes in capital markets. If the shares became less liquid or investors became more risk averse, their price would fall even if the risk of not receiving a dividend or of not receiving the liquidation value did not change. It follows from this that the price of the shares could fall simply because of developments in the capital markets rather than because of greater risk that Barclays would be unable to pay a dividend or would be forced into liquidation. In the following section, I examine the risk that Barclays would be unable to pay the dividend on the Series 5 shares, or that it would be in default on the liquidation value.[108]

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[106] *Bloomberg*.

[107] The securities also could be called, in which case the investors would receive a redemption payment. The call feature is irrelevant to the issues I am addressing and I therefore ignore it.

[108] Throughout his deposition, Plaintiff stresses the importance of the dividend stream from the Series 5 shares to his decision to invest in the shares. See Askelson Deposition, 179:6–17, 306:10–24.

1. Dividend risk

67. The dividends on the Series 5 shares are paid out of the "profits available for distribution" or "distributable profits" of Barclays Bank.[109] Section 830(2) of the UK Companies Act 2006 defines a company's profits available for distribution as "its accumulated, realised profits (so far as not previously distributed or capitalised) less its accumulated, realised losses (so far as not previously written off in a reduction or reorganisation of its share capital)."[110] Over time, determination of the level of distributable profits has become an increasingly complex exercise: "In the past, the majority of companies were able to determine their available levels of distributable profit, simply by referring to the balance on their profit and loss account reserve. However, as accounting standards have become more complex, the question of whether or not profits are realised seems to be more and more contentious."[111]

68. For the purposes of my analysis, therefore, I use the retained earnings (a term that is synonymous with profit and loss account reserve) of Barclays Bank as a proxy for the level of its distributable profits.[112] As of December 31, 2007, these stood at £14,222 million[113] — at the time the Series 5 shares were issued, this was the latest information available to investors regarding distributable profits. Mr. Regan claims that additional estimated first-quarter losses of £800 million should have been disclosed prior to the Series 5 offering. As I explained in Section V.C, had Barclays made the disclosures that Mr. Regan suggests should have been made, it is implausible that it would have disclosed ***only*** the additional losses — it is far more reasonable to

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[109] See footnote 23.

[110] "ICAEW Technical Release Tech 02/10: Guidance on the Determination of Realised Profits and Losses in the Context of Distributions Under the Companies Act 2006," The Institute of Chartered Accountants of Scotland, October 2010 ("Tech 02/10"), §2.7, available at http://www.icaew.com/~/media/corporate/files/technical/technical%20releases/legal%20and%20regulatory/tech%2002%2010%20guidance%20on%20realised%20and%20distributable%20profits%20under%20the%20companies%20act%202006.ashx (last accessed November 24, 2015). Note that when the spelling in quotes is British instead of American, I retain the British spelling.

[111] See, for example, "UK GAAP – Distributable Profits," Mondaq, available at http://www mondaq.com/x/58544/Accounting+Standards/UK+GAAP+Distributable+Profits (last accessed November 24, 2015).

[112] I have not found data on the level of distributable profits of either Barclays or Barclays Bank in their SEC filings.

[113] Barclays 2007 Annual Report, p. 260.

assume that it would have disclosed the fact that even after recording these additional losses, Barclays was still profitable.

69. Even if Barclays implausibly had disclosed only the estimated first-quarter credit losses that Mr. Regan claims should have been disclosed, the total of £800 million additional pre-tax losses would — applying Barclays' effective tax rate of 28%[114]— equate to post-tax losses of £576 million. Consequently, the estimate of Barclays Bank's distributable profits would need to be updated from £14,222 million to £13,646 million, a fall of 4.0%.[115]

70. To put this amount into context, the annual dividend commitment on the Series 5 shares is $215 million[116] — using the exchange rate on April 7, 2008 of US$1.99/£,[117] this translates to £108 million. As previously noted, the other eight preference share issues that pre-dated the issuance of the Series 5 shares have essentially equal priority to the Series 5 shares, as do the various issues of TONs and RCIs. Again using April 7, 2008 exchange rates, the total annual dividend commitment across all preference share issues is £395 million.[118] Adding in the annual coupon commitments on the three RCI issues that are recorded in Other Shareholders' Equity[119] would increase this to £527 million.[120]

71. In other words, Barclays Bank would be unable legally to meet its annual dividend and coupon commitments on the Series 5 shares and other securities with equal priority only if its distributable profits fell below £527 million. Given retained earnings of £13,646 million even

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114 Barclays 2007 Annual Report, p. 170.

115 This calculation is for illustrative purposes — determining the actual post-tax loss stemming from the given pre-tax loss would require a detailed analysis of the tax positions of the relevant companies within the Barclays group structure — but is nonetheless useful since it emphasizes the need to incorporate into the analysis the tax implications of any additional write-downs.

116 Barclays 2008 Annual Report, p. 296. Multiplying the notional amount of $2,650 million by the dividend rate of 8.125% yields $215 million.

117 *Bloomberg*.

118 See Exhibit 1. £395 million is calculated as the sum of the £108 million annual dividend commitment to the Series 5 shares and the £287 million sum of the annual dividend commitments to the outstanding preference shares as of April 7, 2008.

119 The coupon commitments on those TON and RCI issues that are included within Subordinated Liabilities are deducted in arriving at profit after tax; consequently, to include those commitments in the current analysis would essentially be to double count them.

120 See Exhibit 2. The total annual coupon commitment relating to the RCI issues that are recorded in Other Shareholders' Equity equals £132 million.

after the recognition of the post-tax equivalent of £800 million of additional pre-tax credit losses, this would require cumulative after-tax losses of £13,119 million.[121]

72. As of December 31, 2007, Barclays Bank had total assets of £1,227,583 million.[122] A cumulative after-tax loss of £13,119 million would represent a return on assets of negative 1.07%. In the eighteen years between 1990 and 2007 inclusive, Barclays Bank reported positive profit after tax in seventeen of those years — only in 1992 did it report a loss after tax (of £285 million).[123] Consequently, for Barclays Bank to become legally unable to pay dividends on the Series 5 shares, it would have to sustain a loss after tax *46 times higher* than the only annual loss it sustained from 1990 to 2007. Over this period, return on assets ranged from -0.21% (in 1992) to +1.00% (in both 1996 and 2000), with an average of +0.61%.[124] Essentially, Barclays Bank would need to experience its worst year (in terms of return on assets) in the last eighteen years *five times over* before it would be in a position where the dividend commitment on the Series 5 shares could not be legally met in full. In other words, the recognition of these additional losses would not have altered to any significant extent the fact that it was extremely unlikely that Barclays would sustain losses large enough that it would be unable to pay dividends on the Series 5 shares.

73. It should also be noted that Barclays had over £1 trillion of assets spread over seven different business lines — UK Banking, Barclaycard, International Retail and Commercial Banking, Barclays Capital, Barclays Global Investors, Barclays Wealth, and Head Office Functions and Other Operations — and Barclays Capital (the business line in which the assets at issue in this matter were recorded) represented only one-third of Barclays' 2007 profit before tax of £7,076 million.[125] Between 2008 and 2010, during what is generally acknowledged as the

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[121] Note that issuance of equity, whether ordinary shares or preference shares, has no impact on distributable profits.
[122] Barclays 2007 Annual Report, p. 251.
[123] See Exhibit 7.
[124] See Exhibit 7.
[125] Barclays 2007 Annual Report, pp. 4–5, 27.

worst financial crisis in almost a century, Barclays still reported profit after tax from continuing operations of £4,683 million, £3,511 million, and £4,549 million respectively.[126]

2. Default on the liquidation payment

74. Because of the features of the Series 5 shares — the fact that dividends on the shares do not represent contractual commitments but are paid only at the directors' discretion, and the perpetual nature of the shares, meaning that there is no scheduled redemption date — the shares themselves cannot be subject to an event of default. However, as described in Section III.A above, the shares are subject to default risk on the liquidation payment in the sense that an event of default can occur on another security in the capital structure, leading to a liquidation in which the holders of the Series 5 shares receive less than the $25 liquidation or redemption value of the shares.

75. To determine how (if at all) the risk of not receiving the liquidation payment would change as a result of the estimated first-quarter losses that Plaintiff claims should have been disclosed prior to the Series 5 offering, it is necessary to first identify the circumstances that would lead to such an event of default. Broadly speaking, default occurs when the company has insufficient resources to meet its contractual debt commitments. Consequently, assessing default risk involves answering the following three questions: (i) what is the default horizon over which we are interested in assessing the risk; (ii) what is the current level of resources out of which the debt commitments will be met, and how might these resources evolve over the period up to the default horizon; and (iii) what is the level of debt commitments to be met?

3. Distance to Default ("DTD") analysis

76. Starting in the mid-1970s, an extensive academic literature has developed which provides a foundation for analyzing the default risk of securities in a systematic and rigorous way and which motivates a number of practical approaches that are widely used by practitioners for the purpose of such analyses. The seminal paper on which much of this literature builds is Professor

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[126] Barclays PLC and Barclays Bank PLC Form 20-F, dated March 10, 2011 ("Barclays 2010 Annual Report"), p. 186.

Merton's "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates."[127] Professor Merton received the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (commonly referred to as the Nobel Prize in Economics) in 1997, in part because of this paper.[128] The key insight of this paper is that the likelihood of default depends both on the extent to which the value of a firm's assets exceed its commitments and on how volatile the value of the assets is. If the assets have no volatility, a firm that could pay its debt commitments today would never default. If the assets are highly volatile, it becomes more likely that even if the firm could pay its debt commitments today, the value of the assets could at some point fall enough that the firm would not be able to honor its commitments.

77. To quantify the likelihood that a firm will default on its debt commitments, it is necessary to compute what is commonly referred to as the "distance to default" or "DTD." This is a standardized (meaning that it can be compared across firms and through time) measure of the gap between the expected market value of assets at the time the debt commitments fall due and the level of those commitments. Essentially, all other things equal, the higher the DTD, the greater the expected gap between the level of the firm's debt commitments and the resources out of which these commitments will be paid, and consequently the less likely the firm is to default. The final step — translating the calculated DTD into a "probability of default" or "PD" — requires additional assumptions that I discuss below when I consider the implementation of this approach for Barclays Bank.[129]

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127 Merton, R. C. (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates," *The Journal of Finance*, Vol. 29, pp. 449–470. For a textbook presentation of this model, see Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, pp. 572–586.

128 See "Press Release," *Royal Swedish Academy of Sciences*, October 14, 1997, available at http://www nobelprize.org/nobel_prizes/economic-sciences/laureates/1997/press html (last accessed January 11, 2016).

129 Under the assumptions set out in Merton (1974), it can be shown that DTD should be calculated according to the following formula

$$DTD = \frac{ln\left(\frac{V}{B}\right) + \left(\mu - \frac{1}{2}\sigma^2\right)T}{\sigma\sqrt{T}}$$

where "ln" denotes the natural logarithm, V is the current market value of the firm's assets, B is the default threshold (the level of the debt commitments to be met), μ is the expected (continuously compounded) growth rate in the market value of the firm's assets, σ is the asset volatility (the variability through time of the market value of the firm's assets), and T is the default horizon i.e. the time (measured in years) before the debt commitments fall

78. By far the best known and most widely used version in practice of the methodology initiated by Merton (1974) is that originally developed by the KMV corporation,[130] and it is this model that I use to assess the impact of the alleged required additional write-downs on the default risk of the Series 5 shares. The KMV approach[131] has been used in peer-reviewed research,[132] has been subjected to extensive testing by Moody's that is publicly available, and is used by financial institutions worldwide. The use of this approach for global financial firms is the subject of a Moody's validation study for the period from 2001 to 2010.[133] The study concludes that "Our tests indicate that EDF [Moody's KMV] credit measures provide a very useful forward-looking measure of credit risk for global financial firms."[134] Authors affiliated with international organizations such as the International Monetary Fund ("IMF") and the Organization for Economic Cooperation and Development ("OECD") use this approach to assess the risk of default of banks.[135] The approach has also been used by economists at the European Central Bank and has been cited in publications from the Federal Reserve Bank of New York.[136]

79. Specifically, using Moody's KMV model, I calculate the DTD for Barclays Bank as of April 7, 2008. I then estimate what the DTDs would have been had Barclays Bank disclosed estimated first-quarter credit losses prior to the Series 5 offering as Mr. Regan claims it should have. Finally, I explain how the difference between the "actual" DTD and the "but-for" DTD with the estimated first-quarter credit losses is inconsistent with any claim that these losses

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due. Merton, R. C. (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates," *The Journal of Finance*, Vol. 29, pp. 449–470.

130 KMV was acquired by Moody's Analytics in 2002 — this implementation of the model is therefore typically referred to as the "Moody's KMV" model.

131 The core methodological document for the approach is "Modeling Default Risk." See Crosbie, P., and J. Bohn (2003), "Modeling Default Risk," *Moody's KMV*, pp. 1–31.

132 See, for example, Vassalou, M., and Y. Xing (2004), "Default Risk in Equity Returns," *The Journal of Finance*, Vol. 59, No. 2, pp. 831–868.

133 Crossen C., and X. Zhang (2011), "Validating the Public EDF Model for Global Financial Firms," *Moody's Analytics*, p. 4.

134 Crossen C., and X. Zhang (2011), "Validating the Public EDF Model for Global Financial Firms," *Moody's Analytics*, p. 1.

135 See, "Global Financial Stability Report," International Monetary Fund, April 2009, p. 120; Blundell-Wignall, A., and C. Roulet (2012), "Business Models of Banks, Leverage and the Distance-to-Default," *OECD Journal Financial Market Trends*, Vol. 2.

136 Landschoot, A. V. (2004), "Determinants of Euro Term Structure of Credit Spreads," *European Central Bank Working Paper Series*, No. 397, p. 10; Gropp, R., V. Jukka, and G. Vulpes (2004), "Market Indicators, Bank Fragility, and Indirect Market Discipline," *FRBNY Economic Policy Review*, pp. 53–62 at 55.

would have led to a significant increase in the default risk in the Series 5 shares. It is important to note that, while Mr. Regan and Mr. O'Driscoll criticize Barclays for failing to disclose gross credit losses in its 2007 Annual Report,[137] gross losses would not have affected the perceived default risk of the Series 5 shares because gross losses do not measure the change in the equity cushion and thus are not the relevant measure for understanding any change in the distance to default. It is particularly misleading and arbitrary that Mr. O'Driscoll measures the difference in Barclays' gross and net losses as a percentage of its shareholders' equity,[138] when that difference has, by definition, no effect on shareholders' equity at all.

80. Although certain features of the Moody's KMV model remain proprietary, there are three key elements that are widely known and understood — the use of a one year default horizon, a slightly simplified formula for calculating DTD, and the definition of the default threshold. For non-financial firms, the default threshold is defined as the sum of the firm's short-term (meaning amounts that are due in less than one year) liabilities plus one half of its long-term (meaning amounts that are due in more than one year) liabilities. The empirical motivation for counting only one half of the long-term liabilities is that these liabilities are not due within one year so that a firm has only to be able to service these liabilities to avoid having to file for bankruptcy. Moody's KMV does not provide a formula for the default threshold for financial firms, but states that it uses adjusted liabilities. I show that the conclusions I reach hold for different specifications of the default threshold.

81. The simplified DTD formula (taking the one year default horizon as given) is as follows[139]

$$DTD = \frac{EV - B}{EV\sigma}$$

[137] Regan Report, ¶52; O'Driscoll Report, ¶114.
[138] O'Driscoll Report, ¶114.
[139] Crosbie, P., and J. Bohn (2003), "Modeling Default Risk," *Moody's KMV*, p. 9.

where EV is the expected market value of the firm's assets one year from the date at which the DTD calculation is being performed, and (as above) B is the default threshold, and σ is the asset volatility.[140]

a) DTD analysis for Barclays

82. As noted above, for non-financial firms, the default threshold is defined as the sum of the firm's short-term liabilities plus one half of its long-term liabilities. Using information from the balance sheet of Barclays Bank and from the notes to the financial statements in the 2007 Annual Report, I determine this amount for Barclays Bank to be £1,116,690 million (see Exhibit 3 for details of this calculation).

83. The next stage in the calculation of DTD is the determination of the expected (discretely compounded) growth rate (r) in the market value of the assets of Barclays Bank. A standard approach in financial economics to this exercise is to use the capital asset pricing model ("CAPM") which states that

$$r = r_f + \beta(r_m - r_f)$$

where r_f is the risk-free rate, β is the firm's asset beta and $r_m - r_f$ is the expected market risk premium.[141] While the CAPM is used for the purposes of determining expected rates of return in a wide variety of settings, the details of how it is implemented (in particular, the estimation of the three inputs to the model) will often differ among users. For the purposes of my analysis, I use the following inputs (although I present my computations of DTD using a range of different values of r in order to ensure that my results are not sensitive to any particular choice of input):

- risk-free rate 4.5%[142]
- asset beta 0.25[143]

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[140] Technically, EV and V are related by the formula $EV = V(1 + r)$ where r is the expected (discretely compounded) growth rate in the market value of the firm's assets; in turn, μ and r are related by the formula $\mu = ln(1 + r)$.

[141] Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, pp. 34–35.

[142] As of April 7, 2008, the UK government yield curve showed rates ranging from 3.98% (3 years) to 4.81% (6 months), with the 1 year rate equal to 4.38%. The UK commercial bank yield curve showed rates ranging from 4.66% (25 years) to 5.67% (6 months), with the 1 year rate equal to 5.34%. See Bank of England Yield Curves, available at http://www.bankofengland.co.uk/statistics/Pages/yieldcurve/archive.aspx (last accessed January 10, 2016).

- expected market risk premium 6.00%

Using these inputs yields a value of r of 6.00%.[144]

84. To determine the current market value of assets and asset volatility, I use an approach that has become standard among users of models such as the Moody's KMV model.[145] This approach also relies on a key insight of Merton (1974), namely that it is possible to view equity (i.e. ordinary shares) as a call option on the market value of assets, where the strike or exercise price of the option is equal to the default threshold.[146] As of April 7, 2008, the market value of the ordinary shares of Barclays was £28,336 million.[147] Consequently, were either the current market value of assets or the asset volatility known, it would be a straightforward exercise to determine the other. However, neither is known, which requires the use of the iterative procedure described in Vassalou and Xing (2004) to determine both simultaneously.[148] Using a one year estimation period (from April 8, 2007 to April 7, 2008), this procedure yields an

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143 A common source of estimated betas for use in the CAPM is the website of Professor Aswath Damodaran at New York University. See "Damodaran Online," http://people.stern nyu.edu/adamodar. This data (which provides betas on an industry by industry, rather than firm by firm basis) is updated annually and so the most appropriate measure for my analysis would be the estimated asset beta for banks as of January 1, 2008. For US banks, this is 0.39. See "betas07.xls," available at http://people.stern.nyu.edu/adamodar/New_Home_Page/dataarchived.html (last accessed January 10, 2016). There is no data for European banks as of January 1, 2008; as of January 1, 2012 (the first date for which it is available), it is 0.11. See "betaEurope11.xls," available at http://people.stern.nyu.edu/adamodar/New_Home_Page/dataarchived html (last accessed January 10, 2016).

144 Estimating the expected market risk premium is a complex exercise and there are a number of different approaches that are typically used. Using three different approaches, Professor Damodaran calculates equity risk premiums for 2008 that range from 4.05% to 6.92%. "Historically Implied Equity Risk Premiums," available at http://pages.stern nyu.edu/~adamodar/New_Home_Page/datafile/implpr.html (last accessed January 10, 2016). Using the lower and upper limits of this range yields estimates of r of between 5.51% and 6.23% — 6.00% is therefore slightly above the mid-point of this range, but as Exhibit 5 shows, my qualitative results regarding the impact of the disclosure of the additional credit losses on DTD are essentially insensitive to any choice of r in this range.

145 See, for example, Crosbie, P., and J. Bohn (2003), "Modeling Default Risk," *Moody's KMV*, p. 17; and Vassalou, M., and Y. Xing (2004), "Default Risk in Equity Returns," *The Journal of Finance*, Vol. 59, No. 2, pp. 831–868 at 835–836.

146 Merton, R. C. (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates," *The Journal of Finance*, Vol. 29, pp. 449–470 at 454.

147 A review of the assets and liabilities sections of balance sheets of Barclays and Barclays Bank (both of which are prepared on a consolidated basis) reveals only insignificant differences. This indicates that the only asset that Barclays (as a standalone legal entity) owns is its 100% shareholding in Barclay Bank; moreover, Barclays (again on a standalone basis) has only ordinary shares in its capital structure. Consequently, it is appropriate to use the market value of the ordinary shares of Barclays as an estimate of the market value of Barclays Bank, the latter being the appropriate input to the DTD calculation.

148 Vassalou, M., and Y. Xing (2004), "Default risk in equity returns," *The Journal of Finance*, Vol. 59, No. 2, pp. 831–868.

estimated current market value of assets of £1,095,806 million and an estimated asset volatility of 1.24%.

85. I now have all of the pieces necessary for the calculation of the "actual" DTD (i.e. the DTD in the absence of any additional credit losses) for Barclays Bank as of April 7, 2008:

- Current market value of assets £1,095,806m
- Expected (discretely compounded) growth rate in market value of assets 6.00%
- Asset volatility 1.24%
- Default threshold £1,116,690m

Using these inputs yields a DTD of 3.128. It is important to note that the calculations I performed could have been performed by any investor before the issuance of the Series 5 preference shares. In other words, all the data were available and the methodology was known.

86. In Exhibit 5, I report the results of my DTD calculations for five other specifications of the default threshold (and also for estimates of r ranging from 5.50% to 7.00%) as follows — Exhibit 3 provides a detailed analysis of how each of these default thresholds was calculated. The first additional specification uses the same elements of the default threshold as above, but includes 100% (rather than 50%) of long-term liabilities, resulting in a default threshold of £1,234,852 million. The next two specifications (default thresholds of £1,307,054 million and £1,428,033 million respectively) include various off-balance sheet liabilities, and again differ according to whether 50% or 100% of long-term liabilities are included in the calculation.

87. The final two specifications (default thresholds of £570,448 million and £637,906 million, respectively) are somewhat different in that they make a distinction between operating liabilities and debt. Specifically, for non-financial firms, it is usually relatively straightforward to distinguish between net operating assets (the difference between operating assets and operating liabilities) and financial claims — various types of debt, preference shares, and ordinary shares — on those net operating assets. By definition, however, the operations of a financial institution are financial in nature, and so differentiating between operating liabilities and debt can be a complex exercise. However, a case can be made to treat these operating liabilities differently from the other financial liabilities of a financial firm because liabilities that are directly matched with assets could be collapsed by netting against assets in an event of default. To examine whether my conclusions are robust to excluding operating liabilities from

the default threshold, I have to identify which liabilities are operational liabilities. For this implementation of the KMV approach, I categorize the following liabilities as debt — deposits from other banks, customer accounts, financial liabilities designated at fair value, debt securities in issue, and subordinated liabilities.[149] Again, the two default thresholds differ in that one (£637,906 million) includes all liabilities, while one (£570,448 million) uses only half of the long-term liabilities.

b) DTD analysis in Mr. Regan's but-for world of disclosure of 2008 credit losses

88. Mr. Regan alleges that Barclays knew by the end of March 2008 that over the first three months of 2008 it had credit losses of at least £800 million.[150] He claims that this information was material (from an accounting perspective) and should have been disclosed before the Series 5 offering. I have not been asked to give an opinion as to the materiality (either from an accounting or securities law perspective) of the allegedly undisclosed information, but as a financial economist, I can assess and opine on how Barclays' DTD would have been affected if it had disclosed first-quarter credit losses of £800 million prior to the Series 5 issuance.[151]

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[149] My rationale for categorizing all other liabilities as operational is as follows. Six of the types — ***other liabilities; current tax liabilities; insurance contract liabilities, including unit-linked liabilities; deferred tax liabilities; provisions; retirement benefit liabilities*** — are non-financial in nature. See Barclays 2007 Annual Report, p. 244. Note 49 sets out the fair value of financial instruments (financial assets and financial liabilities) and these six categories are excluded from this table. The remaining five types — ***items in the course of collection due to other banks; trading portfolio liabilities; liabilities to customers under investment contracts; derivative financial instruments; repurchase agreements and cash collateral on securities lent*** are excluded from debt because in all cases, there is an equivalent category of asset recorded on the balance sheet, often of a size that is very close to that of the liability in question (where this is not the case, the amount within assets is larger). For example, "derivative financial instruments" within liabilities on the Barclays Bank balance sheet as of December 31, 2007 amount to £248,288 million — "derivative financial instruments" within assets amount to £248,088 million. See Barclays 2007 Annual Report, p. 244. In other words, the net liability with respect to derivative financial instruments represents only 0.08% of the gross amount.

[150] Regan Report, ¶¶60, 65.

[151] Mr. O'Driscoll also claims that Barclays decided to repurchase $975 million in structured investment vehicle ("SIV") paper held by funds within Barclays Global Investors ("BGI") in February 2008 and that this fact should have been disclosed prior to the Series 5 offering. See O'Driscoll Report, ¶125. He does not claim, nor have I seen any evidence to support such a claim, that Barclays was aware of a loss associated with this transaction as of the date of the offering — as such, it has no impact on my analysis of DTD changes stemming from Mr. O'Driscoll's allegations. It is also worth noting that $975 million, or approximately £490 million (using the exchange rate as of April 7, 2008), represented just 0.04% of my estimate of the current market value of Barclays' assets (as described above in ¶85). Thus, any potential impact of exchanging cash for the SIV paper on the volatility of Barclays' assets would be insignificant.

89. I start my analysis by proceeding with a but-for world that corresponds to the disclosure of the existence of (pre-tax) credit losses of £800 million for the first quarter of 2008. Had this disclosure been made, it would have been a matter of simple accounting to assess the impact on the book value of shareholders' equity — specifically, it would have been reduced by the post-tax equivalent of the pre-tax losses. However, it is far less clear what the impact on the market value of the firm's assets — the critical question when considering the impact on the DTD — would have been. To the extent that the financial markets were expecting additional credit losses and were factoring this expectation into the prices of Barclays' securities, disclosing that the losses were to be recorded for financial reporting purposes would not have conveyed new information to investors and would not have affected the market value of assets. In this case, the disclosure would have had no effect on the DTD and hence no effect on the probability of default of Barclays.

90. Thus, assuming that first-quarter 2008 write-downs were completely unanticipated represents the maximum direct effect on the DTD of the disclosure that Mr. Regan claims should have been made. Applying an effective tax rate of 28% to the pre-tax losses of £800 million yields a post-tax equivalent of £576 million. Assuming that the write-downs were completely unanticipated is equivalent to assuming that the market value of assets would fall by this amount. Hence, in the but-for world where the additional write-downs were completely unanticipated, the DTD would fall by 0.041 to 3.087 using the default threshold of £1,116,690 million.

91. To put this upper bound in context, and to explain how such a fall is inconsistent with any claim that the estimated first-quarter 2008 credit losses would have had a significant impact on the default risk of the Series 5 shares, I conducted two analyses.

92. The first analysis asks whether, assuming counterfactually that the first-quarter losses were completely unanticipated by the capital markets, the first-quarter losses led to a change in DTD that would be large compared to the volatility of DTD for a one-year horizon. My estimate of the annual volatility of DTD is 9.43% — in comparison, the additional credit losses lead to a decrease in DTD of 1.31%. In other words, over a year, investors could anticipate considerable variation in DTD that would dwarf in magnitude the impact on DTD of the additional credit losses, assuming counterfactually that they were completely unanticipated — the additional

losses, even if fully unanticipated, would not cause a meaningful change in one-year hence DTD given the yearly volatility of DTD.

93. The second analysis involves translating the "actual" and "but-for" DTDs into default probabilities (PDs). One of the key proprietary elements of the Moody's KMV model is the way in which this translation is effected — using the term expected default frequency ("EDF") as synonymous with PD, they observe that "the EDF model constructs the D[T]D-to-PD mapping based on the empirical relationship (i.e., the relationship evidenced by historical data) between D[T]Ds and observed default rates."[152]

94. I do not have access to this historical data and am therefore unable to map the actual and but-for DTDs that I have calculated into PDs in exactly the same way that Moody's Analytics would. Consequently, for the purposes of illustration, I adopt the assumption in the Merton (1974) analysis that the logarithm of DTD has standard normal distribution. I believe that this is reasonable for two reasons. First, as Figure 8 of Sun, Munves, and Hamilton (2012) shows, for DTDs in the range of 3.087 to 3.128, differences between the PD calculated assuming normality and the EDF calculated using Moody's KMV's proprietary are relatively small.[153] Secondly, I am interested in the change in DTD, and the consequent change in PD, resulting from the additional write-downs. To the extent that the normality assumption distorts the estimated PDs, the distortion created in the estimated change in PDs will almost certainly be much lower.

95. With this assumption, a DTD of 3.128 translates into a PD of 0.09%, while a DTD of 3.087 translates into a PD of 0.10% (*i.e.*, the change in PD, assuming normality, is only 0.01%).

96. Again, it is important to note that this analysis provides a maximum or upper bound on the reduction in DTD that would result from the disclosure of estimated first-quarter 2008 credit losses. In reality, the impact on DTD would have been significantly lower than this because (i)

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[152] Sun, Z., D. Munves, and D. T. Hamilton (2012), "Public Firm Expected Default Frequency (EDF) Credit Measures: Methodology, Performance, and Model Extensions," *Moody's Analytics*, p. 14.

[153] In other words, the reason why Moody's Analytics does not use the normality assumption is: "[t]he differences between the PD calculated using normally distributed D[T]Ds and the D[T]D-to-EDF mapping is obvious **on both ends of the credit spectrum**. On one hand, the observed default rates for firms with medium to high credit quality are significantly higher than implied by the normal distribution…On the other hand, EDF measures for poor quality (i.e., low D[T]D firms) are much lower than the PDs predicted by a normal distribution of D[T]Ds..." is of less relevance here – the DTDs I have calculated are at neither end of the credit spectrum. See Sun, Z., D. Munves, and D.T. Hamilton (2012), "Public Firm Expected Default Frequency (EDF) Credit Measures: Methodology, Performance, and Model Extensions," *Moody's Analytics*, p. 14 (emphasis added).

as discussed earlier, given market-wide developments, investors would have anticipated additional credit losses in the first quarter of 2008; (ii) it is implausible to assume that Barclays would only disclose additional losses without also disclosing gains and profits realized in the first quarter of 2008; and (iii) investors would likely have assumed that Barclays would have managed its capital ratios and wanted to move them towards its targets if losses reduced those capital ratios. I explain each of these factors in additional detail below.

(1) At least some additional credit losses would have been anticipated.

97. The DTD analysis above assumes that the full £800 million in first-quarter credit losses would have been entirely unanticipated. However, as explained in Section V.B above, such an assumption is implausible given publicly known developments in the market and is directly refuted by analyst commentary and Barclays' own disclosures. Any anticipated credit losses would be excluded from the change in DTD as described above; to the extent the losses were fully anticipated, the change in DTD would be zero.

(2) Barclays' overall first quarter results reflected a net gain.

98. Adjusting DTD only for disclosure of first-quarter credit losses does not take into account the gains and profits that Barclays made during the first quarter. If DTD is estimated immediately before issuance in the but-for world, it should also be adjusted for the fact that Barclays had positive profit before tax during that period. In that case, incorporating the disclosure of the overall net results for the quarter could result in a DTD that is higher than the DTD investors would have calculated to the extent that these net results were unanticipated.

(3) Any risk assessments made by Series 5 investors would have incorporated the likelihood that Barclays would have taken action to maintain target capital ratios.

99. The DTD analysis presented so far makes an additional crucial assumption, which is that Barclays would have taken no step to adjust its capital structure in response to losses. If the performance of Barclays in the first quarter of 2008 led it to have lower capital ratios than its

targets, investors would have expected that it would have taken steps to move its capital ratios closer to its targets. The fact that firms such as Barclays adjust their leverage dynamically over time to make it more likely that they will meet their targets has been shown in academic research to be an important consideration in estimating default probabilities.[154] In the extreme case where a firm can always immediately issue equity to make up losses, the debt of such a firm is essentially riskless as it will always have positive equity.

100. In fact, it was well-known in the marketplace that Barclays carefully managed its capital ratios. For example, on a conference call with market analysts in November 2007, CEO John Varley stated that Barclays had the ability to "dynamically [] manage [its capital] ratios" and regulators "absolutely understand how we're managing them."[155] Beginning in 2008, some investor commentary acknowledged that, in order to maintain its equity ratio in the case of any further write-downs, Barclays would have to actively manage its capital base by issuing stock.[156] Indeed, in April 2008, Barclays publicly affirmed its commitment to maintaining its target capital position: "John Varley stressed that 'this is a time for strong ratios'" and "pointed out how active it has been in managing its capital base in recent months, which obviously includes the issuance of equity to China Development Bank and Temasek last summer."[157] Accordingly, it is reasonable to believe that investors would have expected Barclays to continue to manage its equity ratio by issuing stock in response to losses. With such a policy, the impact on default risk of losses would have been attenuated, and possibly eliminated, as the expected equity cushion protecting the preference shareholders would not have fallen by as much as the unanticipated losses and might even not have fallen at all. This would further support the finding that preference share prices would be relatively insensitive to additional credit losses.

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[154] As noted by Collin-Dufresne and Goldstein (2001), "[m]ost structural models of default preclude the firm from altering its capital structure. In practice, firms adjust outstanding debt levels in response to changes in firm value…" (Moody's KMV is an example of what is termed a "structural model" in the financial economics literature). They show that taking into account how firms manage their capital structure can have important effects on assessment of default risk. See Collin-Dufresne, P., and R. S. Goldstein (2001), "Do Credit Spreads Reflect Stationary Leverage Ratios?" *The Journal of Finance*, Vol. 56, No. 5, pp. 1929–1957 at 1929.

[155] "BCS – Barclays Bank PLC (Barclays Capital) Trading Update Conference Call," *Thomson Financial*, November 15, 2007, p. 10.

[156] "Company Alert Barclays FY 2007 Snap Reaction," *Deutsche Bank*, February 19, 2008, p. 4.

[157] "Barclays," *Charles Stanley Equity Research*, April 24, 2008, p. 128.

101. Indeed as discussed in Section IV.B above, Dr. Mason stresses the importance to the FSA of the equity Tier 1 ratio in 2008. Barclays had an internal target equity Tier 1 ratio of 5.25%. Investors would have anticipated that if losses pushed Barclays away from this target, it would take steps to issue equity, especially if encouraged to do so by the FSA. As discussed earlier, any equity issuance would have increased the DTD and hence made the Series 5 shares safer.

102. In sum, it follows from this analysis that a disclosure by Barclays of credit losses for the first three months of 2008 immediately before the issuance of the Series 5 shares would likely have had no discernible adverse impact on DTD because:

- the impact on DTD would have been small even had the losses been completely unanticipated;
- in fact, investors anticipated at least a certain level of additional credit losses;
- the first quarter of 2008 did not result in a net loss that would have reduced the market value of Barclays' assets; and
- investors would have anticipated that, if the losses meant that Barclays would fall below its target for its equity Tier 1 ratio, it would have eventually offset losses through equity issuance, which would have increased the DTD.

c) Additional DTD analyses

103. As noted above, Mr. Regan claims that Barclays should have disclosed "additional known or knowable credit losses…of not less than £800 million…"[158] but does not specify the exact level of additional losses that he believes should have been disclosed. However, the actual losses reported by Barclays for the first quarter of 2008 represent an obvious upper bound on the additional losses that ***could*** have been disclosed. In its Form 6-K dated May 15, 2008, Barclays disclosed "net losses" from "credit market exposures" of £1,006 million.[159] I therefore repeated my DTD analysis assuming disclosure of (the post-tax equivalent of) additional credit losses of this amount and found that the results are essentially unchanged. Specifically, DTD falls by

[158] Regan Report, ¶65.
[159] Barclays PLC and Barclays Bank PLC Form 6-K, dated May 15, 2008, p. 6.

1.65% from 3.128 to 3.076 — assuming normality, this again equates to an increase in PD of 0.01% from 0.09% to 0.10%.[160]

F. Summary

104. Overall, the analysis in this section has identified numerous problems with the arguments advanced by Mr. Regan, problems that render his opinions flawed and unreliable. An analysis of movements in the price of the Series 5 shares shows that the actual disclosure of the credit losses that Mr. Regan claims should have been disclosed prior to the Series 5 offering had no discernible impact on the holders of these shares. There are at least three likely explanations for this finding. First, a careful examination of the impact on this default risk of these losses (and indeed the additional write-downs that Mr. O'Driscoll suggests should have been taken in 2007) shows that this impact (as measured by changes in distance-to-default) would have been indistinguishable from the normal variation in the risk of the Series 5 shares. Second, given market developments during the first quarter of 2008, investors would have likely anticipated some or all of these losses. Third, investors would likely have expected Barclays to have reacted to the losses by issuing new equity, if necessary, to restore its capital ratios; such an action would, by increasing the loss-absorbing equity cushion that protects preference shareholders, have offset any increase in the default risk of the Series 5 shares caused by the losses.

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[160] Separate from Mr. Regan's claim described above, Mr. O'Driscoll appears to suggest that Barclays' disclosed write-downs in its year-end 2007 financial statements were inadequate, stating that "Barclays overvalued its CDO liquidity facilities [in its 2007 Annual Report]" and that "if Barclays' liquidity facilities had been valued in conformity with its mark-to-market CDOs, they should have been written down by approximately $3.6 billion." See O'Driscoll Report, ¶¶111–113. It is unclear whether Mr. O'Driscoll is claiming that additional write-downs should actually have been taken, and he presents no evidence whatsoever to support a claim that all of the liquidity facilities should have been valued in conformity with the mark-to-market CDOs. Additionally, like Mr. Regan, he has done absolutely no analysis to assess the relevance of any allegedly inadequate write-downs to the risks of the Series 5 shares. At the request of counsel, I reran the DTD analysis assuming an unanticipated reduction in the market value of assets of £1,296 million, which is the after-tax effect of the full $3.6 billion referenced by Mr. Driscoll, assuming an effective tax rate of 28% and applying the year-end exchange rate of $1.99/£. The result is a 0.093 reduction in DTD to 3.035. This equates to a PD (assuming normality) of 0.12%, with a percentage change in DTD of 2.95%, less than one-third of the annual volatility of DTD changes.

VI. Plaintiff's experts misunderstand the nature of hedging when asserting that there was "hidden risk" related to negative basis trades.

105. Plaintiff's experts Mr. O'Driscoll and Mr. Regan claim that, at the time of the Series 5 offering, Barclays failed to disclose certain exposures to monoline insurers and to risky credit assets, including CDOs and CLOs.[161] Mr. O'Driscoll claims that as of the end of 2007, Barclays "held a total of £21.5 billion in undisclosed credit market positions."[162] Similarly, Mr. Regan claims that "Barclays' [*sic*] failed to disclose material potential credit loss exposures…by failing to: (1) separately identify £21.6 billion of notional valued assets insured at December 31, 2007, and (2) disclose the underlying nature of those same assets exposed to known credit risk (*e.g.,* CDO, CLO, RMBS)."[163] The so-called "undisclosed exposure" to which Plaintiff's experts refer relates to transactions, sometimes referred to as negative basis trades, which Barclays engaged in with a number of financial institutions known as monoline insurers (or "monolines") and also a number of banks.[164]

106. Generally speaking, the negative basis trades were often structured as follows. Barclays would purchase a senior, AAA-rated tranche of a structured finance security, for instance a super-senior tranche of a CDO. It would then hedge against credit losses from this tranche by buying protection (similar to buying insurance) from a counterparty, typically a monoline. The hedge would be structured as a credit default swap (or "CDS"). This means that Barclays would make periodic payments to the insurer and the insurer would pay credit losses — interest and principal payments not made — as they occurred. At the time that Barclays put on these trades, each of the monolines had an AAA rating.[165] Hence, with such a trade, Barclays effectively insured an AAA-rated note with insurance from an AAA-rated counterparty. In economic terms, Barclays laid off the credit risk of the security but took on counterparty risk with the insurer.

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[161] "CLO" is the abbreviation for Collateralized Loan Obligation.
[162] O'Driscoll Report, ¶115.
[163] Regan Report, ¶97.
[164] See Kosowski, R., and S. Neftci (2015), *Principles of Financial Engineering*, London, UK: Elsevier Inc., p. 632 for a general discussion of negative basis trades.
[165] Deposition of Sean Teague, September 29, 2015 ("Teague Deposition"), 128:2–8; also see Exhibit 6.

With the hedge, Barclays no longer had exposure to the credit risk of the security as long as counterparty risk could be ignored.

107. In risk management, "[c]redit exposure…defines the loss in the event of a counterparty defaulting."[166] As noted in one of the leading textbooks on counterparty credit risk, "exposure is clearly a very time-sensitive measure since a counterparty can default at any time in the future…Essentially, characterizing exposure involves answering the following two questions: what is the current exposure (the maximum loss if the counterparty defaults today) [and] what is the exposure in the future (what could be the loss if the counterparty defaults at some point in the future)? The second point is naturally far more complex to answer than the first…"[167]

108. Consider an example where Barclays has purchased, from a monoline, credit protection on an AAA-rated note with a principal amount of $100 million and interest of 6%. Suppose now that the monoline files for bankruptcy today. If the note made all of its payments, the monoline would never have to make payments. Hence, for Barclays to suffer a loss as a result of the monoline filing for bankruptcy, it has to be that the note has enough credit risk that there is a risk that it will not make promised payments at some time in the future and that the monoline will have to pay. In addition, the extent of any losses would depend on how much the monoline would still be able to pay following its bankruptcy filing. Suppose that today the note sells for 98% of par, and that the fall in price reflects an increase in default risk. In this case, an estimate of the present value of the payments that the monoline would have to make would be 2%, in that if the monoline made all its payments, the note plus the insurance would have no risk.[168] If the monoline files for bankruptcy and there is no recovery, Barclays would lose 2% in terms of today's value. Hence, 2% measures the current exposure of Barclays to the monoline for that note. The exposure to monolines reported by Barclays in its 2007 financial statements was basically current exposure. In fact, Barclays explicitly noted in its financial statements that it did not measure its exposure to credit risk based on notional value: "the notional amounts of certain

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[166] Gregory, J. (2012), *Counterparty Credit Risk and Credit Value Adjustment: A Continuing Challenge for Global Financial Markets*, 2nd ed., West Sussex, UK: John Wiley & Sons Ltd., p. 30.

[167] Gregory, J. (2012), *Counterparty Credit Risk and Credit Value Adjustment: A Continuing Challenge for Global Financial Markets*, 2nd ed., West Sussex, UK: John Wiley & Sons Ltd., p. 30.

[168] The estimate would overestimate the present value of the future payments from the monoline if the mark-to-market value of the note is artificially depressed, perhaps because of illiquidity.

types of financial instruments provide a basis for comparison with instruments recognized on the balance sheet but…do not indicate the Group's exposure to credit or price risks."[169] Barclays also explicitly explained in its earnings conference call for the 2007 financial year that it calculated exposure to the monolines based on a mark-to-market of the underlying assets, noting that Barclays believed this measure was "the best proxy for our exposure."[170]

109. Mr. O'Driscoll argues that Barclays should have disclosed a different measure of exposure.[171] He points out that potential exposure was disclosed to the FSA and that one board committee saw an estimate of potential exposure. He fails to note that Mr. LeBlanc, the Risk Director of Barclays, used the current exposure and not the potential exposure when he reported to the board before the issuance of the Series 5 shares.[172] Potential exposure (or potential future exposure) measures the worst counterparty loss that could be sustained in the <u>future</u> at some probability level.[173] This measure, like many of the six measures Mr. O'Driscoll references, is better described as a possible future scenario that could arise, rather than any determination of actual current exposure.[174] Measures such as potential exposure are relevant not only to the specific example of these negative basis trades, but also to over-the-counter derivative transactions more generally. Yet, a search of the Barclays Annual Report for 2007 for the terms "potential exposure" or "potential future exposure" yields no hits. Hence, Mr. O'Driscoll seems

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[169] Barclays 2007 Annual Report, p. 172.

[170] "That is the mark-to-market of – to the extent we rely on the monoline insurers for their guarantees or credit wrappers that they've applied to individual assets. We take the mark-to-market because we believe it's the best proxy for our exposure, but as with any mark-to-market, is not a realized loss." See "[Barclays] Q4 2007 Earnings Call," *Bloomberg*, February 19, 2008, p. 12.

[171] O'Driscoll Report, ¶119.

[172] BARC-ADS-01544567, pp. 1, 4.

[173] "In risk management, it is natural to ask ourselves *what is the worse exposure we could have at a certain time in the future*. [Potential exposure] will answer this question with reference to a certain confidence level." Gregory, J. (2012), *Counterparty Credit Risk and Credit Value Adjustment: A Continuing Challenge for Global Financial Markets*, 2nd ed., West Sussex, UK: John Wiley & Sons Ltd., p. 127.

[174] Mr. O'Driscoll notes that there are "six metrics used to measure exposure to a counterparty." O'Driscoll Report, ¶118. In addition to counterparty exposure or replacement cost (more commonly referred to as current exposure) and potential future exposure, he refers to expected exposure (average exposure on a **future** date), expected positive exposure (the expected exposure — a future measure — in a given time interval), and right-way/wrong-way exposures (these are essentially adjustments to other future exposure measures to reflect correlation between the position giving rise to the exposure and the creditworthiness of the counterparty. For a discussion of wrong-way and right-way risk see Gregory, J. (2012), *Counterparty Credit Risk and Credit Value Adjustment: A Continuing Challenge for Global Financial Markets*, 2nd ed., West Sussex, UK: John Wiley & Sons Ltd., pp. 307–338.

to be asserting that Barclays should have disclosed monoline exposures differently from the other exposures that it reported.

110. Plaintiff's experts are essentially arguing that: (a) Barclays had on its balance sheet £21.6 billion in credit assets that were insured or "wrapped" by monolines and (b) when Barclays disclosed its exposure to various classes of credit market assets in its 2007 financial statements, it did not disclose the exposure it would have had to the wrapped assets had they not been wrapped. For example, Mr. O'Driscoll states that Barclays "represented that its gross CDO exposure totaled £6,018 million" when, in fact, Barclays' "actual gross ABS CDO exposures alone totaled up to £12.2 billion."[175] Additionally, when Barclays disclosed its exposure to the monoline insurers in its financial reports, it reported the £1.3 billion current exposure, which was based on write-downs of the wrapped assets as of that date, instead of the notional amount of £21.6 billion.[176] Similarly, Mr. Regan claims that Barclays knew of "exposures that materially exceeded the £1.3 billion relating to risk exposed CDOs, CLOs, US RMBS and other wrapped assets held at December 31, 2007."[177]

111. To understand why these arguments are flawed, it is useful to note that the transactions worked in such a way that Barclays had no exposure to the insured assets as long as it remained unlikely that the counterparty would default. In other words, a CDO note's value could fall to zero, but if the monoline made good on its promised payments, Barclays would be in the same situation as if the note were trading at par.

112. Mr. O'Driscoll and Mr. Regan seem to use the existence of counterparty risk — which is present to some degree in any hedging transaction — to imply that Barclays' hedges of certain risky assets did not reduce its exposure to those assets. This conclusion is fundamentally inconsistent with how financial market participants think about hedging and is based on a gross exaggeration of the riskiness of Barclays' exposures to the monolines as they would have been understood at the end of 2007 or at the time of the Series 5 offering.

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175 O'Driscoll Report, ¶¶103, 106. "ABS" is the abbreviation for Asset Backed Security.

176 Barclays 2007 Annual Report, p. 53.

177 Regan Report, ¶87.

113. Specifically, Barclays had an exposure to the monolines only to the extent that there was a decline in the credit quality of the insured assets, in which case current exposure was measured as the difference between the notional and fair market value of these assets. As of December 31, 2007, current exposure stood at £1,394 million — notional value of £21,573 million less fair market value of £20,179 million.[178] Essentially, this is the present value of the cash flows that Barclays expected to *claim* from the monolines. If the monolines were default-free, this would also be the amount that Barclays expected to *receive* from the monolines. Put slightly differently, if the monolines were to default, Barclays would lose £1,394 million.

114. Though the monolines were highly-rated as of December 31, 2007, they were not default-free. Hence, Barclays took a provision for counterparty losses to the monolines. The amount of the provision was £59 million, so that the amount reported on the balance sheet was actually £59 million lower (at £1,335 million) than the £1,394 million referred to above.[179] Note that this provision, which reflects the expected loss arising from the counterparty risk of the monolines, is an extremely small fraction of the current exposure because, at the time, the typical monoline had an AAA credit rating and the probability of default for an AAA-rated credit had been historically extremely small.[180] Neither Mr. O'Driscoll nor Mr. Regan appears to criticize the size of the provision taken by Barclays.[181] Hence, they effectively concede that as of the end of 2007, expected credit losses on monoline exposures were extremely small.[182] Also note that £1,335 million is the exposure reported in the 2007 financial statements, and this exposure is reported on exactly the same basis as that for other classes of credit market assets.

115. As I have just noted, neither Mr. Regan nor Mr. O'Driscoll appears to dispute the validity of the £1,335 million in monoline exposure that was reported on Barclays' 2007 balance sheet.

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[178] Barclays PLC and Barclays Bank PLC Form 6-K, dated August 7, 2008, p. 37.

[179] Barclays PLC and Barclays Bank PLC Form 6-K, dated August 7, 2008, p. 37.

[180] For example, Moody's reported historical 1-year and 7-year cumulative impairment rates for Aaa-rated structured products of 0.06% and 0.30%, respectively. See "Default and Loss Rates of Structured Finance Securities: 1993 – 2007," *Moody's*, July 2008, p. 34. For corporates, Moody's reported historical average 1-year and 5-year cumulative credit loss rates of 0.000% and 0.034%, respectively. See "Corporate Default and Recovery Rates, 1920 – 2007," *Moody's*, February 2008, p. 11.

[181] Additionally, Barclays' auditor, PricewaterhouseCoopers, vetted Barclays' methodology for calculating reserves on its negative basis trades. See PwC002893, p. 4.

[182] To be precise, they amounted to 0.0048% of Barclays' assets and 3.609% of Barclays Capital's net credit market losses in general.

Instead, they take issue with the lack of disclosure of the £21,573 million notional amount of underlying insured assets. However, from the discussion above, it is clear that for Barclays to sustain a loss of this notional amount would require that **both** the value of the underlying credit market assets went to zero **and** the monolines defaulted in such a way that they failed to make all the payments that they were contractually obligated to make. Essentially, therefore, Plaintiff's experts are arguing that *if* the monolines could not meet their obligations, then Barclays' exposure to the underlying credit market assets would in fact be higher than reported. And *if* the value of the credit market assets declined, then Barclays' exposure to the monolines would in fact be higher than reported.

116. Mr. Regan and Mr. Driscoll have, to my knowledge, done no analysis to determine whether disclosing potential exposure or disclosing the notional amount of structured financed notes insured with the monolines would have made any difference to the terms on which the Series 5 shares were issued. They also fail to note that investors would have known that Barclays must have been insuring a notional amount that was a multiple of the current exposure of £1,335 million. For instance, if investors assumed that the structured notes had fallen from par by 5%, then they would have inferred that the monolines were insuring notes with a notional amount of approximately £27 billion.

117. Plaintiff's experts further ignore that before the Series 5 issuance the monolines had mostly AAA ratings, and instead attempt to argue that the notional amount should have been disclosed by creating the incorrect impression that there was a high risk that monolines would fail to honor their commitments. For example, Mr. O'Driscoll notes that "by the end of 2007 and early 2008, the monoline financial guarantors were 'in crisis,' had incurred enormous losses and were of questionable creditworthiness."[183] He also points to commentary and events that occurred *after* the Series 5 offering even though investors could not have evaluated those risks with that same benefit of hindsight. For his part, Mr. Regan quotes an article published in November 2011 which describes, with the benefit of hindsight, that "in 2007 and 2008…default [of the monolines] became more and more of a possibility," without attempting to quantify that

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[183] O'Driscoll Report, ¶65.

possibility nor distinguish how it was different in the middle or end of 2008 as compared with the first quarter.[184] Mr. O'Driscoll is even more misleading, making the point that "essentially all of this added exposure was linked to CDS with monoline insurers, all of which ***subsequently*** defaulted,"[185] something that obviously could not have been known in April 2008 and therefore could not have been relevant to preference share investors' perception of the risks of the Series 5 shares when they were issued.

118. However, while the monolines were undoubtedly considered riskier in early 2008 than they had been perceived a year earlier, most of them retained high credit ratings. According to a table cited by Mr. Regan, approximately 93% of Barclays' negative basis trades were with the following monolines: AMBAC Assurance Co. ("Ambac"), Assured Guaranty Corp. ("Assured"), Financial Security Assurance Inc., ("FSA Inc."), Financial Guaranty Insurance Group ("FGIC"), CIFG Assurance North America Inc. ("CIFG"), and MBIA Insurance Corp. ("MBIA"). As shown in Exhibit 6, as of the end of 2007, all of those monolines had AAA ratings with all three of the major rating agencies, the highest possible rating. As of the end of the first quarter of 2008, Assured, FSA, and MBIA all retained their triple-A ratings with all three major rating agencies while Ambac retained its triple-A rating with two out of the three.[186] CIFG was downgraded to single-A and FGIC was downgraded to triple-B by Moody's and Fitch and double-B by S&P. Thus, with the exception of FGIC, which accounted for less than 10% of Barclays' £21.6 billion in notional value wrapped by monolines, all of the remaining monolines maintained investment grade ratings and of those, all but CIFG remained AAA-rated, the highest available rating. Moreover, MBIA and Ambac, the two monolines which accounted for the almost half of the notional value of Barclays' negative basis trades, were both able to raise capital in the first half of 2008: MBIA issued $1 billion in bonds in January 2008 and Ambac

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[184] Regan Report, ¶35.
[185] O'Driscoll Report, ¶116 (emphasis added).
[186] Note that MBIA was downgraded to AA by Fitch on April 4, 2008, but retained its triple-A rating with Moody's and S&P until June of that year.

issued over $1 billion in common stock in March 2008.[187] Moody's confirmed both Ambac and MBIA's triple-A ratings in the first quarter of 2008.[188]

119. In sum, the £21.5 billion in so-called "undisclosed exposures" consisted of primarily AAA-rated (at the time of the offering) assets with credit protection written by primarily AAA-rated (at the time of the offering) counterparties. Plaintiff's experts imply that, had preference share investors, *at the time of the offering*, known about these "exposures" this knowledge would have meaningfully altered their perceived risks of the Series 5 shares. However, Plaintiff's experts have done no analysis to support such an opinion. And, when Barclays disclosed the notional amount of its insured assets on August 7, 2008 — along with its first-half 2008 results, including significant additional write-downs across several asset classes[189] — there was no statistically significant reaction in the price of the Series 5 shares, which closed at $24.46, very near the redemption value.[190]

VII. Barclays had a robust set of policies and procedures in place throughout 2007 and 2008 to assess asset write-downs and impairments. These policies and procedures were consistent with industry standards and best practices. Further, the extent to which Barclays' senior management and board of directors were involved in establishing and monitoring these policies and procedures was also consistent with industry standards and best practices.

120. Plaintiff claims that Barclays misrepresented its risk management practices and failed to properly write-down the value of certain financial assets, in part due to systematic deficiencies in its processes and controls.[191] Specifically, Mr. O'Driscoll asserts that Barclays "mischaracterized [its] risk management around certain positions, particularly [its] CDO

[187] S&P Capital IQ.

[188] "Moody's Confirms Ambac's Aaa rating; Changes Outlook to Negative," *Moody's Investor Service*, March 12, 2008; "Moody's Confirms MBIA's Aaa rating, Changes Outlook to Negative," *Moody's Investor Service*, February 26, 2008.

[189] Barclays PLC and Barclays Bank PLC Form 6-K, dated August 7, 2008, pp. 7, 31–38.

[190] Kleidon Report, ¶¶67, 107. Moreover, Dr. Kleidon reviewed all statistically significant price declines prior to this date and found that no allegedly corrective information cited in the Complaint was disclosed to the market on any of those days. See Kleidon Report, ¶107.

[191] Complaint, ¶¶134–135, 188.

positions"[192] and that "if Barclays' liquidity facilities had been valued in conformity with its mark-to-market CDOs, they should have been written down by approximately $3.6 billion at year end, in accordance with observed trading prices."[193] Plaintiff's Complaint alleges that statements about "the Company's risk management practices…were false and misleading" in part because "Barclays knowingly failed to write down its exposure to US subprime and Alt-A mortgages, CDOs, monoline insurers and RMBS in accordance with applicable accounting standards."[194] Plaintiff also alleges in his Class Certification Motion that there were "repeated (yet unsuccessful) attempts by the Company's Product Control Group…to record larger writedowns" and that a product controller "received significant 'pushback' from senior management" regarding subprime-related write-downs.[195] In this section I assess Barclays' risk management infrastructure, focusing in particular on its processes, procedures, and governance structure for assessing write-downs and impairments of financial assets. I find that this infrastructure (including the interaction between the risk management function and business lines) was appropriate and consistent with industry standards and best practices. In Section VII.A, I describe the inherent risks that financial institutions are faced with and how institutions can mitigate them. In Section VII.B, I outline the general risk management governance structure in place at Barclays and how it was designed to address these risks. In Section VII.C, I provide an overview of the two primary methods of accounting for financial assets held on the balance sheet. In Section VII.D and Section VII.E, I discuss the best practices for assessing assets under each method and the extent to which Barclays adhered to those best practices.

A. The role of risk management in financial institutions

121. In this section, I discuss the role of risk management in financial institutions and the responsibilities of senior management and the board of directors with respect to the establishment and maintenance of a risk management infrastructure. A financial institution generates profits for its shareholders by undertaking activities that by necessity involve a level of

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[192] O'Driscoll Report, ¶12.
[193] O'Driscoll Report, ¶113.
[194] Complaint, ¶¶134–135.
[195] Plaintiff's Class Certification Motion, pp. 5–6.

risk. However, there is a distinction between the business decision of a financial institution to take a certain level of risk and the risk management that helps identify, measure, monitor and manage those risks.[196] I describe below the broad categories of risk that affect financial institutions and the policies and procedures that they use to manage those risks.

122. There is a wide range of activities in which a financial institution might engage in order to generate profits for its shareholders and which, by necessity, involve taking on risk. For example, a financial institution may help customers raise necessary capital, manage the assets of high net worth individuals, advise and consult customers on merger and acquisitions, design and underwrite various financial products, and make markets in securities.[197] To perform these services and generate profits for its investors, a financial institution needs to hold various risky assets on its balance sheet. Some of these assets come from its market making and proprietary trading activities, others from financial intermediation (*i.e.*, the underwriting and marketing of securities on behalf of its clients). Typically, it will not plan to keep these risky assets (particularly those that arise from its activities as an intermediary) for an extended time period but rather will plan to hold them for a short period of time until they can be resold so that its capital can be redeployed toward other profitable activities.[198]

123. The senior management, together with the board of directors, of any financial institution choose carefully the level of risk they are willing to bear.[199] This level of risk is typically known as risk appetite and is one metric of financial institutions that is closely followed by analysts and potential investors. If a financial institution eliminates risk — that is, if it holds only risk free

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[196] Stulz, R. M. (2014), “Governance, Risk Management, and Risk-Taking in Banks,” *NBER Working Paper No. 20274*, pp. 12–13.

[197] See, for example, Barclays 2007 Annual Report, pp. 8–10, which set out the various business groupings into which Barclays was organized and the principal activities undertaken by each of these groupings. Barclays 2007 Annual Report, p. 10 shows the breakdown of Barclays’ results for the year ended December 31, 2007 across these groupings—approximately two-thirds of the profit before tax for the year was generated by groupings other than Barclays Capital, the investment banking arm of Barclays. For more description of these banking activities see, for example, Iannotta, G. (2010), *Investment Banking: A Guide to Underwriting and Advisory Services,* London, UK: Springer-Verlag Berlin Heidelberg, pp. 3–6; and Stowell, D. P. (2010), *An Introduction to Investment Banks, Hedge Funds, and Private Equity,* Burlington, MA: Elsevier Inc., pp. 109, 118.

[198] Iannotta, G. (2010), *Investment Banking: A Guide to Underwriting and Advisory Services,* London, UK: Springer-Verlag Berlin Heidelberg, p. 4; Stowell, D. P. (2010), *An Introduction to Investment Banks, Hedge Funds, and Private Equity*, Burlington, MA: Elsevier Inc., p. 98.

[199] Stulz, R. M. (2014), “Governance, Risk Management, and Risk-Taking in Banks,” *NBER Working Paper No. 20274*, p. 9.

assets — it will not be able to perform the services described above and will not survive. Management believes that taking risks is in the best interest of shareholders, even with the understanding that some of these risks may not pay off. A higher risk appetite may lead to higher returns and higher growth if the activities of the financial institution are successful. In essence, a financial institution sets its risk appetite by assessing the tradeoff between potential risks and the returns that it expects to earn.[200]

124. When senior management chooses a strategy, it does not have perfect foresight — the outcomes are affected by numerous factors, including many that are beyond the financial institution's control. For example, the risks and returns from financial intermediation are in large part determined by how markets evolve. This in turn is driven by economy-wide factors, such as consumer confidence and the willingness of investors to bear risk. In addition, by definition, a financial intermediary does business with a large number of counterparties. A sub-par performance by some counterparties may force those counterparties to renege on their contracts with the financial institution, which in turn may lead to profits from a strategy to fall below expectations.

125. To make informed business decisions with respect to risks, a financial institution will establish and maintain a risk management infrastructure. The details of this infrastructure will differ from institution to institution, but will inevitably include a central risk function or department.[201] This risk function does not have the authority to take on or abandon risky activities.[202] Rather, it is independent of the business units that implement the financial institution's risky activities, and its role is to help senior management and the board understand risk and to advise them in determining the appropriate risk appetite. Additionally, a financial institution will typically designate a person as the Risk Director or Chief Risk Officer — this

[200] See Megginson, W. L., and S. B. Smart (2006), *Introduction to Corporate Finance*, Mason, OH: Thomson South-Western, pp. 250–252.
[201] Bessis, J. (2015), *Risk Management in Banking*, 4th ed., West Sussex, UK: John Wiley & Sons Ltd., p. 10.
[202] See Goldman, Sachs & Co. and SBC Warburg Dillon Read (1998), *The Practice of Risk Management*, London, UK: Euromoney Books, p. 29.

individual has the responsibility for overseeing the institution's risk management activities and ensuring that its strategies are aligned with its risk appetite.[203, 204]

126. While the CEO and members of the board are very much concerned with risk management issues, it would be impossible for them to singlehandedly quantify and monitor each risk on a day-to-day basis. Instead their primary responsibility is to recognize the importance of risk management and to ensure that the necessary infrastructure is in place. In particular, the firm needs to appoint a Risk Director with the relevant experience and strong leadership skills and to ensure that there is direct and uninhibited communication. I find that in Barclays' case, the CEO and the board of directors were highly involved in risk management issues and had established clear policies concerning the delegation of authority with respect to risk appetite, risk limits, and risk escalation.

127. The existence of a centralized risk management function to measure, monitor, and advise senior management does not negate the risk management responsibilities of the individual business lines. For example, Bessis (2010) notes:

> "The business lines, or front office, make up the first line of defense and are responsible for identifying, measuring and managing all risks within their scope of business. Business lines have the primary responsibility for day-to-day risk management. As the management of the business line is close to the changing nature of risks, it is best able to take actions to manage and mitigate those risks…The existence of a risk department does not suffice to enforce sound risk practices…Making the risk department the unique function accountable for risks would relieve the business lines from their risk responsibilities."[205]

128. In sum, as described above, the role of risk management is not to eliminate risk, but rather to correctly identify key risks and properly monitor and manage them. A realization of a large loss does not necessarily mean that the financial institution has deficient risk management

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[203] Though Chief Risk Officer is the typical title of the head of the risk management organization in the US, the title of Risk Director is used frequently in the UK. Throughout the rest of the report, I use the latter title.

[204] Stulz, R. M. (2014), "Governance, Risk Management, and Risk-Taking in Banks," *NBER Working Paper No. 20274*, pp. 12–13.

[205] Bessis, J. (2015), *Risk Management in Banking*, 4th ed., West Sussex, UK: John Wiley & Sons Ltd., pp. 10–11. See, also: Stulz, R. M. (2014), "Governance, Risk Management, and Risk-Taking in Banks," *NBER Working Paper No. 20274*, §4 and §6.

policies or procedures — future outcomes are far from perfectly predictable, and the definition of "risk" implies the possibility of adverse outcomes.

129. Risk management groups use various tools that help quantify and control the diverse types of risks that a financial institution will typically face. The tools that risk management uses include the setting of risk limits, the establishment of procedures in the event that limits are breached, and the conducting of stress tests. The Risk Director and the risk management teams that he or she oversees apply these tools to identify, measure, and manage the various categories of risk that the institution faces, namely market risk, credit risk, operational risk, and liquidity risk.[206] I discuss each of these categories of risk in turn.

130. Market risk is the risk associated with changes in the prices of traded financial securities.[207] To measure market risk, the market risk management function first identifies sources of risk, called risk "factors" and then calculates the exposure of the financial institution to these factors using metrics such as Value-at-Risk ("VaR").[208] Many of these measures have certain drawbacks such as reliance on past data and pricing models that are typically imperfect.[209] Therefore, as an additional device, a financial institution will also use stress tests that allow it to evaluate the effect of remote but plausible events on its risk profile.[210]

131. To monitor market risk, a financial institution relies on a complex set of limits and controls. The goal of these policies is to ensure that an asset or portfolio of assets cannot be affected too much by an adverse change in one or more of the risk factors.[211] Limits can be exceeded in the short term and may also change because, as I have explained above, the goal of

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[206] See Jorion, P. (2007), "The Need for Risk Management," in *Value-at-Risk: The New Benchmark for Managing Financial Risk,* 3rd ed., New York, NY: McGraw-Hill. For a description of the risk management landscape, see also Goldman, Sachs & Co. and SBC Warburg Dillon Read (1998), *The Practice of Risk Management,* London, UK: Euromoney Books, p. 32. That list also includes settlement risk, legal risk, and reputational risk. These risks are often included in the operational risk category and I follow that practice.

[207] Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, p. 650.

[208] Value-at-Risk ("VaR") is a market risk metric widely used by financial institutions. VaR is an estimate of the maximum loss an institution is expected to incur at a given level of confidence.

[209] For a more detailed discussion see, for example, Krause, A. (2003), "Exploring the Limitations of Value at Risk: How Good Is It in Practice?," *Journal of Risk Finance*, Winter 2003.

[210] "Market Risk Management: Putting the Key Components Together," Ernst & Young, 2012, pp. 13–14. See also "Stress Tests: Useful Complements to Financial Risk Models," *FRBSF Economic Letter*, No. 2005-14, June 24, 2005, p. 1.

[211] Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, p. 10.

the financial institution is not to eliminate risk but to ensure that its activities are aligned with its risk appetite.[212] The individuals who are responsible for managing the market risk of a particular portfolio of securities are typically the individuals that manage the portfolio itself, such as the heads of the relevant trading desks. The role of the risk management function is to provide data that helps the trading desks manage these risks, to ensure that proper procedures are followed, and to escalate any breach in risk limits.

132. Credit risk is the risk that a financial institution's counterparties and borrowers will not make promised payments.[213] Sound practices require that a financial institution monitor and manage not only the risk of individual counterparties or transactions but also the overall risk of credit portfolios.[214] This is needed as the risk across different counterparties may be correlated.

133. To estimate credit risk, a financial institution estimates the probability with which a counterparty or a borrower may renege on its obligation — this is the "probability of default" (PD) discussed above. The loss that the bank will suffer in that scenario is known as the "loss given default" (LGD). These measures are based, among other factors, on historical data and credit risk models;[215] it can be fairly complex to take into account the correlation between individual counterparties' risk and between credit risks and market risks.[216]

134. There are a number of procedures to help manage credit risk. The financial institution may control credit risk by requiring counterparties to post collateral or by putting limits on the overall exposure to any individual counterparty. Industry standard practices are for senior management, together with the board of directors, to design and approve a firm-wide risk strategy. This strategy is applied when granting new loans or renewing existing credits. Risk

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[212] "As stated previously, setting risk limits is an ongoing, dynamic process. Changing markets, trading responsibilities and risk appetites will lead a firm to adjust limits accordingly." See Goldman, Sachs & Co. and SBC Warburg Dillon Read (1998), *The Practice of Risk Management*, London, UK: Euromoney Books, p. 132.

[213] Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, p. 647.

[214] "Principles for the Management of Credit Risk," Basel Committee on Banking Supervision, September 2000, p. 1.

[215] "The GARP Risk Series: Credit Risk Management," Global Association of Risk Professionals, Chapter 1: Credit Risk Assessment, pp. 3, 8.

[216] "The GARP Risk Series: Credit Risk Management," Global Association of Risk Professionals, Chapter 1: Credit Risk Assessment, pp. 3, 7.

management helps control and monitors the credit risk exposures and communicates results of this process to the board of directors and senior management.

135. Operational risk typically refers to factors related to an institution's people, systems or processes and is usually not related to market and credit risk.[217] Examples of operational risk events include theft, fraud, hacking, miscommunication, human or data errors or equipment or software failure.[218] Sound practices to manage operational risk start with identifying and monitoring possible events with potential significant impact on the firm's operations. To control these risks, the risk management team overseen by the Risk Director can hedge or insure against the risk, try to avoid the risk, or mitigate the risk by maintaining a contingency plan to reduce the impact of operational risk realization on the financial institution's operations.

136. As described earlier a major component of a financial institution's operations is trading in various securities on its own behalf or on behalf of clients. The risk of a disruption of the sources of funding or of the ability to quickly get in or out of certain positions is often referred to as liquidity risk. Industry practices for liquidity risk management are relatively less developed but include maintaining a buffer of liquidity, setting a liquidity risk appetite and diversifying sources of funding.[219] An important tool of liquidity risk management is assessing various "what-if" scenarios and developing contingency funding plans.[220]

137. A robust set of policies and procedures with respect to the valuation of all of the positions within the financial institution's portfolio is a key element of the institution's management of the risks described above. For example, such valuations are used for internal and external financial reporting purposes, often form the basis for the determination of the institution's regulatory capital requirements, and are a key input into other aspects of risk management such as VaR calculations and the determination of the institution's credit exposure to its trading counterparties. In line with the idea discussed above that "the business lines, or front office,

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[217] Stulz, R. M. (2003), *Risk Management and Derivatives*, Mason, OH: Thomson South-Western, p. 650.

[218] See Crouhy, M., D. Galai, and R. Mark (2006), *The Essentials of Risk Management*, New York, NY: McGraw-Hill, pp. 7–8, 30, 333–334.

[219] "Sound Practices for Managing Liquidity in Banking Organizations," Basel Committee on Banking Supervision, September 2008, pp. 4, 15–16.

[220] "Sound Practices for Managing Liquidity in Banking Organizations," Basel Committee on Banking Supervision, September 2008, p. 9.

make up the first line of defense," the responsibility for generating the valuations will lie with these business lines. The role of the central risk management function is to make sure that valuations are appropriate and that valid and well-functioning procedures are in place to ensure that valuations from the businesses are validated.

B. Barclays' risk management infrastructure and governance

138. In this section, I review the risk management governance structure of Barclays, which included a Board Audit Committee, a Board Risk Committee, a Group Risk Director, Risk Directors for each of the principal risks faced by the bank, and business risk management teams. Where applicable, I describe how these elements specifically relate to the validation of fair market valuations and impairments. Overall I find that the infrastructure in place was robust and in line with industry practice.

139. The recognized importance of risk management to Barclays was clearly set out in its financial statements:

> "Barclays PLC is a major global financial services provider…Financial instruments are fundamental to the Group's business and managing financial risks, especially credit risk, is a fundamental part of its business activity. Barclays achieves its risk management goals by keeping risk management at the centre of the executive agenda and by building a culture where risk management is part of everyday business decision-making. Barclays ensures that it has the capacity to manage the risk in its established businesses as well as new and growing ones, and that its business plans are consistent with risk appetite, that is, the level of risk Barclays is willing to accept in fulfilling its business objectives."[221]

140. Barclays established a number of committees to identify, monitor, and manage the various risks described above. The Board Audit Committee (comprised of four independent non-executive directors) received quarterly reports on control issues of significance and half-yearly impairment allowances and regulatory reports.[222] The Board Audit Committee's meetings were regularly attended by the Group Risk Director and the Group Finance Director who, through the Chief Financial Officer of Barclays Capital, oversaw the Product Control Group ("PCG").

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[221] Barclays 2007 Annual Report, p. 218.

[222] Barclays 2007 Annual Report, pp. 69, 121. During the relevant period, the chair of the Board Audit Committee was Stephen Russell. See Barclays 2007 Annual Report, p. 113.

Furthermore, the Board Audit Committee reviewed financial statements prior to approval by the Board[223] and had several meetings during which the committee would review the valuation and price testing for different assets.[224]

141. The Board Risk Committee (which is also comprised of independent non-executive directors) received quarterly reports concerning the conditions of Barclays' principal risks, regular "detailed risk report[s]" from the Group Risk Director, and a report when any excess in risk exposure may arise.[225] One key role of the Board Risk Committee was to evaluate Barclays' risk profile to assess adherence to the risk appetite established by the Board. It also reviewed and gave approval to the Group Internal Control and Assurance Framework, the Principal Risks Policy, and other Group policies concerning trading book, liquidity, and credit impairment guidelines.[226] Finally, consistent with industry best practices it made a yearly recommendation to the Board for "an appropriate level and composition of risk," *i.e.*, the risk appetite of the bank.[227] The meetings of the Board Risk Committee were attended by the Group Finance Director, who ultimately oversaw PCG.

142. During 2007, the Board Risk Committee also reviewed, in depth, leveraged credit and asset backed securities markets. The committee examined how the Group's risk controls and stress limits had operated in the prevailing market conditions. The committee also reviewed the impact of market conditions on impairment and mark-to-market positions and on the Group's balance sheet. [228]

143. The Group Risk Director, as described earlier, was a central part of the risk management infrastructure at Barclays.[229] His role was to ensure effective risk management and control and

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223 Barclays 2007 Annual Report, pp. 122–123.

224 BARC-ADS-00861837; BARC-ADS-01554547; BARC-ADS-01023841; BARC-ADS-01375270.

225 Barclays 2007 Annual Report, pp. 69, 121, 124; BARC-ADS-01543389. During the relevant period, the chair of the Board Risk Committee was Sir Richard Broadbent. See Barclays 2007 Annual Report, p. 112.

226 Barclays 2007 Annual Report, pp. 69, 70–71, 124.

227 Barclays 2007 Annual Report, p. 124.

228 Barclays 2007 Annual Report, p. 124.

229 During the relevant period, the Group Risk Director of Barclays was Robert Le Blanc. See BARC-ADS-01593493, at p. 1. For additional description of the roles and infrastructure, see Barclays 2007 Annual Report, pp. 67–68.

he reported directly to the Group Finance Director.[230] In addition, Barclays' risk management infrastructure included several risk directors with specific responsibility for each of the principal risk types, such as market risk, retail credit risk, corporate credit risk, and operational risk. These risk directors, also referred to as Risk-Type heads, were responsible for establishing a risk control framework and risk oversight for the relevant types of risk and reported to the Group Risk Director. At the business level, Barclays had also established the position of Business Risk Director or Chief Credit Officer.[231] These individuals assisted in the formulation of Group Risk policy and its implementation across the businesses. Furthermore the Chief Credit Officers assisted business heads in the identification and management of their business risk profiles and for implementing appropriate controls. They reported directly to both the Group Risk Director and the heads of each business unit such as Barclays Capital and Barclays Wealth.

144. Another important component of Barclays' risk management infrastructure was the Global Financial Risk Management ("GFRM") group. GFRM was divided into two main groups: the market risk division, which oversaw the activity in the trading books, and the credit risk division, which oversaw activities in the banking books.[232] GFRM was focused on setting parameters around the amount of risk that the various business lines could assume.[233] By placing limits on the risk assumed by the businesses, GFRM could determine that Barclays as a whole was adhering to the risk appetite established by senior management.

C. Risks associated with valuation of financial assets

145. In sub-sections A and B above, I explain the types of risks faced by large financial institutions, including Barclays, and describe Barclays' overall risk management infrastructure. In the remainder of this section, I address a particular risk that Plaintiff alleges Barclays failed to appropriately manage — specifically, the risk that certain classes of financial assets on its balance sheet were improperly valued.

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[230] During the relevant period, the Group Finance Director was Chris Lucas. Barclays 2007 Annual Report, p. 277.

[231] For Barclays Capital, the equivalent was Linda King, the Head of Credit Risk Management for Barclays Capital. See BARC-ADS-01593493, p. 1. Barclays Capital also had a Global Chief Credit Officer, Americas during this time period, who was Ian Prior. See BARC-ADS-00010423, p. 29.

[232] Deposition of Eric Yoss, August 28, 2015 ("Yoss Deposition"), 42:5–21.

[233] Yoss Deposition, 20:17–21:5; BARC-ADS-01389999, p. 6; BARC-ADS-00010185, p. 15.

146. The importance to a financial institution of reliable valuations of the positions within its portfolio is set out in ¶137 above, where it is noted that external financial reporting is one of the key "consumers" of such valuations. Barclays prepared its financial statements under International Financial Reporting Standards ("IFRS"), which in broad terms prescribes two distinct methods for determining the value at which financial assets should be recorded on the balance sheet — "amortized cost" and "fair value."[234] Depending on the accounting treatment, the reporting requirements — and by extension, the processes and procedures governing valuation adjustments — are substantially different. I therefore explain each of these methods below.[235]

147. The two categories of financial assets that are held on Barclays' balance sheet at amortized cost are those designated as "loans and receivables" or "held to maturity" (which means that management has the intention and ability to hold to maturity).[236] Such assets are originally recorded on the balance sheet at acquisition cost with any difference between acquisition cost and the promised value at maturity being amortized in some systematic manner over the life of the asset. Importantly, fair value changes do not affect the value at which the asset is held on the balance sheet and therefore, do not impact profits unless the asset is impaired. Nevertheless, accounting standards require that these assets be periodically reviewed for impairment due to changes in default risk that impact the amount that the firm expects to ultimately receive. Such impairments reduce the value of the asset and result in a corresponding loss in the income statement.[237]

148. Other financial assets are held on the balance sheet at fair value. At each reporting period, the firm must estimate the fair value of these assets based on observed market prices or

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[234] An understanding of these accounting requirements is important to an assessment of the robustness of the policies and procedures for valuing the assets in question.

[235] The financial reporting designations of assets as fair value and amortized cost roughly (though not perfectly) correspond to the regulatory capital designations of trading book assets and banking book assets, respectively. Specifically, the trading book consists of financial instruments and commodities held with "trading intent" or in order to hedge other elements of the trading book. See BARC-ADS-00928519, p. 4; "Application," *Prudential Sourcebook for Banks, Building Societies and Investment Firms,* January 2016, §§1.2.7 – 1.2.12.

[236] Barclays 2007 Annual Report, p. 135.

[237] See "International Accounting Standard 39, Financial Instruments: Recognition and Measurement," February 18, 2011, ¶¶58–70 for accounting rules applicable to impairments.

model-implied prices: "[w]here the classification of a financial instrument requires it to be stated at fair value, fair value is determined by reference to a quoted market price for that instrument or by using a valuation model."[238] As the name suggests, for assets designated as "fair value through profit or loss" (these are typically financial instruments held for trading),[239] changes in the fair value are immediately recognized as gains or losses in the income statement. Assets designated as "available for sale" are similarly measured at fair value — however, unrealized gains or losses flow through a separate component of equity.[240] Gains or losses on these assets only affect the income statement upon sale of the asset or if there is a "significant or prolonged" decline in fair value warranting impairment. [241]

149. In sum, in the case of assets held at amortized cost, the operative question is whether recognition of a permanent impairment is required, whereas in the case of assets held at fair value, the firm must consider daily fluctuations in market values. Unsurprisingly, the processes and procedures in place to assess impairment of amortized cost assets are different from those applied to ensure the proper marking of assets held at fair value. In the following sections, I address Barclays' processes and procedures in each case and show that those processes and procedures were robust and consistent with industry standards and best practices.

D. Barclays' processes and procedures for assessing fair value of financial assets

150. In this section I review the importance of a system that independently verifies the prices of fair value assets, the industry standards and best practices for such a process, and how this process was conducted at Barclays during the time period at issue in this litigation. My review of documents in the record shows that at all times during 2007 and 2008, Barclays had a robust system in place to review fair value assets and that this system was consistent with industry best practices. The system demonstrated the ability to identify credit market assets that required reductions in fair value as a result of market deteriorations and then to record these losses on the

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[238] Barclays 2007 Annual Report, p. 151.
[239] Barclays 2007 Annual Report, p. 150.
[240] Barclays 2007 Annual Report, p. 151.
[241] Barclays 2007 Annual Report, p. 152.

balance sheet. I also respond to Plaintiff's specific allegations of failures in Barclays' process[242] and find that Plaintiff misunderstands the role of an independent price verification process and provides no evidence that Barclays' process was compromised during the time period at issue.

1. The role of independent price verification

151. A critical component of risk control in the valuation of assets recorded at fair value is what is commonly known as the independent price verification ("IPV") process. The common (and recommended) practice at financial institutions is for the front office trading desks to provide daily prices for all financial instruments held at fair value and for an independent financial or product control function to perform independent price testing at regular intervals.[243]

152. For many types of financial assets under normal conditions (where prices are easily observable in liquid markets), the price testing process is relatively straightforward. The price testing group can observe market prices and compare those to the prices supplied by the front office. However, the market turmoil that started in the middle of 2007 significantly complicated, and introduced new challenges to, the price testing process. As liquidity dried up in the market for complex structured products — including those products that are at issue in this matter — there was significant uncertainty in assessing their value.[244] Under these conditions, instead of observing market prices, banks were forced to employ models, which required assumptions about the future and significant judgment. Even small changes in these inputs could have large effects on the resulting valuations and reasonable people using different sources of information could disagree on the appropriate assumptions. For example, the Basel Committee on Banking Supervision noted that the outputs of such models "are highly sensitive to the inputs and assumptions adopted" and relied on "expert judgment."[245]

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[242] Plaintiff's Class Certification Motion, p. 6.

[243] Group of 30, "Enhancing Public Confidence in Financial Reporting," 2003 ("Group of 30 Report"), pp. 15–16.

[244] "The market turmoil highlighted the difficulties in estimating fair values due to the lack of liquidity in the markets, the complexity of some financial instruments, and the shift by some banks to more model-based methodologies which increased the use of unobservable inputs." See "Fair Value Measurement and Modelling: An Assessment of Challenges and Lessons Learned from the Market Stress," Basel Committee on Banking Supervision, June 2008 ("Basel Committee (2008)"), p. 3.

[245] Basel Committee (2008), p. 3.

153. In the context of this market turmoil, it is a gross over-simplification to imply, as Plaintiff does, that the role of IPV was to identify the one and only objectively "correct" price. Rather, the role of product control and the IPV process was to ensure that the prices assigned by the front office were properly challenged and that any substantive differences were understood, documented, and escalated to senior management within the risk and control functions and, where they represented a critical component of reported results, to the Board Audit Committee.[246]

154. It is important to note that, during the period relevant to this litigation, the tasks of IPV were in no way mechanical tasks but rather involved considerable judgment. For instance, decisions had to be made as to where to source inputs for models that were being used. Different data providers could have very different values for data that was used as inputs to models. Even market data had to be investigated carefully, as "fire-sale" prices could not be used as benchmarks for fair value estimates. It was quite possible that sources relied upon by product control, such as certain third-party data vendors, did not have data for the specific securities being valued, failed to reflect relevant pieces of market information, or were otherwise flawed. For example, the Basel Committee noted that "the heterogeneity of the underlying exposures (even within a single category of CDO) — such as the particular vintage of each subprime RMBS — together with the specific features of each structure are additional factors that hinder the accuracy in the valuation of these complex instruments."[247] Part of the function of IPV was to interact with data providers to examine the robustness, accuracy, and timeliness of the data they provided.[248]

155. Even prior to the crisis, best practices called for the IPV group to "seek input from risk taking units."[249] Similarly, in reflecting on the challenges to valuation control during the market turmoil in 2007 and 2008, a study by PricewaterhouseCoopers ("PwC") concluded that "[w]e have seen that within banks with an effective risk management structure, front office, back

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[246] "Supervisory Guidance on the Use of Fair Value Option for Financial Instruments by Banks," Basel Committee on Banking Supervision, June 2006, p. 16.
[247] Basel Committee (2008), p. 5, footnote 4.
[248] Teague Deposition, 125:17–126:11.
[249] Group of 30 Report, p. 16.

office, and controlling functions have an equal say and can challenge each other appropriately" and that "in such an environment different views on overall valuations are properly discussed and reconciled to ensure a robust view is reached on complex valuations."[250]

156. Although there were no well-defined prescriptions for how to value a particular asset in the context of significant uncertainty and market turmoil, there were certain elements of the independent price testing process considered by regulatory bodies and industry participants to be best practice. In the following section, I explain Barclays' independent price testing process and how it compared to prevailing best practices across the industry.

2. Independent price verification infrastructure at Barclays

157. I have reviewed Barclays' risk management infrastructure as it pertained to assessing the fair value of the relevant classes of financial assets during the time period at issue in this litigation. I conclude that Barclays had a robust governance structure and an appropriate set of policies and procedures, which were consistent with industry standards and best practices for assessing the fair value of these assets. Specifically, (i) Barclays had in place a governance structure in which a product control group was responsible for price testing and whose reporting lines were independent of the risk taking groups in the business; (ii) the independent product control group created and maintained a well-documented set of policies and procedures for determining valuations; and (iii) these policies and procedures included guidelines for the regular documentation and reporting of IPV results to senior management. I describe Barclays' price verification policies and practices in the subsections that follow.

a) Barclays had a product control group with an independent reporting structure.

158. In order to ensure independence, banks should maintain functional separation between the risk taking units that typically provide the initial valuation (the front office) and the unit

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[250] "Valuation Control in Turbulent Times: Challenges to the Operating Model" in *Global Perspectives on Challenges and Opportunities*, PwC, December 2008, p. 25. See also Basel Committee (2008), p. 4: "[L]eading practice banks emphasised the importance of a diversity of approaches and opinions in the valuation of complex products and had in place a range of mechanisms to cross check valuations."

conducting independent price verification (the measurement and control unit).[251] Consistent with this principle of separation, Barclays' PCG was organizationally independent from the front office desks. Although there was a reorganization within PCG at some point in 2008, at all times relevant to this litigation, the group reported directly to the CFO of Barclays Capital (the investment banking arm of Barclays). At that time, the CFO was Patrick Clackson. As of 2007, Paul Copson, the Global Head of PCG [and COO], and James Walker, the Americas Head of PCG [and also CFO for the Americas], both reported to Mr. Clackson.[252]

159. Barclays' PCG was broadly organized into "product line functions" and "central line functions."[253] Product line functions supported specific business areas in producing daily profit and loss statements, reconciling these to the general ledger, and ensuring that accounting policies were being properly applied. The central line functions served multiple desks and included teams that were devoted entirely to independent price testing. One of these teams was the Independent Valuations Group ("IVG"), which reported to Marcus Morton, who in turn reported directly to Mr. Copson, the Global Head of PCG.[254]

160. Price testing of credit products, which included corporate bonds, CDS, CDOs, CLOs, and other structured products such as SIV-lites, was managed by Sean Teague.[255] Mr. Teague reported to Mr. Morton and therefore, at all times relevant to this litigation, Barclays' management structure maintained direct reporting lines from Mr. Teague to Mr. Clackson.

161. Price testing of Agency RMBS, Alt-A RMBS, subprime whole loans, mortgage servicing rights, and subprime NIMs and post-NIMs were the responsibility of Rich Landreman who, in 2007, reported to Joseph Kaczka.[256, 257] Mr. Kaczka was the head of PCG's US Real Estate

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[251] "Valuation Control in Turbulent Times: Challenges to the Operating Model" in *Global Perspectives on Challenges and Opportunities*, PwC, December 2008, p. 29. See also Basel Committee (2008), p. 4.

[252] Teague Deposition, 22:9–23, 86:23–87:9; Deposition of Joseph C. Kaczka, September 22, 2015 ("Kaczka Deposition"), 65:19–66:18.

[253] BARC-ADS-01525892, pp. 34–35 (Exhibit 205 of Teague Deposition).

[254] BARC-ADS-01298033, pp. 3, 25.

[255] BARC-ADS-01298033, p. 27; Teague Deposition, 26:25–27:19.

[256] BARC-ADS-01298033, p. 40.

[257] "NIM" is the abbreviation for Net Interest Margin. Net Interest Margin Securities give investors access to excess cash flows from securitized mortgage loan pools. Later in 2008 Mr. Landreman's responsibilities expanded further to include Commercial Mortgage Backed Securities ("CMBS") and subprime RMBS. For a discussion of the

Products division and worked with Mr. Copson but reported directly to Mr. Walker.[258] At some point in 2008, Mr. Landreman began reporting directly to Mr. Morton.[259] Due to PCG's reporting structure, there existed a direct chain of command from Mr. Landreman to Mr. Clackson, the CFO, both before and after the reorganization in 2008.[260]

162. Based on my review of organization charts as well as procedure manuals and depositions, no member of PCG's independent valuations group had reporting lines flowing through Barclays' trading businesses.

b) Barclays' PCG maintained a well-documented set of price testing policies and procedures.

163. Barclays' PCG valuation group created and maintained a set of documents which provided detailed guidance on its price testing policies and procedures. For example, the Global Financing Credit Products Price Testing Policy, which covered, among other products, Asset Backed Securities and CDOs, provided guidance on price testing procedures and the specific methodologies used to value credit products. This document was reviewed and updated by PCG at least six times between May 2005 and December 2007. Each update required that the document be approved by the current head of the Independent Valuations Group (Deepak Perianayagam for 2005, and Sean Teague thereafter).[261] Barclays also maintained documents that provided guidance on price testing methodologies for specific products such as subprime ABS, Cash ABS, and CMBS.[262]

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assets that Landreman was responsible for in Landreman's deposition, see Deposition of Richard Landreman, October 22, 2015 ("Landreman Deposition"), 44:24–47:25.

[258] Kaczka Deposition, 65:19–66:9.

[259] BARC-ADS-01525892, pp. 23, 33 (Exhibit 205 of Teague Deposition); Landreman Deposition, 36:14–20.

[260] BARC-ADS-01525892, pp. 22–23, 33 (Exhibit 205 of Teague Deposition).

[261] BARC-ADS-00918327, p. 3.

[262] See BARC-ADS-00836435; BARC-ADS-00836468; BARC-ADS-00836422.

c) In accordance with industry best practices, Barclays' policy was to report significant price variances monthly to senior management and, when appropriate, to the Board Audit Committee.

164. As I previously discussed in Section VII.D.1, in the presence of limited market liquidity, valuations may rely on assumptions based on unobservable inputs, thereby requiring significant judgment to arrive at valuations. As such, careful deliberation is required in order to arrive at the most appropriate valuation. Barclays had in place procedures to ensure that this deliberation and discussion was taking place amongst the proper functions — and at the proper levels of seniority — within the organization.

165. Barclays' process for resolving such discrepancies between the front office and IPV prices began after PCG completed its monthly price testing exercise. At that point PCG would prepare a summary report of all positions with variances that exceeded $250,000 for review by and discussion with the relevant front office trading desk.[263] These monthly meetings, sometimes referred to as the Global Finance Pricing Review (GFPR), were attended by representatives from PCG (including Sean Teague and Paul Copson, as well as the individual product controllers who actually performed the price testing), Global Financial Risk Management (including both global and regional heads of Market Risk Management, as well as the Director of Market Risk Management for the specific assets being discussed), as well as business heads, the regional CFO, occasionally Patrick Clackson, and (in some instances) senior front office management.[264] The purpose of the meeting was for PCG to present business-level variances as well as any pricing discrepancies larger than a preset limit, "with appropriate actions being decided."[265] The Global Finance Pricing Review report,[266] to be presented and reviewed during the meeting, includes a summary of the coverage by asset type and region, details of top

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[263] A variance occurs when PCG's valuation diverges from the value at which the desk has marked the security. It is an "aggressive" variance if PCG's price is lower than the desk's, and a "conservative" variance if PCG's price is higher than the desk's. BARC-ADS-00844487, pp. 2-3.

[264] BARC-ADS-00892206, p. 7; BARC-ADS-00918352, p. 1.

[265] BARC-ADS-00880332, p. 8.

[266] This report has also been called the Independent Valuation Review or the Global Credit Products Pricing Review. See BARC-ADS-00918551, pp. 1–28; BARC-ADS-00917212, pp. 1–38.

five variances, analysis of spread differences, untested items, as well as commentary regarding post month-end remarks and resolutions.[267]

166. The meeting would typically start with a market overview, as well as highlights for the overall variances. Variances of the specific assets under the two head traders — Eric Bommensath and Mike Keegan as of November 2007 — were then discussed.[268] The specific products under Bommensath and Keegan shifted at various points in time, but Bommensath generally oversaw the ABS business, which included the subprime, Alt-A, ABS secondary trading, and CDO desks as well as the Credit business, which included the Global Credit Derivatives desk.[269] Mike Keegan was in charge of the Proprietary Trading business, which included Principal Credit and Portfolio Management.[270] Meeting minutes — distributed to attendees — included action items, such as further meetings between PCG and traders to discuss results,[271] following up with weekly updates on specific assets,[272] reviewing of price testing methodology for specific products/books,[273] distributing more detailed breakdowns of variances or untested portions,[274] and obtaining further sign-offs from business heads.[275] Meeting minutes would be updated as action items were completed. For example, in the November 2007 meeting, following a discussion on market liquidity, one action item was "Tom Hamilton [the head trader on the Alt-A desk] is pushing for further write-downs for year-end as delinquencies continue to increase."[276] In a later version of these minutes, this action item had been updated to "Tom Hamilton is going to write-down approx $125M in AAA Alt A for year-end attributable to market liquidity concerns."[277]

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[267] BARC-ADS-00913892, p. 21.
[268] BARC-ADS-00918352, p. 3. Prior to November 2007, John Kreitler was head of the Global Credit Trading desk before Eric Bommensath took over. See BARC-ADS-00917212, p. 10.
[269] See, for example, BARC-ADS-00778024, pp. 9–10.
[270] See, for example, BARC-ADS-00778024, p. 12.
[271] BARC-ADS-00904489, pp. 1, 3; BARC-ADS-00780339.
[272] BARC-ADS-00904489, p. 3.
[273] BARC-ADS-00903149, p. 2.
[274] BARC-ADS-01512954, p. 3.
[275] BARC-ADS-00903149, p. 3.
[276] BARC-ADS-00904489, p. 3.
[277] BARC-ADS-00918352, p. 3.

167. Depending on the type of data used as an input, price testing results were classified as Hard, Medium, or Soft.[278] For a variance to be classified as Hard, the calculation must have been performed using a strong and reliable external source. If a result was classified as Hard, it would generally be used to adjust the balance sheet, barring an exceptional circumstance. The Medium classification also required a strong external source, but there may be some concerns with the source. These concerns may have comprised the use of only a single market source, inconsistency between multiple external sources, or data not corresponding to the month end date. In these cases, balance sheet adjustments were actively considered based on the results, and justification was required if no action was taken. The Soft classification was used in situations where the valuation was based on an external source of poor quality or analytical techniques such as extrapolation. Soft results were monitored and reviewed regularly, however these results were unlikely to be sufficient evidence to warrant a balance sheet adjustment. In instances in which market data was not available or current, some data was classified as "untested."[279] Untested did not necessarily imply not reviewed, but rather signified that the review did not conform to the criteria established for Hard, Medium, and Soft categorizations.[280] As a matter of policy, any untested values were reported to senior management.[281]

168. As the financial crisis unfolded and the magnitude of variances for certain asset classes grew, IPV results were discussed at the level of Barclays' Board Audit Committee, precisely as regulatory guidelines expected. In early 2008 the Board Audit Committee received a presentation detailing the mark-to-market valuation of structured credit products held by Barclays Capital at the end of 2007.[282] The purpose of the presentation was to describe the positions at year end, the valuation method and assumptions for each position, and "the Independent price testing and benchmarking processes used to validate the valuations and assumptions."[283] Assets reviewed included ABS CDOs, whole loans, residuals, RMBS as well

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[278] BARC-ADS-00907611, p. 3. This paragraph summarizes information found in BARC-ADS-01401911, pp. 7–8.
[279] BARC-ADS-01401911, p. 5.
[280] Teague Deposition, 111:24–112:14.
[281] BARC-ADS-01401911, p. 5; Teague Deposition, 126:19–25.
[282] BARC-ADS-00861837, pp. 1–24.
[283] BARC-ADS-00861837, p. 2.

as CMBS and other ABS, and monolines. For each asset there was a description of the trading desk valuation followed by a description of the independent price testing and benchmarking measures taken to verify that valuation.

3. Plaintiff's arguments that there were significant deficiencies in Barclays' price testing policies and procedures are without basis.

169. As an initial matter, Plaintiff has put forth no analysis assessing Barclays' processes and procedures governing IPV against a defined benchmark of industry standards and best practices. Instead, Plaintiff's Class Certification Motion suggests that PCG had limited authority in practice and that the front office easily overruled PCG's price testing results.[284] As I explain in this section, Plaintiff's characterization is inaccurate. Specifically, Plaintiff's characterization (i) incorrectly implies that any price testing variances should be eliminated without discussion; (ii) ignores that PCG employees were insulated from undue pressure and freely and aggressively challenged front office marks; and (iii) fails to consider that, after robust discussions between PCG, the front office, and senior management, Barclays took write-downs as a direct result of the IPV process.

170. In support of the assertion that Barclays' price testing process failed, Plaintiff cites the testimony of Joseph Kaczka, the director of the US Real Estate Products division of PCG, who recalled that he received "pushback" from the front office desk regarding his requests for write-downs in the subprime space, specifically referring to the NIM and post-NIM residual assets as well as whole loans.[285] Plaintiff also notes that Mr. Kaczka recalled that his management would revise PCG's numbers in response to pushback from the front office and "had discussions above [his] pay grade."[286] Plaintiff appears to suggest that this testimony is evidence that PCG did not properly value the fair value assets at issue and that the process in place for doing so was flawed. In reality, (i) PCG was acting in accordance with industry standards; (ii) Mr. Kaczka's references to "pushback" merely describe the internal discussions and deliberations that were an important

[284] Plaintiff's Class Certification Motion, p. 6.
[285] Plaintiff's Class Certification Motion, p. 6. With regard to the RMBS assets, Mr. Kaczka testified that the desk head Tom Hamilton was "very good" about responding to PCG when it had an issue and that he did not receive "pushback" from him. See Kaczka Deposition, 170:11–24.
[286] Kaczka Deposition, 172:18–173:2.

part of Barclays' processes; and (iii) the record demonstrates that by the end of 2007, PCG's views with respect to the valuation of subprime assets prevailed.

171. Contrary to Plaintiff's allegation, the engagement of the front office on valuations that PCG produced (which Plaintiff characterizes as "pushback") is not an undesirable outcome. As I explained above, this level of interaction and discussion is expected and even encouraged to ensure that the most appropriate valuation is eventually reached. The IPV group should consult the front office because the latter, based on its access and relationships with other market participants, can often have information of which PCG is not aware. For example, Mr. Teague testified that PCG "may not have all of the information the front office has to come up with a value. And in turn there's [*sic*] times where we may have information that we'd like to discuss with the desk to see if they're including that within their thought process."[287] As I explained above, a well-functioning IPV group will consider information from all sources, including the front office.[288] I have seen no evidence that any so-called "pushback" that Mr. Kaczka received was due to anything other than genuine disagreements reached without the benefit of Plaintiff's hindsight.

172. That traders and senior management at times disagreed with Mr. Kaczka's view of the market does not mean that his view was not considered or that there were efforts to prevent him from expressing those views. To the contrary, as I explain above, Barclays created governance structures that promoted the independence of the product control function. In practice, this meant separating PCG's reporting lines and ensuring that proper incentive structures are in place. Indeed, Mr. Kaczka did not report to anyone in the front office.[289] He was responsible for engaging the trading desks as variances appeared and if he could not resolve the differences, then elevating the issue to senior management in PCG.[290] Barclays structured PCG in exactly this way so that the front office would not have leverage over PCG and could not unduly influence the independent valuations.

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[287] Teague Deposition, 58:2–7.
[288] "Fair Value Measurement and Modelling: An Assessment of Challenges and Lessons Learned from the Market Stress," Basel Committee on Banking Supervision, June 2008, p. 4.
[289] Kaczka Deposition, 48:3–7.
[290] Kaczka Deposition, 75:12–16, 82:11–83:8.

173. Moreover, Mr. Kaczka evidently felt comfortable freely expressing his opinions. In his deposition, Mr. Kaczka identified senior PCG management (Walker, Clackson, Copson) as well as senior front office management (Menefee, Godden, Keegan) and said "they will say I pushed hard for loss and was one of the first people to say we have problems with some of these asset classes."[291]

174. To the extent that PCG's numbers were revised by senior management in response to discussions with the front office, this is also not concerning. Barclays had in place a defined process for resolving any variances between the PCG valuation and the front office valuation. As discussed above, when price testers identified a variance above a pre-specified threshold, the price tester would first discuss the variance directly with the desk and if it could not be resolved, elevate the issue to senior management.[292] Mr. Kaczka clarified that after an unresolved disagreement with the desk he would raise it with his management and "ask the business to sell some of the assets or prove that it's right."[293] This approach is in line with industry standards, which advise that "significant valuation adjustments…should be reported to and agreed on by senior management."[294]

175. In any event, Mr. Kaczka is imprecise as to when he received "pushback," stating that it occurred "initially" but that "as time went on, there was less."[295] In reality, as I explain below, contemporaneous documents and deposition testimony suggest that PCG's view prevailed and Barclays took associated write-downs with respect to subprime assets by late 2007.

176. Plaintiff cites Mr. Kaczka's testimony to suggest that Barclays' NIMs were "overvalued" and "should have been written down to zero" as of the end of 2007.[296] Richard Landreman, who reported to Mr. Kaczka and was the head of PCG's US Real Estate Products Technical Review

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[291] Kaczka Deposition, 173:17–23.

[292] BARC-ADS-00844487, p. 3. In his deposition, Richard Landreman, who was in charge of price testing RMBS and whole loans, said "first of all, I would challenge the trader. And if the trader couldn't explain the variance or the difference or explain why, then we would go to, you know, the appropriate chain of command." See Landreman Deposition, 53:11–16.

[293] Kaczka Deposition, 83:2–15.

[294] "Supervisory Guidance for Assessing Banks' Financial Instrument Fair Value Practices," Basel Committee on Banking Supervision, April 2009, p. 8.

[295] Kaczka Deposition, 81:4–7.

[296] Plaintiff's Class Certification Motion, pp. 6–7.

Group (responsible for price testing), had a different perspective. In his deposition, Landreman acknowledged that there was "debate and dialogue around what the appropriate assumptions should be to value [post-NIMs and NIMs]" but by the end of 2007, those securities were written down in accordance with his recommendations.[297] Landreman's testimony is supported by documents from the time period that show that when variances between PCG and the desk built up, write-downs were subsequently taken to reduce the variance. For example, PCG's November Month-end Independent Valuation Review stated that in "regards to Subprime Post-Nim and Nim, desk is using PCG's loss assumptions to derive the fair value for November 2007. Therefore there is no discrepancy. Desk will writedown $139MM."[298]

177. Plaintiff similarly claims that write-downs on whole loans were not sufficient at the end of 2007 and that PCG ignored advice from PwC, their external auditor, that the assets should be further written down. Plaintiff cites a November 16, 2007 email from Mr. Kaczka to the COO of the Asset Securitization Group ("ASG") notifying him that PwC was "looking for much more substantial writedowns on the $4biillion [*sic*] Equifirst originated loans" and that PCG needed "some observeable [*sic*] data to point to, to help persuade PWC to accept the desks levels as reasonable."[299] First, the November 16, 2007 comment occurred at the very beginning of PwC's analysis of the subprime book.[300] Second, similar to the internal price testing process, the front office may have access to data that the external auditor is not aware of or could sell assets to prove their value, which is what Mr. Kaczka was asking the front office to provide in support of its valuations. Third, PCG evidently provided satisfactory information to PwC because PwC ultimately signed off on Barclays' 2007 year-end financials.[301] In fact, the meeting minutes from the November 2007 Global Credit Products Pricing Review (conducted on January 3, 2008)

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297 Landreman Deposition, 95:17–96:7.

298 BARC-ADS-00778024, p. 23.

299 Plaintiff's Class Certification Motion, p. 6; BARC-ADS-00841934, p.1.

300 PwC did not request information on the subprime pool valuation and write-downs until November 5, 2007. See BARC-ADS-00860852.

301 In a presentation produced by PwC discussing their year-end audit, they devote a whole slide to the key issue of US subprime whole and residuals valuation. The slide acknowledges that "management's prices are at the high end of the range that we have observed. Management believes this is justified due to the better quality sub prime loans originated by Equifirst in the second half of the year and is supported by evidence from the sales" and "We are satisfied that management has undertaken a comprehensive review of these assets and their valuation." See BARC-ADS-01588788, p. 3.

indicate that Mr. Landreman "reviewed Whole Loans with PwC and they seemed comfortable with subprime methodology."[302] In his deposition Mr. Landreman recalled that during its review of subprime valuations, "PwC made very thorough detailed reviews of what we were presenting, and questioned us on every assumption we used, which we believed we were able to defend."[303]

178. The email that discusses PwC also discusses a large write-down on subprime assets that Barclays announced on November 15, 2007.[304] In the email chain, the COO of ASG requests details from PCG concerning the whole loans write-down that was booked for October month-end. Mr. Kaczka responds that the write-down "resulted from the variance generated by PCG when running the newly agreed methodology using the Libor +150 discount rate" and that "PAC [Mr. Clackson, the CFO of Barclays Capital] advised PCG to book the variance."[305] The write-down is evidence that PCG was able to recommend write-downs to the CFO of Barclays Investment Bank (Patrick Clackson) and book variances without requiring the front office's approval. Indeed, in his deposition, Mr. Landreman testified that a front office employee "complain[ed] because we pushed losses through because we didn't agree with him and he wasn't aware of those losses. So we booked the losses and then we told them that we booked the losses based on our price testing results."[306]

E. Barclays' processes and procedures for assessing assets recorded at amortized cost for impairment

179. As explained in Section VII.C above, while financial assets held on the balance sheet at amortized cost are not subject to daily fair market valuations, they should be regularly assessed for impairment. I have reviewed Barclays' processes and procedures governing the identification and recognition of impairments during the relevant time period, and conclude that they were consistent with industry standards and best practices. Specifically, (i) Barclays had explicitly defined roles and responsibilities related to impairments within its risk management

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[302] BARC-ADS-00918352, p. 3.
[303] Landreman Deposition, 148:2–5.
[304] BARC-ADS-00841934, p. 2.
[305] BARC-ADS-00841934.
[306] Landreman Deposition, 304:24–305:5.

governance structure; and (ii) Barclays maintained policies and procedures for evaluating and escalating impairments in accordance with industry practice.

180. Unlike fair value assets, which are subject to day-to-day fluctuations in price, the value of amortized cost assets only declines when "there is objective evidence of impairment as a result of one or more loss events…where these events have had an impact on the estimated future cash flows of the financial asset."[307] When one of these events occurs, the bank will recognize an impairment allowance that is estimated as "the difference between the carrying amount and the present value of estimated future cash flows."[308] When a specific asset is judged to be irrecoverable and the amount of loss is finalized, the asset is written down. The process involves a degree of uncertainty, so best practices acknowledge that "[a]ssessment and valuation of loan impairment should not be based solely on prescriptive rules or formulae but must be enhanced with judgement by the appropriate levels of management."[309]

1. Barclays had a system in place to identify loans that were at risk of impairment.

181. The first step in determining proper impairments is identifying "problem loans" that could experience financial difficulties in the near future and be at risk of impairment. During the relevant period, best practices for valuation of assets held at amortized costs indicated that banks should have a system in place that "identif[ies] and report[s] problem loans to reasonably assure that they are appropriately monitored as well as administered and provided for."[310] This credit risk monitoring system "provides the foundation upon which a bank's loan loss or provisioning methodology is built" and will assist the bank in assessing loans that pose a greater credit risk.[311]

182. Barclays had an established process for classifying loans and particularly those that were at risk of default. Loans were divided across the performing book, criticized book, and non-

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[307] Barclays 2008 Annual Report, p. 84.
[308] Barclays 2008 Annual Report, p. 84.
[309] "Sound Credit Risk Assessment and Valuation for Loans," Basel Committee on Banking Supervision, June 2006, p. 8.
[310] "Sound Credit Risk Assessment and Valuation for Loans," Basel Committee on Banking Supervision, June 2006, p. 6.
[311] "Sound Credit Risk Assessment and Valuation for Loans," Basel Committee on Banking Supervision, June 2006, p. 6.

performing book, and to monitor the criticized and non-performing loans, Barclays assigned the loans to a watchlist, which served as a credit risk classification.[312] Every asset had a Credit Responsible Executive (CRE) from GFRM Credit Risk in charge of it. Relationship Responsible Executives, business development officers, and product sponsors were required to inform the CRE of any deteriorating situation as soon as they were aware of it. Accounts and assets were then placed on the "Watchlist" by the CRE when there were grounds for concern regarding the financial health of the loan.[313]

183. The watchlists were divided into multiple categories, ranging from 1 up to 3.5, from low risk of default to high risk.[314] Category 1 suggests a need for caution as there is "some evidence of credit risk deterioration," Category 2 implies there is cause for concern and close control is required since there exists "increased evidence of credit risk deterioration," and Category 3 represents protracted difficulties and is for situations when there is "clear evidence of credit risk deterioration […which] may at some future date result in the deterioration of the repayment prospects or the firm's credit position."[315] Generally, accounts watchlisted 1 and 2 remained under control of the CRE, but names on watchlist 3 and above were transferred to the control of Credit Restructuring and Advisory Group (CRAG).[316] CRAG assets were assessed for impairment when they were designated as watchlist category 3 and at least every three months after that.

184. An Impaired Risk Review by GFRM London from August 31, 2007 shows that two SIV-lites, Golden Key and Mainsail II were added to Watchlist Category 2 because of deteriorating financial position and a third SIV-lite, Cairn High Grade Funding 1, was added to Watchlist Category 1.[317] An update presented to the Executive Committee by Robert LeBlanc, the Group

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[312] BARC-ADS-00010423, p. 8.

[313] BARC-ADS-00010423, p. 8.

[314] Watchlist 1: Caution; Watchlist 2: Cause for concern/close control required; Watchlist 3: Protracted difficulties – actively monitor risk; Watchlist 3.1: Non-performing lending – Non-accrual assets; Watchlist 3.2: Non-performing lending – Other accruing assets; Watchlist 3.3: Non-performing lending – 90 days past due; Watchlist 3.4: Non-performing lending – Reduced rate assets; Watchlist 3.5: Potential problem lending – Assets with serious credit risk doubts. See BARC-ADS-00010423, p. 41.

[315] BARC-ADS-00010423, pp. 12-13

[316] BARC-ADS-00010423, p. 9.

[317] BARC-ADS-00930582, pp. 4–5.

Risk Director, notes that during the second half of 2007 Barclays Capital's "[w]atch list balances have grown, largely due to CDO and FI counterparties being added."[318]

2. Barclays had policies, procedures, and controls to determine loan loss impairments in a timely manner.

185. When a loan or asset becomes impaired, a bank should have a system in place to determine the necessary impairment and then a clear process for senior management to review and approve the proposed impairment. Best practices specify that the process should include identification of "how the amount of any impairment is determined and measured" including the technique used and how it was selected, and the impairment decision should be based on "current and reliable data" and "incorporate management's experienced judgements about the credit quality of the loan portfolio."[319] These assessments should be conducted on a regular basis and in a timely manner to ensure that impairments are accurate and up-to-date.

186. Barclays had a well-developed set of policies and procedures that laid out the process for assessing impairments. In the Americas, a significant impairment would be reviewed and approved by a chain of committees: the US CRAG Watchlist and Impairment Review Committee,[320] Barclays Capital Impairment Committee[321] (BCIC), the Group Credit Risk Impairment Committee[322] (GCRIC), and the Board Audit Committee (BAC).[323] US CRAG would conduct its Watchlist review and Impairment review in a single meeting under the

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[318] BARC-ADS-01555697, pp. 1, 7.

[319] "Sound Credit Risk Assessment and Valuation for Loans," Basel Committee on Banking Supervision, June 2006, p. 7.

[320] The chair of this committee was Barclays Capital's Global Head of Credit Risk Management and core members included Barclays Capital's Global COO, Global CFO, Global CCO, Regional CRAG CCO, Head of CRAG, USA CFO, GFRM CCO, Head of Investment Banking, and Head of Global Loans. See BARC-ADS-00010423, p. 29.

[321] The chair of the BCIC was Barclays Capital's Global Head of Credit Risk Management and core members included Barclays Capital's Global COO, Global CFO, President, Global Head of Product Control, and the Regional CRAG CCO. See BARC-ADS-00010423, p. 26.

[322] The chair of the GCRIC was the Group Credit Risk Director and members included the Group Risk Director, Wholesale Credit Risk Director, Head of Risk Reporting, Barclays Capital's Head of Credit Risk Management and representatives from other business risk departments. Committee membership is listed in BARC-ADS-01174032 and associated titles are in BARC-ADS-01593493, p. 1.

[323] In Europe, the progression is similar although there are separate CRAG Watchlist and CRAG Impairment committees. See BARC-ADS-00010423, p. 15.

oversight of a combined US CRAG Watchlist and Impairment Review Committee.[324] This committee met on a quarterly basis. The entity in charge of the asset (either the CRE or CRAG) would conduct an appraisal of the account and prepare a report to present at the committee meeting. Policy dictated that the committee review all names and assign the watchlist grades and agree to action plans, while also considering reports from business units. The committee would also review new impairment allowances above $1.5 million and existing impairment allowances above $7.5 million, but was required to present its recommendations to its authority, the BCIC.[325, 326]

187. In its quarterly meetings, one of the BCIC's roles was to review new impairments above £1 million and existing impairments above £5 million.[327] It had the authority to approve recommendations for new impairment allowances between £1 million and £10 million and reviewed existing impairment allowances of £5 million or more. The committee would also review impairment allowances between £10 million and £25 million, but would make recommendations to the Group Credit Risk Director or Group Risk Director for approval (or the entire Group Credit Committee (GCC) if deemed necessary[328]). Finally, the committee would also review impairment allowances over £25 million, but make recommendations to the GCRIC for sanction at the semi-annual review. To ensure that impairments were reviewed and improved on a timely basis, between GCRIC meetings any new or movement in allowances over £25 million was recommended to the GCC for sanction.[329]

188. When the GCRIC met to review impairment allowances it would review "economic and other background data relevant to impairment allowance model assumptions" as well as agree to the "appropriate level of impairment allowances for the Group" as a whole.[330] The GCRIC was

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324 For details about this committee, see BARC-ADS-00010423, pp. 15, 29–30.

325 Impairment allowances include releases, write-offs, new monies, debt forgiveness, debt to equity conversions, and discounts on sale of debt, all measured on a cumulative basis for each debtor.

326 If a credit event occurs after the Impairment Committee process then the Global Head of Credit Risk Management, the CCO Americas, and the Head of CRAG Americas can unanimously agree to sanction up to $15 million in new or movements to impairment allowances. BARC-ADS-00010423, p. 29.

327 For details about this committee, see BARC-ADS-00010423, pp. 26–28.

328 BARC-ADS-00010975, p. 13.

329 BARC-ADS-00010423, pp. 26–27.

330 BARC-ADS-01176982, p. 24.

ultimately responsible for approving all impairments on a semi-annual basis, [331] but it "delegated the detailed review of loan impairment in the businesses to the Retail and Wholesale Credit Risk Management Committees."[332] Part of the WCRMC's mandate was to "review and challenge business overview of credit risk performance and half/full-year end impairment recommendations."[333] After the GCRIC review was complete, the Barclays Risk Director presented the results to the BAC on a half yearly basis.[334] In addition to the GCRIC's recommendations, "the Bank's auditors [would] also present their own findings to BAC to ensure that committee receive[s] a balanced view."[335]

F. Summary

189. In this section, I have responded to allegations made by Mr. O'Driscoll and Plaintiff that Barclays had deficiencies in its risk management functions. I have explained the inherent nature of risk in financial institutions and how the goal of the risk management function is not to eliminate risk, but to monitor it and advise senior management and the board about it. Part of this monitoring process involves properly valuing credit assets and recognizing losses if the credit assets decline in value. In practice, this process varies between financial assets held at fair value and those held at amortized cost, but in both cases Barclays employed a robust risk management infrastructure that ensured assets were properly valued and write-downs and impairments were appropriate. Therefore, it is my opinion that Plaintiff's allegation that Barclays' disclosures about its risk management practices were "false and misleading" due to Barclays' alleged "refusal to timely write down its assets"[336] is entirely without basis.

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[331] BARC-ADS-01175591, p. 4.
[332] Barclays 2008 Annual Report, p. 85. Also note that both the RCRMC/WCRMC and the GCRIC are both subcommittees of the Group Risk Oversight Committee (GROC).
[333] BARC-ADS-01593493, p. 2.
[334] BARC-ADS-01175591, p. 4.
[335] BARC-ADS-01175591, p. 5.
[336] Complaint, ¶188.

Executed this 2nd day of February, 2016

René M. Stulz

Exhibit 1
Barclays Bank PLC
Preference Shares [1]
Issued as of April 7, 2008

Name	Notional Amount [2] (*in millions*)	Notional Amount in £ [3] (*in millions*)	Annual Dividend Commitment in £ (*in millions*)
4.875% Non-Cumulative Callable Preference Shares	€1,000	£790	£39
4.75% Non-Cumulative Callable Preference Shares	€1,400	£1,106	£53
6.0% Non-Cumulative Callable Preference Shares	£750	£750	£45
6.278% Non-Cumulative Callable Preference Shares (Series 1)	$1,000	£503	£32
6.625% Non-Cumulative Callable Preference Shares (Series 2)	$750	£377	£25
7.1% Non-Cumulative Callable Preference Shares (Series 3)	$1,375	£692	£49
7.75% Non-Cumulative Callable Preference Shares (Series 4)	$1,150	£578	£45
Total		**£4,796**	**£287**

Source: Barclays 2007 Annual Report; *Bloomberg*

Note:
[1] Because both the Notional Amount and the Annual Dividend Commitment of the 1,000 Sterling £1 Preference Shares rounded to the nearest £1 million are zero, these shares are excluded from this table.
[2] Notional Amount corresponds to the amount and currency that the Preference Shares were issued in.
[3] As of April 7, 2008, the EUR to GBP exchange rate was 0.79003, while the USD to GBP exchange rate was 0.503.

Exhibit 2
Barclays Bank PLC
Tier-One Notes and Reserve Capital Instruments
Issued as of April 7, 2008

Name	**Notional Amount** [1] (*in millions*)	**Notional Amount in £** [2] (*in millions*)	**Annual Dividend Commitment in £** (*in millions*)
6% Callable Perpetual Core Tier-One Notes	£400	£400	£24
6.86% Callable Perpetual Core Tier-One Notes	$1,000	£503	£35
8.55% Step-up Callable Perpetual Reserve Capital Instruments [3]	$1,250	£629	£54
7.375% Step-up Callable Perpetual Reserve Capital Instruments [3]	$750	£377	£28
7.50% Step-up Callable Perpetual Reserve Capital Instruments [3]	€850	£672	£50
5.3304% Step-up Callable Perpetual Reserve Capital Instruments	£500	£500	£27
5.926% Step-up Callable Perpetual Reserve Capital Instruments	$1,350	£679	£40
6.3688% Step-up Callable Perpetual Reserve Capital Instruments	£500	£500	£32
7.434% Step-up Callable Perpetual Reserve Capital Instruments	$1,250	£629	£47
Total		**£4,888**	**£336**

Source: Barclays 2007 – 2008 Annual Reports; *Bloomberg*

Note:
[1] Notional Amount corresponds to the amount and currency that the Tier-One Notes and Reserve Capital Instruments were issued in.
[2] As of April 7, 2008, the EUR to GBP exchange rate was 0.79003, while the USD to GBP exchange rate was 0.503.
[3] These issuances are included in Other Shareholders' Equity. To identify these issuances, I compared the issuances identified as debt in Note 27 to the Accounts, Barclays 2008 Annual Report, p. 214 to those identified in Note m to the Consolidated Balance Sheet, Barclays 2008 Annual Report, p. 297.

Exhibit 3
Barclays Bank PLC
Default Thresholds
As of December 31, 2007
(*millions of £*)

Liabilities	Short Term	Long Term	Total
Balance Sheet Items [1]			
Deposits from banks	£88,821	£2,374	£91,195
Items in the course of collections from other banks	£1,792		£1,792
Customer accounts	£287,144	£14,019	£301,163
Trading portfolio liabilities	£65,402		£65,402
Financial liabilities designated at fair value	£34,663	£57,738	£92,401
Liabilities to customers under investment contracts [2]		£92,639	£92,639
Derivative financial instruments	£247,604	£665	£248,269
Debt securities in issue	£91,899	£37,946	£129,845
Repurchase agreements and cash collateral on securities lent	£169,725	£169	£169,894
Other liabilities			
Financial	£2,968	£1,456	£4,424
Non-financial [2][3]	£6,090		£6,090
Current tax liabilities [2]	£1,311		£1,311
Insurance contract liabilities, including unit-linked liabilities [2]		£3,903	£3,903
Subordinated liabilities	£463	£22,839	£23,302
Deferred tax liabili ies [2]		£855	£855
Provisions [2][4]	£645	£185	£830
Retirement benefit liabilities [2]		£1,537	£1,537
Total Balance Sheet Items	£998,527	£236,325	£1,234,852
Off Balance Sheet Items [1]			
Loan commitments	£186,895	£5,476	£192,371
Other commitments	£653	£157	£810
Total Off Balance Sheet Items	£187,548	£5,633	£193,181

Financial Liabilities [5]	Short Term + 50% of Long Term	Short Term + Long Term
Deposits from banks	£90,008	£91,195
Customer accounts	£294,154	£301,163
Financial liabilities designated at fair value	£63,532	£92,401
Debt securities in issue	£110,872	£129,845
Subordinated liabilities	£11,883	£23,302
Total Financial Liabilities	£570,448	£637,906

Default Thresholds [6]	
1. Financial Liabilities: Short Term + 50% of Long Term	£570,448
2. Financial Liabilities: Short Term + Long Term	£637,906
3. Balance Sheet Items: Short Term + 50% of Long Term	£1,116,690
4. Balance Sheet Items: Short Term + Long Term	£1,234,852
5. Balance and Off Balance Sheet Items: Short Term + 50% of Long Term	£1,307,054
6. Balance and Off Balance Sheet Items: Short Term + Long Term	£1,428,033

Source: Barclays 2007 Annual Report

Note:
[1] Unless otherwise noted, Note 48 to the Accounts, Barclays 2007 Annual Report, p. 243 (Liquidity Risk) provides detail on the contractual maturity of these liabilities on an undiscounted basis. In this case, the amount shown as Short Term is the sum of the amounts categorized as "On demand" and "Within one year" while the amount shown as Long Term is the sum of the amounts categorized as "Over one year but less than five years" and "Over five years."
[2] These liabilities are not included in the Liquidity Risk note described in [1] above. In this case, the amounts used are those from the Consolidated Balance Sheet of Barclays Bank (see Barclays 2007 Annual Report, p. 251). They were categorized as Short Term or Long Term based on my judgment as to the nature of the liability in question. Recategorization of these items between Short Term and Long Term would have minimal — if any — impact on the results of the DTD analysis in Exhibit 5.
[3] Other Liabilities total £10,514 million as of December 31, 2007, £9,058 million of which was "expected to be settled within no more than 12 months." Non-financial Liabilities of £6,090 million are calculated by subtracting Financial Liabilities of £2,968 million from £9,058 million. See Note h to the Consolidated Balance Sheet, Barclays 2007 Annual Report, p. 256.
[4] Provisions total £830 million as of December 31, 2007, £645 million of which was "expected to be recovered or settled within no more than 12 months." Accordingly, £645 million was categorized as a Short Term liability while the remainder was categorized as Long Term. See Note 28 to the Consolidated Balance Sheet, Barclays 2007 Annual Report, p. 243.
[5] See Report ¶87 for an explanation of how certain liabilities were classified as Financial Liabilities, with the remainder being classified as Operating Liabilities.
[6] See Report ¶80 for details of why certain specifications of the Default Thresholds include only 50% of Long Term liabilities.

Exhibit 4
Barclays Bank PLC Series 5 Preference Shares and Barclays PLC ADRs
Closing Stock Price

4/11/08 – 1/29/10

Source: *Bloomberg*; Barclays 2007 Annual Report

Note: I choose to use the ADR price as traded on the New York Stock Exchange under the ticker "BCS" – rather than the price of the ordinary shares traded on the London Stock Exchange – to avoid mismatched closing times and the need to convert the latter into USD. A graph of the price of the ordinary shares, converted into USD and taking into account the 4:1 conversion ratio into ADRs (see Barclays 2007 Annual Report, p. 267), would look essentially the same as that of the price of the ADRs shown here.

Exhibit 5
Barclays Bank PLC
Distance to Default ("DTD") [1]
As of April 7, 2008

Default Threshold [2] (*in millions*)	**Expected Growth Rate** [3]	**DTD for Various Writedown Levels** [4] (*Writedowns in millions*) £0	£576	£724	£1,296
£570,448	5.50%	2.441	2.401	2.391	2.351
	5.75%	2.536	2.496	2.486	2.446
	6.00%	2.631	2.591	2.580	2.540
	6.25%	2.725	2.685	2.674	2.634
	6.50%	2.818	2.778	2.768	2.728
	6.75%	2.911	2.871	2.861	2.821
	7.00%	3.004	2.964	2.954	2.914
£637,906	5.50%	2.480	2.439	2.429	2.389
	5.75%	2.586	2.545	2.535	2.495
	6.00%	2.691	2.651	2.641	2.600
	6.25%	2.796	2.756	2.746	2.706
	6.50%	2.901	2.861	2.850	2.810
	6.75%	3.005	2.965	2.954	2.915
	7.00%	3.108	3.068	3.058	3.018
£1,116,690	5.50%	2.759	2.718	2.707	2.666
	5.75%	2.944	2.903	2.892	2.851
	6.00%	3.128	3.087	3.076	3.035
	6.25%	3.311	3.270	3.259	3.219
	6.50%	3.493	3.452	3.442	3.401
	6.75%	3.675	3.634	3.623	3.583
	7.00%	3.855	3.815	3.804	3.764
£1,234,852	5.50%	2.828	2.787	2.777	2.736
	5.75%	3.033	2.992	2.981	2.940
	6.00%	3.236	3.195	3.185	3.144
	6.25%	3.439	3.398	3.387	3.346
	6.50%	3.640	3.599	3.589	3.548
	6.75%	3.841	3.800	3.789	3.749
	7.00%	4.040	4.000	3.989	3.949
£1,307,054	5.50%	2.871	2.830	2.819	2.778
	5.75%	3.087	3.046	3.036	2.995
	6.00%	3.303	3.262	3.251	3.210
	6.25%	3.517	3.476	3.465	3.425
	6.50%	3.730	3.689	3.679	3.638
	6.75%	3.942	3.902	3.891	3.851
	7.00%	4.154	4.113	4.102	4.062
£1,428,033	5.50%	2.943	2.901	2.891	2.850
	5.75%	3.179	3.138	3.127	3.086
	6.00%	3.414	3.373	3.362	3.321
	6.25%	3.648	3.607	3.596	3.556
	6.50%	3.881	3.840	3.829	3.789
	6.75%	4.113	4.072	4.061	4.021
	7.00%	4.343	4.303	4.292	4.252

Source: See Expert Report of René M. Stulz ("Report")

Note:
[1] See Report §V.E.3 (¶¶76 – 103) for a description of the DTD calculation methodology.
[2] See Exhibit 3 for details of the Default Threshold calculations.
[3] See Report Footnote 143 for details of the Expected Growth Rate calculations.
[4] See Report §V.E.3.b.1-3 (¶¶97 – 102) for details of the Writedown Level calculations.

Exhibit 6
Credit Ratings of Monoline Insurers [1]
Q3 2007 – Q2 2008

	Moody's				Standard & Poor's				Fitch			
Monoline	**Q3 2007**	**Q4 2007**	**Q1 2008**	**Q2 2008**	**Q3 2007**	**Q4 2007**	**Q1 2008**	**Q2 2008**	**Q3 2007**	**Q4 2007**	**Q1 2008**	**Q2 2008**
AMBAC Assurance Corp.	Aaa	Aaa	Aaa	Aa3	AAA	AAA	AAA	AA	AAA	AAA	AA	WD
Assured Guaranty Corp.	Aaa	Aaa	Aaa	Aaa	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
CIFG Assurance North America Inc.	Aaa	Aaa	A1	Ba2	AAA	AAA	A+	A-	AAA	AAA	A-	CCC
Financial Guaranty Insurance Co.	Aaa	Aaa	Baa3	B1	AAA	AAA	BB	BB	AAA	AAA	BBB	BBB
Financial Security Assurance Inc. [2]	Aaa	Aaa	Aaa	Aaa	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
MBIA Insurance Corp.	Aaa	Aaa	Aaa	A2	AAA	AAA	AAA	AA	AAA	AAA	AAA	NR

Source: *Bloomberg*; BARC-ADS-00090241

Note:
[1] Credit ratings are as of the end of each given quarter. According to BARC-ADS-00090241, Barclays had negative basis exposure to these monolines as of November 1, 2007, through asset types including High Grade ABS CDOs, Mezz ABS CDOs, CDO of CDOs, CRE CDOs, Synthetic CDO Corporate Bonds, and CLOs.
[2] Financial Security Assurance Inc., a monoline that Barclays had Synthetic CDO Corporate Bond and CLO exposure to, was renamed Assured Guaranty Municipal Corp. after it was acquired by Assured Guaranty Ltd. in 2009. Assured Guaranty Ltd. is also the parent company of Assured Guaranty Corp.

Exhibit 7
Barclays PLC and Barclays Bank PLC
Return on Assets
1989 – 2007

	Barclays PLC			Barclays Bank PLC [1]		
Year	**Profits After Tax (£m)**	**Total Assets (£m)**	**Return on Assets** [2]	**Profits After Tax (£m)**	**Total Assets (£m)**	**Return on Assets** [2]
1989		£127,616			£127,616	
1990	£428	£134,887	0.34%	£428	£134,887	0.34%
1991	£296	£138,108	0.22%	£296	£138,108	0.22%
1992	-£285	£149,118	-0.21%	-£285	£149,118	-0.21%
1993	£382	£166,008	0.26%	£382	£166,008	0.26%
1994	£1,251	£162,403	0.75%	£1,251	£162,403	0.75%
1995	£1,407	£168,826	0.87%	£1,407	£168,826	0.87%
1996	£1,686	£186,002	1.00%	£1,686	£186,002	1.00%
1997	£1,174	£234,657	0.63%	£1,174	£234,657	0.63%
1998	£1,380	£219,494	0.59%	£1,380	£219,494	0.59%
1999	£1,811	£254,793	0.83%	£1,811	£254,793	0.83%
2000	£2,552	£316,190	1.00%	£2,552	£316,190	1.00%
2001	£2,598	£356,649	0.82%	£2,596	£356,649	0.82%
2002	£2,250	£403,066	0.63%	£2,248	£403,066	0.63%
2003	£2,769	£443,361	0.69%	£2,769	£443,373	0.69%
2004	£3,314	£522,089	0.75%	£3,323	£522,253	0.75%
2005	£3,841	£924,357	0.74%	£3,872	£924,170	0.74%
2006	£5,195	£996,787	0.56%	£5,256	£996,503	0.57%
2007	£5,095	£1,227,361	0.51%	£5,126	£1,227,583	0.51%
Average			**0.61%**			**0.61%**

Source: Barclays 1990 – 2007 Annual Reports

Note:
[1] From 1989 to 1993, Barclays Bank PLC's Profits After Tax and Total Assets are assumed to equal those of Barclays PLC.
[2] In a given year, Return on Assets is calculated by dividing Profits After Tax for that year by the Total Assets for the prior year.

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UNDERGRADUATE STUDIES

University of Neuchâtel, Switzerland, Licence es Sciences Économiques, 1975.

GRADUATE STUDIES

London School of Economics, 1975-1976, Visiting Graduate Student.

Massachusetts Institute of Technology (MIT), 1976-1980, Ph.D. in Economics.

ACADEMIC APPOINTMENTS

Ohio State University, Everett D. Reese Chair of Banking and Monetary Economics, 1996 to present.

University of Southern California, Visiting Professor, 2007.

University of Chicago, Visiting Professor, Stigler Center, 2003-2004.

Northwestern University, Visiting Scholar, Kellogg School of Management, 2003-2004.

Harvard University, Business School, August 1996 to July 1997, Bower Fellow.

Ohio State University, Director of the Dice Center for Research in Financial Economics, 1995 to present.

Ohio State University, Ralph Kurtz Chair in Finance, 1993-1996.

Ohio State University, Riklis Chair in Business and its Environments, 1988-1993.

Ohio State University, Professor of Finance, 1985 to present.

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University of Chicago, Visiting Professor of Finance, 1986-1987.

Massachusetts Institute of Technology, Visiting Associate Professor of Finance, Fall 1985.

Ohio State University, Associate Professor of Finance, 1983-1985.

University of Rochester, Assistant Professor of Finance and Economics, 1980-1983.

OTHER RELEVANT POSITIONS HELD

Research Associate, National Bureau of Economic Research (Asset Pricing Group and Corporate Finance Group).

Director, NBER Project on the Risks of Financial Institutions.

Chairman, Scientific Council, Swiss Finance Institute, 2006 to present.

Board of Directors, American Finance Association, 1988 to 2000, 2002 to 2006.

Consultant to the World Bank, the IMF, the NYSE, Federal Reserve Bank of New York, corporations, and law firms.

Expert testimony in federal courts, state courts, and domestic and international arbitrations.

Taught executives in Europe, Asia and North America (open enrollment as well as for corporations, courses on risk management, banking, derivatives, corporate valuation, investments).

Advisory Committee, Morningstar, 2000-2002.

Director, Banque Bonhôte, 2002 to present.

Director, Wegelin Fund Management, 1999 to 2010.

President, Gamma Foundation, 2002 to 2013.

Director, Community First Financial Group, Inc., 2001 to 2010.

Director, Peninsula Banking Group, Inc., 2001 to 2010.

Trustee, Global Association of Risk Professionals, 2002 to present; executive committee, 2004 to present; chair of governance committee, 2011 to present.

Chairman, Financial Risk Management Examination Certification Committee, Global Association of Risk Professionals, 2002 to present.

Chairman, New York Federal Reserve Bank/GARP Global Risk Forum (2011, 2013), Bank of England/GARP Global Risk Forum (2012, 2014), Hong Kong Monetary Authority/GARP Global Risk Forum (2013, 2015).

International Advisory Committee, NCCR, 2002 to 2011.

External Reviewer, London Business School Finance Department, 2005.

Financial Advisory Roundtable (FAR), Federal Reserve Bank of New York, 2006 to 2010.

Guest Contributor, Harvard Law School Corporate Governance Blog.

Squam Lake Group, member, 2008 to present.

Senior Academic Fellow, Asia Bureau of Finance and Economic Research, 2012 to present.

Fellow, Wharton Center for Financial Institutions, 2013 to present.

HONORS, SCHOLARSHIPS AND FELLOWSHIPS

Advanced Researcher Fellowship, Swiss National Science Foundation, 1978-1980.

Dean's Research Professorship, Ohio State University, Spring 1984.

Pacesetter Research Award, Ohio State University, April 1986.

President-Elect (1993) and President (1994), International Economics and Finance Society.

Docteur Honoris Causa, University of Neuchâtel, Switzerland, 1998.

Eastern Finance Association Scholar Award, 1998.

Selected keynote speeches: ABFER, Asia-Pacific Finance Association, Bank of the Netherlands Governance Conference, Bocconi Derivatives Annual Conference, Drexel Corporate Governance Conference, Eastern Finance Association, European Corporate Finance Institute, European Finance Association, Financial Management Association, European Financial Management Association, Financial Management Association European Conference, FDIC Annual Conference, Rising Stars Conference, Fourth Annual Conference on Asia-Pacific Financial Markets of the Korean Securities Association, French Finance Association, German Finance Association, Infiniti Conference, Notre Dame/SEC Conference, Northern Finance Association, Swiss Banking Association 100th Anniversary Conference, Western Finance Association.

Assurant Lecture, Georgia Tech University, 2004.

Fellow, Financial Management Association, 2000.

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Fellow, American Finance Association, 2005.

Fellow, European Corporate Governance Institute, 2005.

Vice-President (2002), Program Chair, (2003), President (2004), Western Finance Association.

Vice-President (2002), President-elect (2003), President (2004), American Finance Association.

Who's Who in Banking and Finance; Who's Who in Economics.

Jensen Prize for best article in Corporate Finance in the Journal of Financial Economics, 2000, 2008; runner-up, 2011.

William F. Sharpe Award for the best paper published in the Journal of Financial and Quantitative Analysis during the year 2003.

Selected by the magazine Treasury and Risk Management as one of the 100 most influential people in finance (June 2004).

René M. Stulz Scholar Development Fund, created in 2005 by former Ph.D. students.

Fama/DFA Prize for best article in Capital Markets and Asset Pricing in the Journal of Financial Economics, 2005.

Nominated for a Brattle Prize for best paper in Corporate Finance in the Journal of Finance in 2005.

Risk Who's Who, Charter Member, 2006.

Best paper, First Asian-Pacific Capital Markets Conference, Seoul, 2006.

Outstanding Academic Contribution to Corporate Governance Award, Drexel University, 2009.

Risk Manager of the year award, Global Association of Risk Professionals, 2009.

Swiss Finance Institute/Banque Privée Espirito Santo Prize 2010.

Trailblazer in Finance Award, 2014.

Reuters, Highly-Cited Researchers, 2014 onwards.

CONGRESSIONAL TESTIMONY

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"Over-the-Counter Derivatives Markets Act of 2009," testimony to the House of Representatives Committee on Financial Services, 2009.

"Oversight of the Mutual Fund Industry: Ensuring Market Stability and Investor Confidence," Subcommittee on Capital Markets and Government Sponsored Enterprises, House of Representatives Committee on Financial Services, 2011.

BOOKS

Risk Management and Derivatives, Southwestern College Publishing, 2003.

Handbook of the Economics of Finance, volume 1, edited with George Constantinides and Milton Harris, North-Holland, 2003.

Handbook of the Economics of Finance, volume 2, edited with George Constantinides and Milton Harris, Elsevier, 2013.

International Capital Markets, 3 volumes, edited with Andrew Karolyi, Edward Elgar, 2003.

Readings for the Financial Risk Manager, edited with Richard Apostolik, Wiley, 2004.

Readings for the Financial Risk Manager, edited with Richard Apostolik, Wiley, 2005.

The Risks of Financial Institutions, edited with Mark Carey, University of Chicago Press, 2006.

The Squam Lake Report: Fixing the Financial System, co-authored with the Squam Lake Group, Princeton University Press, 2010.

PUBLISHED PAPERS

"On the Effects of Barriers to International Investment," Journal of Finance, 1981, v36(4), 923-934; reprinted in Emerging Markets, Geert Bekaert and Campbell R. Harvey, ed., Edward Elgar Publishing, 2004, 1-36.

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"Options on the Minimum or the Maximum of Two Risky Assets: Analysis and Applications," Journal of Financial Economics, 1982, v10(2), 161-185, reprinted in Options Markets, vol. 2, George Constantinides and A. G. Malliaris, eds., Edward Elgar Publishing, 2001.

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"Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997," with Hyuk Choe and Bong-Chan Kho, Journal of Financial Economics, 1999, v54(2), 227-264.

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"International Portfolio Flows and Security Markets," in International Capital Flows, edited by Martin Feldstein, University Chicago Press, 1999, 257-293, reprinted in Emerging Markets, Geert Bekaert and Campbell R. Harvey, ed., Edward Elgar Publishing, 2004, 387-423.

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"Should we Fear Capital Flows?," in International Financial Markets: The Challenge of Globalization, Leonardo Auernheimer (Editor), University of Chicago Press, 2003, Chicago, Ill.

"Corporate Governance, Investor Protection, and the Home Bias," with Magnus Dahlquist, Lee Pinkowitz, and Rohan Williamson, Journal of Financial and Quantitative Analysis, 2003, v38(1), 87-110.

"Equity Market Liberalizations as Country IPOs," with Rodolfo Martell, American Economic Review, Papers and Proceedings, 2003, v93(2), 97-101.

"Culture, Openness, and Finance," with Rohan Williamson, Journal of Financial Economics, 2003, v70(3), 313-349.

"A New Approach to Measuring Financial Contagion," with Kee-Hong Bae and Andrew Karolyi, Review of Financial Studies, 2003, v16, 717-763. Pre-publication Working Paper

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Advisory Editor, Journal of Investment Management, 2003 to present.

Advisory Editor, Journal of Financial Economics, 2000 to present.

Advisory Editor, Journal of Financial Services, 1999 to present.

Editor, Journal of Finance, 1988 to 2000.

Editor, Corporate Finance Abstracts, Social Science Research Network, 1998 to present.

Editor, Journal of Financial Economics, 1982 to 1987.

Board of Editors, Journal of Banking and Finance, 2008.

Co-Editor, Banking and Financial Institutions Abstracts, Social Science Research Network, 1998 to present.

Co-Editor, Financial Markets and Portfolio Management, 1999 to present.

Associate Editor, Journal of Risk, 2006 to present.

Board of Editors, Japan and the World Economy, 2006 to present.

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Advisory Editor, The Review of Finance, 2003 to 2009.

Advisory Editor, Journal of Economic Perspectives, 2006 to 2008.

Associate Editor, Journal of Economic Perspectives, 2003 to 2005.

Associate Editor, Journal of Financial Abstracts, 1994 to 1998.

Associate Editor, Journal of Financial Economics, 1988 to 1999.

Associate Editor, Journal of International Finance and Accounting, 1988 to present.

Associate Editor, Global Finance Journal, 1988 to present.

Associate Editor, Journal of International Financial Markets, Institutions and Money, 1989 to present.

Associate Editor, Journal of Fixed Income, 1991 to present.

Associate Editor, Journal of International Trade and Finance, 1992 to present.

Associate Editor, Journal of Financial and Quantitative Analysis, 1983-1985.

Acted as an ad hoc referee for AER, JIE, JAE, JFE, JME, JMCB, JFQA, QJE, JF, JB, JPE, Canadian Journal of Economics, Management Science, Marketing Science, Journal of International Money and Finance, Journal of International Business Studies, the Canadian NSF and the NSF.

Editorial Board, Journal of Financial Intermediation, 2013 to present.

APPENDIX B

PRIOR TESTIMONY OF RENÉ M. STULZ

Case Name:	Trustees of the Local 464A United Food and Commercial Workers Union Pension Fund et al. v. Wachovia Bank, N.A., et al.
Case No.:	Civil Action No.: 2:09-cv-00668 (United States District Court, District of New Jersey)
Date of Testimony:	March 2012 (Deposition)

Case Name:	ABN AMRO BANK N.V., et al. against Eric Dinallo et al.
Case No.:	Index No.: 601846/09 Supreme Court of the State of New York, County of New York
Date of Testimony:	April 2012 (Deposition)

Case Name:	In Re Bank of America Corp. Securities, Derivative, and Employee Retirement Income Security Act (ERISA) Litigation
Case No.:	No. 09 MDL 2058 (PKC) (United States District Court, Southern District of New York)
Date of Testimony:	May 2012 (Deposition)

Case Name:	In Re REFCO Inc. Securities Litigation
Case No.:	07-MDL-1902 (United States District Court, Southern District of New York)
Date of Testimony:	September 2012 (Deposition)

Case Name:	Denver Employees Retirement Plan against JPMorgan Chase Bank, N.A.
Case No.:	Index No. 650320/2010 (Supreme Court of the State of New York, County of New York)
Date of Testimony:	October 2012 (Deposition)

Case Name:	Dodona I, LLC et al. v. Goldman Sachs & Co., et al.
Case No.:	Case No. 10-CV-07497 (United States District Court, Southern District of New York)
Date of Testimony:	June 2013 (Deposition), February 2014 (Deposition)

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Case Name: In re BP p.l.c. Securities Litigation
Case No.: Case No. 4:10-MD-02185 (United States District Court, Southern District of Texas, Houston Division)
Date of Testimony: September 2013 (Deposition), March 2014 (Deposition)

Case Name: In Re China MediaExpress Inc.
Case No.: Case No. 11 Civ. 0804 (VM/GWG), United States District Court, Southern District of New York
Date of Testimony: May 2014 (Deposition)

Case Name: Postova Banka, A.S. and Istrokapital SE, Claimants, and The Hellenic Republic, Respondent
Case No.: Icsid Case No. ARB/13/8
Date of Testimony: September 2014 (Hearing)

Case Name: In Re Delcath Systems, Inc. Securities Litigation
Case No.: Case No. 13-CV-3116 (LGS) (United States District Court, Southern District of New York)
Date of Testimony: January 2015 (Deposition)

Case Name: National Australia Bank Limited and TSL (USA), Inc., v. Goldman Sachs & Co.
Case No.: FINRA Dispute Resolution No. 12-04099
Date of Testimony: April 2015 (Arbitration Hearing)

Case Name: Plumbers & Pipefitters National Pensions Fund, et al. v. Michael J. Burns et al.; Hawaii Ironworkers Annuity Trust Fund v. Bernard N. Cole et al.
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Case Name: In Re The Bear Stearns Companies, Inc. Securities, Derivative, and Erisa Litigation
Case No.: Case No. 09 Civ. 8161 (RWS)
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Case Name:	FutureSelect Portfolio Management, Inc., v. Tremont Group Holdings, Inc.
Case No.:	Superior Court of the State of Washington. Court of Appeals No. 68130-3-I
Date of Testimony:	September 2015 (Deposition), November 2015 (Trial)

Case Name:	Federal Home Loan Mortgage Corporation v. Deloitte & Touche LLP.
Case No.:	Case No. 1:14-cv-23713-UU, United States District Court Southern District of Florida, Miami Division
Date of Testimony:	November 2015 (Deposition)

Case Name:	In Re MF Global Holdings Limited Investment Litigation, Relating to The Commodities Customer Class Action; Sapere CTA Fund, L.P. vs. Corzine, et al.; Tavakoli, as Litigation Trustee of the MF Global Litigation Trust v. Corzine, et al.; and U.S. Commodity Futures Trading Commission v. MF Global Holdings Ltd, et al.
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APPENDIX C
Documents Considered

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Expert Report of Allan W. Kleidon, Ph.D., filed on December 15, 2015

Expert Report of D. Paul Regan, filed on December 15, 2015 with Exhibits

Report of Fiachra T. O'Driscoll, filed on December 15, 2015

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BARC-ADS-00836435

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BARC-ADS-00918327

BARC-ADS-00918352

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BARC-ADS-00930582

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BARC-ADS-01174032

BARC-ADS-01175591

BARC-ADS-01176982

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EXHIBIT 36

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

In re BARCLAYS BANK PLC SECURITIES LITIGATION	Master File No. 1: 09-cv-01989-PAC Honorable Paul A. Crotty

<u>EXPERT REBUTTAL REPORT OF CHAD COFFMAN, CFA</u>

CONFIDENTIAL

Table of Contents

I. INTRODUCTION

1. On December 15, 2015, I submitted an expert report in this matter (the "Damages Report," or "Report")[1] in which I opined on the method by which statutory damages under Section 11 of the Securities Act of 1933 ("Securities Act") are to be calculated for Class Members in connection with their purchases of Barclays Non-Cumulative Callable Dollar Preference Shares, Series 5 in the form of American Depositary Shares (the "Series 5 Shares", "Series 5 ADS", or "Shares").

2. On December 15, 2015, counsel for Lead Plaintiff provided me with the Expert Report of Dr. Allan W. Kleidon (the "Kleidon Report"). In his report, Dr. Kleidon states that he was asked "to analyze whether any declines in the price of the Series 5 ADS during the period April 8, 2008 (the "Offering Date") to March 24, 2009 (the filing date of Barclays' Form 20-F for the year ended December 31, 2008 ("2008 Form 20-F")) (the "Analysis Period") were attributable, in whole or in part, to any of the alleged misrepresentations cited in the Complaint."[2] Dr. Kleidon offers the following opinions:

- There were no statistically significant price declines in the Series 5 ADS in the Analysis Period on any days when (i) any allegedly corrective information cited in the Complaint was disclosed to the market, or (ii) any allegedly undisclosed risk cited in the Complaint materialized.
- All statistically significant price declines in the Series 5 ADS in the Analysis Period occurred on days when (i) there was no allegedly corrective information cited in the Complaint disclosed to the market, and (ii) no allegedly undisclosed risk cited in the Complaint materialized.

[1] Unless otherwise defined here, all capitalized terms shall have the meanings given to them in the Damages Report. The "Company" is in reference to Barclays. Additionally, unless otherwise noted herein, all emphasis is added.

[2] Kleidon Report ¶3. As discussed, Dr. Kleidon offers no opinion regarding price declines from March 25, 2009 through April 8, 2009 (the "date of suit"), which period is relevant to any analysis of causation and damages in this matter.

- The price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations.[3]

3. I have been asked by Counsel for Plaintiff in this matter to review, evaluate, and respond to Dr. Kleidon's opinions and analysis. My responses to the Kleidon Report are set forth in this document (the "Rebuttal Report").

4. In formulating my opinions set forth in this Rebuttal Report, I have relied upon the analysis already described in the Damages Report as well as knowledge, experience, and formal training in economics, finance, and statistics, in addition to the allegations, evidence, and facts set forth in this lawsuit. All of the additional materials that I relied upon and considered in reaching my opinions in this Rebuttal Report, beyond those listed in the Damages Report, are identified in the attached **Appendix A**. Global Economics Group is being compensated at $575 per hour for my work on this matter, and at standard hourly rates for work performed by members of my staff acting under my supervision and direction. Neither my compensation, nor the compensation of my firm, is in any way contingent upon the outcome of this case or upon the opinions I express. My qualifications and curriculum vitae were included in the Damages Report, and my updated curriculum vitae is attached in **Appendix B**.

II. SUMMARY OF OPINIONS

5. In reviewing Dr. Kleidon's Report, I have reached the following conclusions that I expand upon below:

[3] Kleidon Report ¶5.

6. The Kleidon Report fails, as a matter of scientific and statistical principles, to affirmatively prove that events unrelated to the misstatements or omissions at issue in this litigation caused observed price declines in the Series 5 Shares during the relevant time period.

7. First, Dr. Kleidon erroneously concludes that his event study analysis provides evidence that the release of information related to Plaintiff's claims could not have caused any observed stock price decline that is not statistically significant at the 95% confidence level. By its nature, an event study that finds a statistically significant change in price is capable of providing evidence (within a certain degree of error) of an affirmative causal linkage between an event and a price movement. An event study cannot, however, based on a ***lack*** of statistical significance, establish a lack of causation for any abnormal return not explained by the control variables. As I demonstrate in this Rebuttal Report, there are numerous examples of days that Dr. Kleidon ignores where (i) news was disseminated related to the alleged misstatements and omissions; and (ii) Dr. Kleidon's event study observed abnormal price declines in the price of the Series 5 Shares. Furthermore, Dr. Kleidon's methodology for identifying news relevant to Plaintiff's claims is inadequate.

8. Second, to the extent that Dr. Kleidon has limited his analysis of causation to only those dates with statistically significant abnormal returns, his causation analysis for these dates is also flawed as he incorrectly concludes that news disseminated on those dates did not relate to Plaintiff's claims. More specifically, Dr. Kleidon identifies seven negative and statistically significant dates on which he opines there is no information related to Plaintiff's claims. For five of these seven dates, I identify news related to Plaintiff's claims that Dr. Kleidon does not properly address. As a result, Dr. Kleidon has not established that even these statistically significant abnormal price declines were unrelated to Plaintiff's claims.

9. Finally, it is my opinion that the regression analysis underlying Dr. Kleidon's event study is fundamentally flawed and does not provide a reliable basis for measuring the abnormal price declines or evaluating the statistical significance of price movements for two distinct reasons. First, Dr. Kleidon's approach mis-measures the volatility of the Series 5 Shares during his Analysis Period and therefore draws erroneous conclusions about which price declines are statistically significant. Second, downward movements in Dr. Kleidon's control index itself during the relevant period reflect, among other things, the market learning how exposure to subprime assets and monoline insurers was affecting the market value of preferred stocks. As a result, movements in Dr. Kleidon's "control" index do not represent an appropriate independent "control" for purposes of isolating price declines in the Series 5 Shares that are independent of Plaintiff's claims.

10. Given these flaws in Dr. Kleidon's approach, it is my opinion that he has not reliably established that information unrelated to Plaintiff's claims caused the price declines observed in the Series 5 Shares.

11. My report is structured as follows: In Section III, I describe how the statute calls for Defendants to prove that events unrelated to the misstatements and omissions at issue in this litigation caused the Series 5 Share price declines during the relevant time period. In Section IV, I show that Dr. Kleidon's methodology and conclusions do not offer reliable economic or statistical evidence to establish alternative causes of observed price declines. In Section V, I describe how Dr. Kleidon does not offer any evidence regarding alternative causes of observed price declines on the vast majority of dates. In Section VI, I show that even on dates where Dr. Kleidon purports to have evidence of alternative causes, he ignores information related to Plaintiff's claims. Finally, in Section VII, I demonstrate how Dr. Kleidon's event study

methodology is unreliable for evaluating which price declines are statistically significant and, at least on certain days, is inappropriate for quantifying the degree to which price declines can be explained by independent market forces.

III. THE STATUTE CALLS UPON DEFENDANTS TO PROVE ALTERNATIVE CAUSES FOR OBSERVED PRICE DECLINES

12. As I stated in the Damages Report, Section 11(e) of the Securities Act establishes the statutory formula by which damages for Section 11 claims are calculated.[4] Specifically, Section 11(e) states the following:

> The suit authorized under subsection (a) of this section may be to recover such damages as shall represent the difference between the amount paid for the security (not exceeding the price at which the security was offered to the public) and (1) the value thereof as of the time such suit was brought, or (2) the price at which such security shall have been disposed of in the market before suit, or (3) the price at which such security shall have been disposed of after suit but before judgment if such damages shall be less than the damages representing the difference between the amount paid for the security (not exceeding the price at which the security was offered to the public) and the value thereof as of the time such suit was brought.[5]

13. However, Section 11 allows Defendants to avoid or limit damages if they can prove that financial losses under the statutory formula did not result from the misstatements and/or omissions. Section 11 provides:

> That if the ***defendant proves*** that any portion or all of such damages represents ***other than*** the depreciation in value of such security resulting from such part of the registration statement, with respect to which his liability is asserted, not being true or omitting to state a material fact required to be stated therein or necessary to make the statements therein not misleading, such portion of or all such damages shall not be recoverable.[6]

[4] Damages Report ¶11.

[5] 15 U.S.C. § 77k(e).

[6] 15 U.S.C. § 77k(e).

14. My understanding is that this element of the statute creates a burden for Defendants to affirmatively prove that the Series 5 ADS price declines were caused by events other than the misstatements and omissions at issue in this litigation, and that Plaintiff is entitled to statutory damages for any portion of the price decline that Defendants have not otherwise proven was the result of something unrelated to Plaintiff's claims. In other words, if Defendants can prove a causal relationship between the security price declining and some event unrelated to the misstatements or omissions at issue in this litigation, then Defendants have met their burden for proving negative causation for that particular price decline.

IV. DR. KLEIDON DOES NOT PROVE ALTERNATIVE CAUSES FOR OBSERVED PRICE DECLINES

15. Dr. Kleidon broadly opines: "The price declines during the Analysis Period are not attributable, in whole or in part, to any of the alleged misrepresentations."[7] However, Dr. Kleidon's approach is only capable of providing economic and statistical evidence for two categories of price declines in the Series 5 Shares: (1) portions of Series 5 price declines that are explained by his market model, which controls for an index of other preferred stocks, and (2) statistically significant price declines that are purportedly unrelated to Plaintiff's claims. (In a later section, I describe why Dr. Kleidon's contention that certain statistically significant price declines are unrelated to Plaintiff's claims is incorrect and unreliable.)

16. A tool that financial economists typically use to provide affirmative economic evidence of a cause and effect relationship between an event and an observed price movement is

[7] Kleidon Report ¶¶5, 107.

the "event study."[8] An event study is conducted by specifying a model of expected price movements conditioned on independent market factors and then testing whether the deviation from expected price movements is sufficiently large that simple random movement can be rejected as the cause.

17. An event study can provide economic and statistical evidence of what caused a price decline in two ways. First, based on historical correlation between one or more control variables (such as a market or industry index) and the subject security, the event study regression is able to identify "expected returns" based on contemporaneous movements in the control variables. So long as the control variables are properly selected and the regression implies a meaningful economic relationship between the control variables and the security price movements, this "expected return" provides economic and statistical evidence of what price movement is explained by the control variables.[9] The difference between the observed return and the "expected return" is known as the "residual return" or "abnormal return." By definition, there is ***no*** economic or statistical evidence that the residual return is caused by movements in the control variables.

18. Second, on days where the residual return is statistically significant ***and*** there is contemporaneous information, the event study method is capable of providing economic and statistical evidence of a causal connection between the information and the residual return. In other words, when a residual return is statistically significant, one can reliably rule out

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[8] A. Craig MacKinlay, "Event Studies in Economics and Finance," *Journal of Economics Literature*, Vol. 35, No. 1, March 1997, pp. 13-39; and John Binder, "The Event Study Methodology Since 1969," *Review of Quantitative Finance and Accounting*, Vol. 11, 1998, pp. 111-137.

[9] This is only valid if movements in the control variables are completely independent of, and unrelated to the alleged misstatements and omissions. As discussed below, *see* Section VII(B), there are days during the relevant time period when the Preferred Stock Index is an inappropriate control because news related to Plaintiff's claims likely impacted Dr. Kleidon's control index.

randomness as the cause of the price change and infer that the information caused the price movement. This is the approach Dr. Kleidon uses in his analysis: "[f]or days with statistically significant price movements, one can analyze the company-specific information that entered the market that may explain the price movements."[10]

19. The event study approach has important limitations. A regression analysis (like the event study methodology employed by Dr. Kleidon) is ***not*** capable of proving an ***absence*** of causation with respect to non-statistically significant abnormal returns. Specifically, the event study is like any other scientific experiment where there is a null hypothesis (H_0) and an alternative hypothesis (H_1). The null hypothesis in this context is that the news on a given day will cause zero (0) price reaction. The alternative hypothesis is that the news caused a price reaction different from zero. If the observed residual price change is large enough to be statistically significant, the event study provides a reliable basis to reject the null hypothesis and attribute the price reaction to the news. However, if the observed price change is not statistically significant, the event study does not prove that the null hypothesis of zero price reaction is actually true.[11] ***Thus, an event study provides no basis to assert that the lack of a statistically***

[10] Kleidon Report ¶45.

[11] Damodar N. Gujarati, *Basic Econometrics* (3d ed. 1995), p.129. This textbook is one of the most widely used graduate level statistical textbooks used in the field of economics ("What a Million Syllabuses Can Teach Us," *The New York Times*, January 22, 2016). *See also* Sir Ronald A. Fisher, *The Design of Experiments*, (New York: Hafner Press, 1971), pp. 16, 22. Sheldon G. Levy, Inferential Statistics in the Behavioral Sciences (1968), p. 83. Helen M. Walker & Joseph Lev, *Elementary Statistical Methods* (3rd ed. 1969), p. 166 (providing a "word of caution" that "***[t]o retain a hypothesis does not prove it true but merely indicates that it is not inconsistent with the observed data of a sample.")***.

significant stock price return constitutes economic or statistical evidence that proves there was no price impact from any news.[12]

20. Dr. Kleidon has not analyzed these non-statistically significant residual price declines, nor does he discuss what caused the abnormal returns he observed on those dates. Yet, Dr. Kleidon inexplicably concludes that "[t]he price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations."[13]

21. Just as an example, on February 17, 2009, Barclays Series 5 Share price declined by 16.32% (from $11.95 per share the previous trading day to $10.00 per share). Based on his underlying regression analysis that controls for a Preferred Stock Index,[14] Dr. Kleidon finds an "expected return" of -9.77% or -$1.17 per share. Under the assumption that his regression properly identified the Preferred Stock Index as an appropriate control (which I dispute in Section VII(B)), this implies a residual return, or ***unexplained*** return, of -6.55% (the total return of -16.32% ***minus*** the expected return of -9.77%).

22. Dr. Kleidon further acknowledges that there was information allegedly related to Plaintiff's claims released to the market on February 17, 2009. At 11:28 AM EST, *Dow Jones*

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[12] While, under these circumstances, the event study may not reliably prove with a measure of statistical certainty that the claim-related news was the cause of a decline, it likewise does not prove that the claim-related news was not the cause of the decline. Event studies do not have this type of explanatory power.

[13] Kleidon Report ¶¶5, 107.

[14] The Preferred Stock Index is a market capitalization weighted index comprised of the 54 financial securities in the S&P U.S. Fixed Rate Preferred Stock Index as of December 31, 2008, Barclays securities excluded. Dr. Kleidon performs two separate regressions for the periods before and after the Lehman bankruptcy on September 15, 2008 (Period 1: April 11, 2008 to September 14, 2008; Period 2: September 15, 2008 to March 24, 2009). Kleidon Report ¶¶46-47. Dr. Kleidon incorporates dummy variables in his regression for events that he suggests have information related to Plaintiff's claims because they were mentioned in the Complaint. A dummy variable is coded as "1" on the relevant date and "0" on all other dates. The purpose of incorporating dummy variables for these dates is to prevent the events of interest from influencing measurement of the relationship between the subject security (in this case the Series 5 Shares) and the control index. In total, Dr. Kleidon uses dummy variables for 11 dates.

reported that Barclays would be closing its U.S. residential mortgage origination business, EquiFirst, "due to market conditions."[15] This is information related to Plaintiff's claims.[16]

23. Dr. Kleidon performs a statistical test to determine if this unexplained decline of 6.55% is statistically significant, and he concludes that it is not.[17] Dr. Kleidon then uses the lack of statistical significance as a basis to improperly conclude that "the allegedly corrective information that entered the market on February 17, 2009 did not cause a decline in the price of the Series 5 ADS."[18] Dr. Kleidon's model, however, is ***incapable of explaining*** what caused the remaining -6.55% or -$0.78 per share residual price decline on February 17, 2009.

24. Indeed, contrary to Dr. Kleidon's conclusion, his statistical analysis only suggests that one cannot infer, with 95% confidence, what caused the abnormal return. It does ***not*** provide economic or statistical evidence of the ***absence*** of a causal link between the information revealed on February 17, 2009 and the abnormal return in the Series 5 ADS on the same day. The regression methodology is not capable of providing that economic or statistical evidence. In other words, Dr. Kleidon has not provided any reliable economic or statistical evidence establishing that the residual price decline of 6.55% (or -$0.78 per share) on February 17, 2009 was not caused by the information relating to Plaintiff's claims.

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[15] "BarCap to Close US Residential Mortgage Unit EquiFirst," *Dow Jones*, February 17, 2009, 11:28 AM EST.

[16] *See e.g.,* Complaint ¶223. The Complaint refers to February 18, 2009 as the market date for this information; however, the news entered the market on February 17, 2009, which Dr. Kleidon also pointed out in his report (Kleidon Report ¶100). As I understand it, Plaintiff maintains that Defendants' omissions and disclosures concerning the high quality of Equifirst's loan portfolio in the Offering Documents were materially misleading in so far as these disclosures failed to disclose the deteriorating performance of Equifirst's loan portfolio in the first three months of 2008. *See* Lead Plaintiffs' Responses and Objections to the Barclays' Defendants First Set of Interrogatories, November 16, 2015, at 10.

[17] Kleidon Report ¶100 and Kleidon Report Exhibit 9.

[18] Kleidon Report ¶101.

25. Dr. Kleidon is making the error of interpreting the lack of statistical significance as proof of a lack of causation, which is a practice that has been widely rejected.[19] Critically therefore, when Dr. Kleidon provides his overall conclusion that "Based on my analysis, the price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations," he is overstating what his methodology is capable of proving and incorrectly claims that he has established that the negative price movement in the Series 5 Shares was not caused by news related to Plaintiff's claims. That is wrong as a matter of statistical principles.

26. In fact, Dr. Kleidon finds a lack of statistical significance on 230 out of 240 days during his Analysis Period. Thus, for ***96%*** of the days he analyzes, he has offered no statistical evidence to support what caused the unexpected portion of the movement in the Series 5 Shares, and thus concludes that these price movements were caused by news unrelated to Plaintiff's claims. As a result, on days where there are unexpected negative returns that do not rise to the level of statistical significance, there is no economic or statistical evidence in the Kleidon Report proving that those price declines were caused by events unrelated to Plaintiff's claims.

27. Moreover, the Kleidon Report addresses eight days where the Complaint alleged that information related to Plaintiff's claims was released and Dr. Kleidon determined there were no statistically significant price declines.[20] Even accepting the reliability of Dr. Kleidon's

[19] *See, e.g.,* Sir Ronald A. Fisher, *The Design of Experiments*, (New York: Hafner Press, 1971), p. 16 ("it should be noted that **the null hypothesis [of zero price movement] is never proved or established**, but is possibly disproved, in the course of experimentation"); Sheldon G. Levy, *Inferential Statistics in the Behavioral Sciences* (1968), p. 83. *See also* Helen M. Walker & Joseph Lev, *Elementary Statistical Methods* (3rd ed. 1969), p. 166 (providing a "word of caution" that "**[t]o retain a hypothesis does not prove it true but merely indicates that it is not inconsistent with the observed data of a sample.")**

[20] As noted below, these eight days are only a small fraction of the days where Dr. Kleidon's regression identifies abnormal returns.

regression approach (which I do not, as described in a later section), his results still show negative abnormal price movements on these eight days that are not explained by his control index and, thus, cannot be ruled out as being related to Plaintiff's claims and contributing to Plaintiff's damages under Section 11.

V. DR. KLEIDON'S METHODOLOGY IGNORES MOST RESIDUAL PRICE DECLINES AND FAILS TO IDENTIFY NEWS RELATED TO PLAINTIFF'S CLAIMS

28. Dr. Kleidon's methodology does not seek to establish the cause for the vast majority of negative abnormal returns that his event study regression identifies. Dr. Kleidon relies on the Complaint to identify days on which information related to Plaintiff's claims was released. He opines that none of these events are associated with negative statistically significant abnormal returns, and then concludes that he has proven an absence of causation on these days. As described in the prior section, this conclusion is inappropriate as a matter of statistics.

29. Contrary to Dr. Kleidon's conclusions, there are numerous examples of stock price declines associated with news related to Plaintiff's claims that Dr. Kleidon does not address because either his event study did not find the abnormal price returns to be statistically significant or such dates were not identified in the Complaint. As explained above, Dr. Kleidon's method does not support a conclusion that the negative abnormal returns on those days were not caused by news related to Plaintiff's claims.

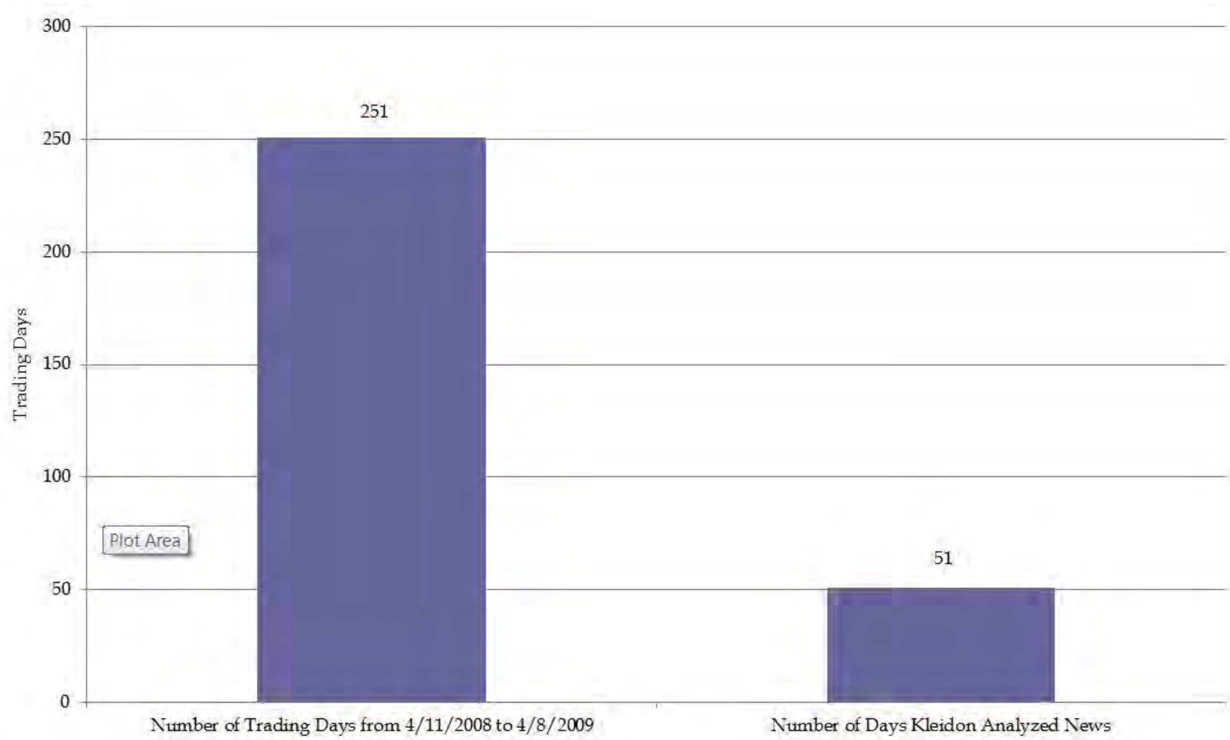
30. Dr. Kleidon specifically states that he limited his analysis of news to the day of, the day after, and the day before a statistically significant return (at the 95% confidence level based on his event study), and dates mentioned in the Complaint:

> As described in footnote 56 of the Report, in preparing the Report, searches were conducted of (A) the Factiva database for articles containing the search

> term "Barclays" in the headline or lead paragraph and (B) Barclays' press releases. These searches were conducted for the following days, as well as for one trading day immediately preceding and following each day: (i) days during the Analysis Period (as defined in the Report) on which there was a statistically significant movement in the price of the Series 5 ADS, *i.e.*, July 14, 2008, July 18, 2008, July 21, 2008, September 11, 2008, September 12, 2008, October 13, 2008, January 21, 2009, January 23, 2009, January 26, 2009 and March 9, 2009; and (ii) additional days during the Analysis Period on which there was a statistically significant movement in the price of the Series 5 ADS under the alternative regression model discussed in footnote 53 of the Report, *i.e.*, September 30, 2008, October 10, 2008, January 30, 2009, February 9, 2009 and March 10, 2009.[21]

31. As a result, Dr. Kleidon cannot have an opinion, nor does he express one, as to what moved the Series 5 Share price outside of the dates for which he actually collected news. Additionally, he cannot and has not proven that there was an alternative cause not related to Plaintiff's claims for the residual declines he observed on those dates. In fact, Dr. Kleidon failed to review news on ***80%*** of trading days from the issuance of the Series 5 Shares until the date of suit, as shown in the bar chart below:

[21] Kleidon Report Exhibit 2.



Source: Kleidon Report and Exhibit 2.

32. Even on days he did analyze, Dr. Kleidon failed to review the vast majority of news stories. According to the Kleidon Report, news was identified by a Factiva database search for the term "Barclays" in the headline or lead paragraph of "major business publications."[22] When I replicate the search on Factiva described by Dr. Kleidon, and include the additional articles he specified in his Exhibit 2, Dr. Kleidon analyzed 146 unique news articles for 51 days total.[23] However, applying Dr. Kleidon's search criteria on Factiva to all days from the date of issuance through the date of suit returns 790 unique articles.

33. Furthermore, by limiting his search criteria to "major business publications," Dr. Kleidon eliminated thousands of potentially relevant news articles because Factiva does not

[22] Kleidon Report n.56.

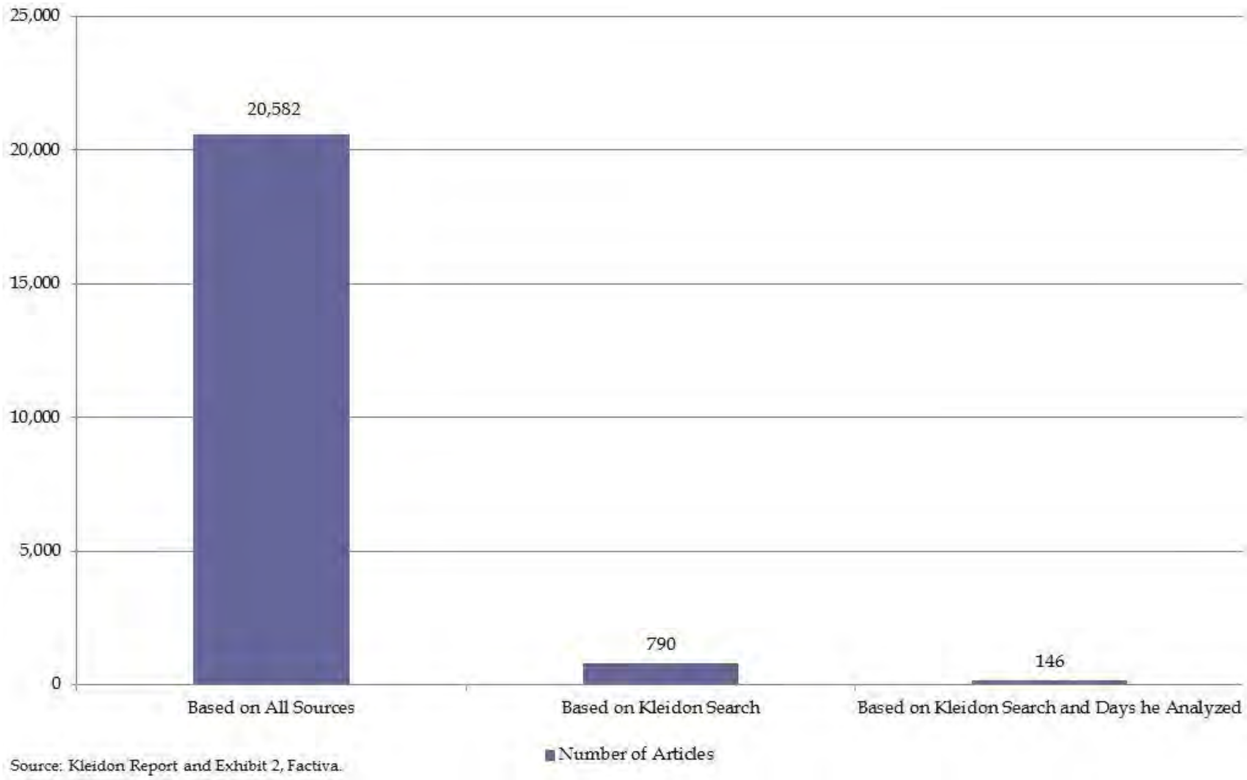
[23] There are several articles in Dr. Kleidon's Exhibit 2 that do not appear in his Factiva search. The numbers reported here include the additional articles that Dr. Kleidon provides in Exhibit 2 to the Kleidon Report.

count sources such as *Reuters* or *The Associated Press* as major business publications. The total number of sources included in the "Major Business Sources" category is 94, while the entire Factiva database draws from thousands of different sources included in the "All Sources" option. Meanwhile, a full search of ***all*** sources with a "Barclays" text search yields over 20,000 unique news articles during Dr. Kleidon's "Analysis Period" and the 11 trading days after, leading up to the date of suit on April 8, 2009. There is no indication in the Kleidon Report that he considered all of this news and, therefore, Dr. Kleidon cannot claim to have proven lack of causation for negative abnormal price declines that accompany the thousands of articles he did not even consider.

34. As an example of how Dr. Kleidon's search criteria missed important news, *Reuters* reported on Sunday, February 1, 2009 that Moody's downgraded the long-term ratings on Barclays from Aa1 to Aa3, and the Bank Financial Strength Rating from B to C with a negative outlook.[24] A Factiva search according to Dr. Kleidon's criteria returns no articles on February 1, 2009. Additionally, there was no mention of the Moody's downgrade in the three articles under major business publications for Barclays on Monday, February 2, 2009 (the trading day on which the Moody's downgrade information entered the market). Thus, Dr. Kleidon failed to consider this information as a potential cause for the abnormal stock price decline of -11.25% he observed on February 2, 2009.

[24] "TEXT-Moody's Downgrades Barclays to Aa3," *Reuters,* February 1, 2009, 7:29 PM EST.

35. As demonstrated in the bar chart below**,** Dr. Kleidon missed at least 80% of news stories about Barclays during the period from the issuance of the Series 5 Shares through the date of suit based on his own limited search criteria.[25]



36. Additionally, Dr. Kleidon does not offer any analysis or opinion regarding price movements that occur between March 24, 2009 (the last day of his Analysis Period) and the date of the first Section 11 lawsuit related to the offering of Series 5 Shares, April 8, 2009.[26]

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[25] There are several articles in Dr. Kleidon's Exhibit 2 that do not appear in his Factiva search. The numbers shown in this chart include the additional articles that Dr. Kleidon provides in Exhibit 2 to the Kleidon Report.

[26] Dr. Kleidon does, however, refer to the increase in the price of the Series 5 Shares after the complaint is filed (Kleidon Report at ¶8). This information is entirely irrelevant to a causation analysis and Dr. Kleidon does not provide any explanation for how or why he considered such information as part of his analysis, yet he ignores price movements before the date of suit which are critical to any causation analysis.

37. Moreover, there is no discussion in the Kleidon Report as to what constitutes information "attributable" to the claims in this case other than the following passage:

> The Complaint contains a section titled "Post-Offering Events," in which it cites many specific events that occurred after the Series 5 ADS offering. For the purposes of analysis, all of the events cited in that section of the Complaint that occurred within the Analysis Period (Complaint PP211-223), along with the March 24, 2009 filing of Barclays' 2008 Form 20-F (Complaint, P195), have been considered to be allegedly corrective disclosures.[27]

38. In his summary of opinions, Dr. Kleidon also defines the relevant information to include:

> (i) any allegedly corrective information cited in the Complaint was disclosed to the market, or (ii) any allegedly undisclosed risk cited in the complaint materialized.[28]

39. Subpart (i) incorrectly assumes without economic basis that Plaintiff identified all of the potentially claim-related information in the Complaint, and subpart (ii) is not addressed or evaluated anywhere in the Kleidon Report. Limited to this definition, Dr. Kleidon's view of what is "attributable" to Plaintiff's claims is too narrow.

40. This is especially true here because, as Dr. Kleidon concedes, Plaintiff broadly alleges the following with respect to the misstatements and/or omissions in Paragraph 135 of the Complaint:

> The statements…from the April 2008 Prospectus and 2007 20-F were false and misleading for the following reasons:
>
> (a) …Barclays knowingly failed to properly write down its exposure to U.S. subprime and Alt-A mortgages, CDOs, monoline insurers and RMBS in

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[27] Kleidon Report, at ¶49.

[28] Kleidon Report ¶5. This definition is also stated in Kleidon Report n.43: "In this report, the phrase 'corrective information' includes both (i) allegedly corrective information that was disclosed to the market, and (ii) the materialization of any allegedly undisclosed risk."

accordance with applicable accounting standards, and failed to adequately disclose the risks posed by these assets;

> (b) …Barclays knowingly failed to adequately disclose the risk to the Company associated with its exposure to monoline insurers, including the fact that the Company had more than £21.5 billion of notional exposure to highly risky mortgage-backed assets, such as £10 billion in A/BBB and non-investment grade CLOs and MBSs, which had only been written down by less than 0.3% at the time of the Series 5 Offering;

> (c) Barclays failed to disclose the substantial and material risk that the Company's U.S. subprime and Alt-A exposure had on its stated capital ratio, shareholder's equity and the risk that the same posed to the Company's future capital ratio and liquidity; and

> (d) The Company's failure to disclose and comply with items (a)-(c) above was in contravention of Barclays' stated risk management policies and public recommendations. [29]

41. Furthermore, I understand that Plaintiff served responses to the Barclays Defendants and Underwriter Defendants Interrogatories, which support and expand upon the allegations in the Complaint.

42. Based on the allegations and discovery responses, the following types of information would, in my opinion, relate to Plaintiff's claims and represent types of information that might negatively impact the price of the Series 5 Shares:

- Additional write-downs or other events that provide investors additional information about the financial impact of and risk of exposure to credit market and subprime assets (including Alt-A, CDOs, RMBS) and to monoline insurers;
- Events that provide additional information regarding Barclays' capital adequacy.

43. Dr. Kleidon did not evaluate whether there was news of this type on each day during his Analysis Period, and in fact there are many days with such news. These dates include, but are not limited to, the following:

[29] Kleidon Report ¶10.

A. AUGUST 14, 2008

44. Before market hours on August 14, 2008, Goldman Sachs estimated that Barclays may potentially need to write down an additional £4.6 billion, including £1.5 billion over the subsequent 18 months, claiming that the Barclays would most likely have to cut dividends to absorb more losses.[30] Multiple news stories were published about Goldman Sachs' warning as Barclays common stock in London declined on the news. The *Guardian Unlimited* reported,

> …banks were weaker on continuing writedown fears, and the prospect of more fundraisings…***Barclays fell 4.5p to 347p after house broker Cazenove cut its recommendation from outperform to in-line and Goldman Sachs issued a sell note and warned of further credit crunch related hits.*** Goldman said: "On Barclays's credit market exposures we believe there is the potential for up to £4.6bn further writedowns. These are spread across the whole credit portfolio but some may take longer to crystalise as they sit within the loan book. We forecast £1.5bn further writedowns over the next 18 months as we believe exposures could move closer to other marks in the market.[31]

45. *Press Association* also noted the same when they wrote:

> Barclays was also in the red, after broker Goldman Sachs warned the bank may need to write down another £1.5 billion over the next year and a half. It has already suffered multi-billion pound hits this year, and shares were 5p lower at 346.5p.[32]

46. *AFX Asia* meanwhile said:

> Goldman Sachs also said it remained concerned about the bank's capital position. Barclays' interim results were disappointing as the weak underlying performance, excluding Barclays Capital revenue, were only saved by a strong performance on costs, Goldman Sachs said…Shares of Barclays were trading down 2 percent at 345 pence by 1033 GMT.[33]

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[30] "UPDATE 1-Barclays May Write Down 1.5 Bln Stg More, Says Goldman," *AFX Asia,* August 14, 2008, 6:43 AM EST.

[31] "Oil and Copper Burnish FTSE," *The Guardian,* August 14, 2008, 5:55 AM EST.

[32] "Market Report," *Press Association,* August 14, 2008, 11:15 AM EST.

[33] "UPDATE 1-Barclays May Write Down 1.5 Bln Stg More, says Goldman," *AFX Asia,* August 14, 2008, 6:43 AM EST.

47. Barclays Series 5 Shares fell 1.72% on August 14, 2008. Dr. Kleidon observed an abnormal return of -1.89% with a t-statistic of -1.55. According to his event study there was not a statistically significant abnormal price decline on this day.[34] Dr. Kleidon provides no analysis to determine the cause of the abnormal price decline on this date in his report. The news of additional expected write-downs is related to Plaintiff's claims, as it reflects the market learning about the financial impact of the exposure to subprime assets (including Alt-A, CDOs, RMBS) and how Barclays' exposure to subprime assets and monoline insurers was impacting the Company's capital. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

B. SEPTEMBER 3, 2008

48. Before market hours on September 3, 2008, Royal Bank of Scotland downgraded Barclays from hold to sell.[35] citing capital ratios and the need for additional write downs as the reason for the downgrade:

> Barclays offers a clear, well-executed, long-term strategy. But benchmarking capital ratios and writedowns vs peers implies a £4.9bn-7.5bn capital shortfall at a time when credit quality and coverage ratios are weakening and core deposit momentum is disappointing. Downgrade to Sell.[36]

49. Moreover, a *Reuters* article cited the RBS downgrade as the reason for the price decline in Barclays' common stock in London:

> Shares in Barclays are down 2.7 percent after RBS downgrades to 'sell' from 'hold', with a reduced target price of 300 pence, cut from 475. RBS says while Barclays offers a clear, well-executed, long-term strategy, benchmarking capital ratios and writedowns versus its peers implies a

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[34] Kleidon Report Exhibit 9.

[35] "UK Summary: FTSE To Shed 75 Points On Econ Slowdown Fears," *Dow Jones,* September 3, 2008, 3:00 AM EST.

[36] "Some of the Parts," *RBS*, September 3, 2008.

> 4.9-7.5 billion pounds capital shortfall for the bank at a time when credit quality and coverage ratios are weakening and its core deposit momentum is disappointing.[37]

50. Finally, a *MarketWatch* article reported similarly: "Shares in Barclays…fell 3.7%. The lender was downgraded to sell from hold by the Royal Bank of Scotland, which said Barclays has substantial near-term balance sheet concerns to overcome. By benchmarking capital ratios and write-downs to peers, it estimates Barclays has a capital shortfall of 4.9 billion pounds to 7.5 billion pounds."[38]

51. Barclays Series 5 Shares price declined by 1.09% on September 3, 2008. According to Dr. Kleidon's event study, this price decline represented an abnormal return of -2.05% with a t-statistic of -1.69.[39] Although not statistically significant at the 95% confidence level, this price decline is significant at the 90% confidence level, which is still a widely accepted measure of statistical significance in financial and economic literature.[40]

52. RBS's downgrade of Barclays on September 3, 2008 is related to Plaintiff's claims as it reflects the market learning about the financial impact of the exposure to subprime assets (including Alt-A, CDOs, RMBS) and how Barclays' exposure to subprime assets and monoline insurers was impacting the Company's capital. Dr. Kleidon does not analyze the abnormal price decline on September 3, 2008 in his report. Accordingly, Dr. Kleidon provides no

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[37] "STOCKS NEWS EUROPE-ROK higher as Landsbanki initiates as buy," *Reuters,* September 3, 2008, 4:14 AM EST.

[38] "London Shares Fall as Miners, Banks Weigh; Punch Taverns Drops After Scrapping Dividend Payout," *MarketWatch,* September 3, 2008, 12:12 PM EST.

[39] Kleidon Report Exhibit 9.

[40] To be considered statistically significant at the 90% confidence level, a price movement must have a t-statistic of at least 1.645. *See* David I. Tabak and Frederick C. Dunbar, "Materiality and Magnitude: Event Studies in the Courtroom," Ch. 19, *Litigation Services Handbook, The Role of the Financial Expert* (3d ed. 2001).

economic or statistical evidence that precludes this event from having caused some or all of the price decline.

C. OCTOBER 8, 2008

53. Prior to market open on October 8, 2008, the U.K. government announced that it would be injecting about £50 billion into the U.K. banking system to prevent its collapse.[41] *BBC News* outlined the basics of the government plan:

> Banks will have to increase their capital by at least £25bn and can borrow from the government to do so.
>
> An additional £25bn in extra capital will be available in exchange for preference shares.
>
> £100bn will be available in short-term loans from the Bank of England, on top of an existing loan facility worth £100bn.
>
> Up to £250bn in loan guarantees will be available at commercial rates to encourage banks to lend to each other.
>
> To participate in the scheme banks will have to sign up to an FSA agreement on executive pay and dividends.[42]

54. The London market immediately reacted negatively to this news:

> There was little immediate relief for FTSE 100 stocks this morning after the government unveiled a £50bn rescue package for the UK banking system… In response the FTSE 100 fell 7% in early trading. Of the leading banks, HBOS shares rose 15%, but Barclays fell 16% and RBS dropped 11%.[43]

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[41] "U.K. to Inject about $87 Billion in Country's Banks (Update1)," *Bloomberg*, October 8, 2008, 2:48 AM EST.

[42] "Rescue Plan for UK Banks Unveiled," *BBC News,* October 8, 2008, 11:58 AM EST.

[43] "Government Bailout Provides Little Relief for Stock Market," *Estates Gazette Interactive,* October 8, 2008.

55. In response to the government announcement, Barclays' CEO, Defendant Varley, said: "Barclays has not requested capital from the Government and has no reason to do so."[44] However, this did not calm investors' fears. The *Wall Street Journal,* for instance, cited the U.K. government's plan as the reason for the stock decline:

> U.K. stocks fell amid concerns that the government's ambitious £400 billion ($699 billion) bank rescue effort wouldn't solve the country's problems, but the plan was nonetheless gaining support as a model for other countries…Bank shares gyrated wildly on Wednesday, as investors guessed which institutions would be most likely to sell stakes to the government. Such moves would dilute the stakes of existing shareholders. Royal Bank of Scotland Group PLC and Barclays PLC said they would participate in at least some of the measures, but declined to provide details….While the shares of some banks shot up on news of the plan Wednesday, RBS shares rose and then fell back, to close up 1% at 90.70 pence, and Barclays shares closed down 2% at 278.25 pence, signaling that investors see both as likely to require a capital injection. HBOS jumped 24% to 117 pence. The broad FTSE 100 index slid 5.2%.[45]
>
> Traders said investors were grappling with the implications of the U.K. government's plan to prop up the country's banks and inject further liquidity into money markets. "Banking shares were mixed in London. HBOS climbed 24% and Royal Bank of Scotland Group rose .8%. Barclays fell 2.4%...[46]

56. The price of the Series 5 Shares fell by 6.74% on October 8, 2008. The abnormal return was -6.21% with a t-statistic of -0.80, according to Dr. Kleidon's event study.[47] Dr. Kleidon mentions the relevant news of the government bailout on October 8, but he does not

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[44] "Bank Shares Rocked as Nationalisation Rumours Rampage Through Markets," *The Times,* October 8, 2008.

[45] "U.K. Stocks Fall Despite New Bank-Rescue Effort; Government Says It Will Buy Stakes in Banks and Guarantee Debts; Other Countries May Look to British Model," *The Wall Street Journal,* October 9, 2008.

[46] "U.S. Stocks Linger in the Red," *The Wall Street Journal,* October 9, 2008, 12:01 AM EST.

[47] Kleidon Report Exhibit 9.

attribute the price decline to this or any other news.[48] The news that Barclays may need government assistance is related to Plaintiff's claims, as it revealed information concerning the severity of losses stemming from Barclays' subprime losses and stressed capital position. Therefore, the news on October 8 reflects the market learning about the financial impact of Barclays' exposure to subprime assets (including Alt-A, CDOs, RMBS) and how Barclays' exposure to subprime assets and monoline insurers was impacting the Company's capital. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

D. OCTOBER 10, 2008

57. As noted above, on October 8, 2008, the U.K. government announced that it would be injecting approximately £50 billion into the U.K. banking system to prevent its collapse.[49] At 5:07 AM EST on the morning of October 10, 2008, Barclays officially commented on the U.K.'s announcement in a press release stating that the bank was considering a variety of options to increase its Tier 1 Capital before resorting to the use of government rescue funds.[50] Barclays confirmed it was considering looking to investors for more capital to improve its finances.[51] Analysts at Credit Suisse commented that "Barclays may need to raise £5 billion to sufficiently bolster its balance sheet."[52] The *Sun* claimed that on this news, Barclays' common

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[48] *See* Kleidon Report ¶36 ("In the U.K., on October 8, 2008, Prime Minister Gordon Brown announced a bailout for the financial industry, and on the same day, the U.K. government introduced higher capital requirements as part of the government's attempt to stabilize the financial system.")

[49] "U.K. to Inject About $87 Billion in Country's Banks (Update1)," *Bloomberg*, October 8, 2008, 2:48 AM EST.

[50] "Barclays PLC Further Comment on UK Government Announcement," *Regulatory News Service,* October 10, 2008, 5:07 AM EST.

[51] "Barclays Looking at Options to Boost Finances," *Press Association*, October 10, 2008, 5:29 AM EST.

[52] "Barclays Looking at Options to Boost Finances," *Press Association*, October 10, 2008, 5:29 AM EST.

stock in London "led blue-chip fallers amid speculation of possible capital-raising and further write-downs."[53]

58. The price of the Series 5 Shares declined by 21.21% on October 10, 2008. According to Dr. Kleidon's event study, there was an abnormal return of -14.80% (a -$1.71 abnormal dollar decline).[54] While Dr. Kleidon did not find this decline to be statistically significant, this news is related to Plaintiff's claims that Barclays did not adequately disclose, among other things, the potential impact of its subprime exposure on its capital position. Dr. Kleidon offers no analysis for the price decline on this day, and therefore he has not proven that it was caused by factors unrelated to Plaintiff's claims. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

E. DECEMBER 19, 2008

59. On the morning of December 19, 2008, the credit rating agency Standard & Poor's ("S&P") issued a credit downgrade across all entities of Barclays. Specifically, S&P lowered Barclays' long-term credit ratings from 'AA' to 'AA-' for all entities. The agency stated, "The downgrades and revised outlooks reflect our view of the significant pressure on large complex financial institutions' future performance due to increasing bank industry risk and the deepening global economic slowdown."[55] As stated in the S&P announcement, the reasoning for the ratings downgrade stemmed from an expectation that asset quality (including subprime assets) would continue to weaken more than previously expected:

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[53] "Market Report," *The Sun*, October 10, 2008.

[54] Kleidon Report Exhibit 9. As will be described in a later section, this -14.8% abnormal return is actually statistically significant once an error in Dr. Kleidon's approach is addressed (*see* Section VII).

[55] "Sector Surrenders Early Gains, S&P Cuts Hit," *MarketWatch*, December 19, 2008, 10:36 AM EST.

> …the ratings actions on Barclays reflect changes in our view of the level of risk associated with the range of activities pursued by major financial institutions. Moreover, we view the current downturn as being potentially longer and deeper than we had previously considered. **Therefore, for Barclays and most of its peers, we view asset quality as likely to weaken materially more than we had previously believed**.[56]

60. The announcement articulates several reasons why Barclays was specifically chosen among the major banks for the ratings downgrade:

> …we believe Barclays is eligible for capital support from the U.K. government if it were required. **About ₤4 billion of Barclays' new capital has been absorbed by cumulative credit market losses**, while the recent sharp declines in equity markets may, in our view, affect our opinion of capital due to the weighing of equity in the substantial post-retirement benefit schemes.
>
> …
>
> "The current ratings factor in a significant reduction in profits in 2009, excluding write-downs, fair-value gains on own debt, and other exceptionals. **This is driven by** a significant slowdown in capital markets, and **sharply rising impairment charges across the board**," added Mr. Hill…A negative rating action would be triggered by the prospect of profitability falling below that expected, either due to more markdowns on credit market assets, higher impairment charges, or a greater income slowdown. **The outlook could be revised to stable if credit losses fell by less than expected, and capital and liquidity remained stable.**[57]

61. In other words, in addition to the ratings downgrade, Barclays was kept on S&P's "negative outlook" for future downgrades because of capital and liquidity concerns stemming from the exposure to low quality assets.

62. S&P's downgrade of Barclays is related to Plaintiff's claims because it reflects the market learning of the increased risk associated with Barclays' assets. Because of the information

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[56] "S&P: Barclays Bank PLC L-T Rating Lowered To 'AA-'; 'A-1+' S-T Rating Affirmed; Outlook Negative," *Market News Publishing*, December 19, 2008.

[57] "S&P: Barclays Bank PLC L-T Rating Lowered To 'AA-'; 'A-1+' S-T Rating Affirmed; Outlook Negative," *Market News Publishing*, December 19, 2008.

discussed in the market on this day, Dr. Kleidon's event study cannot exclude the possibility that some, or all, of the -5.09% abnormal decline he observed on this date was caused by the revelation of impacts on Barclays resulting from its subprime exposure and capital position that was misstated in and/or omitted from the 2007 20-F and Prospectus. Dr. Kleidon ignores the news on this day as related to Plaintiff's claims, and therefore, his analysis is incomplete. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

F. DECEMBER 22, 2008

63. Over the weekend, on December 21, 2008, news broke that Barclays was planning to sell part of its investment banking division, Barclays Capital, to create 40 percent ownership by Barclays and 60 percent ownership by management.[58] In the same announcement, Barclays proposed to "shrink its private equity holdings dramatically…possibly by divesting whole companies controlled by the various divisions of the Barclays private equity empire."[59] Each of these actions by Barclays' management were attempts at raising cash for the parent firm:

> Banking giant Barclays is planning to sell off its private equity arm to management in a bid to strengthen its finances, it was reported today. The bank could also sell off around half of its private equity investments to raise funds, the Mail on Sunday reports. The potential move comes amid concerns that UK banks may have to bolster their balance sheets with more cash next year as the recession deepens. Barclays shunned a taxpayer bail-out, but has raised more than £7 billion through a fund-raising which leaves almost a third of the bank in the hands of Middle East investors. According to the newspaper, Barclays could spin off its various private equity businesses into a new company 40% owned by the bank and 60% owned by its management. The bank's private equity operations sit within the Barclays Capital investment banking business, which has been a key driver of profits

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[58] "Barclays Looks to Sell Private Equity Empire; Billions of Vital Capital Could be Raised in Buyout," *The Mail on Sunday*, December 21, 2008.

[59] "Barclays Looks to Sell Private Equity Empire; Billions of Vital Capital Could be Raised in Buyout," *The Mail on Sunday*, December 21, 2008.

> in recent years. But the capital-intensive nature of the division comes at a time when bad debts are set to rise as the economy turns sour. The Financial Services Authority watchdog is also keeping up the pressure on banks to maintain their balance sheet strength.[60]
>
> The plan is at an early stage and has yet to be approved by Barclays' board, but its aim is to release capital tied up in the division, whose investments include stakes in car parking services group Parkeon, Swarfega maker Deb and mortgage company Jerrold Holdings.[61]

64. Sources also cited industry-wide concerns about cash-raising:

> The potential move comes amid concerns that UK banks may have to bolster their balance sheets with more cash next year as the recession deepens. Barclays shunned a taxpayer bail-out, but has raised more than £7 billion through a fund-raising which leaves almost a third of the bank in the hands of Middle East investors.[62]

65. The *Sunday Telegraph* reported that the bank was concerned with meeting the capital requirements for the Financial Services Authority.

> Barclays provides about 40pc of the capital for its private equity unit, and among the options likely to be on the agenda will be a reduction in that commitment to below 20pc, above which the bank has to set aside a larger capital buffer. Last week's briefing to investors outlined a number of options for BPE's future. A management buyout is unlikely to be on the agenda for at least a year. Barclays would be likely to retain a substantial stake in the division even if it did eventually decide to relinquish control. Capital requirements mean banks need to have reserves set against the amount of risk they face from their debt and equity exposure. Barclays is keen to conserve capital in order to keep within Financial Services Authority requirements…[63]

66. This news about the potential sale of a large portion of Barclays' investment business, one of the most profitable parts of the parent company, is related to Plaintiff's claims

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[60] "Barclays May Sell Private Equity Arm," *Press Association,* December 21, 2008, 7:45 AM EST.

[61] "Barclays Looks to Sell Private Equity Empire; Billions of Vital Capital Could be Raised in Buyout," *The Mail on Sunday*, December 21, 2008.

[62] "Barclays May Sell Private Equity Arm," *Press Association*, December 21, 2008, 7:45 AM EST.

[63] "Barclays to Review Future of Private Equity Arm," *The Sunday Telegraph*, December 21, 2008.

because it reflects the Company acknowledging the need to sell assets as a result of their capital position and the riskiness of its portfolio. Because of the information discussed in the market on this day and the weekend before, Dr. Kleidon's event study cannot exclude the possibility that some, or all, of the -1.73% abnormal decline he observed on this date was caused by this news related to Barclays subprime exposure misrepresented in and omitted from the 2007 20-F and Prospectus, or its capital adequacy. Dr. Kleidon does not analyze the abnormal price decline on December 22, 2008 in his report. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

G. JANUARY 20, 2009

67. On the evening of January 19, 2009, discussions resurfaced about the possibility of Barclays being forced to ask for taxpayer money to address its subprime exposure and capital position:

> Initial euphoria that Barclays had escaped the worst of the banking crisis evaporated today as City analysts queued up to predict the High Street bank will be forced to call for a handout from the British taxpayer. After a share-price collapse on Friday, Barclays today came back fighting, saying profits for 2008 will be higher than most City expectations. But investor fright at the extent of the Government's second banking bailout and fears Barclays does not have enough funding capital on its balance sheet saw initial gains in Barclays shares wiped out, in line with steep falls among rivals Royal Bank of Scotland, Lloyds Banking Group and HSBC.[64]

68. One analyst, Dresdner Kleinwort, stated:

> We are concerned the profit update is insufficient to bring investor concerns down. A possible future shortage of capital following further asset deterioration could eventually push the bank into the arms of the

[64] "Barclays Fightback Fails to Ease Fears of Taxpayer Rescue," *The Evening Standard*, January 19, 2009.

> Government if existing shareholders are unwilling or unable to provide yet further support and share price weakness persists.[65]

69. Meanwhile, an analyst report from MF Global stated:

> The absence of large losses in H2 2008 suggests that Barclays has not written down assets sufficiently far to be able to have attracted a buyer for any substantial part of the portfolio of trouble assets.[66]

70. The news revealed on January 20, 2009 was related to Plaintiff's claims. The fear of a government bailout due to exposure to toxic assets and Barclays' likely need to take additional write downs reflect the market learning more about the financial impact of exposure to and risks of the assets that, according to Plaintiff, were misrepresented in and omitted from the 2007 20-F and Prospectus, and its capital adequacy. The Series 5 Shares declined by 17.4% on January 20, 2009 and, according to Dr. Kleidon's event study the abnormal return was -2.2%. Dr. Kleidon offers no analysis for the price decline on this day, and therefore he has not proven that it was caused by factors unrelated to Plaintiff's claims. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

71. The descriptions of the news on the days above are just examples and by no means an exhaustive list. The point is that Dr. Kleidon did not and cannot claim to have taken into account all of the news related to Plaintiff's claims that accompanied the Series 5 Share declines in rendering his opinions.

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[65] "Barclays Fightback Fails to Ease Fears of Taxpayer Rescue," *The Evening Standard*, January 19, 2009.

[66] "Barclays PLC-A Stay of Execution," *MF Global,* January 20, 2009.

H. FEBRUARY 2, 2009

72. On Sunday evening, February 1, 2009, Moody's cut Barclays' credit rating due to speculation that the bank would need government support in order to stay afloat, in part due to its exposure to subprime assets.

73. The rating agency's press release stated, in part:

> The downgrades reflect Moody's expectation of potentially significant further losses at Barclays as a result of writedowns on credit market exposures as well as an increase in impairments in the UK, which could weaken profitability and capital ratios.
>
> …
>
> Moody's downgrade of the bank's long-term rating to Aa3 reflects the weaker BFSR, but also incorporates the rating agency's view on the long-term credit profile of Barclays - beyond the current government support phase - as one of the leading UK banks with a solid retail, commercial and capital market franchise. Moreover, the current rating also takes account of the very high probability of ongoing support from the Aaa-rated UK government.
>
> …
>
> The downgrade to C with a negative outlook reflects Moody's expectation that Barclays' profitability and capitalisation will continue to be pressured by the ongoing need to implement further writedowns and build larger loan loss reserves. Based on Moody's own stress tests, in a base stress scenario deteriorating values will lead to significant further writedowns on the bank's credit market exposures, particularly for the GBP10.3 billion (as of Q308) commercial mortgages and non-US residential mortgage securitisation exposures and on the GBP23.0 billion notional of monoline-wrapped structured exposures - an area in which the rating agency considers the bank to be exposed to a potentially sharp increase in provisioning requirements.[67]

74. Discussion from reporters and analysts throughout the day reflected the focus on write-downs and capital concerns as the reason for the downgrade:

[67] "Moody's Downgrades Barclays Bank (Senior to Aa3/Stable, BFSR to C/Negative)," *Moody's Investor Service Press Release,* February 1, 2009.

> Although Barclays has not taken any government capital to date, Moody's considers the systemic importance of the bank and the likelihood of receiving government support in case of need to be high.[68]
>
> The downgrades come after the lender last week said it could absorb a 2008 writedown of 8 billion pounds ($11.58 billion) without seeking capital from private investors or the state. Barclays also stuck to its forecast that its 2008 pretax profit would be "well ahead" of 5.3 billion pounds, even after the expected writedowns.[69]

75. Finally, The *Guardian* attributed price declines in Barclays common stock to the Moody's downgrade:

> The recent recovery in Barclays' share price was snuffed out today after the bank was downgraded by the Moody's ratings agency. Barclays shares fell more than 10% as Moody's warned of "significant further losses" at the bank because of writedowns in the credit market and impairments in the UK.[70]

76. The long-term credit rating downgrade of Barclays by Moody's is specifically related to Plaintiff's claims because it reflects the market learning more about the financial impact and risk of its exposure to subprime assets, which are the assets that Defendants allegedly misrepresented in and omitted from the 2007 20-F and Prospectus, or its capital adequacy. Because Dr. Kleidon does not establish that the -11.25% abnormal return he observed on this date was not caused by this news, he has not established that the decline on this day was due to factors unrelated to Plaintiff's claims. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this news from having caused some or all of the price decline.

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[68] "Bank Bosses Face Grilling by MPs," *The Guardian*, February 2, 2009.

[69] "UPDATE 1-Moody's Cuts Barclays' Ratings on Loss Expectations," *Reuters*, February 1, 2009, 9:15 PM EST.

[70] "Barclays Slips Back on Downgrade," *The Guardian*, February 2, 2009.

VI. EVEN WHERE DR. KLEIDON FINDS STATISTICAL SIGNIFICANCE, HE ERRONEOUSLY CONCLUDES THERE IS NO NEWS RELATED TO PLAINTIFF'S CLAIMS

77. Dr. Kleidon identifies 10 statistically significant abnormal return days, 7 of which are negative. He opines that no information related to Plaintiff's claims was released on these dates and thus concludes the statistically significant declines were caused by events unrelated to Plaintiff's claims.[71] For 5 of these 7 negative days, I identify information related to Plaintiff's claims that is not properly addressed by Dr. Kleidon. As a result, Dr. Kleidon has not established that the statistically significant declines on these dates were caused by news unrelated to Plaintiff's claims, even assuming the reliability of his event study (which I dispute).

A. JULY 14, 2008

78. On Friday, July 11, 2008 after the close of the market and through the weekend leading up to Monday, July 14, 2008, several news articles were published discussing concerns with Barclays' capital position and its need to obtain more capital. For instance, *Citywire* asserted that:

> A number of banks have experienced similar funding issues [to HBOS] Royal Bank of Scotland Group (RBS) completed a mammoth £12 billion rights issue earlier in the month and Barclays PLC (BARC) raised £4 billion from sovereign wealth funds and other overseas investors to shore up its capital ratios. A third of advisers expected Alliance & Leicester PLC (AL.) which has yet to place a rights issue to go to the market for cash. Of the rest, ***20.8% expect Barclays to hold a further rights issue***…[72]

79. The *Economist* reported:

[71] Kleidon Report ¶¶49-106.

[72] "Reader Survey: Banks Could Be Set for Second Round of Rights Issues," *Citywire,* July 11, 2008, 8:00 PM EST.

> Barclays raised £4.5 billion ($9 billion) in June, but is still more thinly capitalized than many of its peers.[73]

80. The *Observer* commented on the issue as well, stating:

> Barclays is seen as having rather too little capital, despite raising £ 4bn in a placing.[74]

81. The market impact of these news stories would first be reflected in the price of the Series 5 Shares on Monday July 14, 2008, which is when Dr. Kleidon finds a statistically significant stock price decline.

82. The news that certain analysts believed Barclays was undercapitalized is related to Plaintiff's claims because, among other things, it reflects the market learning about how exposure to subprime assets that, according to Plaintiff, was not properly disclosed to investors were causing the market to reassess whether Barclays had adequate capital. Dr. Kleidon fails to address this claim-related news, and therefore, his analysis is incomplete. Accordingly, Dr. Kleidon provides no economic or statistical evidence that precludes this event from having caused some or all of the price decline.

83. Dr. Kleidon also identifies other events that would have impacted the market price on July 14, 2008 that he characterizes as "macroeconomic." In particular, he notes that the FDIC announced that IndyMac Bank had been closed by the Office of Thrift Supervision and placed into conservatorship by the FDIC.[75] Dr. Kleidon's dismissal of this news as "macroeconomic" and therefore completely unrelated to Plaintiff's claims is not correct. As stated by Dr. Kleidon himself, this move by the FDIC was "widely interpreted as a sign of more

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[73] "Bank Consolidation; Under the Hammer," *The Economist*, July 12, 2008.

[74] "Don't Bank on a B&B buyer," *The Observer*, July 12, 2008, 7:01 PM EST.

[75] Kleidon Report ¶25 and n.58.

failures to come."[76] So even though this news is not specific to Barclays by name, it does not preclude it from conveying relevant information to Barclays' investors about the risks associated with the Company's exposure to subprime assets, which Plaintiff alleges had been misrepresented in and omitted from the 2007 20-F and Prospectus. In fact, IndyMac's failures have been widely linked to its exposure to high-risk mortgage assets, and its seizure reflected the severity of the impact that exposure to such assets was having on banks generally.[77] Therefore, it is incorrect to dismiss this news as unrelated to Plaintiff's claims.[78]

84. Dr. Kleidon mentions that the market was also responding to a proposal by the U.S. Secretary of the Treasury, Henry Paulson, to provide Fannie Mae and Freddie Mac with unlimited funds to rescue these deteriorating mortgage lenders.[79] As with the IndyMac news, Dr. Kleidon dismisses this news as unrelated to Plaintiff's claims when in fact exposure to subprime mortgages was also causing Fannie and Freddie to experience capital shortages.[80] For the same

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[76] Kleidon Report ¶25.

[77] *See* "IndyMac ReOpens, Halts Foreclosures on Its Loans," *The Wall Street Journal,* July 15, 2008, ("IndyMac was the 10th-largest mortgage lender by loan volume in the country, according to industry newsletter Inside Mortgage Finance. It specialized in so-called Alt-A loans, a category between prime and subprime that frequently included loans in which borrowers didn't fully document their incomes or assets. Such loans, which have become known as "liars' loans" because of the frequency in which borrowers' incomes were overstated, contributed to IndyMac's financial troubles.")

[78] Notably, Dr. Kleidon highlighted the following quote from a Wall Street Journal article stating, "IndyMac is the biggest mortgage lender to go under since a fall in housing prices and surge in defaults began rippling through the economy last year – and it likely won't be the last. Banking regulators are bracing for a slew of failures over the next year as analysts say housing prices have yet to bottom out."

[79] "Rescue Plan for US Mortgage Giants," *Financial Times,* July 14, 2008, 12:34 AM EST. *See also* Kleidon Report ¶26 where Dr. Kleidon also acknowledges the news that the U.S. "stepped in to assist Fannie Mae and Freddie Mac directly" on July 14, 2008.

[80] *See* "The State of the GSEs: Not Great, Not Terrible; Answers to some of the questions facing Fannie and Freddie," *American Banker,* July 14, 2008, ("...honestly no one knows how much capital Fannie and Freddie will ultimately need to get to the other side of the mortgage crisis, because no one knows how far home values have yet to fall, how many borrowers will default, and how big the losses will be.")

reasons described above, Dr. Kleidon's conclusion that the decline in the price of the Series 5 Shares was not caused by news related to Plaintiff's claims is incorrect.[81]

85. In sum, because claim-related information was revealed on July 14, 2008, Dr. Kleidon has not proven that the statistically significant 3.33% decline in the Series 5 Shares was caused by factors unrelated to Plaintiff's claims.

B. JULY 18, 2008

86. Before the market opened on Friday, July 18, 2008, Barclays issued a press release announcing a low acceptance rate of only 19% by existing shareholders of new shares from the share offering that closed the prior day.[82] The fact that the vast majority of existing Barclays shareholders did not want to purchase additional shares at the offering price reflected the difficulty that Barclays would have in raising new capital. The market for Barclays' common stock in London reacted negatively to this news, according to numerous sources.[83] An *Investor's Circle* article also acknowledged that "…Barclays fell 2.8 per cent to 282.6p after it said less than a fifth of its existing shareholders participated in its GBP4.5bn capital-raising issue."[84] The *Evening Standard* expressed concern with the news as well, reporting that "T[wo] of Britain's

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[81] On July 14, 2008, the Series 5 Shares fell by 10.71%. After controlling for the industry index, Dr. Kleidon found a statistically significant abnormal return of -3.33%. As I have described above, there was a mix of Barclays-specific news and other events that would have impacted the price of many companies, but especially those with subprime exposure (like Barclays and other companies in the industry index). If some or all of the decline in Dr. Kleidon's control index reflects information that is related to Plaintiff's claims, then the index itself is not a proper independent "control." As I describe below, there are a number of events, including those on July 14, 2008, where use of the control index overstates the amount of price declines tied to non-claim related news.

[82] "Barclays PLC BARC Result of Placing and Open Offer," *Barclays Press Release,* July 18, 2008, 2:00 AM EST.

[83] For example, *see* "Market Comment: London Stocks Stay Down; Miners Weigh," *Dow Jones,* July 18, 2008, 8:27 AM EST and "Barclays says shareholders take up 19 percent of open offer shares UPDATE," *AFX Asia,* July 18, 2008, 3:18 AM EST.

[84] "FTSE Slips Back, Oil Declines," *Investors Chronicle,* July 18, 2008.

leading banks, HBOS and Barclays, secured a combined £8.5 billion in fresh capital today, ***but there was immediate concern that they may need to seek yet more money if the credit crunch worsens***. Barclays today said investors took up just 19% of new shares in its recent fundraising, meaning the bulk of the money will be provided by overseas funds."[85]

87. Dr. Kleidon concedes that news of the low acceptance rate entered the market on July 18, 2008, but claims that because the offering "had been publicly known no later than June 25," it could not have been related to any misrepresentations alleged by Plaintiff.[86] However, while the offering itself was not new information, Barclays' inability to raise capital from a large fraction of existing shareholders was new and, in any event, related to Plaintiff's claims. The need to resort to more expensive capital sources such as overseas funds reflects the market learning about the financial impact of and the risks associated with, Barclays' exposure to subprime assets (including Alt-A, CDOs, RMBS), and how Barclays' exposure to subprime assets and monoline insurers was impacting the Company's capital position and its ability to raise new capital. Dr. Kleidon cannot and does not prove that these events did not cause, at least in part, the statistically significant 5.14% price decline in the Series 5 Shares on July 18, 2008.

C. JANUARY 21, 2009

88. On January 21, 2009, there was substantial coverage of the potential that Barclays would take further write-downs and might face nationalization by the U.K. government as a result of its exposure to the subprime assets and deteriorating capital positions, which conditions

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[85] "Bank Pair Raise £8bn – But May Need More; BANKING," *The Evening Standard,* July 18, 2008.

[86] Kleidon Report ¶63.

the Complaint allege were misrepresented in and omitted from the 2007 20-F and Prospectus.[87]

For example, *The Irish Examiner* reported:

> Barclays and Lloyds Banking Group suffered more heavy losses today as the bloodbath in the banking sector showed no signs of easing. The pair fell 20% and 11% respectively as fears of nationalisation and further credit write-downs continued to cloud sentiment towards the industry.[88]

89. *Dow Jones* reported:

> Shares of Barclays PLC (BCS) fell heavily in early trade Wednesday, after a newspaper report said that the U.K. bank was under intense pressure to bring forward its full-year results. At 0855 GMT, the stock had fallen 27% to 54 pence, its lowest level for over 20 years. . . .The Independent newspaper said Barclays was under pressure to bring forward its full-year results after a profit forecast last week failed to prevent further big falls in the bank's share price. The report said investors are understood to have contacted the bank and urged it to announce audited results, due Feb. 17, as soon as possible to ease fears about credit market write-downs at the Barclays Capital investment bank.[89]

90. The *Irish Times* stated:

> Doubts over the latest bailout package saw banking shares hammered once again yesterday as fears grew over a wholesale nationalisation of the industry.
>
> …
>
> **Amid the deepening crisis in the sector, the insistence by Barclays that it has no need of government help is becoming increasingly perplexing**. The bank has repeatedly said in recent days that it is on course to exceed consensus forecasts of £5.3 billion for 2008, down from just over £7 billion the previous year, indicating that there are no more toxic shocks to come. It seems extraordinary that Barclays alone should be in much better shape than the rest of the industry, although it had a narrow escape when RBS outbid it in the disastrous auction for ABN

[87] Dr. Kleidon acknowledges news regarding fear of nationalization entered the market this day, *see* Kleidon Report ¶91.

[88] "Banking Shares Suffer in London," *The Irish Examiner*, January 21, 2009, 6:57 AM EST.

[89] "Barclays, Lloyds Shares Tumble Again on Results Fears," *Dow Jones,* January 21, 2009, 4:01 AM EST.

> Amro. The loans it has on its books must surely be as toxic as those of its peers. Its shares crashed by 25 per cent on Friday, lost another 10 per cent on Monday and ended last night a further 17 per cent down at just 69p – their lowest level in more than 17 years. At this level, the bank is valued at a mere £6 billion. **Some analysts fear that the Barclays board may be in denial after the traumatic events of recent weeks and the bombed-out share price is certainly saying that more writedowns must be on the way.**[90]

91. The release of news stories related to the fear of nationalization and potential additional write-downs reflects the market learning about the financial impact of Barclays' exposure to subprime assets (including Alt-A, CDOs, RMBS) and how Barclays' exposure to subprime assets and monoline insurers was negatively impacting its capital position.

92. Dr. Kleidon opines that this news is unrelated to Plaintiff's claims because Barclays was never actually nationalized.[91] This is a ***post hoc*** explanation that fails. First, Dr. Kleidon does not dispute that the fears of nationalization were at least partially responsible for the price decline. Such fears were driven by Barclays' depleted capital position and exposure to subprime assets, which the Complaint alleges were misrepresented in and omitted from the 2007 20-F and the Prospectus. Put differently, the threat of nationalization was driven by fears that Barclays' ***capital position*** was not sufficient to withstand further losses ***on its subprime positions.*** Investors suffered ***actual losses*** on this day, and Dr. Kleidon has not proved that these losses were not caused by expectations of nationalization on this day, which are related to Plaintiff's claims. The fact that Barclays was ultimately not nationalized is irrelevant to attributing the cause of the price decline on this day.

93. Beyond that, however, Dr. Kleidon ignores the news regarding heightened expectations that Barclays would have to take additional write-downs as a result of its subprime

[90] "Successful or Not, the Price of Bailout Could Be Too High," *The Irish Times,* January 21, 2009.

[91] Kleidon Report, ¶91.

portfolio ***which did transpire***. Since Dr. Kleidon provides no proof that this event did not cause some or all of the price decline in the Series 5 Shares, he has not established that this price decline was caused by factors unrelated to Plaintiff's claims.

D. JANUARY 23, 2009

94. On January 23, 2009, Barclays fell on widespread reporting of mounting fears that the company would require additional capital or would be forced to nationalize. For example, *Reuters* reported:

> …Barclays remained the focal point of investor unease. Its shares fell 14 percent to 50.6 pence, tumbling for a ninth straight day as concern mounted the bank may require further capital or be nationalized.[92]

95. The *Evening Standard* reported:

> The bank's stock fell for the ninth day running, losing nearly 18%, or 10.4p, at 48.8p. The fall came despite an interview last night with Varley in which he declared his confidence that Monday's government bailout plan would work. However, he said there was nothing he could do to stop the rot in Barclays' shares, which have lost more than two thirds since 12 January amid fears that it would need to tap the government for more cash or possibly even be nationalised.[93]

96. And the *Guardian* wrote:

> Barclays is set for its ninth consecutive day of falls with City traders refusing to believe management's protestations that the bank, which has seen its shares plunge more than 70% since last week, does not need a cash injection or full-scale nationalisation.[94]

97. These declines took place despite Barclays' then CEO, Defendant Varley, attempting to calm investors' fears of additional write-downs and nationalization by announcing

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[92] "WRAPUP 1-Banks on back foot; state help fails to lift gloom," *Reuters*, January 23, 2009.

[93] "Barclays Plunges Amid New Worries Over Bailouts Bill; Economy by Bill Condie," *The Evening Standard*, January 23, 2009.

[94] "Barclays Shares Plunge 15%," *The Guardian,* January 23, 2009.

that the company would report a 2008 profit even after reporting additional write-downs on its toxic credit assets.[95]

98. The news published on this day is related to Plaintiffs' claims because it reflects the financial impact of the exposure to subprime assets (including Alt-A, CDOs, RMBS) and how Barclays' exposure to sub-prime assets and monoline insurers was impacting the company's capital. Dr. Kleidon cannot exclude this information as causing the statistically significant abnormal return in the Series 5 shares on January 23, 2009.

99. As with January 21, 2009, Dr. Kleidon relies upon the fact that nationalization did not occur (which is irrelevant) and ignores the general discussion about inadequate capital which was required. Therefore, for the same reasons discussed above, Dr. Kleidon has not proven that this statistically significant price decline was caused by factors unrelated to Plaintiff's claims.

E. MARCH 9, 2009

100. On March 9, 2009, there was reporting that Barclays might enter into a deal with the U.K. for insurance on its toxic assets. Early in the morning, news broke that Lloyds Banking Group reached a deal with the U.K. that "could lift the government's stake in the bank to 77%."[96] Lloyd's stock decreased with this news, as did stocks of several other U.K. banks. *Dow Jones* reported:

> The announcement also weighted heavily on Barclays, which has reportedly considered seeking government insurance on some assets. Shares in Barclays dropped around 12%.[97]

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[95] "Barclays CEO: Will Make 08 Profit After Write-Downs – Report," *Dow Jones,* January 23, 2009, 2:07 AM EST. *See also* Kleidon Report ¶92.

[96] "Lloyds Banking Shares Drop After Scheme Lifts Govt Stake," *Dow Jones*, March 9, 2009, 4:42 AM EST.

[97] "UPDATE: Lloyds Shares Drop As Government Stake Increases," *Dow Jones*, March 9, 2009, 11:05 AM EST.

101. In addition, a fund manager at Baring Asset Management stated, ‘‘there is still concern out there about the valuation of some of Barclays' assets. Barclays indicated it may participate, but negotiating the terms is very difficult.’’[98] Some analysts valued the toxic assets to be insured at £60 billion.[99]

102. There was also other news on this day that predicted increased write-downs of Barclays' assets:

> Sandy Chen, an analyst at Panmure Gordon, had estimated a write-down of £5.8 billion (USD8.174 billion) as a result of Barclays' growing exposure to derivatives due to the fact that the fair value of some collateralized debt obligations plunged after rating agencies downgraded them.[100]

103. Dr. Kleidon states that news on this day is not related to Plaintiff's claims because "this speculation proved to be wrong, as Barclays did not accept any UK government insurance for any of its assets."[101] In other words, Dr. Kleidon does not argue in principle that this news is unrelated to the Plaintiff's claims, just that the expectation did not occur in the future.

104. Dr. Kleidon does not dispute that the fears of government intervention were at least partially responsible for the price decline in the Series 5 Shares. Such fears were driven by Barclays' depleted capital position and its exposure to subprime assets, which Plaintiff alleges were misrepresented in and omitted from the 2007 20-F and the Prospectus. Investors suffered ***actual losses*** on this day, and Dr. Kleidon has not proved that these losses were not caused by

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[98] "Pressure Rises on Banks to Participate in U.K. Bailout," *The International Herald Tribune*, March 7, 2009.

[99] "Morning Market: Malaise in Banking Sector Casts Early Shadow," *Citywire*, March 9, 2009 ("Barclays decline 6p to 59p following weekend reports that it is looking to place toxic assets worth up to £60 billion into a government insurance scheme…"). *See also* "Banks Dive after Lloyds Nationalised," *The Evening Standard*, March 9, 2009 ("Speculation over how much of its toxic assets Barclays could try to have guaranteed range from £50 billion to £80 billion, but some analysts say this would be far too little.")

[100] "Barclays Loses 25% Value on Toxic-Debt Prediction," *Derivatives Week*, March 9, 2009.

[101] Kleidon Report ¶102.

expectations of nationalization on this day, which are related to Plaintiff's claims. The fact that Barclays was ultimately not nationalized is irrelevant to attributing the cause of the price decline on this day. Beyond that, however, Dr. Kleidon completely ignores the news regarding heightened expectations that Barclays would have to take additional write-downs as a result of its subprime portfolio ***which did transpire***. Since Dr. Kleidon provides no proof that this event did not cause some or all of the price decline in the Series 5 Shares, he has not established that this statistically significant price decline on March 9, 2009 was caused by factors unrelated to Plaintiff's claims.

VII. DR. KLEIDON'S EVENT STUDY IS FUNDAMENTALLY FLAWED AND CANNOT BE RELIED UPON

105. All of the analysis above has assumed that Dr. Kleidon's event study is reliable. However, his event study analysis suffers from methodological flaws rendering it unreliable. In particular:

a. Dr. Kleidon's approach mis-measures the volatility of the Series 5 Shares during his Analysis Period and systematically mis-identifies which days have statistically significant returns; and

b. At least on certain days, downward movements in Dr. Kleidon's Preferred Stock Index during the relevant period reflect, among other things, the market learning how exposure to subprime assets was affecting the market value of preferred stocks. As a result, movements in the "control" index on those days cannot be considered a proper "control" to isolate declines in the Series 5 Shares that are independent of Plaintiff's claims.

A. DR. KLEIDON MIS-SPECIFIES THE DEGREE OF RANDOMNESS IN THE SERIES 5 PRICE MOVEMENTS AND AS A RESULT SYSTEMICALLY MIS-IDENTIFIES SIGNIFICANT PRICE MOVEMENTS

106. Even if I were to accept the use of Dr. Kleidon's Preferred Stock Index as an appropriate control factor, Dr. Kleidon's event study systematically mis-measures the volatility, or degree of randomness in the price movements of the Series 5 Shares during the Analysis Period. This problem is observable in both his underlying assumptions and the ultimate results.

107. Exhibit 8 of Dr. Kleidon's report shows his regression results and makes explicit how he models the random component in the Series 5 Shares. In that exhibit, Dr. Kleidon has a row titled the Root Mean Squared Error ("RMSE"). This figure is critically important because it is used as the denominator to calculate the "t-statistic" in his tests for statistical significance (the threshold for statistical significance under Dr. Kleidon's approach is a t-statistic larger than 1.96).[102]

108. The formula for calculating a t-statistic on a given trading day is:

$$\boldsymbol{t-statistic}\frac{\text{change in price after controlling for market effects } (i.e., \boldsymbol{abnormal\ return})}{\text{standard deviation of errors from regression } (i.e., \boldsymbol{root\ mean\ squared\ error})}$$

109. If the RMSE is too high, Dr. Kleidon is underestimating his t-statistic, and if the RMSE is too low, Dr. Kleidon is overestimating his t-statistic.

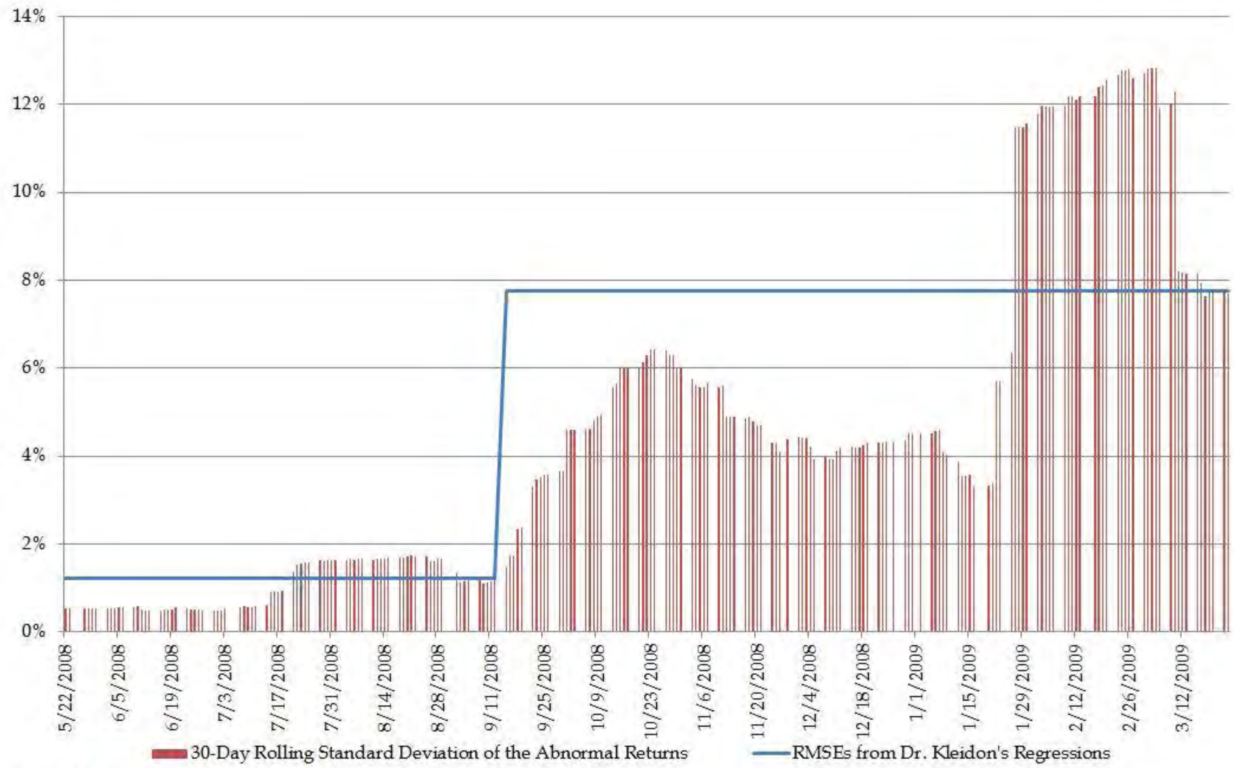
110. Returning to Exhibit 8 of Dr. Kleidon's Report, his methodology implies that the proper RMSE to use on every single day prior to September 15, 2008 is 1.21% of the Series 5

[102] Kleidon Report ¶44 citing *Reference Manual on Scientific Evidence* (David H. Kaye and David A. Freedman, "Reference Guide on Statistics," *Reference Manual on Scientific Evidence*, 3rd ed., Federal Judicial Center (Washington, DC: The National Academies Press, 2011)).

Share price and the proper RMSE to use on September 15, 2008 and after is 7.77% of the Series 5 Share price.

111. To be considered statistically significant at the 95% confidence level, an abnormal return must be 1.96 times as large as the RMSE (because to calculate the t-statistic one divides the abnormal return by the RMSE). Thus, Dr. Kleidon's methodology assumes that the abnormal return required for statistical significance increases substantially from a constant **2.37%** (1.96 times Kleidon's RMSE of 1.21%) in the first period to a constant **15.23%** (1.96 times Kleidon's RMSE of 7.77%) in the second period beginning on September 15, 2008.

112. Such an assumption is inconsistent with how volatility actually evolved over time, and this leads to systematic errors in Dr. Kleidon's assessment of statistical significance. One way to appreciate this is to deconstruct how Dr. Kleidon's own abnormal returns show a pattern over time that he does not capture in his analysis. To see if Dr. Kleidon's assumption of constant RMSE within each of these periods is appropriate, I calculate a moving average of the standard deviation of abnormal returns over the most recent 30 day trading window as shown in the chart below:



Source: Kleidon Backup Materials.

113. The pattern here is telling – there is not one discrete jump in volatility over Dr. Kleidon's analysis period as he suggests. There are increases and decreases in volatility around a generally increasing trend. This critical fact is completely ignored by Dr. Kleidon and not reflected in Dr. Kleidon's calculations. As a result, his RMSE is systematically too high very early in the Analysis Period (the blue horizontal line is consistently and substantially above the red bars). Likewise, in the second half of the first period, there is a sustained period where he understates the volatility (the red bars are consistently above the blue line).

114. This pattern is repeated in the post September 15, 2008 period. For the majority of the second period, Dr. Kleidon overstates the actual volatility (the blue line is substantially and consistently above the red bars). And for the very end of the Analysis Period he understates the volatility (the red bars are higher than the blue line).

115. The charts above rely solely on ***Dr. Kleidon's own abnormal returns that constitute his RMSE***. In other words, I have not altered his model at all; I am just showing that Dr. Kleidon's own abnormal returns belie his assumption of constant volatility within each period.[103]

116. The obviousness and importance of this error are apparent when one observes the proportion of days that he finds statistically significant over these different periods of time. In a properly specified event study, one would expect to observe statistically significant price movements 5% of the time due to randomness alone (this is because by choosing a 95% confidence interval one would expect to make a Type I error 5% of the time).[104] If there are also events that cause the price to move (such as company-related news), one would expect to see even more than 5% of the days statistically significant.

117. The table below shows that in the first portion of Dr. Kleidon's estimation windows (where he systematically overstates volatility) there are far less than the expected number of statistically significant days than would occur by chance (Periods 1a and 2a in the table below). Conversely, when he is understating volatility (in Periods 1b and 2b) the rate at which he observes statistically significant results is over 6 times as high:

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[103] This problem is more technically referred to as having heteroscedastic errors. *See* Damodar N. Gujarati, *Basic Econometrics* (3d ed. 1995), pp. 436-438.

[104] S*ee* Robert D. Mason, Douglas A. Lind and William G. Marchal, "The Normal Probability Distribution," Ch. 7 in *Statistical Techniques in Business and Economics*, Irwin/McGraw-Hill, Tenth Edition, 1999. Also, from David I. Tabak and Frederick C. Dunbar, "Materiality and Magnitude: Event Studies in the Courtroom," Ch. 19, *Litigation Services Handbook, The Role of the Financial Expert*, Third Edition, 2001, p. 9: "…if an event is material at the 5 percent level, this means that there is only a 5 percent likelihood that the abnormal return (or the stock price movement once one controls for market, industry, and other effects) could have been caused by the stock's normal random price fluctuations. Alternatively, we can say that we are 95 percent confident that the abnormal return is greater than what would be expected based on the stock's normal random price fluctuations."

Significant Days throughout the Analysis Period According to Dr. Kleidon's Event Study

	Analysis Period 1		Analysis Period 2	
	Period 1a	Period 1b	Period 2a	Period 2b
	4/11/2008 - 7/17/2008	7/18/2008 - 9/14/2008	9/15/2008 - 1/20/2009	1/21/2009 - 3/24/2009
Number of Statistically Significant Price Movements	1	4	1	4
Total Trading Days in this Period	68	40	88	44
Percentage of Days Significant	1.47%	10.00%	1.14%	9.09%

118. As a result, Dr. Kleidon's identification of which events are statistically significant is unreliable.

119. Dr. Kleidon erroneously assumes that within each of his periods the variance of the abnormal returns is constant and equal to the mean variance. Where, as here, the time series data suggest that the mean of a relevant metric is not constant, one well-accepted technique to address this volatility is to calculate a moving average.[105] Accordingly, a reasonable and simple approach to improving the accuracy of Dr. Kleidon's t-statistics is to calculate the RMSE over 30 day trailing windows rather than relying on an average value over a much longer window that necessarily incorporates the impact of ***future*** events. This allows for the assumed volatility to update ***over time*** according to the data observed over the most recent 30 trading day period, which is more consistent with the volatility that would be expected by the market at any given time. If I replace Dr. Kleidon's volatility with a 30-day moving average estimate of volatility, it results in a more consistent and plausible distribution of significant events:

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[105] See Philippe Jorion, Value at Risk, *The New Benchmark for Controlling Derivatives Risk*, McGraw Hill, 1997, p.168 ("A very crude method, but employed widely, is to use a *moving window*, of fixed length, to estimate volatility. For instance, a typical length is 20 trading days (about a calendar month) or 60 trading days (about a calendar quarter. …Each day, the forecast is updated by adding information from the preceding day and dropping information from (M+1) days ago)." (emphasis in the original).

Significant Days throughout the Analysis Period According to Dr. Kleidon's Event Study

	Analysis Period 1		Analysis Period 2	
	Period 1a	Period 1b	Period 2a	Period 2b
	4/11/2008 - 7/17/2008	7/18/2008 - 9/14/2008	9/15/2008 - 1/20/2009	1/21/2009 - 3/24/2009
Number of Statistically Significant Price Movements	7	4	9	3
Total Trading Days in this Period	68	40	88	44
Percent of Days Significant	10.29%	10.00%	10.23%	6.82%

120. The abnormal price movement on October 10, 2008 provides an example of how this is an important improvement and why Dr. Kleidon's event study cannot be relied upon to test for statistical significance.

121. On this day, the Series 5 Shares price dropped by 21.21% with an abnormal return of -14.80% (an abnormal dollar decline of $1.71) according to Dr. Kleidon's model.[106] Nevertheless, Dr. Kleidon did not find this event to be statistically significant because his RMSE was too large (i.e. it overstated the volatility on that day). If the statistical test is performed with the more reasonable estimate of volatility observed over a narrower 30 day window prior to the event as, it is significant with a t-statistic of -3.00 (well above the threshold of 1.96).

122. This difference in finding statistical significance is important because there is news related to Plaintiff's claims on this day. At 5:07 AM EST on the morning of October 10, 2008, Barclays issued a press release stating that the bank was considering a variety of options to increase its Tier 1 Capital before resorting to the use of Government rescue funds recently made available to it.[107] Moreover, Barclays stated it was considering looking to investors for more

[106] Kleidon Report Exhibit 9.

[107] "Barclays PLC Further Comment on UK Government Announcement," *Regulatory News Service,* October 10, 2008.

capital raising to improve its finances.[108] Analysts at Credit Suisse commented that "Barclays may need to raise £5 billion to sufficiently bolster its balance sheet."[109] The *Sun* claimed that on this news, Barclays' common stock in London "led blue-chip fallers amid speculation of possible capital-raising and further write-downs."[110]

123. Dr. Kleidon only chose to analyze news on days with statistically significant returns unless they were mentioned in the Complaint. Therefore, this day provides a perfect example of how Dr. Kleidon's flawed event study methodology: (1) led him to the wrong conclusion about statistical significance, which (2) led him to not look at the news (because he relied on the Complaint), and (3) led him to ignore a day on which there were observed abnormal price declines associated with news related to Plaintiff's allegations. Such a pattern is emblematic of how Dr. Kleidon's blanket opinion that "The price declines during the Analysis Period are not attributable in whole or in part to any of the alleged misrepresentations" is unreliable.[111]

B. DECLINES IN DR. KLEIDON'S PREFERRED STOCK INDEX ARE NOT NECESSARILY INDEPENDENT OF PLAINTIFF'S CLAIMS

124. Information that reveals the impact of Barclays' subprime and monoline exposure, and is therefore related to Plaintiff's claims, could also affect other preferred stocks, including those in Dr. Kleidon's Preferred Stock Index. Recall, the types of events that were related to Plaintiff's claims include:

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[108] "Barclays Looking at Options to Boost Finances," *Press Association*, October 10, 2008.

[109] "Barclays Looking at Options to Boost Finances," *Press Association*, October 10, 2008.

[110] "Market Report," *The Sun*, October 10, 2008.

[111] Kleidon Report, ¶5.

- Additional write-downs or other events that provide investors additional information about the financial impact of and risk of exposure to credit market and subprime assets (including Alt-A, CDOs, RMBS) and to monoline insurers;
- Events that provide additional information regarding Barclays' capital adequacy.

125. For example, the failure of IndyMac Bank as a result of its exposure to toxic subprime assets provided relevant information to Series 5 Shareholders regarding the severity of losses being experienced by institutions with exposure to subprime assets. Therefore, this event can be viewed as revealing the financial impact of Barclays' exposure to subprime assets that was allegedly misrepresented in and omitted from the Prospectus and 2007 20-F. While this information was important to Barclays investors (the Series 5 Shares declined by 10.7% on July 14, 2008 when the event occurred) , it was also important information for investors throughout the banking industry where many other firms also had exposure to subprime assets.

126. Closer inspection of Dr. Kleidon's Preferred Stock Index reveals that Wells Fargo, Citigroup, JP Morgan Chase, Bank of America, Wachovia, Morgan Stanley, HSBC, Deutsche Bank and Royal Bank of Scotland make up 22 of the 54 securities in the Index, including eight out of the top 10 most highly weighted securities.[112] All of these banks, like Barclays, had substantial write downs as a result of exposure to subprime assets during the relevant period.[113] Therefore, securities of these institutions would also negatively react to information (like the failure of IndyMac) that informed Series 5 Shareholders of the severity of losses being suffered by firms with exposure to subprime assets.

127. The problem this creates for Dr. Kleidon's methodology is that when a "control" variable is not independent of the effect to be measured, it is no longer a proper control. The

[112] Kleidon Report Exhibit 6.

[113] Bloomberg Summary of Writedown Function ("WDCI").

whole purpose of including any explanatory variable (*e.g*. the Preferred Stock Index) in the calculation of the expected return on any given day is to explain the part of the variation in the dependent variable (the return of Barclays Series 5 Shares) ***unrelated*** to the misstatements. In this particular circumstance, where there is information relevant to Plaintiff's claims that is impacting both Barclays and the Preferred Stock Index, Dr. Kleidon's methodology treats the decline in the Preferred Stock Index as an "independent" factor that is considered part of the "expected return" and ***excluded*** from the residual return. As a result, he is biasing his measurement of the effect of the relevant information on the Series 5 Shares.

128. Returning to the IndyMac example, on July 14, 2008, when Barclays fell 10.7%, Dr. Kleidon calculates an "expected" return of -7.4% based on the decline in the Preferred Stock Index and only treats the -3.3% abnormal return as reflecting the impact of the news on the Series 5 Shares. In this particular case, since the information impacting the Preferred Stock Index is not independent of Plaintiff's claims, Dr. Kleidon cannot treat the expected return as economic or statistical proof of an alternative cause for the 7.4% portion of the 10.7% decline in the Series 5 Shares.

129. One additional example of when Dr. Kleidon's use of the Preferred Stock Index as a "control" is inappropriate is on January 20, 2009. I previously addressed this particular day in a prior section because Dr. Kleidon ignored the 2.24% abnormal price decline despite the release of news related to Plaintiff's claims (i.e., commentary suggesting that Barclays may face nationalization by the U.K. government). By controlling for an index of preferred stocks, however, Dr. Kleidon masks a severe 17.36% price decline suffered by investors in Barclays that accompanied news related to Plaintiff's claims. Dr. Kleidon assumes that, because over 15% of

the Series 5 Price decline can be "explained" by the movement in his Preferred Stock Index, this 15% is due to alternative causes unrelated to Plaintiff's claims. Such is not the case.

130. Expectations regarding nationalization that are related to Plaintiff's claims would also impact the preferred stocks of other banks in the index. In particular, there were news stories on this day tying the drop in many bank stocks to the same news related to the decline in the Series 5 Shares. For instance, *MarketWatch* reported that the U.S. financial stocks matched their largest one day drop ever "as investors panicked at the likelihood that there is no end in sight for the sector's need for capital, and no easy way to raise it."[114]

131. *Reuters*, meanwhile, published an article that day that also indicated that the security price declines banks in the U.S. and U.K. were due to capital concerns and a lack of trust regarding whether banks had properly taken marks against their balance sheets. In particular the article stated:

> U.S. bank shares sank Tuesday, with Citigroup Inc and Bank of America Corp hitting their lowest levels since the early 1990s as investors, seeing no quick end to losses from toxic assets, worried that many banks are running short of capital. The KBW Bank Index of leading commercial banks dropped nearly 20 percent to a 14-year low, tumbling almost 43 percent this month alone. Confidence in the banking sector was further rattled after State Street Corp said it could need to raise capital and reported a 71 percent drop in fourth-quarter profit on Tuesday, a day after Royal Bank of Scotland Group Plc posted the biggest loss in U.K. corporate history. The rout was widespread, with shares of regional bank PNC Financial Services Group declining 41 percent and even relative islands of safety like JPMorgan Chase & Co dropping 21 percent. Investors were worried that the U.S. economy was worsening and that banks may not be able to withstand more credit losses without government help, further diluting shareholder interests. 'The market doesn't trust that banks have properly marked their balance sheets and their loan portfolios. The sense is there are further marks to come, that

[114] "Banks Battered as Sector Matches Worst Day Ever," *MarketWatch,* January 20, 2009, 4:21 PM EST.

> tangible book is not as it is stated today,' said Robert Patten, a bank analyst for Morgan Keegan.[115]

132. These are just a few examples of the substantial amount of news reported on this day regarding bank declines which affected members of Dr. Kleidon's Preferred Stock Index. Indeed, several of the firms singled out above were members of his index (*e.g.* Citigroup, Wells Fargo, JP Morgan Chase, Bank of America, and Royal Bank of Scotland).

133. In this particular circumstance, where there is information relevant to Plaintiff's claims that is impacting both Barclays and the Preferred Stock Index, Dr. Kleidon's methodology inappropriately treats the decline in the Preferred Stock Index as an "independent" factor that is considered part of the "expected return" and ***excluded*** from the residual return. As a result, he is biasing his measurement of the effect of the relevant information on the Series 5 Shares.

134. In sum, on events where the Preferred Stock Index cannot be separated from Plaintiff's claims and the index does not represent a proper independent control, Dr. Kleidon has insufficient economic or statistical evidence to establish that the full price decline was caused by something other than information related to Plaintiff's claims.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

RESPECTFULLY SUBMITTED AND EXECUTED THIS 2nd DAY OF FEBRUARY 2016.

Chad Coffman

[115] "WRAPUP 3-U.S. bank shares sink as investors fear more losses," *Reuters*, January 20, 2009, 9:26 AM EST.

Appendix A
Documents Considered

Court Documents

- Class Action Complaint for Violation of the Federal Securities Laws, *Pellegrini*, *et al. v. Barclays Bank Plc*, *et al.*, dated April 8, 2009.
- Second Consolidated Amended Complaint for Violations of the Federal Securities Laws, *In Re Barclays Bank Plc Securities Litigation*, dated September 16, 2013.
- Lead Plaintiffs' Responses and Objections to the Barclays' Defendants First Set of Interrogatories, dated November 16, 2015.
- Expert Report of Chad Coffman, CFA, dated December 15, 2015.
- Expert Report of Allan W. Kleidon, Ph. D., dated December 15, 2015.

Court Decisions and Securities Law

- Securities Act of 1933.
- Securities Exchange Act of 1934.

SEC Filings/Forms

- Barclays Bank PLC Series 5 Prospectus Form 424(b)(5), filed April 9, 2008.
- Barclays 2007 20-F.

Security Data

- Historical data for Barclays 5 Preferred Shares were obtained from Bloomberg.
- Data produced in connection with the Expert Report of Chad Coffman, CFA, dated December 15, 2015.
- Data produced in connection with the Expert Report of Allan W. Kleidon, Ph. D., dated December 15, 2015.

News Articles

Barclays news based on Factiva searches for "All Sources" with the text field "Barclays" as well as news referenced in the Kleidon Report. Articles include, but not limited to, the following:

- "Reader Survey: Banks Could Be Set for Second Round of Rights Issues," *Citywire,* July 11, 2008, 8:00 PM EST.
- "Don't Bank on a B&B buyer," *The Observer*, July 12, 2008, 7:01 PM EST.

- "Bank Consolidation: Under the Hammer," *The Economist*, July 12, 2008.
- "Rescue Plan for US Mortgage Giants," *Financial Times*, July 14, 2008, 12:34 AM EST.
- "The State of the GSEs: Not Great, Not Terrible; Answers to some of the questions facing Fannie and Freddie," *American Banker,* July 14, 2008.
- "IndyMac ReOpens, Halts Foreclosures on Its Loans," *The Wall Street Journal*, July 15, 2008.
- "Barclays PLC BARC Result of Placing and Open Offer," *Barclays Press Release,* July 18, 2008, 2:00 AM EST.
- "Barclays says shareholders take up 19 percent of open offer shares UPDATE," *AFX Asia*, July 18, 2008, 3:18 AM EST.
- "Market Comment: London Stocks Stay Down; Miners Weigh," *Dow Jones*, July 18, 2008, 8:27 AM EST.
- "FTSE Slips Back, Oil Declines," *Investors Chronicle,* July 18, 2008.
- "Bank Pair Raise £8bn – But May Need More; BANKING," *The Evening Standard,* July 18, 2008.
- "Oil and Copper Burnish FTSE," *The Guardian,* August 14, 2008, 5:55 AM EST.
- "UPDATE 1-Barclays May Write Down 1.5 Bln Stg More, says Goldman," *AFX Asia*, August 14, 2008, 6:43 AM EST.
- "Market Report," *Press Association,* August 14, 2008, 1:15 PM EST.
- "UK Summary: FTSE To Shed 75 Points On Econ Slowdown Fears," *Dow Jones,* September 3, 2008, 3:00 AM EST.
- "STOCKS NEWS EUROPE-ROK higher as Landsbanki initiates as buy," *Reuters*, September 3, 2008, 4:14 AM EST.
- "London Shares Fall as Miners, Banks Weigh; Punch Taverns Drops After Scrapping Dividend Payout," *MarketWatch,* September 3, 2008, 12:12 PM EST.
- "U.K. to Inject about $87 Billion in Country's Banks (Update1)," *Bloomberg*, October 8, 2008, 2:48 AM EST.
- "Rescue Plan for UK Banks Unveiled," *BBC News,* October 8, 2008, 11:58 AM EST.
- "Government Bailout Provides Little Relief for Stock Market," *Estates Gazette Interactive*, October 8, 2008.
- "Bank Shares Rocked as Nationalisation Rumours Rampage Through Markets," *The Times*, October 8, 2008.
- "U.K. Stocks Fall Despite New Bank-Rescue Effort; Government Says It Will Buy Stakes in Banks and Guarantee Debts; Other Countries May Look to British Model," *The Wall Street Journal,* October 9, 2008.
- "U.S. Stocks Linger in the Red," *The Wall Street Journal,* October 9, 2008.
- "Barclays PLC Further Comment on UK Government Announcement," *Regulatory News Service,* October 10, 2008 5:07 AM EST.

- “Barclays Looking at Options to Boost Finances,” *Press Association*, October 10, 2008, 5:29 AM EST.
- “Market Report,” *The Sun*, October 10, 2008.
- “Sector Surrenders Early Gains, S&P Cuts Hit,” *MarketWatch*, December 19, 2008, 10:36 AM EST.
- “S&P: Barclays Bank PLC L-T Rating Lowered To ‘AA-’; ‘A-1+’ S-T Rating Affirmed; Outlook Negative,” *Market News Publishing*, December 19, 2008.
- “Barclays May Sell Private Equity Arm,” *Press Association*, December 21, 2008, 7:45 AM EST.
- “Barclays Looks to Sell Private Equity Empire; Billions of Vital Capital Could be Raised in Buyout,” *The Mail on Sunday*, December 21, 2008.
- “Barclays to Review Future of Private Equity Arm,” *The Sunday Telegraph*, December 21, 2008.
- “Barclays Fightback Fails to Ease Fears of Taxpayer Rescue,” *The Evening Standard*, January 19, 2009.
- “Banks Battered as Sector Matches Worst Day Ever,” *MarketWatch*, January 20, 2009, 4:21 PM EST.
- “WRAPUP 3-U.S. bank shares sink as investors fear more losses,” *Reuters*, January 20, 2009, 9:26 AM.
- Barclays, Lloyds Shares Tumble Again on Results Fears,” *Dow Jones*, January 21, 2009, 4:01 AM EST.
- “Banking Shares Suffer in London,” *The Irish Examiner*, January 21, 2009, 6:57 AM EST.
- “Successful or Not, the Price of Bailout Could Be Too High,” *The Irish Times*, January 21, 2009.
- “Barclays CEO: Will Make 08 Profit After Write-Downs – Report,” *Dow Jones*, January 23, 2009, 2:07 AM EST.
- “WRAPUP 1-Banks on back foot; state help fails to lift gloom,” *Reuters*, January 23, 2009.
- “Barclays Plunges Amid New Worries Over Bailouts Bill; Economy by Bill Condie,” *The Evening Standard*, January 23, 2009.
- “Barclays Shares Plunge 15%,” *The Guardian*, January 23, 2009.
- “TEXT-Moody’s Downgrades Barclays to Aa3,” *Reuters*, February 1, 2009, 7:29 PM EST.
- “UPDATE 1-Moody’s Cuts Barclays’ Ratings on Loss Expectations,” *Reuters*, February 1, 2009, 9:15 PM EST.
- “Moody’s Downgrades Barclays Bank (Senior to Aa3/Stable, BFSR to C/Negative),” *Moody’s Investor Service Press Release*, February 1, 2009.
- “Bank Bosses Face Grilling by MPs,” *The Guardian*, February 2, 2009.

- “Barclays Slips Back on Downgrade,” *The Guardian*, February 2, 2009.
- “BarCap to Close US Residential Mortgage Unit EquiFirst,” *Dow Jones*, February 17, 2009.
- “Pressure Rises on Banks to Participate in U.K. Bailout,” *The International Herald Tribune*, March 7, 2009.
- “Lloyds Banking Shares Drop After Scheme Lifts Govt Stake,” *Dow Jones*, March 9, 2009, 4:42 AM EST.
- “UPDATE: Lloyds Shares Drop As Government Stake Increases,” *Dow Jones*, March 9, 2009, 11:05 AM EST.
- “Morning Market: Malaise in Banking Sector Casts Early Shadow,” *Citywire*, March 9, 2009.
- “Barclays Loses 25% Value on Toxic-Debt Prediction,” *Derivatives Week*, March 9, 2009.
- What a Million Syllabuses Can Teach Us,” *The New York Times*, January 22, 2016.

Analyst Reports

Analyst reports obtained through Investext for the period January 2008 through December 2009 as well as reports referenced in the Kleidon Report. Analyst reports include, but not limited to, the following:

- “Some of the Parts,” *RBS*, September 3, 2008.
- “Barclays PLC-A Stay of Execution,” *MF Global*, January 20, 2009.

Academic Articles/Texts

- John Binder, “The Event Study Methodology Since 1969,” *Review of Quantitative Finance and Accounting*, Vol. 11, 1998.
- Sir Ronald A. Fisher, *The Design of Experiments*, (New York: Hafner Press, 1971).
- Damodar N. Gujarati, *Basic Econometrics* (3d ed. 1995).
- See Philippe Jorion, Value at Risk, *The New Benchmark for Controlling Derivatives Risk*, McGraw Hill, 1997.
- David H. Kaye and David A. Freedman, “Reference Guide on Statistics,” *Reference Manual on Scientific Evidence*, 3rd ed., Federal Judicial Center (Washington, DC: The National Academies Press, 2011).
- Sheldon G. Levy, *Inferential Statistics in the Behavioral Sciences* (1968).
- A. Craig MacKinlay, “Event Studies in Economics and Finance,” *Journal of Economics Literature*, Vol. 35, No. 1, March 1997.

- Robert D. Mason, Douglas A. Lind and William G. Marchal, “The Normal Probability Distribution,” Ch. 7 in *Statistical Techniques in Business and Economics*, Irwin/McGraw-Hill, Tenth Edition, 1999.
- David I. Tabak and Frederick C. Dunbar, “Materiality and Magnitude: Event Studies in the Courtroom,” Ch. 19, *Litigation Services Handbook, The Role of the Financial Exper*t (3d ed. 2001).
- Helen M. Walker & Joseph Lev, *Elementary Statistical Methods* (3rd ed. 1969).

APPENDIX B

CHAD W. COFFMAN, MPP, CFA

Global Economics Group, LLC
140 South Dearborn Street, Suite 1000
Chicago, IL 60603
Office: (312) 470-6500
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EMPLOYMENT:

Global Economics Group, LLC
President (2008 - Current)

Global Economics Group specializes in the application of economics, finance, statistics, and valuation principles to questions that arise in a variety of contexts, including litigation and policy matters throughout the world. With offices in Chicago, Boston, and New York, Principals of Global Economics Group have extensive experience in high-profile securities, antitrust, labor, and intellectual property matters.

Market Platform Dynamics, LLC
Chief Financial Officer & Chief Operating Officer (2010 – Current)

Market Platform Dynamics is a management consulting firm that specializes in assisting platform-based companies profit from industry disruption caused by the introduction of new technologies, new business models and/or new competitive threats. MPD's experts include economists, econometricians, product development specialists, strategic marketers and recognized thought leaders who apply cutting-edge research to the practical problems of building and running a profitable business.

Chicago Partners, LLC
Principal (2007 – 2008)
Vice President (2003 – 2007)
Director (2000 – 2003)
Senior Associate (1999 – 2000)
Associate (1997 – 1999)
Research Analyst (1995 – 1997)

EDUCATION:

CFA Chartered Financial Analyst, 2003

M.P.P. University of Chicago, 1997

Masters of Public Policy, with a focus in economics including coursework in Finance, Labor Economics, Econometrics, and Regulation

B.A. Knox College, 1995
Economics, Magna Cum Laude
Graduated with College Honors for Paper entitled "Increasing Efficiency in Water Supply Pricing: Using Galesburg, Illinois as a Case Study"
Dean's List Every Term
Phi Beta Kappa

PROFESSIONAL EXPERIENCE:

Securities, Valuation, and Market Manipulation Cases:

- Testifying Expert in numerous high-profile class action securities matters including, but not limited to:

  - In Re: Bank of America Corp. Securities, Derivative, and Employee Retirement Income Security Act (ERISA) Litigation. Parties settled for $2.4 billion in which I served as Plaintiffs' damages and loss causation expert.
  - In Re: Schering-Plough Corporation/ Enhance Securities Litigation. Parties settled for $473 million in which I served as Plaintiffs' damages and loss causation expert.
  - In Re: REFCO Inc. Securities Litigation. Parties settled for $367 million in which I served as Plaintiffs' damages and loss causation expert.
  - In Re: Computer Sciences Corporation Securities Litigation. Parties settled for $98 million in which I served as Plaintiffs' damages and loss causation expert.
  - Full list of testimonial experience is provided below

- Engaged several dozen times as a neutral expert by prominent mediators to evaluate economic analyses of other experts.

- Expert consultant for the American Stock Exchange (AMEX) where I evaluated issues related to multiple listing of options. Performed econometric analysis of various measures of option spread using tens of millions of trades.

- Performed detailed audit of CDO valuation models employed by a banking institution to satisfy regulators – non-litigation matter.

- Played significant role in highly-publicized internal accounting investigations of two Fortune 500 companies. One led to restatement of previously issued financial statements and both involved SEC investigations.

Testimony:

- Testifying expert in the matter of Kuo, Steven Wu v. Xceedium Inc, Supreme Court of New York, County of New York, Index No. 06-100836. Filed report re: the fair value of Mr. Kuo's shares. Case settled at trial.

- Testifying expert in the matter of Pallas, Dennis H. v. BPRS/Chestnut Venture Limited Partnership and Gerald Nudo, Circuit Court of Cook County, Illinois, County Department, Chancery Division. Filed report re: fair value of Pallas shares. Report: July 9, 2008. Deposition August 6, 2008. Court Testimony February 11, 2009.

- Testifying expert in Washington Mutual Securities Litigation, United States District Court, Western District of Washington, at Seattle, No. 2:08-md-1919 MJP, Lead Case No. C08-387 MJP. Filed declaration August 5, 2008 re: plaintiffs' loss causation theory. Filed expert report April 30, 2010. Filed rebuttal expert report August 4, 2010.

- Testifying expert in DVI Securities Litigation, Case No. 2:03-CV-05336-LDD, United States District Court for the Eastern District of Pennsylvania. Filed expert report October 1, 2008 re: damages. Filed rebuttal expert report December 17, 2008. Deposition January 27, 2009. Filed rebuttal expert report June 24, 2013.

- Testifying expert in Syratech Corporation v. Lifetime Brands, Inc. and Syratech Acquisition Corporation, Supreme Court of the State of New York, Index No. 603568/2007. Filed expert report October 31, 2008.

- Expert declaration in Jacksonville Police and Fire Pension Fund, et al. v. AIG, Inc., et al., No. 08-CV-4772-LTS; James Connolly, et al. v. AIG, Inc., et al., No. 08-CV-5072-LTS; Maine Public Employees Retirement System, et al. v. AIG, Inc., et al., No. 08-CV-5464-LTS; and Ontario Teachers' Pension Plan Board, et al. v. AIG, Inc., et al., No. 08-CV-5560-LTS, United States District Court, Southern District of New York. Filed declaration February 18, 2009.

- Expert declaration in Connetics Securities Litigation, Case No. C 07-02940 SI, United States District Court for the Northern District of California, San Francisco Division. Filed expert report March 16, 2009.

- Testifying expert in Boston Scientific Securities Litigation, Master File No. 1:05-cv-11934 (DPW), United States District Court District of Massachusetts. Filed expert report August 6, 2009. Deposition October 6, 2009.

- Expert declaration in Louisiana Sheriffs' Pension and Relief Fund, et al. v. Merrill Lynch & Co, Inc., et al., Case Number 08-cv-09063, United States District Court, Southern District of New York. Filed declaration re: Plan of Allocation October, 2009.

- Testifying expert in Henry J. Wojtunik v. Joseph P. Kealy, John F. Kealy, Jerry A. Kleven, Richard J. Seminoff, John P. Stephen, C. James Jensen, John P. Morbeck, Terry W. Beiriger, and Anthony T. Baumann. Filed expert report on January 25, 2010.

- Testifying expert in REFCO Inc. Securities Litigation, Case No. 05 Civ. 8626 (GEL), United States District Court for the Southern District of New York. Filed expert report February 2, 2010. Filed rebuttal expert report March 12, 2010. Deposition March 26, 2010.

- Expert declaration in New Century Securities Litigation, Case No. 07-cv-00931-DDP, United States District Court Central District of California. Filed declaration March 11, 2010.

- Testifying expert in Louisiana Municipal Police Employees' Retirement System, et. al. v. Tilman J. Fertitta, Steven L. Scheinthal, Kenneth Brimmer, Michael S. Chadwick, Michael Richmond, Joe Max Taylor, Fertitta Holdings, Inc., Fertitta Acquisition Co., Richard Liem, Fertitta Group, Inc. and Fertitta Merger Co, C.A. No. 4339-VCL, Court of Chancery of the State of Delaware. Filed expert report April 23, 2010.

- Testifying expert in Edward E. Graham and William C. Nordlund, individually and d/b/a Silver King Capital Management v. Eton Park Capital Management, L.P., Eton Park Associates, L.P. and Eton Park Fund, L.P. Case No. 1:07-CV-8375-GBD, Circuit Court of Shelby County, Alabama. Filed rebuttal expert report July 8, 2010. Deposition September 1, 2010. Filed supplemental rebuttal expert report August 22, 2011.

- Testifying expert in Moody's Corporation Securities Litigation. Case No. 1:07-CV-8375-GBD), United States District Court for the Southern District of New York. Filed rebuttal expert report August 23, 2010. Deposition October 7, 2010. Filed rebuttal reply report November 5, 2010. Filed expert report May 25, 2012.

- Testifying expert in Minneapolis Firefighters' Relief Association v. Medtronic, Inc., et al. Civil No. 08-6324 (PAM/AJB), United States District Court, District of Minnesota. Filed expert report January 14, 2011.

- Testifying expert in Schering-Plough Corporation/ENHANCE Securities Litigation Case No.2:08-cv-00397 (DMC) (JAD), United States District Court, District of New Jersey. Filed declaration February 7, 2011. Filed expert report September 15, 2011. Filed rebuttal expert report October 28, 2011. Filed declaration January 30, 2012. Deposition November 15, 2011 and November 29, 2011.

- Testifying expert in Fannie Mae 2008 Securities Litigation, Master File No. 08 Civ. 7831 (PAC), United States District Court for the Southern District of New York. Filed expert report July 18, 2011.

- Testifying expert in Bank of America Corp. Securities, Derivative, and Employee Retirement Income Security Act (ERISA) Litigation, Master File No. 09 MDL 2058 (PKC), United States District Court for the Southern District of New York. Filed expert report August 29, 2011. Filed rebuttal expert report September 26, 2011. Filed expert report March 16, 2012. Filed rebuttal expert report April 9, 2012. Filed rebuttal expert report April 29, 2012. Deposition October 14, 2011 and May 24, 2012.

- Testifying expert in Toyota Motor Corporation Securities Litigation, Case No. 10-922 DSF (AJWx), United States District Court, Central District of California. Filed expert report February 17, 2012. Deposition March 28, 2012. Filed rebuttal expert report August 2, 2012. Filed declaration re: Plan of Allocation January 28, 2013.

- Testifying expert in The West Virginia Investment Management Board and the West Virginia Consolidated Public Retirement Board v. The Variable Annuity Life Insurance Company, Civil No. 09-C-2104, Circuit Court of Kanawha County, West Virginia. Filed expert report June 1, 2012. Depositions June 19, 2013 and December 11, 2015.

- Testifying expert in Aracruz Celulose S.A. Securities Litigation, Case No. 08-23317-CIV-LENARD, United States District Court, Southern District of Florida. Filed expert report July 20,

2012. Deposition September 14, 2012. Filed rebuttal expert report October 29, 2012. Filed declaration re: Plan of Allocation May 20, 2013.

- Testifying expert in In Re Computer Sciences Corporation Securities Litigation, CIV. A. No. 1:11-cv-610-TSE-IDD, United States District Court, Eastern District of Virginia, Alexandria Division. Filed expert report November 9, 2012. Filed supplemental report February 18, 2013. Filed rebuttal expert report March 25, 2013. Deposition March 27, 2013. Filed declaration re: Plan of Allocation August 7, 2013.

- Testifying expert in In Re Weatherford International Securities Litigation, Case 1:11-cv-01646-LAK, United States District Court for the Southern District of New York. Filed expert report April 1, 2013. Deposition April 26, 2013.

- Testifying expert in In Re: Regions Morgan Keegan Closed-End Fund Litigation, Case 2:07-cv-02830-SHM-dkv, United States District Court for the Western District of Tennessee Western Division. Court testimony April 12, 2013.

- Testifying expert in City of Roseville Employees' Retirement System and Southeastern Pennsylvania Transportation Authority, derivatively on behalf of Oracle Corporation, Plaintiff, v. Lawrence J. Ellison, Jeffrey S. Berg, H. Raymond Bingham, Michael J. Boskin, Safra A. Catz, Bruce R. Chizen, George H. Conrades, Hector Garcia-Molina, Donald L. Lucas, and Naomi O. Seligman, Defendants, and Oracle Corporation, Nominal Defendant, C.A. No. 6900-CS, Court of Chancery of the State of Delaware. Filed expert report May 13, 2013. Filed rebuttal expert report June 21, 2013. Deposition July 17, 2013.

- Testifying expert in In Re BP plc Securities Litigation, No. 4:10-md-02185, Honorable Keith P. Ellison, United States District Court for the Southern District of Texas, Houston Division. Filed expert report June 14, 2013. Deposition July 25, 2013. Filed rebuttal expert report October 7, 2013. Filed declaration re: Plaintiff accounting losses November 17, 2013. Filed expert report January 6, 2014. Deposition January 22, 2014. Filed rebuttal expert report March 12, 2014. Filed expert report March 17, 2014. Hearing testimony April 21, 2014. Deposition June 3, 2014. Filed declaration re: damages June 3, 2014.

- Testifying expert in In Re Celestica Inc. Securities Litigation, Civil Action No. 07-CV-00312-GBD, United States District Court for the Southern District of New York. Filed expert report June 14, 2013. Filed rebuttal expert report September 10, 2013. Deposition September 24, 2013.

- Testifying expert in In Re Dendreon Corporation Class Action Litigation, Master Docket No. C11-01291JLR, United States District Court for the Western District of Washington at Seattle. Filed declaration re: Plan of Allocation June 14, 2013.

- Testifying expert in In Re Hill v. State Street Corporation, Master Docket No. 09-cv12146-GAO, United States District Court for the District of Massachusetts. Filed expert report October 28, 2013.

- Testifying expert in In Re BNP Paribas Mortgage Corporation and BNP Paribas v. Bank of America, N.A., Master Docket No. 09-cv-9783-RWS, United States District Court for the Southern District of New York. Filed expert report November 25, 2013. Deposition June 26-27, 2014.

- Testifying expert in Stan Better and YRC Investors Group v. YRC Worldwide Inc., William D. Zollars, Michael Smid, Timothy A. Wicks and Stephen L. Bruffet, Civil Action No. 11-2072-KHV, United States District Court for the District of Kansas. Filed declaration re: Plan of Allocation February 5, 2014. Filed expert report May 29, 2015.

- Testifying expert in The Archdiocese of Milwaukee Supporting Fund v. Halliburton Company, et al., Civil Action No. 3:02-CV-1152-M, United States District Court for the Northern District of Texas, Dallas Division. Filed expert report October 30, 2014. Deposition November 11, 2014. Hearing testimony December 1, 2014.

- Testifying expert in In Re HP Securities Litigation, Master File No. 3:12-cv-05980-CRB, United States District Court for the Northern District of California, San Francisco Division. Filed expert report November 4, 2014. Deposition December 3, 2014. Filed rebuttal expert report January 26, 2015.

- Testifying expert in In Re MGM Mirage Securities, No. 2:09-cv-01558-GMN-VCF, United States District Court for the District of Nevada. Filed expert report November 12, 2014. Deposition January 6, 2015. Filed rebuttal expert report April 2, 2015.

- Testifying expert in Adam S. Levy v. Thomas Gutierrez, Richard J. Gaynor, Raja Bal, J. Michal Conaway, Kathleen A. Cote, Ernest L. Godshalk, Matthew E. Massengill, Mary Petrovich, Robert E. Switz, Noel G. Watson, Thomas Wroe, Jr., Morgan Stanley & Co. LLC, Goldman, Sachs & Co., and Canaccord Genuity Inc., No. 1:14-cv-00443-JL, United States District Court for the District of New Hampshire. Filed declaration January 7, 2015.

- Testifying expert in In Re Nu Skin Enterprises, Inc., Securities Litigation, Master File No. 2:14-cv-00033-DB, United States District Court for the District of Utah, Central Division. Filed expert report June 26, 2015. Deposition August 17, 2015.

- Testifying expert in In Re Intuitive Surgical Securities Litigation, Master File No. 5:13-cv-01920-EJD, United States District Court for the Northern District of California. Filed expert report September 1, 2015. Filed expert rebuttal report November 16, 2015.

- Testifying expert in Babak Hatamian, et al., v. Advanced Micro Devices, Inc., et al., No. 4:14-cv-00226-YGR, United States District Court for the Northern District of California, San Francisco Division. Filed expert report September 4, 2015. Filed rebuttal expert report December 7, 2015.

- Testifying expert in In Re NII Holdings, Inc. Securities Litigation, No. 1:14-cv-00227-LMB-JFA, United States District Court for the Eastern District of Virginia, Alexandria Division. Filed expert report September 11, 2015. Deposition September 17, 2015. Filed rebuttal expert report October 28, 2015. Filed expert report January 8, 2016.

- Testifying expert in In Re Barrick Gold Securities Litigation, No. 1:13-cv-03851-SAS, United States District Court for the Southern District of New York. Filed expert report September 15, 2015.

- Expert declaration in In Re Tower Group International, Ltd. Securities Litigation, Master Docket No. 1:13-cv-5852-AT, United States District Court, Southern District of New York. Filed declaration re: Plan of Allocation October 6, 2015.

- Testifying expert in Beaver County Employees' Retirement Fund et al. v. Tile Shop Holdings Inc. et al., No. 0:14-cv-00786-ADM-TNL, United States District Court for the District of Minnesota. Filed expert report December 1, 2015.
- Testifying expert in In Re Barclays Bank PLC Securities Litigation, Civil Action No. 1:09-cv-01989-PAC, United States District Court for the Southern District of New York. Filed expert report December 15, 2015.

Experience in Labor Economics and Discrimination-Related Cases:

- Expert consultant for Cargill in class action race discrimination matter in which class certification was defeated.

- Expert consultant for 3M in class action age discrimination matter.

- Expert consultant for Wal-Mart in class action race discrimination matter.

- Expert consultant on various other significant confidential labor economics matters in which there were class action allegations related to race, age and gender.

- Expert consultant for large insurance company related to litigation and potential regulation resulting from the use of credit scores in the insurance underwriting process.

Testimony:

- Testifying expert in Shirley Cohens v. William Henderson, Postmaster General, C.A 1:00CV-1834 (TFH) United States Postal Service. United States District Court for the District of Columbia.– Filed report re: lost wages and benefits.

- Testifying expert in Richard Akins v. NCR Corporation. Before the American Arbitration Association – Filed report re: lost wages.

- Testifying expert in Maureen Moriarty v. Dyson, Inc., Case No. 09 CV 2777, United States District Court for the Northern District of Illinois, Eastern Division. Filed expert report October 12, 2011. Deposition November 10, 2011.

Selected Experience in Antitrust, General Damages, and Other Matters:

- Expert consultant in high-profile antitrust matters in the computer and credit card industries.

- Expert consultant for plaintiffs in re: Brand Name Drugs Litigation. Responsible for managing, maintaining and analyzing data totaling over one billion records in one of the largest antitrust cases ever filed in the Federal Courts.

- Served as neutral expert for mediator (Judge Daniel Weinstein) in allocating a settlement in an antitrust matter.

- Expert consultant in Seminole County and Martin County absentee ballot litigation during disputed presidential election of 2000.

- Expert consultant for sub-prime lending institution to determine effect of alternative loan amortization and late fee policies on over 20,000 customers of a sub-prime lending institution. Case settled favorably at trial immediately after the testifying expert presented an analysis I developed showing fundamental flaws in opposing experts calculations.

TEACHING EXPERIENCE:

KNOX COLLEGE, Teaching Assistant - Statistics, (1995)
KNOX COLLEGE, Tutor in Mathematics, (1992 - 1993)

PUBLICATIONS:

Coffman, Chad and Mary Gregson, "Railroad Construction and Land Value." *Journal of Real Estate and Finance*, 16:2, pp. 191-204 (1998).

Coffman, Chad, Tara O'Neil, and Brian Starr, Ed. Richard D. Kahlenberg, "An Empirical Analysis of the Impact of Legacy Preferences on Alumni Giving at Top Universities," *Affirmative Action for the Rich: Legacy Preferences in College Admissions*; pp. 101-121 (2010).

PROFESSIONAL AFFILIATIONS:

Associate Member CFA Society of Chicago
Associate Member CFA Institute
Phi Beta Kappa

AWARDS:

1994 Ford Fellowship Recipient for Summer Research.
1993 Arnold Prize for Best Research Proposal.
1995 Knox College Economics Department Award.

PERSONAL ACTIVITIES:

- Pro bono consulting for Cook County State's Attorney's Office.
- Pro bono consulting for Cook County Health & Hospitals System – Developed method for hospital to assess real-time patient level costs to assist in improving care for Cook County residents and prepare for implementation of Affordable Care Act.
- Pro bono consulting for Chicago Park District to analyze economic impact of park district assets and assist in developing strategic framework for decision-making.

EXHIBIT 37

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC:) Master File No.:
) 1:09-cv-01989-PAC
SECURITIES LITIGATION)
_________________________________)
)
This Document Relates to:)
)
ALL ACTIONS.)
_________________________________)

VIDEOTAPED DEPOSITION OF DENNIS ASKELSON
Palo Alto, California
Wednesday, September 15, 2015
Volume I

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
1801 Market Street – Suite 1800
Philadelphia, PA 19103

BY MR. WHITE:
Q The court reporter will be handing you a document she will mark Defense Exhibit 3.
(Exhibit 3 was marked for identification and is attached hereto.)
BY MR. WHITE:
Q The court reporter has marked as Defense Exhibit 3 a document bearing Bates number UW_Barclays_00093080 -- do you see that number in the bottom right-hand corner?
A Yes, I do, Tom.
Q -- through 91.
A Yes.
Q Do you recognize this document?
MR. D'ANCONA: Feel free to look this over.
THE WITNESS: Yes.
BY MR. WHITE:
Q What is this document?
A It's an email.
Q It's an email from Ezra Proctor to you, correct?
A Correct.
Q And it's actually a chain of emails, correct?

MR. D'ANCONA: Objection. Vague.
BY MR. WHITE:
Q Correct?
A Correct. Yes.
Q Do you see that the stamp that you were just looking at at the bottom right-hand corner begins UW?
A Yes.
Q This indicates that the underwriter defendants produced this document. Is this a document that was in your files?
MR. D'ANCONA: Objection to form.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q Would this document have been among those that you would have kept in your files?
MR. D'ANCONA: Objection to form. Calls for speculation and vague.
THE WITNESS: Yes. It's addressed to me.
BY MR. WHITE:
Q Right. Then why wouldn't you have produced it to the defendants in this case?
MR. D'ANCONA: Objection to form. Calls for a legal conclusion.
THE WITNESS: Your question again, Tom?

BY MR. WHITE:
Q Sure. Let me rephrase the question.
You testified earlier that you searched for documents relating to your investment in Barclays Series 5 ADS, correct?
A Correct.
Q Would this document be among those documents you would have searched for?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q How did you decide what you were searching for when you were looking for documents?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q So who is Mr. Ezra Proctor?
A He was working for Merrill Lynch.
Q How often did you communicate with Mr. Proctor in, let's say, the March/April 2008 time period?
A I can't remember, Tom.
Q How would you communicate with Ezra Proctor in this time period?
A By telephone or email.

Q In your communications with Mr. Proctor prior to this email -- strike that.
Do you recall when you first began communicating with Mr. Proctor?
A No.
Q It was sometime prior to March 2008?
MR. D'ANCONA: Objection to form.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q Do you recall communicating with him about what your investment objectives were?
MR. D'ANCONA: Objection to form.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q You don't remember whether you communicated with him about your investment objectives?
MR. D'ANCONA: Objection to form.
THE WITNESS: Right. I can't remember.
BY MR. WHITE:
Q I'm not asking about the substance of your communications. I just --
A I can't remember talking with him about it. That was 2008.
Q Right. Okay.

Why don't you take a look at page 81. And I'll just use 81 as shorthand for the last couple of page numbers on this.

And you can see that at the top of the page there, Mr. Proctor says, second sentence, "These preferred offerings are a great way to capture a large coupon while retaining liquidity like you would with a standard equity, although this offering should certainly be considered long term to utilize the quarterly dividend."

Do you see that?

A Yes.

Q What is a preferred offering?

MR. D'ANCONA: Objection to form.

THE WITNESS: I don't know.

BY MR. WHITE:

Q What is a coupon?

MR. D'ANCONA: Objection to form. Vague.

THE WITNESS: I don't know.

BY MR. WHITE:

Q Did you have an understanding of what Mr. Proctor was referring to when he said, "These preferred offerings are a great way to capture a large coupon"?

MR. D'ANCONA: Objection to form. Vague

and calls for speculation.

THE WITNESS: I can't remember.

BY MR. WHITE:

Q Do you recall whether you were looking for a long-term investment?

MR. D'ANCONA: Objection to form, vague.

THE WITNESS: Yes.

BY MR. WHITE:

Q Did you consider the offering that was being discussed here a long-term investment?

MR. D'ANCONA: Objection to form. Vague.

THE WITNESS: I can't remember.

BY MR. WHITE:

Q Why were you looking for a long-term investment?

A Just a part of my strategy, my own strategy.

Q Why was that a part of your strategy?

A Mainly for security.

Q What do you mean by "security"?

A That I wouldn't lose money.

Q And do you consider a long-term investment a way to avoid losing money?

MR. D'ANCONA: Objection to form.

THE WITNESS: Yes.

BY MR. WHITE:

Q Did you generally effectuate your strategies?

MR. D'ANCONA: Objection to form. Vague.

THE WITNESS: Yes.

BY MR. WHITE:

Q So you were looking for a long-term safe investment as of March 2008?

A Yes.

Q And Mr. Proctor believed, do you agree, that the offering of SunTrust being discussed here would represent such an investment?

MR. D'ANCONA: Objection to form. Vague, calls for speculation about what Mr. Proctor believed.

THE WITNESS: I can't remember now.

BY MR. WHITE:

Q Would you mind repeating --

A I can't remember.

Q Did you believe that this represented a long-term safe investment?

MR. D'ANCONA: Objection to form.

THE WITNESS: No.

BY MR. WHITE:

Q Why not?

A I never heard of them.

Q So in order to consider it a long-term safe investment, you wanted to ensure that you had heard of the company first?

A Yes.

Q But you just told me before that you don't recall having heard of Barclays at the time of your April 2008 investment.

MR. D'ANCONA: Objection to form. Misstates prior testimony.

BY MR. WHITE:

Q Correct?

A Right. Yes. Um-hum.

Q Let's take a look at page 80, the previous page. The top email on the chain says, "I left you a message earlier to let you know that the SunTrust offering is no longer available, but we have a new offering that is identical in dividend yield but is a different issuer."

What is a dividend yield?

MR. D'ANCONA: Objection to form. Vague.

THE WITNESS: It's interest.

BY MR. WHITE:

Q Did you recall being disappointed that you didn't have the opportunity to participate in the

BY MR. WHITE:
Q Okay. Do you -- after your April '08 investment, did you have any investments that outperformed your Barclays Series 5 ADS?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q What other investments are there?
MR. D'ANCONA: Objection to form. Asked and answered, vague.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q Did you consider $25 a share to be a fair price at the time of your investment decision?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q Knowing what you know now in September 2015, would you have paid $25 per share?
MR. D'ANCONA: Objection to form. Vague, assumes facts.
I don't know. I don't know if I would have done it or not.
BY MR. WHITE:
Q Why not?

MR. D'ANCONA: Objection to form. Calls for speculation.
THE WITNESS: Today it's only at $26.
BY MR. WHITE:
Q Only?
A Yes. I bought it at 25. Today it's only 26. You know, $1 a share over -- since 2008?
Q But you told me you were buying it for the coupon payments.
A That's a different ball game again.
Q But that's why you were buying it.
MR. D'ANCONA: Objection to form. You've got to let him finish his questions.
BY MR. WHITE:
Q Correct?
MR. D'ANCONA: Objection to form.
THE WITNESS: Yes.
BY MR. WHITE:
Q So knowing what you know now, would you have paid $24 per share?
MR. D'ANCONA: Objection to form. Vague, calls for speculation.
THE WITNESS: I don't know.
BY MR. WHITE:
Q Why not?

MR. D'ANCONA: Objection to form.
THE WITNESS: I'd have to do an analysis of it.
BY MR. WHITE:
Q And what would that analysis entail?
MR. D'ANCONA: Objection to form.
THE WITNESS: Whether there are other opportunities for revenue out there.
BY MR. WHITE:
Q So I'm trying to understand, Mr. Askelson, what are you hoping to get out of this litigation?
MR. D'ANCONA: Objection to form.
THE WITNESS: Out of the litigation?
BY MR. WHITE:
Q Yes.
A As team -- as lead plaintiff?
Q Let's begin with Dennis Askelson. What is Dennis Askelson hoping to get out of this litigation?
MR. D'ANCONA: Objection to form. Assumes facts, vague.
THE WITNESS: I hope to recover my loss.
BY MR. WHITE:
Q I'm still unclear as to what that loss is, though.

A Opportune revenue.
Q Opportune revenue. And -- strike that.
Tell me in your own words what opportune revenue is.
MR. D'ANCONA: Objection to form. Asked and answered.
THE WITNESS: Revenue that I could have used to purchase other instruments, other financial instruments, to make money.
BY MR. WHITE:
Q And how would you calculate the loss of opportune revenue?
MR. D'ANCONA: Objection to form. Calls for a legal conclusion, expert testimony.
THE WITNESS: Value of the price per share.
BY MR. WHITE:
Q As of when?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: When I bought it and the timeframe that I would have proposed to sell it.
BY MR. WHITE:
Q When -- what is the timeframe in which you would have proposed to sell?
A I don't know.

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Q So you don't know how you could calculate any damages you've sustained in this case?
MR. D'ANCONA: Objection to form. Vague, mischaracterizes testimony.
THE WITNESS: I had lost a lot of money, so -- I got sucked in. I had to ride it out.
BY MR. WHITE:
Q But my question is, when would you calculate your loss?
MR. D'ANCONA: Objection to form. Vague.
THE WITNESS: When I would sell.
BY MR. WHITE:
Q When was that?
MR. D'ANCONA: Objection to form.
THE WITNESS: I would have had to consider the opportune revenue that presented itself and then make the sell and then use that capital.
BY MR. WHITE:
Q Are you aware of an investment of any kind that performed better than Barclays Series 5 ADS since April 2008?
MR. D'ANCONA: Objection to form.
THE WITNESS: I can't remember.
BY MR. WHITE:
Q So in your complaint, you ask for

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something called rescission. Do you know what "rescission" means?
MR. D'ANCONA: Objection to form.
THE WITNESS: Is that -- I would have to have it in full context, rescission. Can you use --
BY MR. WHITE:
Q Sure. Well, tell me what your understanding of the term "rescission" means generally.
MR. D'ANCONA: Objection to form to the extent it's calling for a legal conclusion.
THE WITNESS: Yeah. I don't know.
BY MR. WHITE:
Q Put to one side the legal conclusion. Just, what is your understanding of what "rescission" means in English?
A I don't remember.
Q Did you have an understanding at some point?
A I don't remember.
Q Do you want to take your transaction back?
MR. D'ANCONA: Objection to form. Vague.
BY MR. WHITE:
Q Let me put the question another way.
Would you undo your transaction given the

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opportunity?
MR. D'ANCONA: Objection to form. Vague, assumes facts, lacks foundation, calls for speculation.
THE WITNESS: No.
BY MR. WHITE:
Q Why not?
A Because my capital is okay now because the price per share came up.
Q Because you've received every dividend payment to which you were entitled when you purchased these, correct?
MR. D'ANCONA: Objection to form. Misstates his testimony.
THE WITNESS: Yes, and then the price per share came up.
BY MR. WHITE:
Q So you would agree with me then that you don't want to return the securities to Barclays and return every dividend that you received in connection with your April 2008 purchase, and in exchange, get your $60,000 back, correct?
MR. D'ANCONA: Objection to form.
MR. NIRMUL: Misstates the law.
THE WITNESS: Repeat the question.

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BY MR. WHITE:
Q Sure.
You testified that you wouldn't want to undo the transaction given the opportunity, correct?
A Right.
Q And I'm just trying to walk through what effectuating undoing it would look like.
So my question is, just to clarify, given the opportunity to return your securities to Barclays, return each and every dividend you received based on your April 2008 investment, and in exchange, receive your initial $60,000 back, you wouldn't want to undo the transaction in that way, correct?
MR. D'ANCONA: Objection to form. Assumes facts and calls for speculation.
THE WITNESS: I don't know.
BY MR. WHITE:
Q So you might be willing to return every dividend you received plus the securities that you own right now, the ones that you purchased in 2008?
A As of the 16th of September? Maybe.
Q You might be willing to do that?
MR. D'ANCONA: Objection to form.
THE WITNESS: I'd have to study it. I

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that in 2010?

MR. D'ANCONA: Objection to form. Asked and answered.

THE WITNESS: I can't remember.

BY MR. WHITE:

Q So you filled out a form, and your best testimony today is that you have no idea what happened to that form until January 28th, 2011?

MR. D'ANCONA: Objection to form. Mischaracterizes testimony, lacks foundation.

THE WITNESS: Yes.

BY MR. WHITE:

Q Did you want to ensure that there was an action of some kind against Barclays in June 2009?

MR. D'ANCONA: Objection to form. Vague.

THE WITNESS: No.

BY MR. WHITE:

Q So you weren't relying on others in the case to prosecute this action?

MR. D'ANCONA: Objection to form.

THE WITNESS: No.

MR. WHITE: I just got a note that we are running out -- we're running out of tape, so we'll take a break.

MR. D'ANCONA: Okay.

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MR. WHITE: We'll take five minutes.

THE VIDEO OPERATOR: We're going off the record at 2:12.

(Recess, 2:12 p.m. - 2:33 p.m.)

THE VIDEO OPERATOR: This is the beginning of Disk 3. We're back on the record at 2:33.

BY MR. WHITE:

Q Mr. Askelson, you understand you're still under oath, right?

A Yes.

Q We're done with the exhibit we were just discussing.

I'd like to return, though, to something we were talking about before the break, which is your understanding about how you've been injured by virtue of your investment in Barclays Series 5 ADS.

As we discussed, you agree that you've received every dividend to which you were entitled, correct?

MR. D'ANCONA: Objection to form.

THE WITNESS: Yes.

BY MR. WHITE:

Q And that the receipt of those dividends was your investment objective when you bought these securities in April 2008, correct?

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MR. D'ANCONA: Objection to form.

THE WITNESS: Yes.

BY MR. WHITE:

Q And you agree that the shares are currently worth more than the price at which you purchased them, correct?

A Yes.

Q But you claim your injury is the loss of an opportune revenue, correct?

A Right, during this specific time.

Q What specific time?

A When I bought the purchases, and then the future time would be when I would make the decision to sell, which I didn't make. But that would be the loss.

Q And during what period was there a loss?

MR. D'ANCONA: Objection to form.

THE WITNESS: I don't know exactly, but about April of 2009, Barclays it a low of $4.96.

BY MR. WHITE:

Q But if it recovered above that, you would agree that's not a loss, correct?

MR. D'ANCONA: Objection to form.

THE WITNESS: No.

MR. D'ANCONA: Calls for a legal

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conclusion.

THE WITNESS: No.

BY MR. WHITE:

Q No? Why not?

A I had a loss during that period of time that the stock price dumped.

Q Okay. So your injury consisted of -- well, strike that.

(Exhibit 14 and Exhibit 15 were marked for identification and are attached hereto.)

BY MR. WHITE:

Q So I've handed you -- the court reporter has marked documents as Exhibits 14 and 15, two charts.

Do you see these? Do you know what these charts are?

A They're a chart from Bloomberg.

MR. D'ANCONA: Don't guess.

Which one is 14 and which one is 15? I'm not clear. The one with the years at the bottom, is that 14 or 15?

THE WITNESS: This is 14, this one.

MR. D'ANCONA: Okay.

MR. NIRMUL: Which is which?

MR. D'ANCONA: This one is 14.

BY MR. WHITE:
Q I'll represent to you, Mr. Askelson, that this is a chart of the price of Barclays Series 5 ADS securities.
MR. D'ANCONA: Exhibit 14 is?
MR. WHITE: Both of these is my representation.
Q And with respect to Exhibit 14, you see that the time period is 2008 to 2015? Do you see that on Exhibit 14?
A Yes.
Q And on Exhibit 15, it's approximately April of 2008 to the end of 2008.
Do you see that?
MR. NIRMUL: What's the end date? Because that's --
MR. WHITE: December 2008.
MR. D'ANCONA: 2008.
THE WITNESS: 8 is missing.
MR. D'ANCONA: '08. It's through the end of '08.
THE WITNESS: Yeah, but on the chart --
BY MR. WHITE:
Q I understand. But my representation is that this was created using the end date of

March 2009, when you sustained your loss of opportunity revenue?
MR. D'ANCONA: Objection to form. Calls for a legal conclusion.
THE WITNESS: It would be hypothetical, but yes. If I decided to sell here, I would have incurred a loss, like I said, of approximately 80 percent.
BY MR. WHITE:
Q So your injury is hypothetical?
A Yeah.
MR. D'ANCONA: Objection to form.
BY MR. WHITE:
Q And did you want to get out of your investment in Series 5 ADS at that point in time?
MR. D'ANCONA: Objection to form.
THE WITNESS: An analysis of myself, I made a bad decision. If I looked at it on April of 2009, I mean, I must have been a dummy to buy into this.
BY MR. WHITE:
Q Right. But you bought in April of 2008.
A Right.
Q So my question is, in March of 2009, did you want to get out of the investment you had made

December 31st, 2008, and we're referring to Exhibit 15.
And you testified earlier that -- I believe your words were that the stock dumped at some point, correct?
A Yes.
Q Based on your review of these charts, can you tell me when you believe the stock dumped?
A The chart is not apparent. Here's the bar graph, but -- or the line draft, but I don't see the month there. Oh, wait a minute. Okay. 3-09-09. $4.95. I said $4.96.
Q I'm sorry. Your reference to 3-09-09 is on Exhibit 14, correct?
A Yes.
Q Can you circle for me on Exhibit 15 when you believe the stock dumped? I'm sorry. Exhibit 14.
MR. NIRMUL: Objection to form.
MR. D'ANCONA: If you can.
THE WITNESS: I can't -- I don't know. I don't know. It dumped right here, but there's no -- this graph is not very explicit.
BY MR. WHITE:
Q Okay. And so was this period of time,

in April of 2008?
MR. D'ANCONA: Objection to form. Assumes facts, calls for speculation.
THE WITNESS: I was really stuck. I couldn't get out. I had to ride it out.
BY MR. WHITE:
Q So you didn't want to get out?
MR. D'ANCONA: No. Objection to form. Mischaracterizes his testimony.
THE WITNESS: I would have loved to have gotten out, but I couldn't. I was stuck.
BY MR. WHITE:
Q Okay. When is the beginning of the period when you believe you sustained your hypothetical injury of an opportune cost and when is the end?
MR. D'ANCONA: Objection to form.
THE WITNESS: It would be hypothetical in that whenever I decided to -- if I saw another opportune -- revenue opportunity out there, I could have sold.
BY MR. WHITE:
Q Right.
A But I couldn't because the stock was $4.95.
Q Right. So when is the beginning and when

good job in presenting the case to the court, and are the -- are the -- is it timely, is there sufficient data in it to back up a -- the support.

But to understand it completely in details, no. That's the job of the class counsel.

BY MR. WHITE:

Q So you satisfied yourself that there was sufficient data to support the complaint?

A Yes. That's 100 pages here that counsel has -- class counsel has done a lot of work, and it's excellent work, and the document will stand.

Q But what exactly is the data that you consider sufficient?

MR. D'ANCONA: Objection to form.

THE WITNESS: I don't know.

BY MR. WHITE:

Q You said you wanted to satisfy yourself that the complaint was timely, correct?

A Did I say that?

Q Well, did you want to satisfy yourself that the complaint was timely?

MR. D'ANCONA: Objection to form.

THE WITNESS: As lead plaintiff, yes, I would be concerned if it was not timely. So, yes, I would be interested that it is timely.

BY MR. WHITE:

Q And what's your understanding of why this is timely?

MR. D'ANCONA: Objection to form to the extent it calls for a legal conclusion.

THE WITNESS: I don't really know.

BY MR. WHITE:

Q Okay. But you just testified that as lead plaintiff, you wanted to satisfy yourself that the complaint was timely.

A Yeah.

Q What did you do to satisfy yourself of that?

MR. D'ANCONA: Objection to form.

THE WITNESS: I don't know.

BY MR. WHITE:

Q Have you heard of the term "statute of limitations"?

A Yes.

Q And did you have a concern that this complaint was outside of the statute of limitations?

MR. D'ANCONA: Objection to form to the extent it calls for a legal conclusion.

THE WITNESS: It's well within the statute

of limitations.

BY MR. WHITE:

Q What is the statute of limitations?

A Three years.

Q But you didn't join the lawsuit until February 2008, correct?

MR. D'ANCONA: Objection.

MR. WHITE: Excuse me. Move to -- strike that.

Q February of 2011 was the first time you appeared in this lawsuit; is that correct?

A Yes, that's when I signed the...

Q And you were satisfied that it was timely because in your view, February of 2011 was before the three-year statute of limitations?

MR. D'ANCONA: Objection to the extent it calls for a legal conclusion.

THE WITNESS: It wasn't February, it was January.

BY MR. WHITE:

Q I believe you signed the form on January 28th, but as I think we just reviewed, you --

A February. This is February.

(Simultaneous colloquy - reporter interruption.)

BY MR. WHITE:

Q I believe you signed the form on January 28th, but the proposed complaint that we were reviewing is dated February 4th, 2011, correct?

A Correct.

Q And is it your testimony that you had satisfied yourself that the complaint was timely because it was within what you believed to be a three-year-statute-of-limitations period?

MR. D'ANCONA: Objection to the form to the extent it calls for a legal conclusion about the statute of limitations period.

THE WITNESS: I would have telephoned counsel or had conversation with counsel about --

MR. D'ANCONA: Please do not get into any -- it's okay to say whether you telephoned counsel, but you can't get into the content of discussion with counsel, okay?

THE WITNESS: Okay.

What's the question?

BY MR. WHITE:

Q So the question is just a simple one. You had testified that you wanted to ensure that the complaint was timely.

A Yes.

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Q And is it your testimony that you believed it was timely as of February 4th, 2011?
A Yes.
Q Do you stand by the allegations in the complaint?
MR. D'ANCONA: Objection to the form. Vague.
THE WITNESS: What is the allegation in the complaint? What are you --
BY MR. WHITE:
Q Well, you've made 100 pages' worth of allegations in the complaint, correct?
A Oh, yes. Allegations. This is correct. Is that what you're --
Q Do you stand by each and every one of them?
A Yes.
Q Even though you haven't read each and every allegation?
MR. D'ANCONA: Objection to form.
THE WITNESS: I've reviewed the document.
BY MR. WHITE:
Q You've reviewed the document, but you testified before that you hadn't read each and every allegation.

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A Right. I haven't read every word and every phrase.
Q So how can you stand by the allegations if you haven't read them?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Class counsel has approved this as a document to be filed, and I rely on class counsel to do their work.
BY MR. WHITE:
Q Okay. You can put that document to one side.
MR. D'ANCONA: Tom, I don't know if there's a good stopping point somewhere in the next stretch.
MR. WHITE: We can stop.
THE VIDEO OPERATOR: We're off the record at 3:35.
(Recess, 3:35 p.m. - 4:00 p.m.)
THE VIDEO OPERATOR: We are back on the record at 4:00 o'clock.
MR. WHITE: Thank you.
Q Mr. Askelson, you understand you're still under oath, correct?
A Yes.
Q Do you recall that in November 2007

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Barclays announced write-downs of any kind?
MR. D'ANCONA: Objection to form.
THE WITNESS: No, I don't recall.
BY MR. WHITE:
Q Specifically on November 15th, 2007, Barclays announced its exposure to various asset classes and took a write-down of $1.5 billion -- excuse me -- billion pounds?
A I'm not aware.
Q So you weren't aware of this write-down at the time that it was announced?
A No.
Q Were you following Barclays in November of 2007?
A No.
Q Were you aware of those write-downs as of the time of your April 2008 investment decision?
MR. D'ANCONA: Objection to form.
THE WITNESS: No.
BY MR. WHITE:
Q Do you recall that Barclays took over $3 billion in write-downs in February 2008?
MR. D'ANCONA: Objection to form.
THE WITNESS: No, I'm not aware.
///

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BY MR. WHITE:
Q What is your understanding of what a write-down is?
MR. D'ANCONA: Objection to form.
THE WITNESS: It's a decrease in the asset value of the company.
BY MR. WHITE:
Q Again, we're in February of 2008. Were you following Barclays at that time?
MR. D'ANCONA: Objection to form.
THE WITNESS: No.
BY MR. WHITE:
Q Were you aware of these February of 2008 write-downs at the time of your April 2008 investment decision?
A No.
Q Do you recall Barclays stating -- anyone from Barclays stating in 2008 that the threat of further write-downs would largely depend on economic and market conditions?
MR. D'ANCONA: Objection to form.
THE WITNESS: I'm not aware.
BY MR. WHITE:
Q Were you concerned in April 2008 that there might be additional write-downs of Barclays'

A It's a complete different timeframe.
Q But why would the timeframe be relevant to your decision as to whether or not you were going to sue based on a particular purchase?
MR. D'ANCONA: Objection to the form. Vague.
If you understand the question, you can answer.
THE WITNESS: Because Barclays corrected the situation and made adjustments, and I would buy them again. I would -- I have no hesitation on this or -- I think there's a subsequent purchase, too, that I made. Different timeframe.
BY MR. WHITE:
Q So you'd have no hesitation?
A Barclays appears to be -- I don't know what their rating is now, but I could find out. But, I mean, it's probably back up to double A.
Q When you say Barclays corrected the situation and made adjustments --
A It appears to me because the price came up. So the public has confidence again in Barclays.
Q So the sole basis for your belief that they corrected the situation is the fact that the --
A Price appreciation.

Q Just if I could finish -- that the price appreciated back up to 25, correct?
MR. D'ANCONA: Objection to the form to the extent it calls for a legal conclusion and expert testimony.
BY MR. WHITE:
Q I'm just trying to understand your testimony.
A Yeah.
Q So the sole basis for your belief that Barclays corrected the situation is the fact that its share price returned back to a level that you thought was appropriate; is that right?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Yes.
BY MR. WHITE:
Q And that level is 25?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Par value is 25.
BY MR. WHITE:
Q Right. Is that the level you think is appropriate for these shares?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Yes.
///

BY MR. WHITE:
Q And if Barclays shares were to drop to $5 per share again, would you consider bringing a lawsuit against Barclays at that time?
MR. D'ANCONA: Objection to the form. Calls for speculation. Objection to the hypothetical.
THE WITNESS: I don't know.
BY MR. WHITE:
Q Why would you sue on one and not the other?
MR. D'ANCONA: Objection to form. Calls for speculation.
THE WITNESS: I'd have to do an analysis of my situation and then make a decision.
BY MR. WHITE:
Q Right, but you're the lead plaintiff.
A I don't know right now.
Q Right. You're the lead plaintiff and you've done an analysis and you've decided to sue on one set of shares but not on another.
MR. D'ANCONA: Is that a question?
BY MR. WHITE:
Q Correct?
MR. D'ANCONA: Objection to the form.

THE WITNESS: This is personal. This is not -- I consider this personal, not part of the lawsuit.
BY MR. WHITE:
Q So the subsequent investment is a personal investment?
A Yes.
Q And the earlier investment is not a personal investment?
A No, it's --
MR. D'ANCONA: Objection to form.
BY MR. WHITE:
Q Correct?
A No, it's personal.
Q The earlier investment was personal, too?
A Yeah.
Q You testified that you recall making an additional purchase?
A Yes.
(Exhibit 22 was marked for identification and is attached hereto.)
BY MR. WHITE:
Q Mr. Askelson, you've been handed a document that's marked Defendants' Exhibit 22. It's a document bearing Bates number BARC-DA-0000023

through 24.
Do you recognize this document?
A Yes.
MR. D'ANCONA: Look it over.
MR. WHITE: It's two pages.
Q Do you recognize this document?
A Yes.
Q What is it?
A It's a trade confirmation.
Q And you see that you've purchased approximately $19,814 worth of Barclays ADS on September 19th, 2012, correct?
A Yes.
Q Why did you make this additional investment?
A Again, mainly for the 8.125 percent yield.
Q Any additional investment objectives?
MR. D'ANCONA: Objection to form.
THE WITNESS: No.
BY MR. WHITE:
Q Are you happy with the performance of the investment?
MR. D'ANCONA: Objection to form.
THE WITNESS: Yes.
///

BY MR. WHITE:
Q What cash -- withdrawn.
Did you use the dividends that you'd received from your initial purchase in April 2008 to purchase these additional shares of Barclays ADS?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Say it again.
BY MR. WHITE:
Q Sure.
The -- you testified earlier that you recall receiving approximately 30- or $40,000 in dividends from your initial --
A Yes.
Q -- Barclays purchase, correct?
A Yes.
Q Did you use that money to make these additional purchases?
A Oh, I don't know.
Q Was that money kept in a separate account?
A No.
Q It was commingled with other money that --
A Right.
Q -- you had?
Is this a significant amount of your savings?

A No.
Q And here you were willing to pay $25.94 per share, correct?
A Yeah.
MR. D'ANCONA: Objection to form.
THE WITNESS: Yes.
BY MR. WHITE:
Q And yet Barclays could force you to sell these for $25, correct?
A Correct.
Q And you would sustain a loss in those circumstances, correct?
MR. D'ANCONA: Objection to form to the extent it calls for a legal conclusion or economic (sic) opinion.
THE WITNESS: It would be a minor loss.
BY MR. WHITE:
Q But you were willing to take a minor loss --
A Yes.
Q -- because you wanted the 8.125 percent dividend?
A Yes.
MR. D'ANCONA: Let him ask his question before you start answering, okay?

THE WITNESS: Okay.
MR. D'ANCONA: He's got to finish his question or else it's an impossible record.
THE WITNESS: Good point.
BY MR. WHITE:
Q It's late, and thank you for your testimony today, Mr. Askelson. We're getting to the home stretch.
So the question was, you were willing to take a loss, potential loss, because you wanted the 8.125 percent coupon, correct?
MR. D'ANCONA: Objection to the form.
THE WITNESS: Yes.
BY MR. WHITE:
Q Do you recall receiving a return better than 8.125 percent on any investment you've made since April 2008?
MR. D'ANCONA: Objection to the form.
THE WITNESS: No.
BY MR. WHITE:
Q So to the best of your recollection, this is the best investment you've made since April 2008?
MR. D'ANCONA: Objection to the form. Mischaracterizes the testimony.
THE WITNESS: Yes.

EXHIBIT 38

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

Master File No.:
1:09-cv-01989-PAC

IN RE BARCLAYS BANK PLC:
SECURITIES LITIGATION

This Document Relates to:

ALL ACTIONS.

Deposition of Sir Richard Broadbent
London, England
Friday, October 30, 2015

** CONFIDENTIAL UNDER PROTECTIVE ORDER **

Court Reporter:
Rhiannon Mason-Edwards (Veritext Legal Solutions)
Accredited Realtime Reporter

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
1801 Market Street – Suite 1800
Philadelphia, PA 19103

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BY MR. NIRMUL:
Q. "The purpose is to update you on current exposures and market outlook for the ABS and Leveraged Credit markets."
The next bullet point says:
"The market situation has arisen from delinquency in recent vintages of US sub-prime residential mortgages increasing significantly beyond the range of initial market expectations. This has had the following impact".
You see there's three bullet points?
A. Yes.
Q. The first deals with market valuations dropping with respect to asset-backed securities. And the next two bullet points, the first says:
"Growing investor distrust of the public Rating Agency process, which has not differentiated well across risk structures, and has been unresponsive to changes in the asset class and the environment."
Do you see that?
A. I do.
Q. Do you have an understanding of -- of what that bullet point refers to?
MR. TOMAINO: Objection to form.
THE WITNESS: I don't -- I don't recall this, and I'd have to kind of construct it now looking at it. But

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I mean, the agencies, I believe, were the -- the entities which gave credit ratings, essentially, to certain tranches of securities, and what this appears to be referring to is that the ratings were coming -- were becoming less -- less trusted.
BY MR. NIRMUL:
Q. Do you recall there being a sense in the -- in the market that the rating agencies in this timeframe were slow to react to deteriorating credit, to deteriorating credit of -- of assets that they were -- that they were rating?
MR. TOMAINO: Objection.
THE WITNESS: I -- I don't have that recollection.
BY MR. NIRMUL:
Q. Do you see the next bullet point says:
"Subsequent concern about unrealised or unreported losses across the industry, including banks and investment funds."
Do you know what that refers to?
A. Well, again, I -- I don't have a recollection of this -- of this paper. But constructing it now, it appears to be concern in the market that we -- there were losses which were potentially going to be incurred across multiple financial services entities.
Q. Do you recall there being market uncertainty

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that was driving down the stock price of -- of banks such as Barclays?
MR. TOMAINO: Objection to the form of the question.
BY MR. NIRMUL:
Q. In this timeframe?
A. Not in this particular timeframe. Not in -- whatever the date of this paper is. I don't -- I simply don't recall the stock price movements in September 2007.
(Exhibit 394 marked for identification.)
MR. TOMAINO: I'm just going to step out very briefly while the witness is reviewing this.
MR. NIRMUL: Sure.
MR. TOMAINO: I'll be back, I'm sure, before he's finished reading.
MR. NIRMUL: Okay.
BY MR. NIRMUL:
Q. So have you had an opportunity to review the document?
A. I have read the document, yes, thank you.
Q. So is what I've marked as plaintiffs' 394 a copy of the minutes of a board risk committee dated 19 September 2007?
A. Yes.
Q. And were you -- did you attend that meeting?

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A. I did.
Q. And that's reflected on the first page of the document?
A. That's reflected on the first page of the document.
Q. And did Mr. Cronjé and Mr. Likierman, also reflected on the first page of the document, were they the other two board members of the board risk committee at that time?
A. They were both members of the risk committee, yes.
Q. And Mr. Russell is reflected as being in attendance at that -- that meeting. What was his role?
A. He was also, I believe I recall, a member of the risk committee.
MR. TOMAINO: Just to note, the document says it was via video conference. You said "in attendance". There's actually a list on the document of those in attendance and a list of those present. Mr. Russell is under the list of those present and there's an asterisk that says "via video conference". Just to clarify the record.
MR. NIRMUL: Thank you.
BY MR. NIRMUL:
Q. I'm sorry, so you were saying that you believed he was a member of the risk committee?

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A. Yeah, that was my recollection.
Q. And I'm not sure if that's -- if that's accurate or not, but --
A. I believe it is. That's just my recollection.
MR. TOMAINO: What Mr. Nirmul believes about the accuracy of anything is not your concern. Your job here is to answer questions.
BY MR. NIRMUL:
Q. So you see that Mr. Russell, it says that he's participating via video conference for items 1 to 2.1(1) only?
A. Yeah.
Q. And those items are -- if you look at page 2 of 9, it starts with the "CHAIRMAN'S MATTERS", which is number 1, and 2.1(1) runs through the discussion of the "KEY RISK ISSUES"?
A. Yes.
Q. Was there a particular reason that Mr. Russell would have attended or at least sat in on just those portions of the presentation to the committee?
MR. TOMAINO: Objection to form.
THE WITNESS: If, as I believe was the case, he was a member of the committee, he would normally have attended the whole meeting. I think obviously some other

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business took him away, rather than -- it was more a question of what took him away, rather than why was he there, I think.
BY MR. NIRMUL:
Q. Okay. With respect to the members of management that are in attendance, was Mr. Lucas a regular attendee at the risk committee meetings?
A. Yes, while he was finance director, he would attend regularly.
Q. Okay. And Mr. Le Blanc, as risk director, was he always in attendance?
A. He would always attend -- well, he was certainly a regular attender.
Q. Was there always someone from Pricewaterhouse in attendance?
A. I wouldn't -- I couldn't recall and say "always". But I was very happy to encourage Pricewaterhouse to attend because I felt it was helpful to their independent oversight of -- of the bank that they should hear our discussions.
Q. Did you independently have any discussions with Pricewaterhouse in connection with your work on the risk committee, separate and apart from -- you know, from management?
A. I mean, I don't recall a specific discussion.

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And I'm sure I spoke to the Pricewaterhouse partner from time to time about a range of matters.
Q. Is that Mr. -- Mr. Rivett?
A. It was Mr. Rivett at this time, yes.
Q. Are there any other Pricewaterhouse partners that you can recall attending risk committee meetings?
A. No.
Q. Any other members of management that regularly attended risk committee meetings?
MR. TOMAINO: In '07?
BY MR. NIRMUL:
Q. In '07 and -- and '08?
A. And "regularly" being...?
Q. Well, let's say every meeting.
A. I don't recall whether there was anyone who attended every meeting. Probably the most frequent attender at this time would have been Rich Ricci.
THE COURT REPORTER: "Rich Ricci"?
THE WITNESS: Rich Ricci, yes.
BY MR. NIRMUL:
Q. So turning to page 2, under the "KEY RISK ISSUES", do you recall the -- the discussion of the market conditions that are reflected on 2.1(1) of -- of these minutes?
A. I don't recall this particular discussion.

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I mean, we had, clearly, multiple discussions over a prolonged period of time, and I -- I just don't recall a particular discussion.
Q. These minutes would have been prepared by the secretary; is that right?
A. By the secretary or one of his team, yes.
Q. And that would be Mr. Dickinson?
A. Mr. Dickinson. Andrew Smith I think was one of his team. So...
Q. And then the minutes would be provided to the board for -- to the committee for approval?
A. Correct.
Q. Okay. And was the secretary charged with providing an accurate summary of the discussion that was held at the committee meeting?
A. Correct.
Q. If you go to page 4, there's a -- a record of the discussion of what's called "principal areas of exposure".
MR. TOMAINO: Where are you looking at? I'm sorry.
MR. NIRMUL: I'm looking at the top of page 4 of 9.
THE WITNESS: Oh, yes. I've got it, yes.
BY MR. NIRMUL:

EXHIBIT 39

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC: Master File
SECURITIES LITIGATION 1:09-cv-01989-PAC

This Document Relates to:

ALL ACTIONS.

CONFIDENTIAL

VIDEOTAPED DEPOSITION OF PATRICK CLACKSON

Thursday, December 10, 2015
At: 8:27 am

Taken at:
Sullivan & Cromwell LLP
1 New Fetter Lane
London EC4A 1AM
United Kingdom

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1801 Market Street – Suite 1800
Philadelphia, PA 19103

the CFO of -- I can't remember if it was Barclays Capital then or not at the end, but either Barclays Capital or the investment bank, the corporate bank and the wealth business of Barclays.
Q Okay.
How long did you occupy that position?
A Erm, I was CFO of the investment bank for about ten years. During that period, I also took on the responsibility for the corporate bank and the wealth business.
Q Okay.
By "wealth business" are you referring to the entity called BGI?
A No. That's the asset management.
Q Okay.
What's the name of the wealth management business?
A Barclays doesn't generally run in entities. It generally runs in operating divisions.
Q Okay.
A And so Barclays Wealth is an operating division of Barclays, including elements of Barclays Bank PLC and other subsidiaries.
Q Okay.
(Court Reporter requested one speaker at a time)

Okay. So I believe you testified that you served as a CFO of the investment bank for a period of ten years; is that right?
A Approximately ten years.
Q Approximately. So from approximately 2000 to 2010 you were the CFO of the investment bank?
A Yeah, I can't remember the exact dates, but generally that sort of period.
Q Okay.
When did you join Barclays?
A I joined Barclays in 1998.
Q Okay.
What was your position at the time you joined?
A I was the controller of the investment bank when I joined Barclays.
Q Okay.
A Which was then called Barclays Capital.
Q Are you a CPA?
A No, I'm not a CPA.
Q What is your educational background?
A My professional qualifications, if that's the question you're asking?
Q Sure?
A I'm a chartered accountant of England and

Wales.
Q Okay.
Do you have any other -- do you have any professional licenses?
A I don't know quite what that term means in a UK context, but being a chartered accountant means that I'm a -- you know, I have an accounting training, and I think the system is different from the system in New York.
Q I see.
What is it -- what are the requirements to be a chartered accountant here in the UK?
A To become a chartered accountant, you have to go through a series of exams; do a three -- and have a three-year training contract.
Q Mmm hmm?
A And you then have an ongoing requirement to keep your professional education to a certain level, which varies depending on what job you do.
Q Okay.
A And so I'm still -- yeah, so I'm still a current member. So I'm -- I can still use the initials ACA, which is Association of Chartered Accountants.
Q I see.
So in your current position you still

maintain your standing as a chartered accountant?
Is that a fair characterization?
A Erm, I'm still a chartered accountant.
Q Okay. Understood.
So we're going to focus for much of today's --
MR TOMAINO: I'm sorry to interrupt you.
MR NIRMUL: Yes?
MR TOMAINO: It might be useful for the record, since you've started to ask him questions about his qualifications as a chartered accountant, to review his prior to Barclays employment background. I think that would complete the record.
I can do it on my own questioning if you like, but it seems, as a matter of proper order, to be addressed now.
MR NIRMUL: I don't necessarily think it's relevant.
Q But if you'd like briefly, tell us what your prior experience was before joining Barclays?
A I joined Coopers & Lybrand in 1986 as a trainee chartered accountant.
Q Mmm hmm.
A Coopers & Lybrand are now part of PricewaterhouseCoopers and I worked there for ten

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years.

I trained originally in the audit practice and spent five years in the audit practice, mainly auditing investment banks and other financial services firms.

Q Mmm hmm.

A And then spent five years mainly doing consulting work for Coopers & Lybrand, again generally for investment banks.

Q Okay.

A And after that I spent a couple of years working for Sumitomo, being the Finance Director of their investment bank, which was at that time based in London, with branches in Asia and New York.

Q Okay.

How did it come to be that you joined Barclays in 1998?

A I had various contacts and connections and people I knew from my consulting career at Coopers & Lybrand who had gone to Barclays.

Q Okay.

When you were at Coopers & Lybrand, did you provide consulting work to Barclays?

A Very briefly, in the mid-90s, I probably spent less than a week as part of a bigger engagement, but

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generally they weren't one of my clients.

Q Okay.

I think you said you joined in 1998 as a controller and you became CFO in around 2000.

Is that about right?

A Yeah, 2000, 2001. I can't remember what the dates were.

Q And who did you succeed as CFO?

A The CFO before me, who I originally -- actually, sorry, the CFO before me? There were about four or five during my first couple of years.

I don't remember which one I succeeded, because they came and went. It would either be Gerard LaRocca or John Devine.

Q Okay.

So much of today's focus is going to be on the period calendar year 2007 and calendar year 2008, and so -- and to the extent I want to, you know, ask you questions about other periods of time, I'll qualify that.

But with respect to that period of time, and let's just start with 2007, can you tell me generally what your responsibilities were -- was as CFO of the investment bank?

A As a CFO of the investment bank, I was

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responsible for running the finance function of the investment bank in all different locations around the world.

The finance function included the controllers, the financial controllers; it included an area called product control, which was responsible for doing -- preparing the daily P&L and doing the valuation testing on the trading books.

And I suppose, looking upwards, my responsibilities were to ensure we had complete accurate results of the investment bank reflected in our management accounts, our reports to the Board and our external filings; and providing forecasts and budgets both to an investment banking management and to Barclays group.

Q Okay. Thank you for that description.

And those general -- that overview of responsibilities, did that also apply to 2008?

A Yes, it was generally the same responsibilities.

So -- and, as a CFO of an investment bank, clearly you have a broad remit, not a narrowly defined role.

Q Correct.

So let's just kind of -- I think you

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identified four general areas.

Let's start with, you said running the finance function of the investment bank.

Can you tell me a little bit more about what that entails?

A Again, it's a long time ago, 2007, 2008, so any numbers I quote will be approximate.

Q Mmm hmm.

A But I think the staff in the finance function was somewhere between 2,500 and 4,000 people.

Q Okay.

A So it's actually running quite a large organization and that obviously entails hiring the right people, putting the right logistics so you retain the people in that function, et cetera, and making sure you have the right people in the right roles; and making sure also that that group of people is integrated with the Barclays group finance function, which was somewhat larger.

Q Did the finance function include preparing budgets and forecasts for the investment bank?

A Yes.

Q Okay.

Who were your principal reports with respect to the finance function?

MR TOMAINO: Meaning who reported to him?
BY MR NIRMUL:
Q In other words, people who reported to you?
A I can give you some names of my reports. They did change over time, so over the period 7 and 8 they will have changed.
I can't remember without going back to look at records precisely who changed when.
Q Mmm.
A But the principal ones I can remember at that time were James Walker, who was the CFO of the Americas and the investment bank in the Americas.
Paul Copson, who ran the product control function.
I'm trying to remember who was the financial controller at that time, because there were some changes in the people ...
There were two or three different financial controllers during that period. One of them was Guy Seddon, but I'm not sure if I can remember precisely who it was at that point in time.
Q Okay.
A And then I had a CFO in Asia reporting to me as well.
Again, I'm not sure if I can quite remember

who it was at that point in time.
Q Was it Peter McNulty, possibly?
A Yes, it could have been Peter McNulty.
Q What were Mr Walker's principal responsibilities as CFO of Americas?
A So James Walker was CFO of Americas. So in the same way as I've described my roles as CFO for the investment bank, he had exactly the same responsibilities, but over the American business.
And, again, in the same way as my role, his role would not have been narrowly defined. Being the CFO, he would have had to do whatever else needed doing.
Q Mmm hmm.
In terms of the operations in the Americas, did -- which of Barclays operations was he overseeing?
A He was overseeing all of the investment banking operations in Americas. So Barclays also had cards, business in America, and at that time it did have BGI Barclays Global Investment investors in California, which he didn't oversees. So an investment bank in Americas.
Q Okay.
With respect to the mortgage securitization business for US residential mortgage backed securities,

was that a group that was under Mr Walker's responsibility?
A So James was, as I said, the CFO in Americas --
Q Mmm hmm.
A -- covered all the investment banking business in America. The mortgage business was one of the businesses in America.
As a CFO, you're not responsible for business. The people running the business are different.
Q Yes.
A But he would have been responsible for the controllers around that business, who are making sure valuation, pricing, financial records were correct.
Q Okay.
You mentioned product control, and that was overseen by Mr Copson; is that right?
A Yes, Paul ran global product control.
Q Okay.
What was the function of global product control?
A I think I explained earlier.
Q Mmm hmm?
A But, just to repeat, they were responsible for producing daily trading income numbers, and they were

also responsible for price testing valuations, which was in most cases done on a monthly basis.
They were also responsible for checking that all the trades which were done were booked correctly, recorded correctly, and they liaised with the technical accounting group, which was part of the financial control, to ensure that we were following all the appropriate accounting policies, in line with the international accounting standards, but also in some cases they would also look at US GAAP as well.
Q Okay.
A I say "in some cases" because in some cases we had sort of technical people who would -- from the technical accounting group, who would take the international GAAP stuff and do the US GAAP adjustments.
Q Okay.
Now, with respect to product control, how were the -- how did product control address the -- I guess the requirements of each of the various business lines within the investment bank?
So, for example, there are different -- there are traders assigned to different asset classes, for example. Were there product controllers who were specialized in particular asset classes?

line, please do so, but, you know, generally speaking, how did product control produce the daily P&L within the investment bank?

A It's -- product control, I think, had about a thousand people in product control.

Q Okay.

A And supporting a large number of different trading desks.

And so the response to your question is in many different ways.

In some trading desks everything flowed down in a very automated way, and so the systems produced a P&L, and they might produce a P&L which would be produced by the traders, so the front office, and then produce an independent P&L, and the Product Controllers would then reconcile and compare the two and work out what any differences were.

At the other extreme, things wouldn't flow in an automated way through the systems, and had to be done manually, and you might get a manual calculation from a trading desk of what they estimated their P&L to be.

Q Mmm hmm.

A And the product controllers would do another manual calculation to try and reconcile to that manual

calculation -- and everything in between those two.

But generally the daily P&L we produced was the responsibility of the trading desks and the trading heads of the trading desks. So it was the trading desk responsibility to do that.

Q Mmm hmm.

A Product control checked and validated what they could to make sure any errors and things were picked up and then they published the -- but they published the trading desk view out to management, and in some cases that was one day after the trading had been done, and in some cases it could be two days, just depending on the timing.

I can't remember exactly where it was in 2007.

Q Okay.

A So it would be a trading desk view, but it would have some checks to make sure that it reconciled with the positions and things we had on the system.

Q Okay.

So on a daily basis product control didn't validate the valuations that traders assigned to their positions; is that right?

MR TOMAINO: Objection to the form of the question.

THE WITNESS: The -- just to reiterate, we had a thousand people in product control --

BY MR NIRMUL:

Q Yes.

A -- and many different processes.

So in some areas there were some validation done [sic] of the trading valuations on a daily basis. In other areas there was less done. It really depended on the availability of data and information and sophistication of systems.

Q Did product control have authority to accept or reject any valuations that traders assigned to their positions on a daily basis?

MR TOMAINO: Objection to form.

THE WITNESS: I think, just to go back, the traders produced the daily estimate, and the trading desk heads were responsible, and we tried to be very clear that these were the trading estimates.

The reason for them being the trading estimates is the traders were the people who understood the markets and were operating in the markets and had the best knowledge of where the markets were, so they were their estimates.

The job of the Product Controller was to make sure they had the right data going into them, so all

the trades transactions had gone into them, and there weren't anything missing.

Now, if there was obvious errors, it was their responsibility to pick that up.

BY MR NIRMUL:

Q Okay.

A In terms of on that daily basis because they didn't, well, as I said, in some places they did have some independent information, and in other places they didn't -- they wouldn't necessarily be in a good position to check those valuations.

And the process of checking those valuations would in some cases be quite complicated and take weeks, rather than hours and days.

Q Mmm.

A Which is why quite a lot of the testing or most of the testing was done on a monthly basis.

Q So let's talk about the monthly price testing process.

In general terms, can you explain how that process was carried out?

MR TOMAINO: Objection to form.

That's an incredibly broad question. He could probably talk about the answer to that question for at least seven hours.

So you note my objection and you can focus your question a little more.

MR NIRMUL: Objection noted.

Q You can answer in general terms, if you can.

MR TOMAINO: Do you have the question in mind?

THE WITNESS: Yes. Could you repeat the question, please?

MR NIRMUL: Do you mind repeating that question for me?

MR TOMAINO: In general terms can you explain how that process was carried out?

That was the question.

THE WITNESS: Okay. Well, I'll try not to explain in general terms, but I'll try and explain some of the different elements of how the process was carried out.

BY MR NIRMUL:

Q Sure. Thank you.

A So where you had liquid -- where you had positions in liquid markets, and where there were independent prices available in those markets from independent sources, the valuation price testing was done by comparison of the marks which the traders provided for positions with the third party prices.

And in those instances, generally, we had a process which the experts within product control and product control management would have agreed were the appropriate prices, so we would consistently use the same independent price sources to compare.

Q Mmm hmm.

A In a lot of illiquid markets we would use more than one independent price source.

So we were comparing independent marks with the marks provided by the desk.

In terms of were there any changes we wanted to make to the firm marks in that position, we also had different criteria in different places, but we wouldn't -- if there were very small differences and overall the desk was very close to the mark, we wouldn't change.

If there were larger differences, they would get escalated to a certain level where we would try and investigate to find if there was some logic.

Q Mmm hmm.

A And so the level of escalation would rise with the differences, but generally we would adjust for the larger differences.

So that's the liquid end of price testing.

Rather than explaining everything, which

would take a long time --

Q Yes.

A -- to go to the other extreme, where they're very illiquid markets and the traders are pricing positions, you would go through a series of steps.

The first step would be to find were there any market prices available, independent prices available.

In some cases, because other investment banks weren't able to find other liquid prices for markets, there were services set up where you would at the end of the month take all of your prices in these illiquid markets, you would send them to a central service, other investment banks would do the same, send those prices in.

The service would take all the prices for similar instruments, it would compare them and it would pass you back a result of how you compared with that -- what the mean of what the other dealers had, where your positions were.

So you would have -- and it would be anonymized, so you wouldn't know who had pricings where.

Q Mmm hmm.

A But you would be able to see if you were in

line with the other dealers, or where you were out with the other dealers. So it was another way of trying to get some independent price information.

Some of the -- and I can't remember in 2007 and 2008 precisely how advanced those services were, or where we had those services.

Q Do you remember any names of those services?

A So, Totem, for example, was one of those services.

Q Okay. Okay.

A So where you couldn't find liquid readily available prices, where you -- and where you couldn't -- you didn't have this Totem service, the other thing you did is you looked at prices of transactions which had happened around the period end, and actually you would do that in combination with the other things, because a price on a screen tells you one thing. Where someone has actually transacted gives you better information about where the market really is.

Q Mmm hmm.

A And obviously the size of your position would also influence.

So the market price may be on a screen, but if it's only for a very small size and you have a big size, is that the appropriate price for a large size?

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Q Mmm hmm.
A So you would look at trades for transactions done around the period end, either before or after the period end, to give some indication of what the price may be.
If there weren't any trades done around the period end and there weren't independent available prices and you didn't have a service like Totem, you would then move to basically a model-based validation to have an independent model from the model which the desk used to try and validate what the prices should be, and so you would establish your own model.
I mean, your own model may be the same model the desk would use. This was often done with risk management as well, because risk management would often have the skills around however various markets traded, valued, how do some of the models work, and risk management would generally validate the models which were used.
Then the Product Controllers would put into the models independent inputs into the models.
Now, again, some of those inputs could be -- you go through the same process.
Q Mmm hmm.
A Some of those inputs could be readily available

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liquid things. Some of them you may be able to get from price services, like Totem.
Q Mmm hmm.
A Some of the inputs you may be able to get from trades around the period end.
But some of the inputs, again, you may not know, and so you would have to try and estimate what was the best way of independently getting this input.
Having created that independent model, you would then compare that model with the output from the front office and the traders model to see how did it compare and where the differences were.
Generally, in that case, the -- you didn't know if -- you know, you had two models, a model produced by the controllers using risk management, a model produced by the front office, and they both made various assumptions, and then product control would try and understand where there were big differences, and go through the same escalation process where there were differences I described earlier.
And then between those liquid valuations and those very illiquid --
Q Mmm hmm?
A -- you would have other processes, but effectively going through similar steps.

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I suppose the other thing which I should mention is at the same time in doing that, the key thing about valuation is making sure you had all of your positions.
So you can value positions, but you've also got to make sure you've got a complete and accurate list of positions before you do that.
And there was also quite a lot of work around month end just reconciling front and back office systems, pending trades, and making sure you were valuing the correct positions as well.
Q Okay.
A Clearly, there's been a lot of publicized stuff in the markets around people valuing positions which didn't exist.
So -- you know, rogue traders, and things like that --
Q Mmm hmm?
A -- which I'm sure you will have read about in the press.
And so quite a serious part of the valuation process, and quite a lengthy process, was making sure you independently validated that all the positions you were valuing were positions you actually owned.
Q Okay. Thank you for that overview. That was

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very helpful.
Let's talk about -- so let's go back to the liquid markets, and I think you said that one of the functions of product control was to look at the differences between the valuations being maintained by the traders and then the valuations that they observed through their analysis.
How were those -- to go into it more specifically, how were the differing valuations reconciled between traders and product control?
MR TOMAINO: Objection to form.
Misstates the testimony.
THE WITNESS: Yes. So, sorry, I was just going to go back.
So I talked of the month end --
BY MR NIRMUL:
Q Month end.
A -- valuation process.
Is that what you're referring to?
Q That's right. The month end, yes.
A And I think I explained how that month end process went; that there was a comparison of the two.
Q That's right.
A And then there was the process of escalating, depending on the difference between those.

Q And what do you mean by a process of escalating?
What does that entail?
A So I think I said it would generally go to, like, the manager of that product control area.
It would often include the Risk Manager for that area, who would have a good view of where the market was, what anomalies there might be, what the data the desk were looking at, and the data the product control was looking at, so we'd have an understanding.
Q Yes.
A And there could be legitimate differences, as I said.
A simple example of one would be the size of the position, for example.
Q Mmm hmm.
A And the answer was to -- or the aim was to try and get the best valuation to reflect the position of the company at that time and, as you went through that process to try and get to that point, as I said earlier, the starting point was that the traders' valuation, because they were the people in the market and who spent their time buying and selling, should be the best position, but there were these checks to validate that there weren't any sort of obvious errors

or biases in that.
But going through that process, and to get the right independent people from -- so risk, as well as the product controls, were all independent of all of the front office --
Q Mmm.
A -- was an attempt to come out with what the most appropriate answer to put into the company's books and records were.
Q Was there a threshold in terms of a variance between the traders and the PSG [sic] --
(Court Reporter requested repetition)
Was there a threshold of variance between the valuations that PCG derived and what the traders reflected at which the variance would be escalated to management or senior management?
A There were various variances at different times, and I can't remember what the position was then.
Q With respect to the valuation protocols for -- in liquid markets, did the finance department have written methodologies that described the process by which PCG would test the valuations?
A Again, there are lots of protocols at different times. I can't remember what the position was at that point.

I know Paul Copson, who ran PCG, spent a lot of time putting those protocols in. I can't remember at the period in question precisely what state those were at.
Q Okay.
Were variances between PCG and the traders escalated to your level?
A I think what I said earlier, depending on the size and scale things were escalated.
So larger variances and disputes would have been escalated to me.
Q And what was the procedure for -- let me withdraw that.
Were there meetings that occurred at month end whereby traders and PCG would try to resolve their differences with respect to their valuations?
A I generally didn't attend them. I understand there were some.
Q Mmm.
A But, again, I think a thousand people, and many different desks. There were many different ways the system operated.
Q Okay.
Let's talk about the illiquid markets, and so the development of models to price illiquid

instruments.
You mentioned that the traders might have -- would have -- you know, in the case of illiquid markets, the traders might have a model and PCG might have a model.
Would those models have been developed independently?
A Yes, I think I said that generally they would be developed independently.
It may be that risk, because, as I said, risk had often the skills to understand the right models.
Q Mmm hmm.
A And it may be that risk were -- and risk would also check all the front office models. So all the front office models defined by the front office were also checked by the risks department.
Q Mmm hmm.
A It may be that risk would say we should use the same model. So they could be consistent; they could be different.
Q Okay.
Let's turn to the division that you referred to. I think it was ... was there a function called financial planning and analysis within the finance group?

THE WITNESS: PwC had no role in our preparing our financial statements.

BY MR NIRMUL:

Q Mmm hmm.

A They had a role in auditing our financial statements.

Q Okay, and when did --

A And, sorry, by "our" financial statements, Barclays' financial statements.

Q Okay.

With respect to Barclays Capital, did PwC play any role in the valuation decisions with respect to any of the assets owned by Barclays Capital?

MR TOMAINO: Objection. Form.

THE WITNESS: No, Barclays Capital went through a process, which I've described, around valuing assets --

BY MR NIRMUL:

Q Mmm.

A -- which then went through to the audit committee where it was finally agreed.

PwC had no role in the valuing of assets, in the same way that our internal audit department didn't have any role in valuing assets.

Q Mmm.

A But if PwC had any issues or concerns with the valuation processes we were following, or the accounting treatment we were adopting, they would raise that with us.

And in this case it looks like Gary, who runs technical accounting, actually working for Hugh Shields within the investment bank, as they were formulating this policy would have wanted to check that technically PwC didn't have any issues with it before we adopted it.

Q Okay.

So, in the context of this email, is BarCap preparing a methodology for valuing structured credit assets, and then seeking approval from PwC for that particular methodology?

A We weren't seeking approval, because within our own processes within Barclays we would have to approve and agree, but we were just making sure that our auditors wouldn't have any issue with the process we were looking to follow.

Q Okay.

(Court Reporter requested one speaker at a time)

Okay. You could set that aside.

(Exhibit 506 marked for identification)

What I've marked as Plaintiff's 506 an email

from Stephen King to Patrick Clackson, dated January 25, 2008. The subject is S&P Assumptions Change Should Spur More EODs, and it's Bates labeled BARC-ADS-0276209 through 210.

You may review it.

(Pause).

(Briefly off the record)

Sir, so in this email exchange Mr King forwards to you an article relating to Standard & Poor's assumptions about the performance of certain CDOs.

Is that a fair characterization of the email chain?

MR TOMAINO: Objection. Form.

THE WITNESS: He's forwarded something I think from Total Securitization, which I presume is some sort of trade body in some way, which talks about S&P assumptions.

It does sound like S&P themselves don't seem to have made any comment -- is my -- I'm a little bit confused by exactly what's here, but it looks like something from a trade body.

BY MR NIRMUL:

Q Okay.

Are you familiar with that trade association?

A No, I'm not.

Q Okay.

And do you know who Diana Henderson is? That's from whom this chain originates.

A No, I don't.

Q And CDO Agency, New York? Do you know what lists that relates to?

A I think that's probably Stephen King's trading desk.

Q Okay.

He writes to you:

"Presume you saw this".

Why would he presume that you saw this article?

MR TOMAINO: Isn't that a question for Stephen King, who you've deposed?

MR NIRMUL: We haven't deposed him.

MR TOMAINO: How could he possibly know the answer to what Stephen King meant?

Objection.

THE WITNESS: The markets and the subprime markets were moving around a lot. There was a lot of focus on them.

BY MR NIRMUL:

Q Mmm hmm?

A I think Stephen was just assuming I would be reading the press and keeping up to date with what was happening in those markets.
Q Okay.
At this point in time, January 25, 2008, were you anticipating EOD triggers for the CDOs that Barclays Capital was exposed to?
MR TOMAINO: For all of them?
MR NIRMUL: Any of them?
MR TOMAINO: Objection to form.
THE WITNESS: I can't remember the detail. I think there was something in those other papers we were looking about -- we had for some of them. I can't remember exactly where we were, but I'm sure we were following our policy of looking 12 months ahead.
BY MR NIRMUL:
Q And the policy was to look 12 months ahead to see if there was a -- there was a potential --
A And to try and forecast forward to say where there was a potential, and then to calculate impairment as if we held the underlying securities --
Q Okay.
A -- on a fair value basis.
Q Thanks.
Okay. You can set that aside.

We talked earlier today about the process for illiquid securities and the development of models.
A Sorry, what process?
Q Within -- within the finance group for valuing illiquid assets. I think you testified to that earlier, that there was a process?
A So the valuation testing process; is that what you're talking about?
Q Well, so let me back up.
I think I'd asked you earlier about the processes for valuing -- valuating assets held by Barclays Capital, and I think you divided it into liquid and illiquid, and explained with respect to liquid assets there was a market-based test for valuation, and then with respect to illiquid there was a model-based methodology.
Is that a fair characterization?
MR TOMAINO: Objection. Form.
THE WITNESS: No, let me just correct you on a couple of points --
BY MR NIRMUL:
Q Okay.
A -- just to make sure you are clear.
So one is I think I was clear that the traders' marks were the ones used generally to mark the

books if they were deemed to be closer to the market and the most appropriate.
And then there was valuation testing --
Q Mmm hmm?
A -- used to make sure that those marks were appropriate.
Q Okay.
A Both in terms of whether the position is included and were the valuations appropriate.
If there were differences, then I think I explained that there was a process around where those were escalated and resolved.
And I said there were a range of activities, from liquid to illiquid. For some of the illiquid, there were the models. For other illiquid, there were others methodologies used. So that wasn't the only process used for illiquid securities.
Q Okay.
So one of the processes for illiquid securities was development of a valuation model, and that was done by PCG, as well as the traders independently; is that right?
A That's one of the processes, and I -- well, yes, there would be many processes like that, and in some cases, as I mentioned, done by PCG, in combination

with risk management.
Q Okay.
Do you recall valuation of -- well, do you recall that Barclays Capital maintained positions in whole loans in 2007 and 2008?
A Yes, I remember we had positions.
Q Okay.
What do you recall about those positions?
MR TOMAINO: What are you asking him?
BY MR NIRMUL:
Q Well, let me just -- do you recall that those positions were originated through the securitization business run by ASG?
A I recall that Michael Wade ran a business -- I can't remember who Michael reported to --
Q Mmm hmm?
A -- which had some of them.
I remember in the credit businesses there were various different businesses which held whole loans.
I can't remember what ASG stood for, if that was the name of one of those businesses.
Q Okay.
ASG was a business within the -- within Barclays Capital; correct?

EXHIBIT 40

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC)
SECURITIES LITIGATION) Master File
------------------------- No. 1:09-cv-01989-PAC
This Document Relates to:)
All Actions)
-------------------------)

125 Broad Street
New York, New York

April 21, 2016
8:57 a.m.
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stock, so, for example, in my calculation of statutory damages, you know, if this were -- if I were looking at a different security, the numbers would have been different, but I don't think my overall approach to the case is any different as a result of them being preferenced shares.

Q. Do you have an opinion as to whether price movement of preferenced shares are affected by the same events as common shares?

MR. NIRMUL: Objection to form.

A. They can be affected by the same events.

Q. Did you analyze that question in preparing your reports in this case?

A. I didn't do a specific analysis of how the Series 5 share price changes were different than the common share price changes, but I was certainly aware of the fact that they might not be.

Q. Did you become aware of any differences in the performance of the Series 5 shares from Barclays common shares during the preparation of your report?

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A. Anecdotally I did. Some of the news stories and reports I read made reference to changes in the price of the common shares from time to time and I noted that it wasn't always the same as the preference shares, but that had no bearing -- it didn't change my approach to the analysis.

Q. Why?

A. Because I was asked opinions on the -- to form opinions about the Series 5 shares, not the common shares.

Q. So you did notice differences in the price movements to the same events of the Series 5 shares versus the common shares?

MR. NIRMUL: Objection to form.

A. Like I said, anecdotally I noted that difference and it didn't concern me because it would not be a surprise to me that the common shares would react differently to the preference shares on certain events.

Q. Why -- why would common shares react differently to preference shares to the same event?

A. There are a number of reasons that

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could happen and I'm not going to try to give a survey of all of them that are plausible or possible, but one reason -- one example is that because the common shares are last in the capital structure and most subject to variability in value as a result of changes in the company's situation, you would often expect to see the common shares react more than the preference shares so long as the equity cushion is high. That could reverse actually if the equity cushion becomes low.

So there are a number of different logical economic reasons that the preference shares would react differently than the common shares to certain types of information at certain times depending on the situation of the company.

Q. What are some other reasons?

A. If there were events that were viewed as positive for holders of securities higher up in the capital structure, but might be dilutive to security holders at the bottom of the capital structure, you could actually expect to see them move in opposite ways in

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certain circumstances. So that is another reason that comes to mind.

Q. What is an example of such an event?

MR. NIRMUL: Objection to form.

A. If a company is close to bankruptcy or insolvency and there is a highly dilutive event that protects bondholders or preferred shareholders or security holders up the capital structure, but heavily dilutes common holders, you could expect to see -- you might, not in every circumstance, but it would not be illogical to see the stock price, the equity price go down, but the preferred stock or bond prices to go up.

Q. Would an equity offering be the type of event that could cause preferred shares and common shares to react differently?

MR. NIRMUL: Objection to form.

A. It would depend on the nature and circumstances of the firm and the deal and the terms of the deal, but that is certainly plausible.

Q. You mentioned an equity cushion before. What is an equity cushion?

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A. Generally speaking, without being overly technical about it, it is the value of the company over and above the value of the debt and preferred shares so that there is -- so that there is room for the firm to absorb losses that would be faced by the equity holders and not the securities higher up the capital structure.

Q. Did you perform any analysis as to what types of events would cause price reaction in the Series 5 ADS?

MR. NIRMUL: Objection to form.

A. Do you mean as distinct from the common stock? I'm a little unclear about your question, what you mean.

Q. Either as distinct from the common stock or just in general.

MR. NIRMUL: Same objection.

A. As part of my analysis, I certainly considered what types of information might cause the preferred shares prices to move, yes.

Q. But did you perform any analysis as to the types of events that could cause the preferred shares to move?

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MR. NIRMUL: Objection to form.

A. Yes, I think I described that in my rebuttal report.

Q. I'm going to hand you 605. What is Exhibit 605?

A. It appears to be the rebuttal report I filed in this matter. Again, there were some charts I believe that were originally submitted in color that appear to be in black and white here, but other than that, it looks to be a copy of my rebuttal report.

Q. And where in this report do you provide an analysis on the types of events that could cause price reaction in the Series 5 ADS?

A. In paragraph 42 of my report, I don't seek to enumerate every type of information that might move the prices of the Series 5 shares, but I define here in my view what types of information related to plaintiff's claims that could move the prices of the Series 5 shares.

Q. In this report did you perform any analysis as to the types of events that did cause price reaction in the Series 5 ADS?

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MR. NIRMUL: Objection to form.

A. Could I have that read back, please?

(Whereupon the record was read back by the reporter.)

A. In -- so the context of this report is, I was responding to a report filed by Dr. Kleidon where he had done an analysis that purported to evaluate the causation of -- the causal relationship between certain types of news and the Series 5 shares. So, in the context of reviewing and analyzing his report and his views about what caused certain price movements in the Series 5 shares, I analyzed that subject.

Q. So did you reach any conclusions as to event -- whether any events caused price reaction in the Series 5 ADS?

MR. NIRMUL: Objection to form.

A. I guess the easiest way to say it is that I formed views about certain movements in the price and what caused the movements in the price, but I'm not offering an opinion in this case about the specific cause of any particular stock price movement other than to say -- to

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describe what the evidence Dr. Kleidon has put forward, what it does and does not show with respect to causation, but I'm not planning on offering an opinion in this case of what actually did cause a particular price movement at this particular time.

Q. Did you analyze whether the market for the Series 5 shares was efficient during the relevant period as defined in your report?

A. I did not perform any analyses specifically to evaluate market efficiency in this case, no.

Q. And why didn't you perform that analysis?

A. I was not asked to form an opinion on that.

Q. Sitting here today, do you have any opinion on whether the market for the Series 5 shares during the relevant period as defined in your report was efficient?

A. I have not performed all the analysis I would need to do to reach that conclusion, so I don't have a -- I do not -- I am not planning on offering an opinion on that

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under subpart A it says, "Barclays knowingly failed to properly write down its exposure to U.S. subprime and Alt-A mortgages, CDOs, monoline insurers and RMBS in accordance with applicable accounting standards," and then this last phrase in there refers specifically to "and failed to adequately disclose the risks posed by these assets."

So my understanding is plaintiffs are alleging that there were risks that were not adequately disclosed at that time. Furthermore, in subpart C, it says, "Barclays failed to disclose the substantial and material risk that the Company's U.S. subprime and Alt-A exposure had on its stated capital ratio, shareholder's equity and the risk that the same posed to the Company's future capital ratio and liquidity."

So the risks -- my understanding of plaintiff's claim is that Barclays did not adequately disclose the risk to their capital ratios of the capital market assets described in these paragraphs and so if events that reflect the materialization of the risks

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associated with those allegations in my view would be related to plaintiff's claims.

Q. And what does it mean when you say materialization of the risks associated with those allegations?

MR. NIRMUL: Objection to form.

A. My understanding of plaintiff's claim is that the capital market assets described in paragraph 40 that the risks associated with Barclays holding of those assets were not adequately disclosed and so to the extent that those -- to the extent that there were events that could cause a loss in the Series 5 shares that resulted from materialization of those risks of losses resulting from news reaching the market about the risks of those securities or those assets, that would represent a materialization of the risk.

Q. So, in your view, the materialization of the risk is a disclosure to the market about the true risk of those assets?

MR. NIRMUL: Objection to form.

A. It could be a -- any information

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reaching the market that brought the market closer to the truth regarding the risk of those securities and it could be discussion of a heightened risk or actual materialization of specific losses associated with those assets.

Q. When did these risks that you are speaking of materialize?

MR. NIRMUL: Objection to form.

A. Well, I don't attempt to catalog every instance of where risks may have materialized. What I -- the context of what I am doing is rebutting Dr. Kleidon's opinion that there is -- there was no -- that there were no price declines related to plaintiff's claims during his analysis period and my view is that that is based on too narrow a definition of what is related to plaintiff's claims and, therefore, in my report I provide examples of certain events that in my view could reflect the materialization of the risk of these claims -- of the risks that were allegedly misstated.

So, I don't have an opinion about every single event that might represent the

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materialization of the risk. I am responding to Dr. Kleidon's statement that there weren't any that could be materializations of the risk.

Q. Did you identify when any risk materialized?

MR. NIRMUL: Objection to form.

A. I identify examples of dates that if plaintiff's claims are true and Barclays misrepresented or inadequately disclosed the risks associated with these capital market assets, that there are certain events that could be materializations of the risk that -- can I finish my answer? That Dr. Kleidon failed to consider in his analysis.

Q. Did you opine that these events could be materializations of the risk or were materialization of the risk?

A. I am opining that these are -- this is information reaching the market that is informing the market further about the risks associated with Barclays holding of the assets that plaintiff's claim for which the risk was misrepresented.

Q. So, for the events that we are

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speaking of, are you concluding that those events were materializations of an allegedly undisclosed risk in the Series 5 offering documents?

MR. NIRMUL: Objection. Form.

A. I am opining that under the assumption that plaintiff's claims are true, that Barclays did not adequately disclose the risks of these assets in terms of the risk of the assets themselves or the risks they pose to the capital adequacy of Barclays, that I have given examples of events that represent the market learning more about what those risks meant to Barclays. So in that sense I am describing these events as risks -- the materializations of risks related to those assets that Dr. Kleidon did not consider.

Q. So you are opining that these events were materialization of the risk?

MR. NIRMUL: Objection to form.

A. I don't know how I can say it any more clearly. My view is that these events were -- represent the market learning more about the risks Barclays faced as a result of

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both on -- risks faced as a result of holding the assets -- or holding those assets posed to their capital adequacy.

Q. What is your understanding of those allegedly undisclosed risks in April of 2008?

MR. NIRMUL: Objection to form.

A. My understanding is that plaintiffs are alleging that there were facts and circumstances that existed at Barclays regarding the exposure to certain risks, the losses that had been experienced on those securities and trends that Barclays was aware of as to how those securities were affecting its capital position that were not properly disclosed.

Q. If we turn back to paragraph 40 -- when were the alleged misstatements in April of 2008 known to the market?

MR. NIRMUL: Objection to form.

A. Again, in order to answer your question, first of all, I haven't formed a specific view on exactly when the full truth, including all the materializations of the risk related to those risks were known to the

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market.

Q. So when were the alleged misstatements contained in 40 sub A here known to the market?

MR. NIRMUL: Objection to form.

A. Are you talking about -- I just want to be very clear on your question. Are you asking when -- are you including the misstatements and omissions and the materialization of the risk related to the misstatements and omissions?

Q. Yes and we can break them down one by one if you want.

MR. NIRMUL: So do you want to do that?

MR. PELLER: If he wants, start with 40A.

A. Okay. So in 40A, my understanding of plaintiff's claim is that Barclays failed to properly write down exposure to certain assets and failed to adequately disclose the risk posed by those assets and so I think over time the market learned both about the specific write-downs, but also continued to learn about

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the materialization of the alleged risks that were -- the materialization of risks that were not adequately disclosed over a longer period of time. That is my understanding of plaintiff's allegation.

Q. Did the market learn of the write-downs and the materialization of the alleged risks that you just referred to by May 15, 2008?

MR. NIRMUL: Objection to form.

A. That's not my understanding of plaintiff's claim, no.

Q. Did the market learn by June 25, 2008?

A. That is not my understanding of plaintiff's claim, no.

Q. Did the market learn by August 7, 2008?

A. That is not my understanding of plaintiff's claim, no.

Q. Are you opining when the market learned of the alleged write-downs or the materialization of the alleged risks that we referred to in paragraph 40A?

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MR. NIRMUL: Objection to form.

A. I think if -- it's evident from the record when certain write-downs actually occurred, but the materialization of the risk regarding what my understanding of plaintiff's allegation of the inadequately disclosed risk took place over a longer period of time and I am not opining at a specific time of when the materialization of all those risks had occurred.

Q. So, if we turn to 40B, when did the market learn of the alleged misstatements, omissions in 40B or when did the -- well, let's start with that.

MR. NIRMUL: Objection to form.

A. I don't have a specific opinion about when the market fully learned about all of the risks associated with the allegations in 40B.

Q. Do you have any view on when the market learned of those risks?

A. Again, your question is a bit confusing to me because you're talking about learning of the risk or are you including

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materialization of the risk that was misstated in your question?

Q. Yes.

A. Then I have not formed a specific opinion about when the materialization of all the inadequately disclosed risks had occurred by.

Q. Let's turn to -- did you form an opinion as to when any of them did?

MR. NIRMUL: What is the question?

A. I'm not sure what them refers to in that question.

Q. Did you form an opinion as to when any of the allegedly undisclosed risks in 40B materialized?

MR. NIRMUL: Objection to form.

A. In -- I believe there are examples of days on which information came to light and I give examples of that in my report where information came to light that represents additional either information about what is alleged in 40B or the materialization of the risks related to 40B in my report, but I don't -- so I give examples of when I believe

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there were materializations of that risk, but I am not offering an opinion on when the full extent of the materializations of the risk had taken place.

Q. If we turn to 40C, did you form an opinion as to when any of the allegedly undisposed risk referred to in 40C materialized?

A. In my rebuttal to Dr. Kleidon, I identify certain dates that I believe represent materializations of risk related to 40C, but I haven't formed an opinion as to when the full materialization of those risks had taken place.

Q. And turning to 40D, did you form an opinion as to when any of the allegedly undisclosed risks in 40D materialized?

A. I think of D as really being an element of or a subset of A, B and C, so I would give the same answer to D, regarding D. So some of the events I discuss in my report would reflect -- to the extent that the failure to comply with their own risk management policies created risks from the particular assets at question here or the risks to

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Barclays capital adequacy, there are some events I identify in my report that represent materializations of the risk, but I don't form an opinion about when the full materialization had taken place.

Q. If we turn to paragraph 42, you state, "The following types of information would, in my opinion, relate to plaintiff's claims and represent types of information that might negatively impact the price of the Series 5 shares?"

A. Yes.

Q. Now, did you opine on whether these types of information did impact the price of the Series 5 shares?

MR. NIRMUL: Asked and answered.

A. I did not form any specific opinions about the degree to which these events caused a decline in the price of the shares.

Q. Did you form an opinion on whether these types of events impacted the price at all of the Series 5 shares?

MR. NIRMUL: Objection to form.

A. I came to the conclusion that based

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on the evidence presented in the Kleidon report, it is not -- there is insufficient evidence to conclude that they did not, but I did not form a specific opinion about the effect of any of these particular pieces of information on the Series 5 shares.

Q. So you did not form an opinion on whether these types of events impacted the price of Series 5 shares at all?

MR. NIRMUL: Asked and answered.

A. If you want, I'll give the verbatim answer to what I gave to the previous question, which is, in reviewing Dr. Kleidon's opinions about causation, I came to the opinion that he had not provided sufficient evidence to conclude that these events didn't affect the Series 5 shares.

I'm not giving a specific opinion about the degree to which any one of these events actually affected the Series 5 shares.

Q. Or whether they affected the Series 5 shares, right? You said degree. So just to be clear, you didn't form an opinion on whether these types of events impacted the price of the

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Series 5 shares at all; yes or no?

MR. NIRMUL: Asked and answered. The court reporter can read back the last answer.

MR. TOMAINO: He needs to answer the question.

MR. PELLER: He needs to answer the question.

MR. NIRMUL: I think he has twice now.

MR. TOMAINO: He needs to answer the question.

A. Can I have it read back, please, so I can have the specific question in mind?

MR. TOMAINO: The question is -- he is not opining on the degree to which it was affected at all. The question is is he opining on whether it was affected at all.

MR. BROWN: He wants the question read back. He's entitled to that.

MR. TOMAINO: He is. And then we are entitled to an answer. You don't read back an answer. The witness can answer.

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(Whereupon the record was read back by the reporter.)

A. I am not offering a specific opinion. Again, I am going to put it in the context of what I am doing. I am, in response to the analysis presented by Dr. Kleidon, I have formed the opinion that he has provided insufficient evidence to conclude that these events, that the misrepresentations and omissions were not the result of declines in the Series 5 shares.

I am not offering an affirmative opinion about whether the specific events I identify affected the stock, the Series 5 shares.

Q. In paragraph 42 you say quote, "The following types of information would, in my opinion, relate to plaintiff's claims and represent types of information that might negatively impact the price of the Series 5 shares, correct?

A. That's what I say, yes, and that reminds me of another criticism I have of Dr. Kleidon's surrebuttal report that I have not

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responded to before. Finish your question and if we have a chance, I'll go back and explain my criticism.

Q. So what is the basis for the related to standard that you use in paragraph 42?

A. So when I say relate to, what I mean is that it's information that could cause the stock, the Series 5 shares to decline as a result of the misrepresentations and omissions. What I mean by as a result of the basis of that is the language in the negative causation section of the Securities Act which talks about declines in price that are the result of the misrepresentations and omissions.

And what I mean by result from or what my interpretation of result from that is used is either information that specifically corrects the misrepresentations and omissions or represents the materialization of risks that were inadequately disclosed.

So, in my view, these types of information that I describe in paragraph 42 are either things that correct the misstatements and omissions or represent materializations of

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are the subject of this litigation. I have not performed an analysis of exactly how similar their assets were.

Q. Well, if you don't know what assets IndyMac held and how those compared to Barclays, how can you conclude that the failure of IndyMac would have informed a Barclays investor about anything related to Barclays credit market exposures?

MR. NIRMUL: Objection. Form.

A. So in paragraph 83 of my report, I note that -- I quote Dr. Kleidon saying, "This move by the FDIC," referring to the seizure of IndyMac, "was 'widely interpreted' as a sign of more failures to come" and so Dr. Kleidon is acknowledging that this is an event that has implications for not just IndyMac, but other regulators or other financial institutions and in footnote -- when I say at the end of paragraph 83, I say, "Therefore, it is incorrect to dismiss this news as unrelated to plaintiff's claims" and I footnote 78 -- in footnote 78 I say, "Notably, Dr. Kleidon highlighted the following quote from a Wall

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Street Journal article stating, 'IndyMac is the biggest mortgage lender to go under since fall in housing prices and surge in defaults began rippling through the economy last year - and it likely won't be the last. Banking regulators are bracing for a slew of failures over the next year as analysts say housing prices have yet to bottom out'."

So there are articles and Dr. Kleidon cites them suggesting that this was new information and a signal to the market about the severity of how assets of the type held by IndyMac, which Barclays held those classes of assets as well, could -- this was a signal to the market of the risks associated with those types of holdings. And my point is that Dr. Kleidon simply rejects this news as macroeconomic and I'm describing why there is actually a relationship between this information coming to light and what the market was learning about Barclays, the potential impact of Barclays' exposure to those types of assets.

Q. I don't think any of that answered

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the question, so I'll just move to strike it and we can move on.

You're not opining that the failure of IndyMac should have been predicted in April of 2008 by Barclays, correct?

MR. NIRMUL: Objection to form.

A. No.

Q. Okay, let's go to paragraph 84.

A. Okay.

Q. You discuss a proposal by the US Secretary of Treasury to provide Fannie Mae and Freddie Mac with unlimited funds to rescue those lenders, correct?

A. Yes.

Q. What misstatement in the Series 5 offering documents did that Treasury proposal correct?

A. Again, I don't think it provides a correction of a specific misstatement in the offering documents, but what it does do is signal to the market the extent to which the government would have to step in to deal with losses on classes of assets that -- for deteriorating mortgage loans and that it would

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need unlimited funds, meaning the severity of the risk here was unlimited and that was a signal to the market that -- of how severe the risks were of assets of this type.

Q. So what allegedly undisclosed risk from the Series 5 offering documents materialized from the Treasury's proposal?

A. My understanding of plaintiff's claim is that Barclays inadequately disclosed the risk of a number of different types of capital assets, including those tied to mortgages and that this event served as information available, new information available to the market that allowed investors to better understand the risks associated with the types of credit market assets that Barclays was holding and that plaintiffs allege were misrepresented.

Q. So you're not opining that this Treasury announcement was the materialization of an undisclosed risk?

MR. NIRMUL: Objection to form.

A. If, in fact -- I don't agree with that. If, in fact, Barclays was

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misrepresenting or did misrepresent the risks associated with its capital market assets and its capital adequacy at the time and how the exposure to these assets could affect its capital adequacy going forward, then this event provides information in the market that would allow investors to better understand the full nature of the risks that they were taking in the Series 5 shares as a result of Barclays holding these types of assets.

Q. So are you opining on that or not?

A. I think I was just clear that this is a materialization of -- that if there was a misstatement of the risk, then this event provides more information to the market about that risk.

Q. Are you opining that the Treasury announcement caused any price reaction in the Series 5 shares?

A. I'm not providing that opinion, but my understanding is that Dr. Kleidon has opined that there was a statistically significant stock price movement on this date and he has concluded that the information he described was

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at least a partial cause of the stock price decline and I'm not -- I'm not disagreeing with his assessment.

Q. So the answer is no, you're not opining that the Treasury announcement caused any price reaction to the Series 5 shares, right?

MR. NIRMUL: Objection to form. Did you finish your answer before he interrupted you?

THE WITNESS: Yes.

A. I'm not opining that the Treasury announcement caused any specific price decline. All I'm -- what I am saying is that the -- I will leave my answer there. I'm not opining that it caused any particular price stock movement.

Q. Do you want to take lunch?

A. I'm fine to go a little bit longer, but if everybody else wants to.

Q. If you're hungry, let's take lunch.

THE VIDEOGRAPHER: The time on the video monitor is 12:27 p.m. We are off the record. This ends media two.

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(Luncheon recess taken.)

AFTERNOON SESSION

THE VIDEOGRAPHER: We are back on the record. The time on the video monitor is 1:05 p.m. This is the start of media number three.

Q. Welcome back.

A. Thank you.

Q. Do you agree with Dr. Kleidon that the standard of confidence interval for statistical significance is 95 percent?

MR. NIRMUL: Objection to form.

A. I think a standard confidence interval used for evaluating the probability of a type one error is 95 percent within the financial economics literature.

Often a 95 percent confidence interval is used for evaluating type one error as well.

Q. So in paragraph 51 of your rebuttal report, and you're referring to a specific price decline here, you say, "This price decline is significant at the 90 percent level which is still a widely accepted measure of

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statistical significance in financial and economic literature." Do you see that?

A. I see that, yes.

Q. Are you opining that the 90 percent level confidence level is the appropriate level for determining statistical significance here?

MR. NIRMUL: Objection to form.

A. I believe it would not be incorrect if somebody drew an inference, as a matter of finance or economics, from a 90 percent confidence interval. So I think it's -- using a 90 percent confidence level, as long as you're specifying that is the level you're using, there is nothing wrong with drawing a causal inference between the release of news and a stock price movement if you can show that it's significant at the 90 percent level.

Q. Are you using the 90 percent level?

MR. NIRMUL: Objection to form.

A. I didn't perform an event study in this case. Dr. Kleidon did and I am commenting on the interpretation of the event study he ran. I am saying that it would not be incorrect to draw a causal inference based on a

EXHIBIT 41

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

* * * C O N F I D E N T I A L * * *

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC	)	
SECURITIES LITIGATION	)	Master File
-------------------------	)	No. 1:09-cv-01989-
This Document Relates to:	)	PAC
All Actions	)	
-------------------------	)	

November 13, 2015
9:04 a.m.

Videotaped Deposition of ROBERT E. DIAMOND, JR., held at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York, before Laurie A. Collins, a Registered Professional Reporter and Notary Public of the State of New York.

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document appears on 847, and that's titled Basel II RWA position.

Does the presentation address the impact of the banks credit market exposures on risk-weighted assets?

A. I think that's -- it's not quite that narrow, but I think that's a good assessment of why this was brought to the committee at this time. As you can see from reading through this, Basel II, which was a capital regime, is procyclical.

So it means as positions deteriorate and market deteriorate, more capital is needed. So in addition to if we have positions that took write-downs or losses, we had a second issue of often they took more capital so...

Q. And what is the consequence for Bar Cap's business of having higher risk-weighted assets?

A. So generally a business within a bank will have a budget of risk-weighted assets, based on the overall capital available, for the credit card business, what you're doing in Africa. And if everything else being equal, completely equal,

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and certain businesses like credit markets had positions deteriorating, taking more capital, it would in essence not squeeze out of the businesses but it would be harder to manage the overall profitability of the business or the allocation of capital.

So that is why -- yeah.

Q. So if you look at this -- thank you for that.

If you look at the first -- this page 847, it says 2007 year end 178 billion. Is that a target RWA size for Barclays Capital for 2007 or was that for -- sorry.

A. I think what this is saying is we completed the year comfortably below the budget, which is good, so we managed very effectively within that, notwithstanding the more difficult market conditions.

Q. Okay.

And then the third bullet point is February 10th, 2008, is an estimate of I guess it's the RWA position estimate of 185 billion to 188 billion. What's the significance of that to you?

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A. I think it's just information.

Q. It just reflects an increase from year end of approximately 7 to 10 -- 8 to 10 billion -- is that right? -- or 7 to 10?

A. Yes, it says it's beginning to draw, it's still below budget for the year, which is 190 to 195 billion. So -- and it's looking at the source of those increases.

Q. Thank you.

And what is soft head room to -- in that sentence that reads, daily 2008 RW limit of 190 billion with soft head room to 195 billion? What does that mean?

A. It's likely to mean there's a budget of 190 with a request of 195. So something like that.

Q. And this is a budget --

A. It may -- it could mean it's not officially approved yet but it's the direction we're going.

Q. This is a budget for Bar Cap?

A. It appears to be.

Q. Okay.

A. It's impossible to tell from this if

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that's the case. And my memory isn't strong enough to remember the numbers then. But that's the impression I have.

Q. Then if you'd turn to the next page, this page is titled key RWA risk areas.

How do you interpret this page?

A. It makes me very proud of how well managed the team was, you know, to prepare us this early in the year for here are the areas that could grow, here are the areas that could be down, this is a potential of what we'll need Barclays to give us extra space.

But it's very, very impressive to be all over this this early in the year in these incredibly difficult market conditions. So actually it's a real sense of pride, looking at it.

Q. And as you read this, your group is trying to estimate how risk-weighted assets might be impacted by various exposures that reside within Bar Cap; is that right?

MR. LEVANDER: Objection.

A. Again, we're thinking this is a Bar Cap report?

EXHIBIT 42

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

-------------------------- Master File No.:
IN RE BARCLAYS BANK PLC: : 1:09-cv-01989-PAC
SECURITIES LITIGATION :
--------------------------:
This Document Relates to: :
:
ALL ACTIONS. :
--------------------------:

October 6, 2015
9:03 a.m.

** CONFIDENTIAL UNDER PROTECTIVE ORDER **

VIDEOTAPED DEPOSITION of THOMAS HAMILTON, taken by Plaintiffs, held at the Marriott Hotel, Rye, New York, before Eileen Mulvenna, CSR/RMR/CRR, Certified Shorthand Reporter, Registered Merit Reporter, Certified Realtime Reporter, and Notary Public of the State of New York.

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investment grade. So triple-B and above are all investment-grade securities.

Q. So these single-As, would they have been something ordinarily that you would have been able to market?

MR. TOMAINO: Objection to form.

THE WITNESS: It depends on the time. I could never make a general statement that single-As were hard to move, you know. Maybe today they were, maybe tomorrow they weren't, but it wasn't a general problem.

BY MR. NIRMUL

Q. In this time frame, single-As were difficult to move?

MR. TOMAINO: Objection to form.

THE WITNESS: I don't remember. It appears so from this e-mail, but I don't know.

BY MR. NIRMUL:

Q. There's a reference here to "market observables" in the next sentence where Mr. Chen writes, "They will mark down all subs given the lack of market observables."

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Do you understand what that means?

MR. TOMAINO: Objection to form; foundation.

THE WITNESS: No.

BY MR. NIRMUL:

Q. How did you value your trading positions with respect to Alt-A?

MR. TOMAINO: Objection to form.

BY MR. NIRMUL:

Q. In this time period.

A. First, Steve Cozine was responsible for doing that. But he would -- you know, it would vary. Sometimes it would be on transactions in the marketplace. Sometimes it would be, you know, spread to certain prepayment and default assumptions.

Q. How often were positions -- trading positions marked?

A. Daily.

Q. And so if they would be marked daily, are they being marked by the trader?

A. Yes.

Q. How does a trader go about marking a trading position? Let's talk 2000 -- you know,

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2006, early 2007 time period with respect to Alt-A.

What did you understand to be the process?

MR. TOMAINO: Objection to form.

THE WITNESS: He would -- he's in the marketplace, right. So he's getting information from customers, he's getting information from salespeople, he's seeing bonds trade in the marketplace. And his job is to accumulate all that information and come up with market levels for all of the securities.

BY MR. NIRMUL:

Q. So the "market observables" referred to in this e-mail, that refers to the trader looking at other transactions in the market and coming to a position on the value of his or her position --

MR. TOMAINO: Objection to form; lack of foundation.

BY MR. NIRMUL:

Q. -- is that right?

MR. TOMAINO: He already testified

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monthly basis the month-end marks of all the positions of the position.

Q. Were there particular individuals in PCG that were assigned to your business? Let's just talk about the 2007 time frame now.

A. I'm sure there were. I don't remember exactly. Rich Landreman was -- I recollect, but I'm not positive who the person was at that time.

Q. Were these people -- did these people have expertise in the asset classes that you were trading in?

MR. TOMAINO: Objection to form.

THE WITNESS: To some degree.

BY MR. NIRMUL:

Q. When you began trading in Alt-A securities in late 2006, early 2007, was there someone else within PCG that was assigned to -- for valuation of those instruments?

A. I don't remember.

Q. Do you recall Richard Landreman being someone at PCG that was responsible for your business' book?

A. I do.

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Q. Okay. Anyone else?

A. I'm sure there were others. There's more than one person in the group, but I don't remember who it was.

Q. Joe Kaczka, do you remember that name?

A. Probably. Yes, I remember Joe.

Q. So what was the process between PCG and your traders in terms of arriving at a valuation for your business' positions?

MR. TOMAINO: Objection to form.

THE WITNESS: Well, the price testing guys would just test what my traders' marks were. And if they had variation around those or wanted to test -- contest that, we would have a monthly meeting to do so.

BY MR. NIRMUL:

Q. And so if there was a variance between a value that they arrived at, for a particular trader's position, from that trader's position, they would meet with who to discuss that?

A. They would start with me.

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Q. Okay.

A. I probably had my individual desk heads in the meeting as well. They would say, we have a variance here, high or low, is there a reason for it, and we would discuss it and see if -- if it was a real variance, if it was something explainable, if it was not explainable.

Q. Ultimately who would get to determine what the position would be marked as?

MR. TOMAINO: Objection to form.

THE WITNESS: PCG could mark stuff wherever they wanted, my business anyways.

BY MR. NIRMUL:

Q. If there was disagreement between PCG and the trader, who would get the final say as to what the mark would be on a particular position?

MR. TOMAINO: Objection to form.

THE WITNESS: PCG.

BY MR. NIRMUL:

Q. Okay. That's the protocol that you recall that was applied to your business?

A. Yes.

Q. Okay. What did PCG have, to your

EXHIBIT 43

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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IN RE:)
) Master File No:
BARCLAYS BANK PLC) 1:09-cv-01989-PAC
SECURITIES LITIGATION)
)
------------------------------X
)
THIS DOCUMENT RELATES TO:)
ALL ACTIONS)
------------------------------X

October 19, 2015
8:43 a.m.

** C O N F I D E N T I A L **

VIDEOTAPED DEPOSITION OF

GRANT KVALHEIM, taken by Plaintiffs, held at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York, pursuant to Notice, before Mayleen Cintrón Ahmed, a Registered Merit Reporter, Certified Realtime Reporter, and Notary Public of the State of New York.

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGIION
1801 MARKET STREET, SUITE 1800
PHILADELPHIA, PENNSYLVANIA 19103

- KVALHEIM - CONFIDENTIAL -
in September 2007?
A. I believe so.
Q. How did you learn that Stone was proceeding with a Tier 1 retail preference offering?
A. I presume I would have heard about it in the Treasury Committee, but I -- I don't know exactly.
Q. And I think you testified earlier that you attended Treasury Committees during your employment throughout 2007; is that right?
A. Yup.
Q. Is one of the topics that would be discussed at a Treasury Committee, whether or not to raise capital?
A. Yes.
Q. Would members of the Treasury Committee also discuss whether to engage in a preferred share offering of Tier 1 capital?
A. Yes.
Q. In discussing at a Treasury Committee meeting whether or not to raise capital, what factors would the Treasury

- KVALHEIM - CONFIDENTIAL -
Committee discuss or consider with respect to that decision?
MR. TOMAINO: Objection. Form and hypothetical.
A. The bank's overall level of liquidity and capital, prospects for business, the kind of factors you would expect would be considered.
Q. And again in your email, on Exhibit 318, you were referring to a preferred share offering that occurred in September '07; is that right?
MR. TOMAINO: Well, it's not -- the email is July. So it couldn't, it couldn't be past tense, had occurred in September.
A. It seems to anticipate an offering in September, yes.
Q. I'll re -- I'll re-ask the question --
A. Okay.
Q. -- to make it clear.
In your July 25, '07 email, you are referring to an upcoming preference share

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offering that would occur in September of '07; is that right?
A. Yes.
Q. And whose decision ultimately was it to engage in this preferred share offering that you're discussing here in this email?
A. I believe it's up to the Board of Barclays Plc.
Q. Do you know who would present to the Board the proposition of raising capital?
A. The CFO.
Q. What was the name of the CFO in July of 2007?
A. Naguib Kheraj.
Q. And the C -- excuse me. I'll withdraw that.
And the Board had the ultimate authority on whether to go forward with the preferred share offering; is that correct?
A. I believe so.
Q. Was that the protocol that was followed in 2007 as well?
A. I would assume so, yeah.
Q. Did anybody else -- withdraw that.

- KVALHEIM - CONFIDENTIAL -
Apart from the Board, was anybody else's authority required in order to the proceed with a preferred share offering?
MR. TOMAINO: Objection to form.
A. I don't believe so.
Q. And if you look at the second paragraph on page 483 of Exhibit 318, you wrote: "Markets very ugly yesterday across credit. HY and leveraged loans particularly weak."
Do you see that?
A. I do.
Q. Does "HY" stand for high yield?
A. It does.
Q. And you continue: "Citi hitting any bid in the market yesterday in both NY and London, they have clearly been directed to reduce risk."
Do you see that?
A. I do.
Q. Okay.
You continue: "Boots now needing substantially larger discount than we believed even last Friday."

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Do you see that?

A. I do.

Q. Is Boots a person?

A. No. Boots is a U.K. pharmacy company.

Q. Was that a client of Barclays at this time?

A. It was. They had done a leveraged buyout of Alliance, I think, one of their competitors, so had done a large leveraged loan transaction in the marketplace about this time.

Q. And you continue: "Offering Mezz at 95 versus our cost of 98, second lien at 96 versus our cost of 98 and no expectation it will all sell at that level."

Do you see that?

A. I do.

Q. Is that sentence referring to Boots' capital raise?

A. That's right. So the mezzanine structure of the Boots transaction and the second lien piece of the Boots transaction.

Q. And these -- these mezz's and

- KVALHEIM - CONFIDENTIAL -

these second liens were being offered below the cost; is that correct?

A. That is correct.

Q. Skipping to the next paragraph on page 483, you write: "Subprime also remains volatile and [high yield/leveraged] loans and subprime segments infecting sentiment across the board, AAA CMBS as an example, spread has widened 50% in last couple of weeks, where underlying collateral performance at record low default rates."

Do you see all that?

A. I do.

Q. And you write: "Sentiment poor, liquidity worse."

Do you see that?

A. I do.

Q. With respect to your statement "spread has widened 50% in the last couple of weeks," can you explain what the implications of that is?

MR. TOMAINO: Objection. Form.

A. What the implication is?

Q. Sure.

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A. It means they're trading at wider spreads than they did a couple of weeks prior. So in order for spreads to go up, prices are going down.

Q. Does a widening of spread reflect at all on perceived risk of an asset?

MR. TOMAINO: Objection. Form.

A. Not necessarily. It can quite often reflect technicals in the marketplace without any implication whatsoever on the underlying credit quality of an asset.

Q. You continue on page 483: "Clackson is here in NY and we'll bottom out, but we will take severe marks on super senior ABS CDOs at month end as mark to model we have now overstates any reasonable expectation of future loss."

Do you see that?

A. I do.

Q. Was -- is Patrick -- I'm sorry. Withdraw that.

"Clackson," does that refer to Patrick Clackson?

A. It does.

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Q. What was Patrick Clackson's position in July of '07?

A. I believe he was the CFO of Barclays Capital.

Q. Did you work with Mr. Clackson a lot in 2007?

MR. TOMAINO: Objection. Form.

A. As the CFO of Barclays Capital, I worked with Patrick throughout my time at Barclays Capital.

Q. And you wrote, on page 483, "but we will take severe marks on super senior ABS CDOs at month end..."

Do you see that?

A. I do.

Q. As part of your responsibilities in 2007, were you involved in taking marks to -- to assets within the Credit Trading division?

A. Not directly. The traders would have been responsible for marking their books; I would have been responsible for ultimate oversight of those marks. But I personally was not marking any books.

Q. And you say traders would mark their own books. How would you ultimately determine -- or, withdraw that.
How did you know how traders were marking their books?
A. I don't understand the question.
Q. Were you presented with a report that would provide traders' marks on their books?
A. Sure.
Q. Was this report provided to you on a periodic basis?
A. Yes.
Q. How often would you say that you received reports of traders' marks on the books?
A. The trading heads would get them daily. I would have -- I would review them less frequently.
Q. As part of your review of traders' marks, what would you look at? I'll withdraw that.
I think a minute ago you said you would have been responsible for ultimate

oversight over those traders' marks.
Do you -- do you recall that testimony?
A. I do.
Q. Okay.
Could you decide whether or not a trader's marks should be changed?
A. If I had a basis for that, yes.
Q. So if a trader wanted to mark their book at x, you wanted to mark it at y, it was your authority or --
A. If I believe he had done it incorrectly, yes.
Q. How would you determine whether a trader had, as you put it, done it incorrectly?
A. Asked --
MR. TOMAINO: Objection. Form.
A. Asked for benchmarks, look for comparability, sense the reasonableness. It was also inputs from other areas: Finance, Product Control.
Q. Which person --
A. Risk.

Q. Which persons within Finance would you seek input from in connection with your review of traders' marks?
MR. TOMAINO: Objection. Form.
A. I don't recall names.
Q. Was Patrick Clackson at this time considered a person within Finance?
A. Yes.
Q. Would you seek Mr. Clackson's input with respect to --
A. Not on a regular basis, but from time to time.
Q. And I'll restate my question, because I think that was unclear.
My question was: Would you seek Mr. Clackson's input with respect to analyzing traders' marks in the books?
A. No, not as a general matter.
Q. Were there persons within Product Control that you would seek their input in part -- as part of your analysis of the traders' books' marks?
A. I think you're creating the wrong...

Product Control had a function; they went through processes without me having to ask them to do it. They would present their analyses of traders' positions, where they agreed with marks, disagreed with marks.
There was a normal process that was gone through between the traders and Product Control before -- particularly on less liquid, mark-to-model, illiquid markets, and -- and then ultimate judgment was required as to where the mark should be set at the end of the month.
Q. You said that Product Control would conduct their own analyses of traders' positions; is that right?
A. That's correct.
Q. Would you review those analyses that had been created by Product Control as part of your overall review of the traders' marks?
A. On occasion. Not always.
Q. When you say "on occasion," can you be more specific as to how often that would occur?

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pools of differing vintages but with the substantially poorer performance of the 2006 collateral, this assumption no longer makes sense."

Do you see that, sir?

A. I do.

Q. You continue: "This change in methodology has been agreed by the business, Risk, and Finance."

Do you see that?

A. Yes.

Q. Why were you advising Mr. Diamond that the portfolio met -- that the portfolio valuation methodology was being changed with respect to post-NIM subprime positions?

A. A meaningful business event that I wanted to make him aware of.

Q. Was it your practice in 2007 to inform Mr. Diamond whenever a portfolio valuation methodology was changed?

MR. TOMAINO: Objection. Form.

A. I would say it wasn't about portfolio methodology. But again, keeping your CEO informed about meaningful events

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both positive and negative.

Q. So you -- it was your understanding that a change in valuation procedures was something that Mr. Diamond should know about?

A. No, I didn't say that. I said "meaningful events," and you're trying to make it around valuation, valuation methodology. I deemed this to be a meaningful event.

Q. Okay.

A. So it isn't I didn't inform him because it was a valuation methodology change.

Q. Why was the -- why was the portfolio valuation methodology being adjusted with respect to post-NIMS?

A. Up 'til this point we had taken a portfolio approach which didn't differentiate between the vintages, and given the underperformance of the 2006 collateral were saying that no longer made sense.

Q. And when you say "vintage," does that refer to a year?

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A. It does. It refers to mortgage -- the year of the mortgage origination.

Q. And you write in your second paragraph: "In the new methodology, we are using realized losses to date on the underlying collateral as well as current delinquency queues and rating agency projections to estimate cumulative losses and have also used new estimates for deal life prepayment speeds."

Do you see that?

A. I do.

Q. Those items that you list in discussing the new methodology, had they been applied with respect to the private previous methodology?

A. Those factors had been applied but we had used uniform assumptions for all of them on a portfolio basis and that we were going year by year.

Q. And below that paragraph, it appears that you're illustrating to Mr. Diamond what the -- the new values will be versus the old values on these, these

- KVALHEIM - CONFIDENTIAL -

vintages; is that right?

MR. TOMAINO: Objection. Form.

A. I'm showing the value versus cost, and cost is not shown here.

Q. So with respect to value versus cost versus March 2007 month end, you put in your email "total equals." And is that around 21 million?

A. That's right, 21-and-a-quarter million, yeah.

Q. And that's the amount by which the value of those assets exceed their cost basis?

A. Correct.

Q. And you compare that to -- you write in your email, for comparison, the February 2007 month end is a total of 125 million.

Do you see that?

A. I do.

Q. So the new methodology would result in a decrease in value versus cost basis of a -- of approximately 100 million; is that right?

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A. Correct.

Q. Did this adjustment to the methodology require your approval before it was implemented?

A. I would assume so. I don't recall specifically approving, but I think that's a fair assumption.

Q. You can set that aside and we can take a break.

THE VIDEOGRAPHER: Did you say break?

MR. STEWART: Yes.

THE VIDEOGRAPHER: Going off the record. The time is 1:33. This ends disc number three.

(Whereupon, a short recess was taken.)

(Plaintiffs' Exhibit 320, 7/13/07 email chain re: PCG Meeting, BARC-ADS-00327336, marked for identification, as of this date.)

THE VIDEOGRAPHER: We are back on the record. The time is 1:48. This is disc number four.

- KVALHEIM - CONFIDENTIAL -

BY MR. STEWART:

Q. The witness has been handed Exhibit 320, which is a one-page document Bates stamped BARC-ADS-00327336. Let me know when you're ready to proceed.

A. Okay.

(Witness reviewing document.)

A. Okay.

Q. Okay.

Do you recognize this document, sir?

A. I do.

Q. Okay.

What is it?

A. An initial email from John Carroll who ran Subprime Mortgage Trading, Securities Trading, to John Kreitler, his boss. John then forwarding it to me and me responding to John.

Q. On page 336, Mr. Carroll initially writes: PCG's assessment of the 250 million impairment to the PNR book for the end of July is based on their changing their methodology from our agreed upon roll rate

- KVALHEIM - CONFIDENTIAL -

analysis put in place at the end of Q1 2007."

Do you see that?

A. I do.

Q. Based on your reading of this email, did you understand that Mr. Carroll had a disagreement with how PCG was applying a methodology with respect to the PNR book?

MR. TOMAINO: Objection. Form.

A. Sorry. Can you repeat?

Q. Was it your understanding upon reading this email in July 2007, that Mr. Carroll was unhappy with PCG's actions with respect to the PNR book?

MR. TOMAINO: Objection. Form.

A. He disagreed to their -- with their methodology, yes.

Q. In the instance -- withdraw that.

Where there was a disagreement between the desk and PCG as to how a methodology or which methodology should be applied, who had the ultimate authority as to which methodology would ultimately be applied?

MR. TOMAINO: Objection. Form.

- KVALHEIM - CONFIDENTIAL -

A. Oh, the ultimate responsibility was Bob Diamond's. But the two people most responsible for the production of our financial statements were the CFO and the CEO.

Q. Did you have any authority in that decision?

A. Not ultimate authority.

Q. Okay.

The ultimate authority fell on Mr. -- the CEO and the CFO; is that right?

A. Yes.

Q. Would you be consulted as part of that discussion?

A. I would expect so, yes.

Q. Okay.

And was it your decision -- well, withdraw that.

Would you then make a recommendation to Bob as to which, which side you agreed with?

MR. TOMAINO: Objection. Form.

A. Well, first step would be to try to get -- try to resolve the differences

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between the business and PCG, which would normally be the case.

Q. And how would you go about resolving the difference, differences between the business and PCG?

A. Put everyone in a room and talking it out.

Q. And that would include yourself?

A. Not necessarily. But certainly the trading heads, PCG, someone from Finance. In this case, John Carroll as the -- as the sub trading head. Yeah.

Q. Would the trading heads report -- trading heads reported to you, is that right, in, two-thousand --

A. Only John Kreitler and Vince Balducci reported to me. I would certainly know people like John Carroll.

Q. And at the top of page 336, you wrote: "I told Clackson that his chicken little gang had wasted a lot of people's time by running off in a panic without at any point engaging anybody in the front office."

Do you see that?

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A. I do.

Q. What are you referring to when you say "chicken little gang"?

A. I'm referring to the exercise below where they're already recommending an impairment based on the new methodology; whereas, we just reviewed in the prior memo where how the Business, Finance and PCG, had agreed on the new methodology of looking vintage by vintage, and now we're here less than a quarter later and PCG, on their own, without consultation with the business, has come up with a different methodology.

Q. Was PCG the "chicken little gang"?

A. They were.

Q. Okay.

A. Not as a general matter, but in this email.

Q. I won't tell them you said that.

What did you mean when you referred to them as "chicken little gang"?

A. Well, that they are -- look, these were difficult times and stressed markets. But they're -- they're performing an analysis

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that I didn't think was appropriate at the point in time that it's being -- being done.

Q. All right. You can set that aside.

(Witness complying.)

Q. Still looking at Exhibit 320. Do you know which analysis was ultimately applied: PCG's or -- or what Mr. Carroll calls the agreed upon roll rate analysis?

MR. TOMAINO: For -- for which period?

MR. STEWART: Around this, following this email exchange.

A. I don't recall.

Q. Do you know who would have ultimate authority as to the decision of what methodology would be applied?

MR. TOMAINO: Objection. Form.

A. I think I answered that before, the CFO and the CEO. But that would only be on the presumption that in discussions between the Business and PCG there wasn't a resolution of their differences.

Q. If PCG and the traders could not

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agree on what marks to take to a book, would you resolve that disagreement?

MR. TOMAINO: Objection. Form.

A. I would engage to try. But, again, at the end of the day if there are differences, it goes up to the CFO and the CEO for final decision.

Q. And if there was a disagreement, would -- you would essentially communicate to the CEO and CFO and say: "Here is the disagreement as to the numbers, please make a resolution"?

A. No. I think that would more likely come through PCG and Finance than through the front office.

Q. In 2007, did you ever elevate to the CEO and the CFO a disagreement between PCG and the traders regarding marks?

MR. TOMAINO: Objection. Form.

A. Not to my -- not that I can recall.

Q. In 2007, did you ever on your authority reach a resolution with respect to a disagreement between PCG and traders on

- KVALHEIM - CONFIDENTIAL -

between the business and PCG, which would normally be the case.

Q. And how would you go about resolving the difference, differences between the business and PCG?

A. Put everyone in a room and talking it out.

Q. And that would include yourself?

A. Not necessarily. But certainly the trading heads, PCG, someone from Finance. In this case, John Carroll as the -- as the sub trading head. Yeah.

Q. Would the trading heads report -- trading heads reported to you, is that right, in, two-thousand --

A. Only John Kreitler and Vince Balducci reported to me. I would certainly know people like John Carroll.

Q. And at the top of page 336, you wrote: "I told Clackson that his chicken little gang had wasted a lot of people's time by running off in a panic without at any point engaging anybody in the front office."

Do you see that?

- KVALHEIM - CONFIDENTIAL -

A. I do.

Q. What are you referring to when you say "chicken little gang"?

A. I'm referring to the exercise below where they're already recommending an impairment based on the new methodology; whereas, we just reviewed in the prior memo where how the Business, Finance and PCG, had agreed on the new methodology of looking vintage by vintage, and now we're here less than a quarter later and PCG, on their own, without consultation with the business, has come up with a different methodology.

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Q. I won't tell them you said that.

What did you mean when you referred to them as "chicken little gang"?

A. Well, that they are -- look, these were difficult times and stressed markets. But they're -- they're performing an analysis

- KVALHEIM - CONFIDENTIAL -

that I didn't think was appropriate at the point in time that it's being -- being done.

Q. All right. You can set that aside.

(Witness complying.)

Q. Still looking at Exhibit 320. Do you know which analysis was ultimately applied: PCG's or -- or what Mr. Carroll calls the agreed upon roll rate analysis?

MR. TOMAINO: For -- for which period?

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Q. If PCG and the traders could not

- KVALHEIM - CONFIDENTIAL -

agree on what marks to take to a book, would you resolve that disagreement?

MR. TOMAINO: Objection. Form.

A. I would engage to try. But, again, at the end of the day if there are differences, it goes up to the CFO and the CEO for final decision.

Q. And if there was a disagreement, would -- you would essentially communicate to the CEO and CFO and say: "Here is the disagreement as to the numbers, please make a resolution"?

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Q. In 2007, did you ever elevate to the CEO and the CFO a disagreement between PCG and the traders regarding marks?

MR. TOMAINO: Objection. Form.

A. Not to my -- not that I can recall.

Q. In 2007, did you ever on your authority reach a resolution with respect to a disagreement between PCG and traders on

- KVALHEIM - CONFIDENTIAL -
their marks?
MR. TOMAINO: Objection. Form.
A. Not that I recall.
Q. In 2007, did you ever make a recommendation to Mr. Diamond or the CFO as to how a disagreement between PCG and the traders with respect to the marks should be settled?
MR. TOMAINO: Objection. Form.
A. Again, not that I recall. And it -- it's not the process that I described.
The traders' marks are the traders' marks. If PCG is objecting to them, they bring them up through Finance to the CFO. So it really wouldn't be my position to recommend PCG versus a trader mark.
I already had the authority to adjust trader marks based on my view of the trader's marks, but it wasn't really for me to choose between PCG and traders.
Q. Did you have the authority to adjust trader marks after the -- after a disagreement had been brought up to the CEO and CFO level?

- KVALHEIM - CONFIDENTIAL -
A. No.
(Plaintiffs' Exhibit 321, handwritten notes, BARC-ADS-GK-00000143, marked for identification, as of this date.)
Q. Sir, you've been handed Exhibit 321, which is a one-page document Bates stamped BARC-ADS-GK-000000143.
Take your time to review the document and let me know when you're ready.
(Witness reviewing document.)
A. Okay. Ready.
Q. Is Exhibit 321 a document that you produced in connection with this deposition?
A. It is.
Q. Okay.
And these are notes that you took during your time at Barclays?
A. Yes, they are.
Q. And the date at the top reads "11/9." Do you see that?
A. I do.
Q. That's 11/9/2007?
A. Yes.

- KVALHEIM - CONFIDENTIAL -
Q. What does "VB" stand for?
A. Vince Balducci.
Q. And I'll read this sentence, and -- and if I misread it, just feel free to correct me.
At the top, you wrote: "1 million to stay but agreement unclear."
Did I read that correctly?
A. Yes.
Q. What agreement are you referring to?
A. Vince is informing me he's been told that they'd like him to stay 'til the end of the year, but then he's going to be leaving. And they've offered him a million dollars to do that. And he's saying, but the form of the agreement unclear.
Q. Okay.
Below that, you write: "Ricci, Clackson, Prior, King, Lee Guy sequestered for six hours to value Saypoff book!"
Do you see that?
A. I do.
Q. Who's "Prior" referring to?

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A. Ian Prior, a member of the Credit Department.
Q. Do you know what his position was in November '07?
A. I believe he was the head of Credit in the Americas.
Q. And "King," does that refer to Stephen King?
A. I believe so, yes.
Q. Who was Lee Guy at this time?
A. Lee Guy was the Barclays Capital head of Risk based in London.
Q. And you wrote "sequestered for six hours to value Saypoff's book! Neither Sarvjeet nor VB invited."
Do you see that?
A. I do see that.
Q. Did I read that correctly?
A. Yes, you did.
Q. Who does "Sarvjeet" refer to?
A. Sarvjeet Garcha was the chief lieutenant for Vince Balducci in the credit derivatives area.
Q. Are these notes referring to a

EXHIBIT 44

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

------------------------------X
IN RE:)
) Master File No:
BARCLAYS BANK PLC) 1:09-cv-01989-PAC
SECURITIES LITIGATION)
)
------------------------------X
)
THIS DOCUMENT RELATES TO:)
ALL ACTIONS)
------------------------------X

October 22, 2015
9:39 a.m.

** C O N F I D E N T I A L **

VIDEOTAPED DEPOSITION OF

RICHARD LANDREMAN, taken by Plaintiffs, held at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York, pursuant to Notice, before Mayleen Cintrón Ahmed, a Registered Merit Reporter, Certified Realtime Reporter, and Notary Public of the State of New York.

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1801 Market Street – Suite 1800
Philadelphia, PA 19103

- R. LANDREMAN - CONFIDENTIAL -

the marks were at any point in time.

So we had built reports that would look for price changes, you know, overnight, any major prices movements, things like that, to try and monitor the marks in the books.

Q. Okay.

A. But we were responsible to review everything at least monthly.

Q. Okay.

And that process you just described, that was for each of the assets that you were responsible for?

A. For MSRs it was -- you don't have external marks for those.

Q. Right.

A. So you really had to bring in -- you had to model those and -- and do the valuation based upon your assumptions that you could observe.

Q. Okay.

So setting aside the MSRs, were the assets that we've talked about, that was the procedures that you just --

A. Yes.

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Q. -- described was consistent for all those assets; is that correct?

A. Yes.

Q. Okay.

So if there was a variance for -- between the price testing results that your group compiled and the marks that were provided to you by the traders, what would happen?

A. Well, first I would have to go in and research to see what my assumptions are and, you know, if I could explain and make sure that I did all of my homework before I talked to a trader.

And I would go in and look at -- ask the trader why there was a major variance, to see if they could explain if there was one of the assumptions that were being applied that might have been something different.

Many times it was the uniqueness of the security may have caused there to be some difference, or maybe a data vendor wouldn't have that level of sophistication in

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their model.

Q. So were you personally doing the price testing for each of these asset classes? Or did you have individuals working for you who would do the price testing?

A. It started off being just me, and then I brought in, you know, staff to -- that I trained to do this.

Q. Okay.

A. And they would have to review that with me.

Q. And did you have different staff members for different asset classes?

A. As I grew, it became different. And I tried to provide coverage where everyone had, you know, learned a little bit about each asset class.

Q. Okay.

But the price test -- their price testing results, the people who worked for you, that result would come to you and then you would decide whether or not to elevate any variance to the traders; is that correct?

A. Correct.

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Q. So if -- so if you did see a variance, you would, first thing you said, do your homework to make sure it was --

A. Uh-hmm.

Q. -- correct; is that right?

A. Uh-hmm.

Q. And then after you had done your homework, let's assume there was still a variance, what would you do next?

A. I would -- first of all, I would challenge the trader. And if the trader couldn't explain the variance or the difference or explain why, then we would go to, you know, the appropriate chain of command.

I would go, like, for example, to Kaczka or whoever the manager was of that trader. And -- and I would have to present the price testing results to the trader as well.

We did have an instance where a trader had mis-marked books and he had been relieved of his responsibilities.

Q. You remember that? You

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specifically remember that happening?

A. Uh-hmm.

Q. Okay.

And was this one time?

A. Well, I mean, in the time I was doing the agency business, just the agency business, there was a -- somebody in one of the conduit business that had bought some assets that he wasn't quite familiar with and he wasn't sure how to mark them. And he ended up losing a lot of money that he made a mistake on and it cost him his role.

Q. And when was that?

A. I think it was like 2005, 2006.

Q. Okay.

The process by which you would elevate the variance, how would you decide whether or not you would go to Mr. Kaczka or someone else?

A. I would always go to Kaczka.

Q. Okay.

A. I mean, I have to go up the chain and make sure everyone knows that there's an issue, so...

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Q. Okay. So your first step would always be to report any variance to Mr. Kaczka?

A. Of course.

Q. Okay.

And then you said in some instances you would go speak with the trader's manager; is that correct?

A. Yeah. I could also go into the head of the RMBS trading business and go talk with him as well, and go talk with him about any of his traders at any time. Because he wanted to know; he looked at everything we did. Tom Hamilton was that, responsible.

Q. So, generally, how often would it occur that you would have to go to Mr. Kaczka and report variances for your -- the assets that you were in charge of pricing?

A. Until --

MR. TOMAINO: Objection to the form of the question. You answer.

A. Until 2006, there really wasn't major issues.

Q. Okay.

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So --

A. I mean, we had the one issue with one of the conduit traders who had purchased some assets that he wasn't -- he wasn't allowed to buy those types of assets. It was clearly a technical mistake on his part.

Q. Okay.

Setting aside that single instance, up until 2006, this didn't happen -- this process didn't happen very often; is that what you're saying?

MR. TOMAINO: Objection to form.

A. No. The traders -- whenever there was an -- the traders were open and honest and -- you know, we had purchased ten traders from Citibank. These were guys that had been very successful in their careers that they were brought in. So that was -- it was very few issues that came up in those time frames.

Q. Okay.

So starting in 2006, during 2006, did more issues occur?

MR. TOMAINO: Objection to form.

A. Well, when you expand your

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business into subprime, there -- there were issues then.

Q. Okay.

So the business expansion into 2006, for you that included overseeing some subprime assets; is that right?

A. Uh-hmm.

Q. Okay.

So what were the issues that you saw with regard to the subprime assets?

MR. TOMAINO: Objection to form.

A. The subprime assets had -- at least the assets we were acquiring were less observable. There were -- it wasn't like a data vendor was providing us whole loan pricing or mortgage servicing rights pricing.

So we would have to be more involved in modeling and making sure the assumptions that we had in our models were consistent with what was being published out in the secondary market.

Q. So did that result in there being increase in the amount of variance between your price -- your pricing and the marks that

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that? From whom were you receiving that, those new inputs?

A. We --

MR. TOMAINO: Objection. Form.

A. We had multiple sources of data that we had. One was our own portfolio from HomeEq. We had what we thought was a fairly comprehensive view in our own data from the $53 billion portfolio that we could analyze and actually get realtime data from our servicer, so we could look at how the loans were transitioning from 30-, 60-, 90-day delinquent, how many loans cured, how many loans got worse.

We saw the loss severities, we saw how much we lost on foreclosures, and we didn't have a delay in that time so we were able to use that information to our advantage to try and make sure that we had appropriate assumptions in our models.

We also had external research that was publishing; we had external data vendors providing us data, whether it was McDash or Loan Performance. Just the information from

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our own securities portfolio that we could look at.

Q. Okay.

Did you use that data to change your assumptions during 2007?

A. Yes.

Q. And the external data that you received, was there any delay in -- in receiving that data? And I say that -- you mentioned earlier the data that you had from your own portfolio, you had it realtime, immediately.

Was there a delay in receiving the external data?

MR. TOMAINO: Objection. Form.

A. We would receive our servicing portfolio statistics every month. And then if you think of what a data vendor is doing, he is actually out there getting everybody's data. So you need to consolidate everybody's data and there is usually a one-month delay. So the data you are looking at, the trends you're seeing from the data consolidators may have been delayed by up to, you know, a

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month.

MR. OLTS: Okay.

MR. SPADA: Luke, when we get to a convenient break point.

MR. OLTS: Yeah, sure.

MR. SPADA: We have been going over an hour.

MR. OLTS: All right. We can take a break. That's fine.

THE VIDEOGRAPHER: The time on the video monitor is 10:42. We're off the record.

(Whereupon, a short recess was taken.)

THE VIDEOGRAPHER: We are back on the record. The time on the video monitor is 10:59 a.m. This starts media two.

BY MR. OLTS:

Q. Okay. So just prior to the break, we were just discussing some changes you had seen in the subprime market in 2007; is that right?

A. Uh-hmm.

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Q. Okay.

And I believe you had testified that based on the changes that you had seen in the market, you made some adjustments to the inputs to your pricing model for subprime assets; is that correct?

A. Correct.

Q. Okay.

Other than the changes to the inputs to your pricing model, did you make any other changes to how you were pricing subprime assets during 2007?

MR. SPADA: Objection to form.

A. Can you be a little more specific? What --

Q. Sure. I mean, you described what you had seen in the subprime market in 2007.

And I just want to know other -- other than changing the inputs, did you do anything else to adjust how you were pricing subprime assets on Barclays books?

MR. TOMAINO: Objection to form.

A. I mean, we -- we were still using the same discounted cash flow models to --

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You know, we were still using Intex, we were still using the same type of assumptions. It was really more rigor in defending the inputs into those specific assumptions.

Q. And was there an increase in the variance between what the traders were marking the books at and how you were pricing the assets for subprime in 2007?

MR. TOMAINO: Subprime whole loans or securities or both?

MR. OLTS: Both.

MR. TOMAINO: Objection. Form.

A. For the securities that we were pricing in the subprime world, there was a difference of opinion in the types of assumptions -- the change, the order of magnitude that the assumptions were changing, yes.

Q. Okay. So let's -- we'll break it down a little bit.

So let's first talk about -- well, the subprime whole loans. Was there a -- was there an increase in the variance during 2007 for the subprime whole loans?

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MR. TOMAINO: Objection. Form.

A. The subprime whole loans were -- that we were looking at were the originated portfolio from EquiFirst, so that was sort of an interesting conversation, a unique conversation.

Because when we acquired EquiFirst, we changed their underwriting guidelines and so you really couldn't compare it to what was out in the market at that time. So that would be one difference.

And then you almost had to wait to see how those loans would perform for a period of time before you could really argue one way or another whether or not the change in the underwriting parameters that we implemented at EquiFirst were taking effect.

Q. Okay.

So in your opinion, were you able to accurately price the subprime whole loans throughout 2007?

MR. TOMAINO: Objection. Form.

A. We believed that the assumptions we were using were credible, and they were

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defendable; that we could point to other observable trades that had occurred or other published publications at that time that would support our use of those assumptions.

Q. And was there a difference of opinion between your group and the traders as to the valuation of those subprime whole loans --

MR. TOMAINO: Objection.

Q. -- during 2007?

MR. TOMAINO: Objection. Form.

A. There were -- there were differences.

Q. Okay.

And what were those differences?

MR. TOMAINO: Objection. Form.

A. The differences were: the magnitude of the losses; the scope; the amount of prepayments that we were expecting. All of the assumptions were questioned and debated.

Q. Okay.

So did you -- did you believe that the -- did your price testing results equate

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to a lower price than what the traders were marking the book at?

MR. SPADA: Objection.

MR. TOMAINO: Generally? Just note my objection.

A. It depends. There were different categories of loans that had different pricing differences. But generally, we tended to be a little -- we were -- we tended to be on the lower side of the valuation spectrum than the traders might have been, but they had different information than we had.

Q. Okay.

But it was part of your job to just have discussions with them about that different information that they had, right?

A. Yes.

Q. Okay.

And after discussing that different information with the traders, did you increase your marks? Or did you increase your prices for the subprime whole loans?

MR. TOMAINO: Objection. Form.

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A. We are allowed to be -- differ.

Q. But that -- that wasn't my question.

Did you increase your price based on the information that you were provided by the traders for the subprime whole loans?

MR. SPADA: Objection to form.

A. No.

Q. You did not?

A. No.

Q. So despite receiving that information, you did not increase your prices; is that right?

MR. TOMAINO: Objection. Form.

A. We felt comfortable with the information we had that there was an acceptable range of difference that we were allowed to perform within.

Q. Do you recall what the variance was generally for the subprime whole loans --

MR. TOMAINO: Objection.

Q. -- during 2007?

MR. TOMAINO: Objection. Form.

A. Not -- not offhand. I don't

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remember whether it was, you know -- it was generally small changes to some of these assumptions would have fairly large impact to the valuations. So, you know, a small change in a loss assumption might equate to a number that might appear large but may be -- is really a small change in a default assumption or a loss assumption.

Q. You testified earlier that there was some -- there were different categories of loans within the --

A. Uh-hmm.

Q. -- subprime whole loan book; is that right?

A. Correct.

Q. Okay.

Were there categories of loans for which the traders had lower prices than what your group cal -- calculated? Excuse me.

MR. TOMAINO: Objection. Form.

A. I don't recall. I would need to see a report from that period of time.

Q. Okay.

But as you sit here today, you

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can't recall any categories of loans for which the traders had lower marks than what your prices were coming out at; is that correct?

MR. TOMAINO: Objection. Form. Foundation.

A. I don't remember the marks, period. So I would need to look and see which asset categories we had versus their marks, so. I don't recall.

Q. But, generally, you remember it being that your prices were lower than the traders' marks; is that right?

MR. TOMAINO: Objection. Form. Misstates the testimony.

A. Generally, my price testing resulting showed there was a variance where we thought there would potentially be more room to move down earlier in the year. By the end of the year, many of those were resolved.

Q. And when you say "end of the year," you mean by the end of 2007?

A. Well, every year. I mean, we --

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whenever we published financial statements, we wanted to make sure that there were -- you know, variances were, you know, put into a range that were, you know, within the policies or the procedures that said, you know, within a certain range, and we would escalate whatever issues through management and we would talk to those issues.

Q. Okay.

Do you recall what the allowable range of the variance was for subprime whole loans during 2007?

MR. TOMAINO: Objection. Form.

A. I don't recall that number.

Q. Do you recall generally what it was?

MR. TOMAINO: Same objection.

A. I don't recall that number, no. I mean, no.

Q. I mean, so the change in the EquiFirst underwriting guidelines that you described earlier, was that a factor that you looked at in conducting your price-testing analysis?

EXHIBIT 45

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC)

SECURITIES LITIGATION) Master File

------------------------- No. 1:09-cv-01989-
PAC

This Document Relates to:)
All Actions)
-------------------------)

125 Broad Street
New York, New York

April 5, 2016
9:44 a.m.

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Philadelphia, Pennsylvania 19103

right?

MR. RUSSO: Objection.

A. Not at all.

Q. You didn't share that view?

A. By then, by the time the letter went out, I did have the view that the monolines were in deep, deep trouble, but it wasn't the origins of the --

Q. Every single monoline?

A. Well, specifically the monolines on which we were most focused.

Q. Which were?

A. Which were MBIA, Ambac, FIGIC and FSA.

Q. And those were some of the ones in which he held a short position, right?

A. I think he had shorts in MBIA and Ambac. I'm not absolutely certain of that.

Q. You shared his view at the time that MBIA and Ambac were of questionable and worsening creditworthiness, correct?

A. Well of which time?

Q. Early 2008, January?

A. Yes.

Q. Did you have that view prior to January '08?

A. No, I had a more neutral view actually.

Q. When did the view change?

A. As we completed the build-out of the project in question.

Q. What was the project in question exactly?

A. What the -- what the project was was our desk, we would never -- we would never -- we were never willing to do negative basis trades or to enter into credit default swaps with the monolines because we regarded the monolines as being too obvious as sorts of wrong way risk, in other words, that in principle when the -- when there was going to be a problem with the assets that the monolines were going to provide a credit default on that was going to be exactly the time that the monolines were going to be unable to pay on the insurance that they had written to you.

So, we gotten into a lot of trouble about this view because the monolines,

particularly MBIA and to a lesser extent Ambac, were very big customers of Credit Suisse and were very vocal to sales management as to why is it that Credit Suisse won't do business with us when Credit Suisse is happy to sell stuff to us, but Credit Suisse's CDO desk won't interact with us in other ways. This got into the fixed income management level.

So we kind of realized at a certain point, mostly Kareem Serageldin, to a lesser extent David Thompson, that we needed to come up with not just kind of an in principle answer to this question, but come up with a researched reasoned answer as to whether or not the monolines were creditworthy with respect to the assets that we worked in.

So we basically -- I ran a small team, a couple of very smart young analysts and associates whose job it was to gather all of the information that they could, both from kind of traditional public sources, from more complex public sources like interrogating SEC databases and then from market sources that we could gather information on and essentially we

tried to completely replicate the structured finance exposures of the three main monolines.

So what we basically did is, we got their overall exposure as disclosed in their 10-K's and other documents. We then downloaded every RMBS security from the Edgar database and picked up all of the ones that got MBIA or Ambac wraps, put those together in a database, connected those things up with the information we were able to gather about the ABS CDOs from market sources of ABS CDOs that were out there and build up a model that was an internal Credit Suisse model that contained all of these inputs.

Then what we did was, we hooked that up to our research department's subprime model and what that subprime model was was a model that investors who were customers of Credit Suisse could use to input econometrics basics like interest rates, unemployment rates, house price changes, into a model and have it that that model would predict based on a very, very large database of prior inputs into it, essentially predict what the default rate was

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going to be for a specific RMBS security based on those econometric inputs.

So we hooked that thing up to this thing and then we worked with research to generate some kind of macro assumptions for house prices and other things. What this thing did is, it ran through Intex all of the exposures that MBIA and Ambac had and to a lesser extent, FSA and FIGIC and generated loss scenarios for MBIA and for Ambac and FSA and FIGIC based on this, but the objective of it wasn't particularly with the view of taking a short on the monolines or anything of that sort. It was just essentially trying to figure out whether we should do business with them or not.

Q. And you determined not to?

A. Yes, in a nutshell, yes. Well, no. Let me rephrase that. What we did was, we then took the output through the model to Jim Healy, who ran fixed income at the time and he ran through this thing several times and then he took the decision to basically tell sales management to put an end to it, that we weren't

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going to write exposure with the monolines.

Q. And that decision reflected some assessment of their creditworthiness or lack thereof, correct?

A. Yes.

Q. Not every market participant shared that same assessment, correct?

MR. RUSSO: Objection.

A. True.

Q. If other market participants had a different view of Ambac or MBIA's creditworthiness and decided to buy protection from them, that is not -- that is not an improper or somehow inappropriate decision, that was their opinion and their judgment, correct?

MR. RUSSO: Objection.

A. Well, no, your sentence isn't really correct. It's formulated.

Q. Okay.

A. Because by the time of the views -- by the time of the views we are discussing, nobody was buying protection from the monolines.

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Q. But they were still making assessments of their exposure to monolines, correct?

A. Yes.

Q. On page 53 that we looked at, there is an entry for monoline exposure, right?

A. Yes.

Q. And that entry, that number in there is the result of a very involved assessment of the creditworthiness of the monolines, right?

MR. RUSSO: Objection.

A. No.

Q. What is it the result of?

A. That's the 1.335 which is the markdown on the underlying MBTs.

Q. Do you know what a credit evaluation is?

A. Yes, 59 million.

Q. So the 59 million pounds CVA that results in the $1.335 billion monoline exposure number was an assessment of creditworthiness, correct?

MR. RUSSO: Objection.

A. Well, yes, but I'll draw the

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distinction between the assessment as you previously termed it and what this is, which is a valuation of creditworthiness as it goes into the CVA.

Q. Fair enough. But that was a subjective opinion that was reached based on assessing a wide variety of information?

MR. RUSSO: Objection.

A. Totally wrong.

Q. What is it based on?

A. Here is what you do when you're doing a CVA and this is in the Barclays paper too, so we saw what they did and it wasn't inconsistent with what we would do generally.

When you're doing a CVA, you project out your cash flows on the underlying, the cash flows as expected in dealing with that counterparty. Then you take as an input with respect to -- with respect to that counterparty, you take the credit default swap market spreads and you use those market spreads to come up with an assessment of the probability of default and the loss given default projected forward at each future cash

flow date to the extent that you've got a forward curve of credit default swaps -- forgive me if I go a little slowly here because I'm going to try to avoid getting too technical.
Q. Let me stop you there though. That process of generating the CVA is one that involves making assumptions and projections, correct?
A. Well, as much as I said so far doesn't involve a great many assumptions or projections beyond what is already built into market prices and into an Intex model, publicly available model.
Q. But there are assumptions built into those models, correct?
A. At the margin, but for what I described so far, not that many assumptions.
Q. Have you analyzed how Barclays conducted its CVA analysis with respect to monoline exposure?
A. Yes, the one big catch is when you get to beyond the date of the longer stated default swap, then you're right, you have to

make some assumptions as to how you assess the credit default swap probabilities for cash flows from that data out to infinity.
Q. Did you assess how Barclays did that aspect of the CVA analysis?
A. Yes.
Q. Are you expressing any opinions in this case about Barclays CVA methodology?
A. No.
Q. You looked at it and you have determined that it was appropriate; is that right?
MR. RUSSO: Objection.
A. I can't really do that because what I reviewed was the verbal descriptions of it, which seems reasonable, but what I didn't see was the underlying spreadsheets themselves.
Q. Did you ask for them?
A. No.
Q. Why not?
A. There is always more things you can add to the list here.
Q. Was your analysis or your review, if that's a better word, of Barclays' methodology

for doing the CVA on monolines something that was important to the opinions you reached?
A. No.
Q. The reason it wasn't important to the opinions you reached is because you're not claiming that the 59 number in this -- that we were just talking about was an inappropriate CVA, it's not part of your opinion, right?
MR. RUSSO: Objection.
A. It's not part of my opinion.
Q. The 1.335 billion pound monoline exposure that is on page 53, did you analyze the methodology that yielded that number?
A. In part, yes.
Q. I think you said before that reflected the mark to market decline in the underlying and short assets, right?
A. Correct.
Q. Are you ex --
A. Or to be precise 1.335 plus 59.
Q. Fair enough and thank you for clarifying that.
A. Tiny clarification.
Q. So right, the 1.335 billion pound

monoline exposure number is net of the $59,000,000 credit valuation adjustment?
A. Yes, so it's at 1.394 was the actual number. Sorry, just a small correction.
Q. Thank you for the clarification. Have you offered any -- sorry, as part of your work in this case, did you -- do you claim that the way the 1.335 net of the 59 was arrived at was as a result of a methodology that was not reasonable?
MR. RUSSO: Objection. Are you asking how it is calculated?
MR. TOMAINO: No, I'm asking him the methodology of how it is arrived at.
MR. RUSSO: Okay. Objection.
A. I think the methodology was reasonable.
Q. You're not claiming that the decline in value of the underlying insured assets reflected in that number was a number different than 1.335 after the 59 CVA, right? You're not taking issue with that number?
A. I'm not taking issue with that number.

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Q. I just wanted to clarify. That's what I thought.

Q. So, your --

A. 2:15 or so we take a very short break?

Q. I'll do it earlier if you need to. I don't care when the break is.

A. I think I'm in good shape, but very short.

Q. Certainly. Roman VII, "Leveraged Loans and CLOs and Their Risks in 2007-2008." I'm looking at your opening report that runs from paragraph 66 to 72 and again, is it fair to say that this is in here as factual background and context and that there are no opinions set forth in this section?

MR. RUSSO: Objection.

A. Well, my opinion is summarized in paragraph 72 as we did with the other ones, which was that substantial risks were indeed present in the CLO market and those were manifested by falling prices. People were conscious of them by that point in the CLO market too.

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Q. That is what I was going to ask you. Is it your testimony by late 2007, early 2008, substantial risks were present as manifested in falling prices in leveraged finance and CLOs, right?

A. Yes.

Q. And as far as you're concerned, that was publicly known?

A. It was, yes.

Q. Roman VIII, "Commercial mortgages and their risks in 2007 and 2008" that runs from paragraph 73 through 77 and again, is it fair to say that everything you've listed here in your last paragraph 77 was publicly known by April 2008?

A. Yes.

Q. You said that, "By April 2008, the CMBX.AAA Series 5 index was trading around 85% of face value and the CMBX.BBB Series 5 index was trading around 30% of face value." And that "Both had traded around 100% of face in early 2007." Do you see that?

A. Yes.

Q. What were they trading at at

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12/31/07?

A. You know, I don't recall. I need to go and take a look.

Q. Did you look at that for purposes of your work here?

A. I don't remember.

Q. It wasn't really relevant to any opinion you were rendering, right?

A. I don't know why I put earlier -- I don't recall.

Q. I'm sorry, I thought you were finished?

A. The answer is I don't recall.

Q. So Roman IX is, "SIVs and SIV-LITES And Their Risks in 2007-2008," and that runs from paragraph 78 to all the way to 99. Do you see that?

A. Yes.

Q. And the information set forth in this section, it's fair to say was all publicly known during the time period being described of 2007 and 2008, right?

MR. RUSSO: Objection.

A. Yes.

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Q. I'm going to be asking you some questions about your report still, but I also -- some of them are going to relate to page 53 of the 2007 20-F, so if you still have that open, that will be great.

A. Yes.

Q. Paragraph 103 of your opening report says that in -- and again I think it's citing -- paragraph 103 is citing to page 53 of the 2007 20-F, right, and page 51 I guess?

A. Yes, 25, 53 and 51.

Q. So there are some exposure numbers for CDOs listed in your paragraph that are taken off the source pages of the 20-F; am I right?

A. Yes.

Q. And you say that it's your opinion -- I'm reading from the last -- the second last sentence of paragraph 103 that it's your opinion that, "The 2007 20-F understated the true size and risks associated with Barclays' ABS CDO position." Do you see that?

A. I do.

Q. And then you go on in this following

in various ABX indices.
Q. And you don't regard those as hedges against the super senior exposure?
A. No.
Q. Why not?
A. Because if you actually look at the spreadsheets that Barclays used to store the information in what they had was they had ABS CDO super senior positions, they had subprime positions and they had a number of other positions and they had an ABX short position and what they did was each -- the spreadsheets that I saw only had the information on monthly intervals, so intra month I can't tell, but the information, the positions in the ABX changed at different set intervals, but then some of them were allocated to the ABX book and some of them were allocated to the subprime book and those allocations changed at different times along the way in such a way to argue that these things were stapled to the ABS CDO positions at any given moment in such a way to make them hedges.
Furthermore, as a factual matter, to

say that the ABX is truly a hedge of your ABS CDO positions is not really correct. It's not an effective hedge for ABS CDO seniors. What it will do admittedly is when the price on your ABS CDOs goes down, it's reasonable to assume that the ABS will also go down. That is the limit with its effectiveness as a hedge.
Q. Did you look at where the 1347 hedge number came from?
A. Yes.
Q. Did you find it?
A. Yep.
Q. Is it your testimony that that number should not have been depicted here as reducing the exposure down to 4671?
A. Yes.
Q. Where should it have been shown?
MR. RUSSO: Objection.
A. There is no reason why you couldn't show it separately as a short against the overall capital markets exposures book.
Q. So it would have reduced the exposures. It's just a question of where it appeared in the chart?

A. Yes, it would reduce the exposures overall. It's not just a question of where it would appear in the chart. It's how do you characterize it short of that sort in the context of the overall credit market positions.
Q. But it would have reduced the exposure?
A. It wouldn't have reduced the exposure of the ABS CDO super seniors.
Q. But it did reduce the exposure of Barclays' credit market exposures?
MR. RUSSO: Objection.
A. It did reduce the exposure of Barclays' credit market exposures overall.
Q. And the opinion you just rendered is based on your view of the ABX and how it can be used as a hedge against ABS CDO super senior positions, right?
MR. RUSSO: Objection.
A. Based on two things. The first is seeing the positions in the spreadsheets and seeing the way that they put on a short, the short built up through the third quarter, maybe into the fourth quarter of 2007. They then --

they didn't add to the short or change it, but each month they reallocated it between the -- between the ABS CDO super senior book and the subprime book.
At year end it so happened that the hedge that was allocated to that book was 1347 and the rest of the position was allocated to the subprime book. The following month that changed again. So there was no consistency with respect to there being a hedge position that was stapled to the book, if you will. The second is just as you say, which is the nature and character of the ABX itself.
Q. But it's your testimony that year end 12/31/07, the 1347 hedge position was in the ABS CDO super senior book?
MR. RUSSO: Objection.
A. At that particular instance, it was in the ABS super senior book.
Q. So let me just recap. There was a little bit of a digression. So the 6018 exposure before hedging is not a number you take issue with?
MR. RUSSO: Still talking about

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excluding negative bases?

Q. With respect to CDOs that are not sitting in the MBT book, right?

A. Yes.

Q. And in the monoline insurer's number, the 1.335 we already talked about that, you don't take issue with that number either, or with respect to the 59 CDA on top of that number, right?

MR. RUSSO: Objection.

A. Well, I take issue with how it's characterized, but I don't take issue with the number itself.

Q. Right, and by that you mean, you think that Barclays should have disclosed the notional amount of all of the monoline credit default swaps basically, right?

MR. RUSSO: Objection.

A. No, that is a separate thought, but specifically what that 1.335 represented or to be precise 1.394 represented were the losses on their -- on the CDOs and CLOs in their MBT book and correspondingly the 1.335 was the corresponding purported change in fair value of

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their monoline protection positions as of that date.

Q. Right, and okay -- and as we've said, you're not claiming that the 1335 was an inaccurate description of the amount that the underlying insured assets had dropped post the credit value adjustment of 59?

A. I'm not.

Q. You wanted to take a break at quarter after?

A. Yes, whenever it suits you.

Q. Let's take five now.

THE VIDEOGRAPHER: The time is approximately 2:11 p.m. This is the end of media number three and we are off the record.

(Brief recess taken.)

THE VIDEOGRAPHER: The time is approximately 2:24 p.m.. This is the beginning of media number four and we are on the record.

Q. Mr. O'Driscoll, still staying with page 53 of the 20-F for a second, there is a paragraph on the right-hand column of page 53

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that says "Barclays Capital." It's the fourth paragraph down. "Barclays Capital held assets with insurance protection or other credit enhancement from monoline insurers. The value of exposure to monoline insurers under these contracts was 1.335 million pounds at" -- that's the 12/31/07 number and then in parentheses it says, "Comparatively at June 30, '07 that number was 140 million pounds." Do you see that.

A. I do.

Q. Then it says, "There were no claims due under these contracts as none of the underlying assets were in default." Do you see that?

A. I do.

Q. In your opinions in this case you're not taking issue with anything that is stated in that paragraph, right?

MR. RUSSO: Objection.

Q. You don't claim there is anything inaccurate in that paragraph?

MR. RUSSO: Objection.

A. No, except that the value of

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exposure was not a concept that investors would have understood or would likely have correctly read in the context of the disclosure of that 1335 amidst the other positions and exposures listed off on the left-hand column.

Q. How do you know that?

A. Because I see 1335 in the text on one side and I see 1335 against monoline issuers in the table on the left side.

Q. What I'm asking you is, why do you think an investor would not understand the 1335 to be the value of exposure to monoline insurers under those contracts?

MR. RUSSO: Objection.

A. Well, what people would not have understood was value of exposure, value of exposure not being a term that I recognize or I think anybody else would readily recognize and particularly when that exposure is included in the table on the far side, which are principal balance exposures, it was all the more misleading.

Q. So is it -- when you read this, is it your testimony that when you read this page

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are doing no new volumes with the monolines. Instead what he said is, it is a result of the mark to market change rather than a lot of new volume. So he muddied the water here once again as to whether they were adding to the exposures or whether the value of exposure meant something different.
Q. But what he said is that increase in exposure is as a result of the mark to market change in the underlying assets rather than a lot of new volume. So from that you conclude that primarily the change from 140 to 1.335 billion was exactly what you were describing before, which was the decline in the market value of the underlying and short assets, right?
MR. RUSSO: Objection.
A. It's -- I think it's a reasonable inference, but he's mixed together the two concepts of mark to market together with additional transactions with the monolines in such a way as to make it impossible for investors to be clear as to whether the 1335 is, in fact, the market value of exposure, i.e.

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the current exposure in risk terms, or whether it's some culmination of risk exposure and not a lot of new volume.
Q. But a reasonable inference from what Mr. Lucas said was that it reflected the mark to market decline in the underlying assets, right?
MR. RUSSO: Objection.
A. I think a reasonable assessment is that some part of it was mark to market change and some part of it was new volume. That said, obviously it was not new volume because we know they didn't put on any new volume.
Q. Based on his statement that the increase in exposure is the result of the mark to market change in the underlying assets, it would not be reasonable to interpret the 1.335 billion as the overall notional amount of all of Barclays' monoline insurance contracts, right?
MR. RUSSO: Objection.
A. I don't agree. Unfortunately the --
Q. If that's your testimony, that's your testimony.

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MR. RUSSO: You can finish.
MR. TOMAINO: He said I don't agree. That was the question.
MR. RUSSO: He was trying to say more before you interrupted him.
Q. Do you want to say more? Go ahead.
A. Well, the earnings transcript at those two points was simply to confuse -- to really set the record straight. It's an unfortunate reality that these were all Q&A responses rather than being in the initial script which probably didn't help, but the reality is that Chris Lucas' two responses, I can't put any positive weight on them.
Q. What do you mean positive weight?
A. Meaning I can't regard them as clearing up the matter.
Q. For you?
A. For me, nor can I believe that any reasonable person in the space would have come away with the clearly right answer based on this.
Q. Did anybody ask a follow-up question as to whether or not this was current exposure

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to the monoline versus overall notional? Did anybody ask that question?
A. That -- Chen's question, as you point out, was the following question.
Q. When Lucas answered it in the way we just read, did anyone follow up and say what do you mean?
A. Was there a follow-up to the follow-up?
Q. Yes.
A. No, there was one follow-up and that was it.
Q. Let me ask you -- let's just take a look at a few pages of the 20-F. So page 89.
MR. RUSSO: Are you looking at the numbers on the top or bottom right-hand corner?
MR. TOMAINO: I'm looking at the page numbers in the lower right.
A. The big page numbers in other words?
Q. Yes. I just want to ask you, I think I know the answer, but I just want a clear record here.
You're not testifying that Barclays'

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financial statements failed to disclose the overall notional amount of all of its derivative instruments, right?

MR. RUSSO: Objection.

A. Correct.

Q. So, for example, on page 89, under the heading Derivatives, there is a paragraph that says, "Derivative instruments are contracts whose value is derived from one or more underlying financial instruments or indices defined in the contract. They include swaps, forward rate agreements, futures, options and combinations of these instruments and primarily affect the Group's net interest income, net trading income, net fee and commission income and derivative assets and liabilities." Do you see that?

A. I do.

Q. It says, "Notional amounts of the contracts are not recorded on the balance sheet." Do you see that?

A. Yes.

Q. Are the monoline credit default swaps encompassed within this description?

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MR. RUSSO: Objection.

A. Almost for certain, yes.

Q. And so here investors are being told that the notional amounts of those are not recorded on the balance sheet, right?

A. Yes.

Q. And there is nothing wrong with that in your view, right?

MR. RUSSO: Objection.

A. Well, that's not where you record -- when you put derivatives assets and liabilities on an AIS balance sheet, that's not where you put it.

Q. Where do you put them?

A. You put the value of the derivative assets and liabilities on the balance sheet and then there is a separate disclosure section, probably note 20 in this thing, which is the disclosure with respect to notional and fair values of derivative contracts.

Q. Do you want to try table 14?

A. 14 perhaps.

Q. On page 102. Do you see credit derivatives-- no, sorry, "Table 14: Notional

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principal amounts of credit derivatives as of 31st December 2007." Do you see that?

A. Yep.

Q. And it says, "Credit derivatives held or issued for trading purposes," and at year end 2007, the figure is 2.472 trillion pounds, correct?

A. Yes.

Q. And the notional amount of the monoline contracts is included within that number, correct?

MR. RUSSO: Objection.

A. I don't know for a fact, but I assume that it is.

Q. I just wanted to make sure that you're not opining that it was left out of the financial statements and notes.

A. I'm not opining that, no.

Q. Similarly you're also not opining that the value of the underlying unsured assets were left out of Barclays' financial statements, right?

MR. RUSSO: Objection.

A. Yeah, I'm not opining that.

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Q. So if you flip with me just real quick, sir, to page 161, just I think this is the consolidated balance sheet at 12/31/07 there, do you see the third item down is Trading Portfolio Assets and they reference note 12, right?

A. Yes.

Q. And if you -- then also a couple below Derivative Financial Instruments note 14?

A. Yep.

Q. So you would expect that the derivative financial instruments note 14 would include the amount of the credit default swaps, including the monolines, and the trading portfolio assets, referencing over to note 12, would include the underlying insured assets such as bonds bought from a CDO tranche?

MR. RUSSO: Objection.

A. I don't know that for sure, but they are either going to be in trading portfolio assets or in available for sale financial instruments.

Q. But the point is, when you have referred at various times in your report to

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certain CDO positions that were in the MBT book from being hidden, you weren't suggesting that the value of those assets was left off of Barclays' financial statements?
A. No.
MR. RUSSO: Objection.
Q. Why don't you turn, if you would, please, to note 14, which is the Derivative Financial Instruments.
A. Here we go, yes.
Q. 172, right?
A. 172, yes.
Q. Above the table this says, "The notional amounts of certain types of financial instruments provide a basis for comparison with instruments recognized on the balance sheet, but do not necessarily indicate the amounts of future cash flows involved or the current fair value of the instruments and, therefore, do not indicate the Group's exposure to credit or price risks." Do you see that?
A. Yep.
Q. It goes on to say, "The derivative instruments become favorable (assets) or

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unfavorable (liabilities) as a result of fluctuations in market rates or prices relevant to their terms. The aggregate contractual or notional amount of derivative financial instruments on hand, the extent to which instruments are favorable or unfavorable and, thus, the aggregate fair values of derivative financial assets and liabilities can fluctuate significantly. The fair value of a derivative contract represents the amount at which that contract could be exchanged in an arms-length transaction, calculated at market rates current at the balance sheet date." Do you see that?
A. I do.
Q. And then it says, "The fair values and notional amounts of derivative instruments held for trading are set out in the following table." Do you see that?
A. Yes.
Q. Did you consider this note in forming any of your opinions?
A. I did.
Q. What conclusions did you draw from it?

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A. Well, the conclusion that I took was that in all probability the CDS's associated with the negative basis trades were included in the credit derivative swaps line on this document.
Q. Did you also conclude that what the market is being told here is that Barclay views its exposure to contracts such as that is not the notional amount? I'm specifically focusing on the part that says, "do not necessarily indicate the amounts of future cash flows or the current fair value of the instruments and, therefore, do not indicate the Group's exposure to credit or price risk."
MR. RUSSO: Objection.
A. Yes, but the word I tend to focus on most strongly is the word "necessarily."
Q. I don't follow your answer.
A. Well, in my view it should indicate it in both places. It should indicate do not necessarily indicate the amount of future cash flows and then do not necessarily indicate the group's exposure to credit or price risks and that would have been a more precise statement

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of the way that these things work.
For instance, the nature of this table, which is almost the same for US cap as for IAS cap, is that it is a disclosure of all of the different types of derivatives. Now with an equity derivative, for instance, if you're short the S&P 500, you can be certain that the S&P 500 isn't going to go to infinity for instance. It may go up. It may go down.
With credit derivatives, they work somewhat differently because credit derivatives are bounded by a theoretical upper and lower bound and with credit default swaps, the theoretical upper bound is the present value of all of the coupon payments on the credit derivative and the other bound is the notional amount.
So with respect to credit derivatives, the notional is actually a pretty good indicator. With respect to other types of derivatives, it isn't necessarily so.
Q. Isn't this statement telling the reader that Barclays does not view its exposure as the notional and that it's just presenting

the notional as a way of comparison?

MR. RUSSO: Objection.

A. Honestly, language of this sort is -- has become sort of boilerplate in this note for both US issuers and for European issuers subject to IAS GAAP.

Q. Well, boilerplate or not, doesn't it tell the reader that Barclays' view is exposure to these contracts is something other than the notional amount?

MR. RUSSO: Objection.

A. Take a look at this table as a whole. What you'll see is that the derivative assets runs to 29 trillion at the end of 2006 of which only 2.4 trillion was credit derivatives. I frankly think they are speaking in general rather than speaking with respect to the risks for any particular asset class.

Q. Okay, but leaving that aside, isn't this saying to the reader that Barclays does not view the notional as its exposure; that it presents the notional for comparative purposes, but it does not consider its exposure to be the notional?

MR. RUSSO: Object to form. Asked and answered.

A. Honestly, I don't know whether that is because they have inadvertently or not repeated the word -- inadvertently repeated the word "necessarily."

Q. I don't understand your answer. Does this give any sense to a reader as to how Barclays considers its exposure to these contracts and whether or not it considers the notional to be its exposure?

MR. RUSSO: Objection.

A. Let me put it this way. What Barclays thinks is not here nor there. This is disclosure that you're required to do both under US GAAP and IRS GAAP. So what Barclays thinks is material at three what investors think--

Q. I thought that's what I was asking.

A. No, what you asked is what Barclays thought respectfully.

Q. Well, isn't it a fair reading of this, that exposure to these kinds of contracts is not the notional amount?

MR. RUSSO: Objection.

Q. Isn't that what this says?

A. Again, I think that's more a product of poor drafting on the part of Barclays and I think it's a representation of reality.

Q. As written, that is what it is stating, correct?

MR. RUSSO: Objection. Asked and answered.

A. As it is incorrectly written, that is what it is stating.

Q. It is stating that the notional is not the exposure, it's the notional?

MR. RUSSO: Objection. Asked and answered.

Q. That's what it is stating?

A. That is what it is incorrectly stating.

Q. Whenever you say it's incorrectly stating that, why do you think that is incorrect?

A. Because I think that the exact statement would be to say, but do not necessarily indicate the amounts of future cash

flows involved or the current fair value of the instruments and, therefore, do not necessarily indicate the group's exposure to credit or price risks.

Q. Okay. But be that as it may and your desire to correct the grammar, what it states is that the notional amount of these contracts is not the exposure to Barclays?

MR. RUSSO: Objection. Asked and answered.

A. Frankly, all you're doing is drawing my attention to one more false statement on Barclays' part. If you're going to push me to it.

Q. I'm not pushing you anywhere. I want to find out what your opinions are.

A. I think this is a false statement.

Q. Why; because the word necessarily is not there?

A. The word necessarily would make it a correct statement, but notional contract amount in the context of a credit derivative is an indication of group exposure or can be at least an indication.

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Q. And your testimony is that this statement says it is or it isn't or it's unclear?

MR. RUSSO: Objection.

A. My statement is that that first sentence is poorly drafted.

Q. Do you think it's important to -- let me back up. So we have talked about the 1.335 and you're not disagreeing that that is accurately representing the decline in value of the underlying insured assets after taking the $59,000,000 CVA, right?

A. Well, I'm taking no issue with the 1394.

Q. I understand that your opinion is that Barclays somewhere should have disclosed the overall notional amount of its credit default swap contracts with monoline insurers other than in the overall derivatives disclosures we've just looked at; is that fair?

MR. RUSSO: Objection.

A. I wouldn't be as dogmatic as that. It wasn't essential that they disclose the notional, that the notional is not the only

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measure that could be used, but it's got the great virtue of being the simplest measure with respect to a credit of underexposure.

Q. So I think in one of your reports or maybe both, you would have gone through various different ways that one could express their exposure to monolines, right?

A. Yes.

Q. And I think you went through five or six different ways, right?

A. Yes.

Q. And you are not opining as to whether or not one or more of those ways is appropriate or inappropriate as a matter of accounting, correct?

MR. RUSSO: Objection.

A. None of them are, strictly speaking, a matter of accounting.

Q. They are basically matrix of ways of expressing exposure, correct?

A. Correct.

Q. And you're not claiming that a reporting company like Barclays was required to use one of those in particular as opposed to

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others, right?

A. Correct.

Q. And you -- I think you expressed an opinion, or perhaps made an observation somewhere in one of your reports, about how other financial institutions during this time period expressed their exposure to monolines?

A. I did.

Q. I think we are talking about your reply at or around paragraph 81; is that right?

A. 81.

Q. You wrote, "As regards market practice, one can look at what other banks that held similar positions were disclosing" and then you go on to say that Citigroup disclosed in February 2008 12.7 billion of notional amount of transactions with monolines and then a net market value direct exposure of 4 million, right?

A. Yep.

Q. And then you say that, "Similarly Merrill Lynch, in February, disclosed a notional amount of credit default swaps with financial guarantors" and then you say that,

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"In March of '08, UBS disclosed exposure to monolines totaling 24.2 billion notional amount as well as a fair value after CDA of 3.6 billion," right?

A. Yes.

Q. So what you are saying there is that Barclays, like UBS, for example, disclosed a fair value after CDA, but did not disclose the notional amount of the credit default swaps?

MR. RUSSO: Objection.

A. Yes.

Q. And some of these other banks, like UBS, actually disclosed both the fair value and the notional, right?

A. Correct.

Q. Now, go to your Documents Considered list for Exhibit 1 to your rebuttal report. On page 2, the last three documents listed are the three documents that I think you just cited which are the form 10-K's for 2007 of Citigroup, Merrill Lynch and UBS; is that right?

A. Yes.

Q. It was the review of those documents

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A. Fair.
Q. Let's go to -- sorry, your reply, page 40, paragraph 79. Just take a look at that, please.
A. (Witness reading document).
Q. Okay, are you with me?
A. 78, 79.
Q. Great. In paragraph 79 you say, about halfway down that paragraph, "By no later than February 19, 2008, Barclays was expecting to take a loss provision on the Whistlejacket purchase." Do you see that?
A. I do.
Q. Is your only source for the statement that Barclays was expecting to take a loss provision on the Whistlejacket purchase the document you cite in the next sentence?
A. There is actually a number of -- there is a number of different variables or drafts of that document, but collectively that document.
Q. So your only source for your statement that Barclays was expecting to take a loss provision on the Whistlejacket purchase by

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no later than February 19, 2008 are various versions of notes drafted for the February 19, 2008 earnings call, right?
A. Correct, but again, it's not an illogical proposition given that the Whistlejacket investors did actually take a decent loss ultimately.
Q. When you say ultimately, what do you mean, when?
A. I think 2011 it got wound up essentially.
Q. 2011, okay. So the size of a loss taken on windup in 2011 doesn't have anything to do with the size of a loss provision that might be taken in 2008, right?
MR. RUSSO: Objection.
A. Not necessarily they are going to be related in some way shape or form or may be related in some way shape or form.
Q. You don't know because you haven't analyzed that, right?
A. Yeah, I don't have the data to go back and analyze it now. In all probability given that in was February 2008, the loss would

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have been quite a bit bigger at that date than it would have been by doing what they did and essentially letting Whistlejackets as its run off -- sorry, they being the continuing investors in Whistlejacket.
Q. But we have no idea because that's not what happened, right?
A. We have no -- sorry?
Q. You said the loss would be bigger if it had been wound up in 2008 instead of 2011, but it wasn't wound up in 2008, right?
A. True, it wasn't, yes, but a mark to market loss provision as of that date would have reflected what the mark to market losses would have been.
Q. And you say based on various versions of notes for the earnings call from February 19th that Barclays was expecting to take a loss provision on the Whistlejacket purchase, right?
A. I do.
Q. The version of the February 19th earnings call preparation notes that you cited says, "If comment regarding our actions on

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Whistlejacket is necessary, then here is the proposed response. We have purchased additional securities and provided additional credit support for certain institutional liquidity products. The earnings charge in 2008 for these actions may be of similar size to the charge in '07." Do you see that?
MR. RUSSO: Objection.
A. I do.
Q. Is it your testimony that a draft talking point that says the earnings charge in '08 from these actions may be of similar size to the charge in '07 indicates that Barclays was expecting to take a loss provision on the Whistlejacket purchase?
A. Well, my answer here is responding to Professor Stulz's, S-T-U-L-Z, statement that he meaning -- meaning me, "does not claim nor have I seen any evidence to support such a claim that Barclays was aware of the loss associated with this transaction as of the date of the offering." So there seems to be evidence that Barclays was aware of a loss associated or at least potentially associated

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with this transaction.
Q. So you have not actually concluded that Barclays, in fact, was expecting to take a loss?
MR. RUSSO: Objection.
A. Well, it seems fairly clear that Barclays was aware that they could say to people, if asked, that the mark would maybe be of similar size to the charge in 2007.
Q. What was the charge in 2007?
A. I think it was about 50 million.
Q. And that was actually the charge in 2007 with respect to -- with respect to the BGI support was actually discussed on the earnings call, right?
A. Yeah.
Q. There was no attempt to hide that?
A. No.
Q. Let me see. Now is an okay time for a break and we'll come back and try to finish up.
A. Okay.
THE VIDEOGRAPHER: The time approximately 5:42 p.m. This is the end

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of media number six and we are off the record.
(Brief recess taken.)
THE VIDEOGRAPHER: The time is approximately 5:55 p.m. This is the beginning of media number seven and we are on the record.
Q. Mr. O'Driscoll, I just want to point you to paragraph 46 of your reply report of O'Driscoll Exhibit 2.
A. Yes.
Q. So, in paragraph 46 you say that Mr. Dolan suggests that you were opining that Barclays should have anticipated these defaults and, therefore, that Barclays' year-end 2007 valuations were incorrect, referring back to defaults by monoline insurance company, right?
A. To be honest, I don't remember what this paragraph is all about. Bear with me one second.
MR. RUSSO: Objection.
A. Okay, sorry. Can you ask your question again?
Q. Yes, you read in paragraph 46,

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"While Mr. Dolan suggested I am opining 'that Barclays should have anticipated these defaults and, therefore, that Barclays' year-end 2007 valuations were incorrect,' I have offered no such opinion." Do you see that?
A. I do.
Q. These defaults refers to defaults later on in 2008 and thereafter of monoline insurers, right?
A. Yes.
Q. So you are not offering an opinion that Barclays' year-end 2007 valuations were incorrect because Barclays should have anticipated those defaults, right?
MR. RUSSO: Objection.
A. I am not opining that Barclays should have known that these defaults would occur.
Q. And you're not opining that their CVA adjustments or their assessment of current exposure to monolines should have been different for purposes of the 12/31/07 financial statements?
A. I'm not.

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Q. Now in 47 you say that Mr. Dolan, "asserts that some counterparty protection sellers were not monoline insurers (such as Goldman Sachs) needed to be 'bailed out' by the government in 2008...the market viewed the probability that a highly rated entity like Goldman Sachs would default on a payment obligation under these contracts as extremely low" and then Dolan goes on to say that according to your paragraph 47, "In addition, Mr. O'Driscoll has cited no evidence that Goldman Sachs did not meet its obligations under the CDS contracts." Do you see that?
A. I do.
Q. And then you go on to say that Dolan is misstating your report because you only mentioned Goldman Sachs, other than in footnotes, in a table on page 21 where you tabulate Goldman had "acquired loan servicer or Litton Loan Servicing." Do you see that?
A. I do.
Q. Now that reference to page 21 should be paragraph 21 of your initial report, right?
A. Probably.

EXHIBIT 46

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC)
SECURITIES LITIGATION) Master File
---------------------- No. 1:09-civ-01989
This Document Relates to:
All Actions

April 22, 2016
9:36 a.m.

CONFIDENTIAL

Videotaped Deposition of D. PAUL REGAN, taken at the offices of SULLIVAN & CROMWELL LLP, 125 Broad Street, New York, New York, before Frank J. Bas, a Registered Professional Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York.

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
1801 Market Street – Suite 1800
Philadelphia, PA 19103

A. Yes.
Q. In what matters?
MR. OLTS: Object to form.
A. I don't know. I would look at his CV to see what matters he's testified in. But I know he has testified.
Q. Do you know approximately how many matters he has testified in?
A. I would think it's less than five.
Q. Do you know when the last matter he provided testimony was?
A. I don't.
Q. Focusing just on last year, approximately how much of your income derived from work you or your firm did in matters related to pending or prospective litigation?
MR. OLTS: Object to form.
A. When you say my income, you're talking about me personally?
Q. Yes, I am.
A. I don't -- I'm not paid based upon -- based upon the matters that the

firm does. The firm compensates me on a salary basis. Then there is a bonus, and the bonus is calculated by my partners by a consensus vote, and how they determine my bonus is something which is really up to each individual partner.
Q. Okay. Well, let's focus then just on your time for last year. Approximately how much of your time last year derived or was dedicated to work that you were doing in connection with pending or prospective litigation?
MR. OLTS: When you say "last year," do you mean calendar year 2015?
MR. WHITE: Yes.
A. Well, I probably worked about 2500 to 2600 hours, and I think my forensic time, which is litigation, possible litigation, possible matters in dispute, was probably about 1700 hours.
Q. And of those 1700 hours approximately what percentage of them involved matters with Robbins Geller?
A. Approximately 15 percent.

Q. What about Kessler Topaz?
MR. OLTS: Objection; form. Would that include time in this case? Are you differentiating between Robbins Geller and Kessler Topaz?
MR. WHITE: Let me withdraw the question.
BY MR. WHITE:
Q. How many hours did you spend last year on any litigation with which you were working with Kessler Topaz?
A. The only matter that I'm working with Kessler Topaz was this matter. So it would be included in the hours that I have in this case. So to some extent it's a duplication, but through -- from my retention in mid-October 2015 through the end of December I haven't parsed out my total hours, but if that was 200 hours, it would be about 10 percent.
Q. I just want to make sure I understand the math. So is that 10 percent -- are you counting the time

that you spent for Robbins Geller and Kessler Topaz in the same number of hours that you calculated, which I believe you said was 200?
A. Yes.
Q. Okay.
A. It's the same number in the -- the same numerator --
Q. We're getting into dangerous territory.
A. -- for this case. For Robbins Geller there was a couple of other matters, so that's why it's a little higher.
Q. Okay, so there was another 5 percent.
A. Right.
Q. Excuse me for talking over you there.
Let's talk about the nature of your assignment for a moment. How would you describe your assignment in this matter?
A. I would describe it as one

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which was evolving. There was a few initial discussions with Mr. Yurcek and counsel, and the initial discussions were to review the 20-F; review certain depositions; review documents relating to -- mostly deposition exhibits that related to board risk committee, board minutes, finance committee minutes, e-mails and documents relating to trading losses, impairments in the last quarter of 2007 and in the first quarter of 2008.

And after doing that the assignment narrowed to whether or not there were omissions in the 20-F, and whether there were omissions in the Series 5 prospectus, and then focus on whether those were material. And that's what's led to paragraph 16.

Q. And why did the assignment narrow to simply looking for omissions in those materials?

MR. OLTS: Obviously I'm just going to caution you, you don't need to disclose the contents of discussions with

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Robbins Geller or Kessler Topaz.

A. It narrowed because as we learned about the financial events occurring within Barclays in the last quarter of 2007 and in the first quarter of 2008, and we assessed and assimilated that information, it appeared to me that there were omissions with respect to the 20-F and with respect to the Series 5 in April, and that we would focus the report on those omissions, which was principally the lack of a subsequent event disclosure, and on the incomplete disclosure of the concentrations and the risks arising from the concentrations in the monolines.

Q. Did it narrow because you identified no misstatement in the 20-F during the work you were doing reviewing materials related to the fourth quarter in 2007?

A. Well, I would consider an omission a misstatement. I know that we discussed the limited time frame that we had in which to work on this case and to

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reach an informed and well-based opinion, and given the time frame that we had, we narrowed the focus to the two items that I mentioned.

I know from working on maybe 30 different banks around the world, for banks or regulators, attorney generals, Department of Justice, this obviously in 2007 was a turbulent time and 2008 was, you know, Series 5 hurricane time -- excuse me -- 2008. And I know there's exposure to understated trading losses and understated impairments, but I informed counsel that that's an enormous task and that I didn't intend to get into that.

Q. So you're not opining that any of the figures in the 2007 20-F are inaccurate, correct?

MR. OLTS: Object to form.

A. I'm not opining one way or the other. They may not be; they may be. I don't have an opinion.

Q. And you're not opining that anything in the 2000-F financial

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statements is inaccurate, correct?

MR. OLTS: You said the 2000-F.

MR. WHITE: I'm sorry. Let me restate the question.

BY MR. WHITE:

Q. You're not opining that anything in the financial statements that are in the 2007 20-F are inaccurate, correct?

A. I don't touch on it one way or the other.

Q. And you're not opining that anything in the offering materials for the Series 5 ADS is inaccurate, correct?

A. Well, I'm assuming you're -- you have a focus on inaccurate, meaning that there's a number that should be materially different than what is included in the 20-F, and reference documents.

Q. Is there --

A. And as I said a moment ago, I don't have an opinion one way or the other on that.

Q. Is there a number in the

EXHIBIT 47

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

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Master File No.:

1:09-cv-01989-PAC

IN RE BARCLAYS BANK PLC

SECURITIES LITIGATION

____

This document relates to ALL ACTIONS

Videotaped Deposition of STEPHEN GEORGE RUSSELL,

taken by DIANA BURDEN, Certified Court Reporter,

held at Sullivan & Cromwell LLP,

1 New Fetter Lane, London, EC4A 1AN,

on Friday, 6 November 2015, at 9:00 am

** CONFIDENTIAL **

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what the phrase "economic capital demand" means in the context of this sentence?
A. As I am sitting here now, the answer is no. I may have done in 2008, but I certainly don't now.
Q. Okay. You can set that aside. Thank you.
(Exhibit 452 marked for identification)
The witness has just been handed exhibit 452, Bates range BARC-ADS01602574-2585. Take the time you need and let me know when you are ready.
MR WHITE: Are there particular pages you are going to be focusing on?
MR. STEWART: My questions will apply generally throughout most of the document, but let me look through and I can give you specific pages.
MR. TOMAINO: Why don't you just review the whole document. It seems like he may have questions about a lot of it, so you may as well just review it.
A. Okay. Right. It is a fairly detailed and comprehensive minute.
BY MR. STEWART:
Q. Do you recognise this document?

A. I recognise it as a purported minute of the Audit Committee on 13 February.
Q. As indicated at the top of page 574 you chaired this Board Audit Committee meeting.
A. Yes.
Q. If you please turn to page 575, there is a sentence three quarters down the top paragraph and it reads: "The main continuing weakness was in the co-ordination between the central team in London and the overseas teams, particularly in New York".
Do you see that?
A. I do.
Q. Did you have any interaction with the New York PwC team in 2007 or 2008?
A. I don't remember doing so.
Q. Do you have an understanding as to what responsibilities the New York team had in 2007 or 2008?
A. Specifically -- not specifically, no. Each part of the business in Barclays would have had its own PwC team in attendance, so that's ...
Q. Can you clarify that, "each part

of the businesses in Barclays would have had its own PwC team in attendance"? Can you be more specific what you mean by that?
A. Well, I think we all know what auditors do, the work they do. Because of the scale and size of Barclays each of the main divisions had a PwC team dedicated to the work that an auditor normally does.
Q. But you don't mean attendance at the actual Audit Committee, do you?
A. I don't know. We had the lead partner in the Group Audit Committee. I don't know what happened elsewhere.
Q. I am just referring to the first page which lists only one attendee from PricewaterhouseCoopers.
A. That is correct.
Q. Do you know whether -- withdraw that.
Do you have an understanding as to what businesses or divisions fell within the responsibility of the PwC New York team?
A. The various offices within the New York set-up.
Q. Do you have an understanding as to

whether that would have included Barclays Capital offices based in New York?
A. I don't know specifically.
Q. The next sentence reads: "In response to a question, Mr. Lucas confirmed that the deterioration in the scores from BGI arose from this latter weakness".
Do you see that?
A. Yes.
Q. Were you aware of some sort of scoring system that was in place around the time of these Audit Committee minutes?
A. We talked earlier about the slight -- the dissatisfaction with PwC's performance in February 2007. That was based on the scoring system which was reported by Group Finance.
Q. So --
A. So this is the same process, twelve months later.
Q. So the report from Group Finance would include scores submitted by certain persons.
A. I don't remember specifically.
Q. Did you have any interaction with any other overseas teams, setting aside New York?
A. I think I only met them when I was

visiting offices of overseas companies, or indeed divisions within the UK.

Q. If you scroll to the very bottom of page 575 there is a sub heading No 1.3, and the sentence reads: "Mr. Lucas presented his paper on Auditor's Remuneration, which had been laid on table at the meeting and highlighted that PwC had carried out additional audit work relating to the Sub-prime valuations for Barclays Capital and, as a result, there might be an additional fee to be settled for that work".

Do you see that?

A. I do.

Q. Do you have an understanding as to what the additional audit work in relation to the sub prime valuations for Barclays Capital was?

A. I don't remember.

Q. Do you have an understanding as to why there would be an additional fee for that work, apart from the fee that PwC would earn for their audit work in connection with the 2007 year end results?

A. Partly at my request PwC were taking closer and closer scrutiny over all of this stuff as the market developed.

Q. When you say "over all of this stuff", what do you mean by "this stuff"?

A. The assets we have been talking about. I have explained that clearly it was our job to provide as much assurance as possible that the valuations and the mark downs were as professionally and thoroughly carried out as we could. It was becoming a bigger issue as time went by. It seemed to me to make sense to ensure that we gave it as much scrutiny as possible.

Q. The stuff that you mentioned, would that include sub prime assets?

A. I can't remember specifically.

Q. Can you remember generally what the assets were that were being reviewed by PwC --

A. If you go back to the list we were looking at earlier --

Q. Let me finish that question.

Can you remember generally what the assets were that PwC reviewed in connection with this additional audit work?

MR. TOMAINO: Objection to the form of the question.

A. Specifically I cannot.

BY MR. STEWART:

Q. Do you recall any details at all regarding the assets that PwC reviewed in connection with this additional audit work?

MR. TOMAINO: Asked and answered. The same question.

A. The only recollection I have is the list we looked at earlier.

BY MR. STEWART:

Q. Is this additional audit work that the Audit Committee had requested of PwC?

A. Whether it was a result of our request I don't know. I was anxious to make sure that the work was absolutely as thorough, and double thorough, as possible.

Q. Did the Audit Committee review this additional audit work provided by PwC with respect to sub prime valuations for Barclays Capital?

A. We would have taken PwC's assessment at the Accounts and Audit Committee meeting as usual, and it would have embraced any additional work.

Q. Do you remember any details regarding the results of this additional audit work

by PwC?

A. It is a matter of public record, isn't it, in the results which were issued.

Q. Are you saying all of the details regarding PwC's additional work was publicly provided?

MR. TOMAINO: Objection to the form.

A. I am saying that the numbers that PwC validated were a product of this additional work.

BY MR. STEWART:

Q. I think my question was a little different. So PwC provided some additional audit work in relation to sub prime valuations for Barclays Capital, and my question is do you remember any of the details regarding PwC's results or conclusions reached in connection with this additional audit work?

A. The only result I remember would have been their assessment that the results -- well, the valuations were appropriate.

Q. And would this be results they provided during their oral presentation at the Audit Committee meeting or Accounts Committee meeting?

A. Part of the process I have

EXHIBIT 48

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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IN RE:)
) Master File No:
BARCLAYS BANK PLC) 1:09-cv-01989-PAC
SECURITIES LITIGATION)
)
-----------------------------X
)
THIS DOCUMENT RELATES TO:)
ALL ACTIONS)
-----------------------------X

December 16, 2015
9:39 a.m.

** C O N F I D E N T I A L **

VIDEOTAPED DEPOSITION OF

DOUGLAS SUMMA, taken by Plaintiffs, held at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York, pursuant to Notice, before Mayleen Cintrón Ahmed, a Registered Merit Reporter, Certified Realtime Reporter, and Notary Public of the State of New York.

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1801 Market Street – Suite 1800
Philadelphia, PA 19103

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And it says, "Note: The electronic workpapers supporting the analysis and conclusions included in section 4 of this document have been provided to the assurance engagement team for inclusion in their workpapers?"

Do you see that?

A. Yes.

Q. Is this -- is it fair to say that this work -- strike that. Let me back up.

Is it fair to say that your work, and as reflected in this document, was sent to the assurance engagement team for inclusion in their work papers and that those work papers then might be sent up to the PwC's U.K. audit team?

MR. OLTS: Objection. Calls for speculation.

A. Our work is provided to the U.S. audit team and our support is provided to the U.S. audit team. What goes to the U.K. audit team, I'm not certain.

Q. Okay. But as far as you were concerned in putting together this work and

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transmitting it to the U -- PwC U.S. audit team, you would have felt that it was -- in terms of the accuracy and thoroughness of your work, that it would have been okay from your perspective for them to forward it on to PwC U.K.; am I right?

MR. OLTS: Object to form.

A. I would have -- yeah, I don't quite know how to answer the question since I don't know whether it does go -- I'm not certain if I -- again, I'm not quite certain if I am answering your question.

Q. Let me see if I can clarify.

When you prepared this information, you didn't have the view that it would not be appropriate to send it to PwC U.K.; is that right?

A. I -- I would not -- yeah, I would not find it -- or I would find it appropriate. Double negatives. I'm sorry, guys.

Q. Yes, I started.

A. It's been a long day. Anyway, it -- it would not -- I would not have been

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concerned if it had been shared with PwC U.K.

Q. Thank you.

A. I think that is what you're trying to get at.

Q. Yes. Thank you.

PwC 547, please. In the paragraph that appears under the chart there, there's a sentence that -- that reads: "The benchmarking exercise we performed over Home Equity ABS and CDO positions looked at the direction and magnitude of changes from July of December 31, 2007, however, the graphs below also explain why we believe the 12/31/07 actual mark is reasonable compared with the 12/31/07 ABX mark and therefore a review of the May and June data was not deemed necessary."

Is that a fair reflection of the conclusions reached by you and your team?

(Witness reviewing document.)

A. Yes.

Q. And if you flip over a couple of pages to PwC 549. You state -- you stated here in the memo, in the last sentence:

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"Overall BarCaps' [sic] prices trend in line with the closest fit ABX index across the period of interest, with limited areas of divergence."

Do you see that?

A. Yes.

Q. And what did you conclude from that finding?

A. That the -- I believe we concluded that the...

(Witness reviewing document.)

A. Just trying to find the actual conclusion of this.

Q. You know, let me -- let me withdraw that question, and I -- I think I have an easier way to get to it. Let's go to 553.

And 553 and 554, there was some questions of Mr. Olts. I think these show some detailed analyses that you and your team did --

A. Uh-hmm.

Q. -- concerning mapping, if you will, some of these instruments held by

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Barclays to movements in the ABX; is that fair?
A. Yes.
Q. Okay.
And if you look at 553, am I right that this is an instance where the Barclays prices were actually lower than what the ABX would have shown?
A. That's what it -- yes, that's what it indicates.
Q. And then on the next page, PwC 554, there are some examples.
There's an example in the last box of a situation where the Barclays price was -- was higher than ABX; is that right?
A. Yes.
Q. And then on 556, I think the conclusion on home equity appears there, which says: "Based on benchmarking the ABS and CDO Home Equity selected financial instruments, we are satisfied that [the] direction and magnitude of the movement in BarCap's prices is consistent with the ABX within a reasonable range of fair value. In

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addition, outliers we identified were appropriately explained by management and no individually material outliers or systematic bias was detected from our benchmarking procedures."
Do you see that?
A. Yes.
Q. And I think Mr. Olts went through that with you and you testified that this is a fair reflection of your conclusions; is that right?
A. Yes.
Q. Is that a conclusion that you stand by today?
A. Yes.
Q. We discussed the negative basis trades a little bit with Mr. Olts. I just wanted to cover some of it in a little bit more detail, if I can. So if you would please turn with me to PwC 560.
(Witness complying.)
Q. The last sentence that appears on PwC 560 states: "Based on the reasonableness of the spreads we independently pulled and in

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light of PCG testing, BarCap spreads on these single name CDS appear reasonable."
Do you see that?
A. Yes.
Q. Does that fairly and accurately reflect the conclusions you reached?
A. Yes.
Q. And that conclusion was based on all the work that you and your team did?
A. Yes.
Q. Do you stand by that conclusion today?
A. Yes.
Q. Two pages over, PwC 562, there's a conclusion on negative basis trades.
And, you know, rather than continually reading large passages into the record, I'll just ask it to you this way:
Was your conclusion on the negative basis trades based on the work that you did as set forth here, i.e., that Barclays' prices were reasonable?
(Witness reviewing document.)
A. Within a reasonable range of fair

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value, yes.
Q. And in the - it also states that the outliers you identified were appropriately explained by management, and no individually material outliers or systematic bias was detected?
A. Yes.
Q. And is that a conclusion that you stand by today?
A. Yes.
Q. Let me just take a quick detour and have you look at another document real quick while we're on the subject of negative basis trades. This is what has been previously marked in the case as PX-491.
So the document that has been marked as PX-491 is an email from Phil Rivett at PwC U.K. to some people at Barclays with some PwC U.K. folks cc'd.
Do you see that?
A. Yes.
Q. It's dated May 8, 2008. Do you see that?
A. Yes.

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Q. And the attachment to this email is a -- states "Board Audit Committee report, Final Draft - 13 May 2008, Pricewaterhouse-Coopers." Do you see that?

A. I do.

Q. And did you know that from time to time representatives from Pricewaterhouse-Coopers in the U.K. would attend Barclays Audit Committee meetings?

MR. OLTS: Objection. Object to form. Lack of foundation.

A. Did I know that they were doing it? No. Do we meet with audit committees routinely? Yes.

Q. Okay.

And is it also correct that routinely, with respect to audit clients, that PricewaterhouseCoopers will make presentations to the Audit Committee?

A. Yes.

Q. If I could ask you, Mr. Summa, to flip to the Bates numbered page that ends 743 of this document. And I'd like to focus your attention on this portion of the PwC

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presentation that's entitled "Exposure to monoline insurers."

Do you see that?

A. Yes.

Q. And this states: "Barclays' exposure to monoline insurance companies exists largely within 'negative basis trades'."

And then it goes on one sentence later:

"The exposure represents the current fair value loss on the assets which, in the event of default on those assets, would be recoverable from the monoline"?

Do you see that?

A. Yes.

Q. And then it goes on to say: "The notional amount of monoline guarantees amounts to $42.3 billion and the fair value exposure is $5.5 billion."

Do you see that?

A. Yes.

Q. Why is -- in this document is the exposure referred to as the $5.5 billion

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number and not the $42.3 billion notional number?

MR. OLTS: Objection to form. Lack of foundation. Calls for speculation.

A. Why is the fair value exposure 5.5 billion? That's the net -- you know, that's the net value of the cash, or the cash position versus the insurance, less -- less the credit risk.

So, so that is the -- that is the risk on a fair value basis -- or that's the loss, I guess, on a fair value basis that -- that Barclays incurred on these negative basis trades.

Q. Okay.

And do you know -- well, in your view as someone who's been doing work for --

How long have you been doing work on -- with respect to monoline insurance valuation and exposures?

A. Monolines? Probably 15 years.

Q. So as someone who's been -- sorry. Let me back up.

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Do you consider yourself a specialist in that area?

A. I do, actually.

Q. Do you consider yourself an expert in that area?

A. I --

MR. OLTS: Object to form.

A. I -- I -- I think I'm -- probably I am an expert on monoline insurance at this point.

Q. Okay.

So when -- when assessing Barclays' exposure to monoline insurers, is the notional amount of the guaranties a meaningful number in terms of assessing exposure?

MR. OLTS: Object to form. Lack of foundation. Calls for speculation.

A. The exposure -- notional is -- is quite simply a notional size. The real loss would -- in this case would be the 5.5 billion.

Q. So when one tries to assess Barclays' exposure to the monolines as stated

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in this document, is the notional number a meaningful number for purposes of that assessment?
MR. OLTS: Object to form. Calls for speculation. Vague and ambiguous.
A. The -- I'm sorry. Now I forgot the question because...
Q. Well, so let me -- let me just stay what this document says. It says here, it talks to Barclays' exposure to monoline insurance guaranties. Do you see that?
A. Yes.
Q. And then it says: "The exposure represents the current fair value loss on the assets which, in the event of a default on those assets, would be recoverable from" --
A. Right.
Q. -- "the monoline."
A. Yes.
Q. And then it says: "The notional amount of [the]... guarantees amounts to 42.3 billion and the fair value exposure is 5.5 billion."
A. Right.

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Q. Do you see that?
And I'm wondering why if you, as an expert in monolines and assessing bank's risk of loss or exposure to them, whether it would be correct to refer to the exposure that Barclays had with the monolines as 42.3 billion in notional?
MR. OLTS: Object to form. Lack of foundation. Calls for speculation. Object to the use of him as an expert.
A. Okay.
MR. TOMAINO: I didn't ask for his deposition. You did.
A. The notional is not a real meaningful number in my mind. The real number that is the exposure is the 5.5, which is really saying what is the -- what is the potential loss.
Q. Okay. So that's the end of the detour. Let's go back to your memo, which is PX-520.
And let me ask you to turn with me to page PwC 570, which is the -- comes at the end of a section where it says "Conclusions

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on the CDOs." Do you see that?
A. Uh-hmm.
Q. And this says: "Based on benchmarking the Corporate CDOs to CDX and benchmarking the ABS CDOs to TABX where applicable, we are satisfied that direction and magnitude of the movement in BarCap's prices is consistent with the referenced indices index within a reasonable range of fair value. In addition, outliers we identified were appropriately explained by management and no individually material outliers or systematic bias was detected from our benchmarking procedures."
Do you see that?
A. Yes.
Q. And does that accurately reflect the conclusion that you and your team reached after doing all this work?
A. Yes.
Q. Do you stand by that conclusion today?
A. Yes.
Q. The next section covers the work

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done by you and your team on super senior liquidity facilities. And if you will forgive me for one moment for another short detour.
When we were looking at PX-519, which is the Critical Matter memo. If you could just keep -- keep your memo open to that page, if you would, and then pull out PX-519, the Critical Matter memo.
A. I'm sorry. Which page do you want in my memo?
Q. PX 573 [sic].
A. 573? Okay.
Q. And then on page 16 of PX-519, which you see on PwC --
A. Uh-hmm.
Q. -- 528, there's a little bit in there that you discussed with Mr. Olts in the last full paragraph on that page which says, "FA concluded that the magnitude of the high grade write downs appear in line with other financial institutions and the Mezzanine write-downs, although considerably less than Citibank and Merrill Lynch, did not appear

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unreasonable given?"

Do you see that?

A. Uh-hmm.

Q. Okay.

And there was a little bit of a discussion of, you know, about what the basis was for that. And -- and I just wanted to ask you.

After that statement, it says: "See FA's report titled 'Barclays Capital Analysis of CDO, ABS & CDS Pricing', which is attached as Appendix 4."

Do you see that?

A. Uh-hmm.

Q. Now, is that a reference to your memo, which has been marked as PX-520?

A. It looks like it is, yes.

Q. Okay. Great.

So on PwC 573 of your memo, PX-520, there are some boxes containing some analysis. And I wanted to ask you if that was an example of the analysis supporting the conclusions reached by you and your team about any differences between Barclays'

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write-downs on some of these instruments and write-downs taken by others such as Merrill and Citi?

MR. OLTS: Object to form.

A. Yes. This would include -- yes, this is the type of analysis we would have done. In fact...

(Witness reviewing document.)

Q. And so just looking at -- I don't want to go through this and belabor it too much.

But in some of the boxes on 573, is it fair to say that there's a summary of the analysis here that supports you and your team's conclusion that BarCap's write-downs on -- on high-grade super seniors do not appear to be unreasonable as well as your conclusion that BarCap's write-downs on some of the other deals done by Merrill and Citi also were not unreasonable?

MR. OLTS: Object to form.

A. Yes. We concluded that they're -- do not appear unreasonable.

Q. And then if you turn with me,

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please, to PwC 576. And I just want to go through this quickly because I think Mr. Olts discussed it with you, but -- but didn't -- didn't cover it in too much detail.

It says: "Conclusion on NAV For Super Senior Liquidity Facilities."

And then it states: "Based on the proximity of the writedowns of BarCap's super senior High-Grade positions with other writedowns in the marketplace and review of the collateral supporting the High-Grade deal" -- "the High-Grade deals in light of other bank's collateral (Merrill), we are comfortable with the overall price level of the super senior High-Grade positions."

Do you see that?

A. Yes.

Q. And is that an accurate reflection of your conclusion?

A. Yes.

Q. And it goes on to say: "For the mezzanine CDOs, as the writedown for the Mezzanine super seniors was less than other market benchmarks (for two deals in

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particular); therefore, we reviewed the underlying collateral of these deals to determine that it was not unreasonable for the write" -- "for the writedowns would be less for BarCap's MEZZ deals. In addition, benchmarking the underlying subprime and ABS CDOs to the ABX and TABX index provided comfort that the pricing levels are not inconsistent with the referenced indices... within a reasonable range of fair value. No systematic bias was detected from our benchmarking procedures."

Do you see that?

A. Yes, I do.

Q. And is that a fair and accurate reflection of the conclusion that you and your team reached after doing all this work?

A. Yes.

Q. And do you stand by that conclusion today?

A. Yes.

Q. PwC 581, please. There's a conclusion on CSO, which I think, as we discussed, refers to collateralized-synthetic

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obligations?
A. Yes.
Q. Is that right?
A. Yes.
Q. Are those basically synthetic CDOs?
A. Yes.
Q. And the conclusion there says: "Given the poorly performing collateral and that these positions are so deeply in the money, a value near the deal notional appears for these CS" -- "appears for these CSOs does not appear unreasonable. No systematic bias was detected from our review."
Did I read that right?
A. I'm sorry.
Q. Did I read that right?
A. Yeah. I'm actually just reading it again.
Q. Sorry. Let me know when you're ready.
(Witness reviewing document.)
A. Yes.
Q. And this -- is this an accurate

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reflection of the conclusion that you and your team reached after doing all this work?
A. Yes.
Q. And do you stand by this conclusion today?
A. Yes.
Q. In the interest of just shorthanding this, on 583, 584 and 586, there are conclusions expressed on CDS, European CLOs and CMBS and commercial mortgages.
Do you see those four bolded headings?
A. Uh-hmm.
Q. And is it fair to say that with respect to the work done on each of those areas, that the conclusion reached by your team is accurately reflected here?
A. Yeah, I'm just looking.
(Witness reviewing document.)
A. Yes.
Q. And I -- and I'm going to shorthand this.
Is it fair to summarize those conclusions as being that -- that Barclays'

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prices with respect to these four categories were found to be not unreasonable?
MR. OLTS: Object to form.
A. Some of them are more focused on price movements. So the last one is a price movement point. So some of them are more explicit in terms of saying that they're within a reasonable range or not unreasonable. The last one is the commercial mortgages, it was linking to the CMBS. And direction magnitude is -- is consistent with what we would have expected.
Q. Okay. And as you sit here today, do you stand by the conclusions as expressed in this memo for those four categories?
A. Yes.
Q. Thank you. I think you can put aside PX-520.
MR. TOMAINO: So I'd like to ask the court reporter to mark as the next exhibit in line, which is DX-5, a one-page document bearing the production number PwC 016587.
(Defendants' Exhibit 5, 8/6/08 PWC

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Subsequent Events memo, Half-Year Meeting, PwC016587, marked for identification, as of this date.)
Q. Mr. Summa, do you recall that during the time period 2007 and 2008, that Barclays rec -- reported financial results on a full-year and a half-year basis?
A. Barclays, yes, they do full year and half year at that -- in 2006 and 2007, yes.
Q. So, for example, the -- the year-end '07 financial results were reported in the annual report which was filed in or around March of '08; is that right?
A. I don't know when it was filed. But it would have been -- it was sometime after year-end, so it could have been.
Q. And then the first half results for 2008 would be reported some period of time after the end of the first half, which would have been the first half ended June 30, 2008; is that right?
A. Yes.
Q. Were you involved in any work

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And then if you -- if you look just at the next sentence, it says: "Some of the controls that management and PwC looked to in assessing the potential impact of untested portfolios are," and there is a list of six items there.

Do you see that?

A. Uh-hmm. Yes.

Q. And would you agree that those are some of the controls that PwC looked into?

A. I have no --

MR. OLTS: Object to the form. Lack of foundation as to what the audit team did.

A. Yeah, I wasn't involved in the review of controls.

Q. Okay.

It's safe to say that if it's -- if it's in this Critical Matter memo, it's more likely than not accurate?

MR. OLTS: Object to the form as to whether it's more likely or not.

A. I guess I'd answer it this way is that, again, I would hope that my PwC

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colleagues are reporting what they did.

Q. Thank you.

I'd like to direct your attention next to item 4.1, "Financial instruments carried at fair value with subprime exposure."

A. Uh-hmm.

Q. And that's an area where you and your team did work, correct?

A. Yes.

Q. The first paragraph under the heading says: "In concluding, for credit financial instruments carried at fair value for sub prime exposure, where there is limited or no available observable market data, whether the use of valuation techniques resulted in an accurate measure of fair value (i.e. transaction price), we considered," and then there's a number of items.

Do you see that?

A. Yes.

Q. And am I right that that list of five numbered items does include items that were considered by you and your team in doing

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your work on financial instruments carried at fair value with subprime exposure?

(Witness reviewing document.)

A. Sorry. Could you ask that question again?

Q. Yes. Let me make it a little more simple because my first question, I think, was a little garbled.

Is it correct that the numbered items 1 through 5 on pages 18 and then over to 19 are the items that the PwC team and your team considered in concluding on the -- whether the valuation tech -- techniques resulted in an accurate measure of fair value?

MR. OLTS: Object to form. Lack of foundation as to what anyone other than his team did.

A. Yeah. I could -- I look at this and I can comment on 4, which is what we did.

As -- as I discussed earlier, I wasn't really involved in the -- in any of the controls work, so I don't have a point of view on what we did, what we considered. I

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don't know exactly what we considered.

Q. Okay.

Did you have -- did you yourself have inter -- interaction with personnel in Barclays' Product Control and Finance group in connection with your work in '07 and '08?

A. Yes.

Q. And I think among the names you mentioned were James Walker?

A. Uh-hmm.

Q. Did you have interaction with Patrick Clackson?

A. Yes.

Q. Did you have interaction with Paul Copson?

A. Yes. Yes.

Q. Did you have any interaction with Chris Lucas, the global finance CFO? Sorry. The --

A. I don't know if I --

Q. -- global CFO.

A. I don't know if I had any in 2007 with Chris. I've had interactions with Chris, I just can't remember in 2007.

Q. And you had interaction as well with the front office people like Stephen King, correct?
A. Yes.
Q. So item 2 says -- mentions interaction with Finance and PCG and the front office, and it says: "[D]emonstrated the individuals involved in the valuation of these instruments are competent and experienced individuals."
Is that consistent with -- with what you found from your interactions?
A. Yes, it was.
Q. Let me direct your attention, please, to 531, PwC 531, which is on page 19.
Under item 2 under 4.3 "Other credit financial instruments," there's a statement that says: "The overall price variance between front-office and PCG was immaterial."
Do you see that?
A. Yes.
Q. Was that a conclusion that you and your team reached?

A. No. That would probably be a conclusion that our audit team reached because materiality is determined and assessed by our audit team.
Q. Fair enough.
And so item 1, "No material" -- "No material errors were detected in valuation from the results of our cash and derivative independent price testing," is that a conclusion that you and your team reached?
MR. OLTS: Object to the form.
A. We did not do all the cash instruments. We did not do all the derivative instruments. So I couldn't comment on that.
So other credit -- I don't know what goes into that caption. The work that we did, we did not find any material errors in the items we covered, but we did not -- I couldn't answer that question for, you know, something that broad.
Q. Okay.
A. Or --

Q. So --
A. Or imprecise may be a better the word. I don't know how broad it is.
Q. Okay. But with -- is it fair to say with respect to the work that you did?
A. Yes.
Q. Okay.
Now, under item 5 which says "Final Conclusions Reached and Basis Thereof," I think you testified a bit about some of this with Mr. Olts. I just wanted to sort of break it down a little bit.
In item No. 1, it says, "Based on our controls work and substantive procedures," and then it goes on.
A. Uh-hmm.
Q. So am I right that the substantive procedures is the work that you and your team did, and the controls work is the work that other members of the PwC audit team did?
A. Yes.
MR. OLTS: Object to the form.
Q. Okay.
MR. OLTS: Lack of foundation.

A. Well, said differently, actually, right, I can -- I can comment on the substantive procedures on the asset classes that I was involved in. That's -- that's what I did.
Q. Got it.
And item 1 here says: "Based on our controls work and substantive procedures, we believe that the fair value of credit financial instruments is within a range of acceptable fair values."
Did I read that right?
A. "Credit financial... within" -- acceptable range of fair value, yes.
Q. Am I right that with respect to the substantive procedures that you and your team performed on the financial instruments that you worked on, that's a fair reflection of your conclusion?
A. Yes.
Q. Okay.
And you stand by that conclusion today?
A. Yes.

EXHIBIT 49

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

* * * C O N F I D E N T I A L * * *

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE BARCLAYS BANK PLC)
SECURITIES LITIGATION)
-------------------------) No. 1:09-cv-01989-
This Document Relates to:) PAC
All Actions)
-------------------------)

September 29, 2015
9:34 a.m.

Deposition of SEAN TEAGUE, held at the offices of Sullivan & Cromwell LLP, 125 Broad Street, New York, New York, pursuant to subpoena, before Laurie A. Collins, a Registered Professional Reporter and Notary Public of the State of New York.

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
1801 Market Street – Suite 1800
Philadelphia, PA 19103

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Q. Have you spoken with Mr. Kaczka since he was deposed?
A. No.
Q. Have you reviewed Mr. Kaczka's deposition transcript?
A. No.
Q. And apart from Mr. Kaczka and Mr. Landreman, did you speak to anybody else?
A. No.
Q. Can you give a brief overview of your educational background?
A. Sure. I went to Binghamton University, graduated December 1994, political science major, minor was economics.
Q. After receiving your degree from Binghamton, what did you do next?
A. I worked in consulting for a short period of time with HSBC, looking at credit rating on municipal bonds, writing essentially what were like book reports for the rating team as well as worked in ISDA documentation area, which are contracts between banks to perform trading.
So it's like the overall umbrella of like liquid contract to perform trading. And

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within that context I later moved to Barclays for a short period of time and working in trade documentation. That was about like eight months.
Q. What time period is this?
A. This was '95. Barclays was '96.
Q. What did you do next?
A. Then I went to -- I joined Bankers Trust approximately '96/'97, worked at Bankers Trust until they were acquired by Deutsche Bank, in a few different roles.
The first role was in trade documentation. The second role was in middle office for credit derivatives. That role was more what they called product control when I joined Deutsche Bank.
In Deutsche Bank I did product control, daily P&L, for credit derivatives desk, later on working for an interest rate desk for the Canadian trades swaps desk. I managed that area from a product control perspective for about a year, year and a half, and then I moved back into structured credit at Deutsche Bank. That was supporting, you know, the very large credit derivatives desk. I did that role for some time before leaving around

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2000/2001 to join Commerce Bank.
At Commerce Bank I built out their middle office, put a P&L explain in place, worked on T1 trade reconciliations, moved onto the trading desk, performed as a junior trader hedging activity for CDO desk.
After about a year at that role, I moved into alternative investment strategies, also known as fund of funds, where I did due diligence traveling around the U.S., Europe, meeting hedge funds, making sure that there was no operational risk as far as our investments were concerned, also meet with the portfolio managers to ensure that the investments and the credit space matched well with our portfolio and, you know, should help us provide growth with limited operational risk.
After that point in time, I joined Barclays around June 2005 in the valuations space within product control, and I stayed in product control in that valuations space, either in the credit space or in the rate space, over the last ten years.
Q. Are you still employed by Barclays today?

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A. No, I am not.
Q. Okay. When did you leave Barclays?
A. Approximately June 12th or 13th.
Q. Of this year?
A. Yes.
Q. And why did you leave?
A. Was it June? Sorry, it was July, July 12th. My role was moved to India, so I was laid off.
Q. And what was your role as of July 12th or 13th of this year?
A. I was global head of interest rate valuations at Barclays within the product control team. So it was product control valuations, global head of rates.
Q. I think you mentioned when you worked at Deutsche Bank you were involved in product control for credit derivatives; is that correct?
A. That's the case, yes.
Q. And what were your responsibilities in that role?
A. Performing daily P&L. Basically when the trading desk was responsible for -- it's called the Merton model, but it's actually trading

options equities as well as treasury swaps. My responsibility was calculating the daily profits and losses of that and doing the month-end reconciliations.

Q. Did you have any valuation responsibilities in that role?

A. No, I did not.

Q. You said you then moved to structured credit. Was that in a trading position?

A. You mean at Commerce Bank or at Barclays?

Q. I believe you said --

MR. TOMAINO: I think he's talking about at Deutsche Bank.

Q. At Deutsche Bank, yes.

A. The first role was a credit desk was less -- it was not structured credit; it was just credit. And then the second role was the role I just discussed where that was equities, credit, and options. The first role was really credit default swaps and total return swaps.

Q. Then you said at Commerce Bank you helped build out the middle office. What does that mean?

A. They didn't really have a full system in place at Commerce Bank like at Deutsche Bank. They were a smaller bank. So they didn't have a full IT system to explain daily P&L, how much money was made on trading for that day versus how much money was made what they called mark to market.

So my role when I first joined was to break out how much money they had made or lost on positions that were already held on the balance sheet versus how much they made or lost on positions they bought and sold that day.

Q. And in that role were you responsible for valuing any securities or quantifying any mark-to-market moves in securities?

A. Quantifying the mark-to-market moves was part of the daily P&L process. But as far as valuing the securities, no.

Q. Okay. So when you joined Barclays in June of 2005, was that your first experience in valuing credit securities?

A. Well, when I was at Commerce Bank on the trading desk, my responsibility was to build out -- we had a CDO that we were looking to issue,

and I was doing cash flow modeling to make sure the credit rating agencies approved the ratings that we were trying -- that we were aiming for for that structure.

So it was a tiered structure with numerous tranches in the CDO, and you need to get credit ratings for each of the tranches. And to get that -- to get the credit rating approved by the credit rating agencies, you need to do cash flow modeling.

The reason I was hired at Barclays is because I had experience doing cash flow modeling at a previous firm, and that is how you basically perform the valuations for structured products is doing cash flow modeling.

Q. Okay. This cash flow modeling you were doing at Commerce Bank, did that involve -- or did the CDO, I guess, that you were involved in have any subprime or alt-A mortgage exposure?

A. No. It was emerging market.

Q. So when you joined Barclays in 2005, you said you were involved in valuations; correct?

A. Well, once I joined Barclays, I was -- the whole time at Barclays I worked on the product

control valuations team.

Q. Okay. So is the valuations team, is that a subset of the larger product control group?

A. That's correct. So the two main functions within product control would be your product control P&L line team, which was responsible for performing daily P&L, ensuring the books and records reconcile at month end, you know. They work closely with the finance team to ensure accuracy of the balance sheet.

The responsibility of the product control valuations team is to work closely with the P&L line team, ensuring that the books are properly marked, basically guardians of the balance sheet to working under the CFO to ensure when the CFO is signing off on the financials that the values are correct.

Q. Okay. So during your time at Barclays, were you ever a member of a P&L line team?

A. No, I was not.

Q. Okay. So you were solely focused on valuations for your time at the company?

A. Yes.

Q. And what do you mean when you say

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projection on your prepayment speeds. You need to come up with your projection of your default rates. You need to determine the appropriate credit spread to use based on the vintage of that security, based on the credit rating of that security. So then most importantly you need to see if there was any trading activity.

So there was a number -- a wide range of information required to perform the analysis and come up with what is deemed as a logical value, appropriate value, within the range.

Q. So is the valuation team, then, conducting its price testing -- strike that.

By the time the valuations team gets the balance sheet for a particular month to conduct its price testing, is that balance sheet more or less final?

MR. TOMAINO: Objection to form.

A. The objective is to always have a final balance sheet to work with when performing price testing so you're not testing incorrect positions/ pricing.

Q. So if any asset classes had been written down during the prior month, those write-

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downs would be reflected in the balance sheet that the valuations team would obtain for purposes of conducting the price testing?

MR. TOMAINO: Objection to form.

A. Any marks that were taken in the prior month should be reflected -- any re-marks by trading should be reflected that day. So they should be, by their very nature, captured in month end.

Q. So then, for example, when you say the price testing is done by the second or third week of the month, are you saying so as an example September's price testing would be completed by the second or third week of October?

MR. TOMAINO: Objection to form.

A. That would be -- again, depending on the product. On the more straightforward products, they can oftentimes be performed within the first week of the month. Again, equities, something as simple as, say, treasuries would usually be done within the first week of the month.

So very liquid products which require less analysis are done in a shorter time frame,

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and then individuals -- usually the logic from how you perform your testing is you start off with the more straightforward products and then you start focusing on the more structured products.

Q. So this meeting that was typically held during the second or third week of the month, what was the purpose of the meeting?

MR. TOMAINO: Objection to form.

A. The logic was to perform a review of the variances by business and discuss those variances with the trading desk and, you know, management and product control. I believe -- yeah, I can't say it was in '07 or '08 or later, but then also risk management would attend the meeting as well.

Q. And why would risk management attend the meetings?

MR. TOMAINO: Objection to form.

A. Just to ensure transparency of any variances that are being calculated by product control.

Q. And during these meetings what was the nature of the discussion around variances between the desk's marks and PCG's marks?

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MR. TOMAINO: Objection to form.

A. Can you be more specific?

Q. Yeah. You said you were discussing some of the variances. And what would the nature of those discussions be? Why were you discussing variances?

MR. TOMAINO: Objection to form.

A. Taking a step back, if you will, I'd look at it almost from the perspective of if you sold your house tomorrow would you be able to tell me exactly what it would sell for or do you think anyone on the street could tell you exactly what the price it would sell for.

If you're having a meeting to discuss what -- people around the table have an understanding of what the inputs being used to come up with those valuations. So there will always, if you will, be open discussion on the logic on how one formed the basis to come up with a valuation.

From a trading perspective, keeping in mind traders are responsible for marking the portfolio, product control is responsible for independently verifying those marks. In that

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thought process, we may not have all of the information the front office has to come up with a value. And in turn there's times where we may have information that we'd like to discuss with the desk to see if they're including that within their thought process.

Q. If we look back at this presentation here --

A. Yes.

Q. -- looking at page 42 still, the fourth bullet down says, work with the product control team, risk management, and market risks to establish pricing processes, thresholds, and reporting requirements.

Do you see that?

A. Yes.

Q. Do you know what the reference to pricing processes, thresholds, and reporting requirements referred to?

MR. TOMAINO: Objection to form, lack of foundation.

A. I really can't -- I don't remember the specifics of what that would refer to.

Q. What responsibility would the

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independent valuations group have over establishing variance thresholds?

MR. TOMAINO: Objection to form.

A. That would be something that the product control valuations team would be responsible for from an IPV threshold perspective.

Q. What do you mean, "IPV threshold"?

A. What -- if a variance is over a certain size, what to include for reporting requirements.

Q. And what do you mean by "what to include for reporting requirements"?

A. I believe at this point in time, the best of my recollection, we had a 250,000 sterling threshold at the position level. So if the position was larger than 250,000 sterling variance between the price calculated by the independent valuation team and the price calculated by the front office, that would be something that would be escalated for reporting purposes.

Q. Escalated to whom?

A. Within the reporting constraints. So I don't recall if there was any specifics, but it would be like the front office. For instance, you would review those with the trader that had marked

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those positions.

Q. Anyone else other than the trader?

A. I mean, depending on how senior the report was going to as far as, you know, how high up, I don't recall if the requirement was to the highest level reporting. But in reality the higher-level reports would have been to senior management, and that would be across all businesses, if you will, under their remit.

So I don't recall if we actually had a mandate to put those types of -- that type of information at that highest level, because we already had large price testing reports being sent by business.

Q. Do you recall any instances where variances were escalated to the highest levels of senior management?

MR. TOMAINO: Objection to form.

A. On a regular basis -- you know, there was always going to be potential ad hoc escalations of variances. But on a regular basis, on a monthly basis, you know, large variances were being escalated as part of the monthly process.

Q. How high up within Barclays'

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organizational structure were these variances being escalated?

MR. TOMAINO: Objection to form, foundation.

A. To the best of my knowledge, again, Patrick, you know, would have been included on a lot of these. Paul Copson would have been included on these, as Morton reported in to Paul. Within the front office, it would obviously be the head traders for those businesses would be part of those meetings for each month end.

Q. Do you recall the names of any of the head traders?

A. I recall Vince Balducci was around at that point in time. John Kreitler was around at that point in time. I don't recall any other names as far as business heads. Oh, sorry, and Michael Keegan.

Q. And what trading desks was Mr. Balducci responsible for?

A. He was responsible for the credit trading desk.

Q. Would that include the CDO positions that your group was independently valuing?

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A. Yes. And Stephen King, who held -- he was the head trader for that business area and would have reported in to Vince Balducci.

Q. Do you recall having any interactions with Mr. Balducci or Mr. King regarding the results of the independent valuation group's assessment of the value of the CDO positions?

A. Yes.

Q. How frequently would these interactions take place?

A. With Mr. King it would be quite often. That was part of our remit, if you will. So we had discussions with Mr. King and his directs quite often as far as the valuation. And with Mr. Balducci, at minimum we would discuss it on a monthly basis as part of the regular meeting.

Q. In your regular meetings with Mr. Balducci, what specifically would you discuss?

A. We would go through any large variances that existed, be it conservative or aggressive, and, you know, escalate any issues or concerns. We'd also have his COOs -- or one of his COOs to be there to help facilitate any questions and requests that we had.

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Q. And what about your interactions with Mr. King? So those were more frequent; is that correct?

A. Yes, that would be more frequent, since Mr. Balducci was senior to Mr. King. So yes, we would talk to Mr. King more frequently regarding any -- be it if we were trying to find additional information to help us value a portfolio, if we were trying to better understand what positions were on the balance sheet, as well as if there was any variances that were escalating originally.

At the beginning of each month when we have the data set calculated, we would talk to the traders that were marking the portfolio. Then we would escalate any larger variances that were not resolved to Mr. King. Then the last reporting level would be to Mr. Balducci from the front office perspective.

Q. And what do you mean "variances" -- "larger variances that were not resolved"?

A. Well, if you had a discussion and just say the desk was marked at 90 and independent valuations' view was the price should be 88 and you'd have a discussion with the traders to say,

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Again, here are my inputs, here's my logic, and I don't have third-party data that supports being priced at 90, unless you can provide me any third-party data this is where the variance is going to be.

If the desk provides other third-party data saying, Oh, you didn't look at there was a trade let's say the last day of the month at 90, that's why I have it marked at 90. So understanding you are working with a theoretical price based on a cash flow model, I just saw an actual trade at 90. So if that's case, independent valuations would say, Okay, I have a better source of information this should be priced at 90. So that would be resolved.

On the other side of it, you could have a similar conversation with the desk, and you may know of another desk, if you will, within the firm that traded a position -- either that position or a like position. And you may have a bit of information that the desk may not have on why they should re-mark that.

Q. So were the goal of these meetings, then, to attempt to resolve any material

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variances?

MR. TOMAINO: Objection to form.

A. The goal of the meeting would be to correct but more so understand. I don't think "correct" is possibly the right word. It's more to fully understand why there's a difference of opinion.

It doesn't -- like anything in life, it doesn't mean you're always going to meet in the middle. People always have strong opinions. It was just more document, understand, and help determine where the appropriate valuation range seemed to work to get to a place where you're saying, Okay, now I have a better comfort level, be it that, A, I have more information, or I'm in a place where I can, if you will, better triangulate where I think this is valued.

Q. So if, as a result of these meetings, a material variance could not be resolved, you said it would get escalated?

MR. TOMAINO: Objection to form.

A. The first level is always to try to basically understand, if you will -- "clean" maybe is not the right word, but clean up as far as

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understanding what data is required to properly mark the portfolio.

So there's always going to be breaks that can arise for no reason. Maybe you think the desk marked at 90 and they actually were marked at 88. So there's always going to be things that need to be corrected in the overall balance sheet, if we don't have the right data. So that's all part of the first process with the trading desk.

Then whatever's outstanding after talking to the traders themselves is then something we would escalate to Stephen King as far as the next meeting would go and walk through, again, the larger variances or the variances across the books to better understand where we're seeing these variances and if there's any rational for that.

Q. Were discussions with the trading desks regarding these material variances ever contentious?

MR. TOMAINO: Objection to form.

A. I mean, to be honest, "contentious" is probably a strong word. There's always going to be a difference of opinion. So there's going to

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be individuals that will, if you will, have a strong view. But it doesn't mean it's contentious.

Q. What does it mean for your group's valuation procedures to be independent?

MR. TOMAINO: Objection to form.

A. In my view what the responsibility of the team was was to come up with our own valuation to ensure that we were, you know, working separate from the desk. It doesn't mean that we don't work with the desk to, again, try to obtain information, but at the end of the day it's really the responsibility of those within product control to come up with their own valuation.

So the desk may provide us information that we could use as inputs to a valuation, but it doesn't mean that -- the objective we try to get is whatever information we can get on our own. For instance, if we receive data from brokers, we prefer not to get data by way of the desk. We prefer to just talk straight to the brokers and have them forward us the information or include us on their distributions.

Q. Who is then responsible within the

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independent valuations group for ensuring that these valuations were independent?

MR. TOMAINO: Objection to form.

A. Can you restate the question?

Q. Sure. Who within the valuations group was responsible for ensuring that this price testing was independent from the trading desk's?

MR. TOMAINO: Objection to form.

A. So the logic is captured within the procedures of the product control valuations team on how we -- how we ascertain the data. So that's going to be captured within be it the policy or the procedural documents on how the data is obtained.

Q. Okay. What other procedures were in place to ensure the independence in this process?

MR. TOMAINO: Objection to form.

A. Again, within the policy and procedure, there would also be independent auditors that would review and ensure that the data is captured independently, be it internal audit, be it PwC, to review our policies and procedures and ensure the team is working within line of the policies and procedures.

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Q. Was your compensation affected in any way as to whether an asset was marked up or marked down?

MR. TOMAINO: Objection, foundation.

A. Can you restate the question?

Q. Sure. Was your compensation affected in any way --

A. Was mine?

Q. -- based on whether or not --

A. Oh, I thought you said a compensation. No, my compensation would not have been affected.

Q. As a member of the independent valuations group, did you have any interest in where a position was marked?

MR. TOMAINO: Objection to form.

A. My objective was to make sure it was marked as appropriately as I saw, based on the information that was available to me.

Q. Was the independent valuation group's price testing review meant to provide an independent and objective assessment of the trader's marks?

MR. TOMAINO: Objective, did you say?

MR. RUSSO: Objective.

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MR. TOMAINO: Objection to form.

A. I would say it would be subjective view on where the trade was marked.

Q. But the review would have been meant to provide an independent assessment of the trader's marks?

MR. TOMAINO: Objection to form.

A. Our responsibilities were to come up with our own marks to ensure the integrity of the balance sheet. And that would be as to challenge a trader for both if there was a price discrepancy creating a material variance between where product control believed that a position should be priced versus where trading had marked it.

Q. And the overriding goal of your price testing procedure was to ensure that assets were marked appropriately; correct?

A. That was the main function of the independent product valuation team.

MR. RUSSO: Take a quick break.

MR. TOMAINO: Sure.

THE VIDEOGRAPHER: This ends Unit 1. We're off the record at 10:53.

(Recess taken from 10:53 to 11:14.)

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THE VIDEOGRAPHER: This begins Unit 2 in the deposition of Sean Teague. We're on the record at 11:14.

Q. Mr. Teague, I'd like to go back a little bit to the price testing procedures that we were discussing earlier, and I'd like to focus on the CDO price testing as an example.

So let's assume for a particular month that you do need to wait until three days after the month end to receive the closing P&L. What would you do with that P&L once you received it?

MR. TOMAINO: Objection to form and hypothetical.

A. To be clear, it's not the closing P&L; it's the closing balance sheet.

Q. Balance sheet. I apologize.

A. So with the closing balance sheet, you'd get an Excel file from the product control line, including positions, along with the CUSIP or identifier, so you can get more information on the position, be it via Bloomberg or other sources. So you have an identifier, you have the position name, and you're going to have the size of the position, the notional as well as where the desk

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has that position priced.

Using that information you can start performing your independent valuations. For a CDO other information that can prove helpful, which you could probably get from the trading desk or from the middle office, would be seeing if there's any suggestions that the desk is using to mark that position, be it prepayment speed, default rates, credit spread, because if -- when pricing a CDO, if you only have a cash price, if you will, that would really -- that doesn't really serve any purpose. You need to have all of the underlying information to come up with a price.

Q. So once you receive that information from the desk, what would your team do?

MR. TOMAINO: Objection to form, hypothetical.

A. So pricing CDOs, the focus was trying to get independent third-party data to determine how to value the different CDOs. The things that would go into that information would be for securitized products is a lot of the banks, if you will, would have reporting -- research reports where they see prepayment speeds, where they see

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default rates. As well you look at the positions themselves to see what are their historic prepayment speeds, what is their historic default rate.

So what you're doing when pricing a CDO is coming up with a projection of your prepayment and default, and that, for a waterfall, would determine which portions of the CDO from the bottom up will be getting money. If default rates increase, then the bottom portion of the CDO, those tranches will not be receiving money based on the waterfall.

So the individual would be pricing this through a system called INTEX. It's a third-party vendor system. And they would take the data for the inputs and price it by INTEX. If the individual has recent trading activity or vendor prices, then they could use those in place of running the cash flow analysis.

The cash flow analysis is, if you will, a -- it's a modeled price, theoretical price, based on the information that you have available to you. Having market data in the nature of trading activity, that would be more reliable, if

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make that money disappear. So if you're taking the weighted average life just say, again, from ten years down to three years, all those future cash flows are gone.

So in coming up with a projection, you may have similar projections, but those similar projections can create vastly different prices.

Q. So once the valuations group then obtains the final price from INTEX, you said you calculate then the variance between that final price and the trader's price?

A. Yes.

Q. After the variance is calculated, what do you do next?

MR. TOMAINO: Objection to form, hypothetical.

A. So the individual that performed the calculation within the product control valuations team would then reach out to the trader that was responsible for marking those positions and, again, discuss the -- discuss all of the positions generally is the logic.

And the larger variances would be the ones that they discuss and spend more time focused

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on why is there a difference of opinion on how these are marked.

Q. And would that meeting take place before the monthly meeting to discuss the results of the independent price testing?

A. Yes. So that would be -- that would either take place via e-mail or over the phone or face-to-face. So the communications of the larger variances would be something that the individual product control valuation person that performed the calculation would reach out to the person on the desk that is marking the position.

Q. I believe you testified earlier that if the material variance could not be resolved with the trader then the matter would get escalated to Mr. King; is that correct?

MR. TOMAINO: Objection to form.

A. In the case of CDOs, as Mr. King was the lead for that desk. If there was -- the overall variance would be included in the report for that business area. A summary of what that variance is related to would be provided to Mr. King as part of the monthly report.

Q. And who would be responsible for

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addressing material unresolved variances with Mr. King?

MR. TOMAINO: Objection to form.

A. Can you restate the question?

Q. Sure. Who within the independent valuations group would be responsible for addressing any unresolved material variances with Mr. King?

MR. TOMAINO: Objection to form.

A. The meeting was to escalate any large variances, any -- any resolution of those large variances would be something that would be for senior management to discuss with the business leads, as in Mr. King. So that would be leads for product control would be responsible for discussing any issues.

As far as escalation, that would come out of the product control valuations team. And as far as who would be responsible at the end of the day, it would be the leads for product control.

Q. And who are the leads for product control?

A. Again, at that point in time I guess

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Marcus Morton for lead for values as well as Paul Copson, if I recollect, was the head of product control at the time and up unto I guess Patrick Clackson, who is the CFO.

Q. And this escalation that would occur from Mr. Morton and Mr. Copson, would that occur before or after the monthly meeting that we were discussing this morning?

MR. TOMAINO: Objection to form, hypothetical, foundation.

A. It can occur ad hoc. It can occur at or after the meeting. It would just be part of the -- the information regarding the variances would be within that monthly meeting. So that would usually be where the discussions would begin.

Q. And who had the ultimate authority to determine whether or not to resolve a material variance?

MR. TOMAINO: Objection to form.

A. I can't really say.

Q. What would happen to material variances that went unresolved?

MR. TOMAINO: Objection to form,

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foundation.

A. Keeping in mind the market's always moving. For instance, last month there was quite a bit of market volatility. So, you know, many things, if you will, resolve themselves through market volatility or, you know, new issues show up while other issues are resolved.

So the markets are always open, if you will, while the process is somewhat stale. So you're always going to have certain things that just kind of get addressed on their own, and other things may linger. But, in short, anything that's kind of larger as far as a variance would go and it's outstanding would be captured throughout the reporting process for continued escalation.

Q. What do you mean that they would be captured throughout the reporting process?

A. Well, just to say if there's a large variance in January and a large variance in February, that would be encapsulated within the -- be it the commentary and the monthly reporting.

Q. And those variances, would they be escalated to senior management in January and again in February?

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A. Yes, at the business level you have large variances would be captured in the monthly report.

(Pause.)

MR. RUSSO: Can we stay off the record for a moment. I need to get one document.

THE VIDEOGRAPHER: We're off the record at 11:30.

(Pause.)

THE VIDEOGRAPHER: We're back on the record at 11:31.

(Plaintiffs' Exhibit 206, e-mail and attachment, Bates-stamped BARC-ADS-00903148 through 151, marked for identification.)

Q. Marked as Exhibit 206 an e-mail and attachment with the Bates range BARC-ADS-00903148 through 151.

Mr. Teague, take a look at this e-mail and attachment and let me know if you sent these in the ordinary course of your business as a member of the product control group at Barclays.

A. Yes, we had meeting minutes for each of the monthly meetings. This one was a senior meeting. This is with Eric Bommensath, who was

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the individual who managed credit. So as far as -- a number of business heads reported in to Eric Bommensath, one of them being Stephen King.

Q. You referred to this as a senior meeting. What do you mean by that?

A. Well, this is -- he was the -- this is December 2007? So he was I believe the global for -- let's see. Yeah, so this is global credit products. So he was the head for global credit products at the time.

Q. So the senior meeting would take place on a monthly basis?

A. Correct.

Q. Were there other meetings that would take place on a monthly basis as well?

MR. TOMAINO: Objection to form.

A. There were meetings that would take place ahead of this meeting with the different business heads that reported in to -- sorry, Mr. Bommensath.

Q. So those meetings would include Mr. King and others -- other desk heads?

MR. TOMAINO: Objection to form.

A. Yes, that was the objective was to have

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a meeting for the business heads ahead of the meeting with Mr. Bommensath.

Q. If you look at the attachment here, it says the meeting is called by you. Do you see that?

A. Yes.

Q. What responsibilities did you have over these monthly senior meetings?

MR. TOMAINO: Objection to form.

A. My responsibilities included gathering of the information across the valuations areas as far as ensuring individuals updated any slides for the business areas that they covered, the price testing that they performed, as well as I would lead the discussion/take the minutes with regards to any of the variances that were discussed at the meeting along with any actions taken away from the meeting.

Q. In leading these monthly discussions, what types of issues were you typically focusing on?

MR. TOMAINO: Objection to form.

A. As this was the pricing review meeting, any differences in prices by business area that

EXHIBIT 50

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

C O N F I D E N T I A L

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

- -

Master File No.:
1:09-cv-01989-PAC

IN RE BARCLAYS BANK PLC:
SECURITIES LITIGATION

This document relates to ALL ACTIONS

- -

Deposition of JOHN VARLEY

Held at Sullivan & Cromwell, located at One New Fetter Lane, London, EC4A 1AN, United Kingdom

On the 29th of October, 2015 at 8:33 a.m.

VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
1801 Market Street – Suite 1800
Philadelphia, PA 19103

A. I said to you earlier that the subject matter of the complaint was broadly the subject matter of the documents that we reviewed, and I have nothing to add to that.
Q. So you can't be any more specific as to specific topics that you had your memory refreshed?
A. We reviewed a few documents. I remember specifically some of the things that we were looking at and in some cases my memory was refreshed, to your question.
Q. Can you tell me what things your memory was refreshed on?
A. We looked at quite a few documents.
Q. And that was during the meeting on Monday. How long did that meeting last?
A. I told you, it lasted a few hours.
Q. And then when was the next time that you met?
A. We met briefly on Tuesday and we met again yesterday.
Q. How long did those meetings last?
A. A couple of hours and a few hours.
Q. During those meeting, did you look at documents that refreshed your recollection?
A. Exactly.

Q. And same answer, just the general subject matter of the complaint?
A. The same answer.
Q. During your meetings this week with your attorneys, who was present?
A. Those in the room.
Q. All right. Everyone?
A. Well, Rachel, Adam, Tom, Bob, Michael, and in our meeting yesterday there were two other people present.
Q. Do you know who they were?
A. I do, yes.
Q. Who were they?
A. One of them was Nicholas Purnell, who is a Queen's Counsel here, and the other was from Corker Binning, who are one of my legal advisers.
Q. Was there anyone from Barclays at any of your meetings?
A. No.
Q. I am not going to spend a lot of your time running through your history at Barclays. I think it is well documented. I just want to confirm a few things. Did you join the Bank in Barclays in 1982, is that correct?
A. It was either 1981 or 1982.

Q. And you were at BZW prior to being at Barclays, is that correct?
A. BZW was part of Barclays.
Q. So when you joined BZW it was already part of Barclays?
A. Yes.
Q. And BZW became Barclays Capital, is that correct?
A. In a manner of speaking.
Q. And in 1995 you became Chairman of the Asset Management Division of Barclays, is that correct?
A. I did.
Q. And you joined the Board of Barclays in 1998, is that correct?
A. I did.
Q. In January, on January 1, 2004, you became Group Deputy Chief Executive, is that correct?
A. Yes, it is.
Q. And September 1, 2004, you became Group Chief Executive, is that correct?
A. That is correct, yes.
Q. And Mr. Diamond became Chief Executive in 2011, is that correct, January 1?
A. It is.

Q. Did you leave the bank in 2011 or did you stay on?
A. I left -- to be precise, I left the bank in 2010, so I ceased to be Chief Executive at the end of 2010. I left the Board at the end of 2010. I remained an adviser to the bank for the following nine months, so I left my advisory capacity at the end of September 2011.
Q. Are you currently employed?
A. Yes.
Q. By whom are you employed?
A. I sit on two commercial boards and I chair two charities.
Q. What are the boards that you sit on?
A. One is Rio Tinto plc, and the other is Black Rock LLP.
Q. The subject matter of the questions that I am going to be asking you today is going to focus on the years 2007, 2008 and perhaps some into 2009. I would like to ask you about your role in, let's say, 2007 with regard to some specific aspects of Barclays' business. I understand that you had broad responsibilities across many business lines as Chief Executive, but the subject matter of many of my questions is going to be focusing on the asset backed

securities that were held by Barclays Capital. As Chief Executive, in 2007 and 2008, did you have any role in valuing the securities that were held by Barclays Capital?

A. No.

Q. Whose responsibility was it, what was your understanding of whose responsibility it was within the bank to value those assets?

MR. TOMAINO: Objection to the form of the question. You can answer.

A. The responsibility for the positions and the trading books was Bob Diamond as Chief Executive of Barclays Capital, but there was an extensive process relating to valuations which involved both Barclays Capital, it involved the group finance function, it involved our external auditors, and where appropriate it involved inputs from our external advisers and from counsel.

Q. Let's focus on 2007. During 2007, would you agree with me that there was what has been called generally the beginning of the financial crisis in the United States?

MR. TOMAINO: Objection to the form of the question.

A. Can you repeat the question?

Q. Sure. We will get into specific documents, but would you agree with me that during 2007 there was a focus on the valuation of assets that were backed by sub-prime mortgages?

MR. TOMAINO: Objection to the form of the question.

A. What was clear with the first -- I think your question, your first question in any event, if I have understood it correctly, was my words, not yours, were there the first signs of stress in the financial system in 2007, yes. Were there some signs of illiquidity in some of the securities to which you are referring, yes.

Q. With the development of those stresses, did you take any additional roles you had not previously as Chief Executive in reviewing the valuation of the assets that were held by Barclays Capital?

MR. TOMAINO: Objection to the form.

A. We had a very extensive and rigorous process for securities valuation. It started at the trading desk. It involved the product control group, who were separate from the trading desk. It involved devolved Barclays Capital finance. It then went to central Barclays Capital finance. It then went to

central group finance. It then as appropriate went to auditors, underwriters, external advisers. So what I am describing here is an extensive system that was designed to ensure that our valuations were hard-headed and rigorous.

Q. Okay. Just to be clear, what I am asking is did your role in looking at or valuing the securities change at all during 2007?

MR. TOMAINO: Objection to the form of the question.

A. I have already told you that I was not involved in the valuation of securities. What I relied on was the extensive process that I have just summarized.

Q. So in no way during 2007 did you change your role in valuing those securities? You did not have any role at the beginning and you did not have any role at the end. Is that correct?

A. That is the correct characterization. I have told you I had no role in the valuation of securities.

Q. Okay, and I had limited my previous question to 2007. So just during 2008, you would agree with me that the stresses that you described earlier increased during 2008. Is that correct?

A. I would agree with that.

Q. And despite the increase in those stresses, your role did not change at all in valuing or reviewing the value of the assets held by Barclays Capital. Is that correct?

MR. TOMAINO: Objection to the form. The question now has broadened from valuing to reviewing the value. It is a compound question by definition but just note my objection.

Q. I will reask it. Did your role at all change during 2008 -- first, let's talk about valuation. Did you play any role during 2008 in the valuation of securities held by Barclays Capital?

A. I had no role in the valuation.

Q. And same for 2009, you had no role in the valuation, is that correct?

A. Correct.

Q. During 2007, did you increase your role in reviewing the assets that were held by Barclays Capital?

MR. TOMAINO: Objection to the form of the question.

Q. Let me rephrase the question. During 2007, did you as Chief Executive have an increased amount of diligence, you personally, have an increased

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Q. 117 of 315.
A. Yes, thank you, I have it.
Q. This page is entitled: "Risk Management, Credit Risk Management, Barclays Capital Credit Market Exposures". You will see there is a chart breaking down Barclays -- words and a chart obviously, breaking down the ABS CDO super senior exposure. Do you see that?
A. In the table you are talking about or --
Q. That whole page --
A. Yes, I see under A1.
Q. Yes, it is enumerated A1, there is ABS super senior, and the chart has a more granular breakdown of the assets that were on Barclays' books as of year-end 2008. Is that correct?
MR. TOMAINO: I will just object to the form.
A. What is your question?
Q. The chart that is set forth there on page 95 of Exhibit 387 is a breakdown of the Barclays ABS super senior exposure as of 12.31.08. Is that correct?
A. I believe it is, yes.
Q. And do you see there is a handy chart that has on the far right-hand side of that chart has

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"As of 12.31.07." Do you see that?
A. Yes, I do.
Q. It says "marks". Do you see that?
A. Yes.
Q. Do you have an understanding as to what that chart, that column is referring to?
A. Yes, I do.
Q. What is your understanding?
A. It is referring to the extent to which the positions have been marked down.
Q. And so the far right-hand column is the extent that the positions had been written down as of December 31, 2007, is that correct?
MR. TOMAINO: Objection, form.
A. Yes, I believe it is.
Q. So those are the marks that were used for the calculation of the figures in the 2007 20-F?
A. I believe so.
Q. So, for example, at the time of the 2007 20-F, the 2005 and earlier vintage ABS super senior CDOs were written down to 69 cents in the dollar. Is that a fair characterization?
A. Yes.
Q. Just so I am reading it, if you can confirm my reading of this correctly, the fourth row

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down, entitled "Sub-prime", is that an aggregate number of the prior three rows, so what this is communicating is that the ABS CDOs backed by sub-prime collateral as of 12.31.07 were written down to 60 cents in the dollar?
MR. TOMAINO: Objection, form.
A. I am not adding the numbers up literally but I am just adding the right-hand figure up in each case and it appears to total to the sub-prime sub-total, so I would speculate, yes, without doing the maths for you.
Q. That is fine, I appreciate it, thank you. If you turn to the next page or 2 pages over, so page ending 119 of 315, this slide is entitled: "Credit Risk Management, Other A2, other US Sub-prime." Do you see that?
A. "Other US sub-prime", in the heading, yes. I do see that.
Q. The first line of this chart is "Whole Loans - Performing." Do you see that?
A. Yes.
Q. So reading this is telling us that as of 12.31.07 for the sub-prime whole loans on Barclays' books which were performing, you were holding those at 100 cents in the dollar. Is that correct?

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MR. TOMAINO: Objection, form.
A. Yes, I believe so.
Q. And loans that were more than 60 days past due, you were holding those at 65 cents in the dollar, is that correct?
A. I believe so, yes.
Q. I understand this level of detail was not disclosed in the 2007 20-F but -- strike that.
Do you think, based on all the information we have seen about how terrible the sub-prime market was doing, et cetera, do you think --
A. How what sub-prime --
Q. How terrible the sub-prime market was doing, as you said, it was savage price cuts?
A. No, I said that October was a savage trading month. I have not used the word -- I have not said that sub-prime market was doing terribly in my evidence to you today.
Q. Okay. Do you believe that the sub-prime market was doing well at the end of 2007?
A. No, of course I don't.
Q. Do you think it was doing terribly?
A. I just didn't use the word "terribly".
Q. I appreciate that.
A. It was exhibiting stress.

Q. All right. Do you think that the loans, the sub-prime loans on Barclays' books were appropriately valued at 100 cents in the dollar at the end of 2007?

MR. TOMAINO: That is not what this says. The 100 cents in the dollar refers to performing whole loans.

MR. OLTS: Right. So do you believe that the sub-prime performing whole loans were properly valued at 100 cents on the dollar, mark to market, at the end of 2007?

MR. TOMAINO: Objection, form.

A. As I say, I believe in the integrity of the figures that you have in front of you, and I take at face value what I see here, 100 percent at the end of 2007 and 80 percent at the end of the 2008.

Q. So you believe that the marks -- that holding them at 100 cents in the dollar at the end of 2007 was an accurate mark to market valuation of those assets. Is that correct?

MR. TOMAINO: Objection, form.

A. I do believe in the integrity of the process that generated these marks. I didn't look at the marks particularly myself, as you know from my earlier evidence, but we had an obligation to value

faithfully, and I believe these are faithful valuations.

Q. So you believe you could have gone out into the market and sold those loans at 100 cents on the dollar at the end of 2007, is that correct?

MR. TOMAINO: Objection, form.

A. I don't know. I don't know.

Q. They were mark to market, is that correct?

A. I assume that they were mark to market, some of them may have been mark to model.

Q. And I assume that if I asked the same question with regards to some of these other assets, asking you about the specific marks at the end of 2007, your answer would be the same, for example, for the CDO marks, would your answer be the same as it was for the whole loans?

A. It would, because very considerable care was taken as a result of the processes that I have described to you before, very considerable care was taken to ensure that these assets were appropriately mark to market or were, absent market activity, marked to model.

Q. And you never reviewed the models that were used -- if models were used, you yourself never

reviewed any of the models that were used to mark any of these assets?

A. You are right, I didn't review models. I delegated that.

Q. Before we went over that chart, were you aware that the sub-prime, the performing sub-prime whole loans were being held at 100 cents on the dollar?

A. I don't recall, but it is possible that that had been drawn to my attention. I do recall from evidence we have looked at together today that in large parts of this book we were at 99 percent plus performing, so it doesn't surprise me. I mean, just by reference to what we have looked at together today, it doesn't surprise me to see this number at all. I don't remember it but it doesn't surprise me to see it.

(Exhibit 388 marked for identification)

Q. The court reporter has handed you what has been marked as Exhibit 388. Exhibit 388 is a one page email and multiple page attachment, Bates numbered BARC-ADS-01557589 through 593. The email is from Mr. Le Blanc to Mr. Varley, copying other individuals. The subject is: "Risk Update to Board Final Draft Paper." Let me know when you have had

a chance to look at that.

A. Yes, thank you. Thank you.

Q. Exhibit 388 is an email that you received in the normal course of your business at Barclays?

A. Yes, I think so.

Q. Do you recall receiving this email?

A. No, I don't.

Q. Do you recognize the attachment?

A. I don't recognize it, no.

Q. The update memo?

A. No.

Q. It appears to be one of the several risk update memos that we have seen throughout today?

A. I think so.

Q. In this email Mr. Le Blanc, on the front of Exhibit 388, goes through and summarizes some of the information that is contained in the report. Do you see that?

A. Yes. You mean on page 589?

Q. Right.

A. Yes, I do.

Q. In the email, on the third bullet point down, he says: "Barcap impairment of 275 billion euros". I believe that is --

Do you recall there being a rise in the delinquencies in the Alt A assets during 2008?

MR. TOMAINO: Objection, form.

A. I remember that the Alt A, in a sense, as illustrative of the market in sub-prime as a whole, was exhibiting further signs of stress.

Q. So did you see that -- in your opinion was the market for Alt A related in some fashion to the sub-prime market?

MR. TOMAINO: Objection, form.

A. I think, from recollection, there was quite a lot of correlation between these market performances.

Q. You can set that aside.

(Exhibit 389 marked for identification)

The court reporter has handed you what has been marked Exhibit 389. Exhibit 389 is Bates numbered BARC-ADS-01601045 through 060. The front page is pretty much blank. The second page is entitled: "Paper for Board Meeting on Thursday 17 April 2008." It appears to be a memo to the directors from Mr. Dickinson, dated 11 April 2008. The subject is: "Approval of minutes of previous meeting, 20 March 2008."

A. Right, thank you.

Q. Sure. All right, do you recognize

Exhibit 389?

A. Well, I don't know what you mean by "recognize it". I see it as a set of meeting minutes.

Q. So you recognize it to be a copy of the meeting minutes for the Barclays Board of Directors held on Thursday March 20, 2008?

A. Yes, I believe it is.

Q. This is a meeting that you attended, obviously. Do you recall -- it states here that you attended it. Do you recall attending this meeting?

A. I don't recall, but I imagine I was at it.

Q. If we can turn to enumerated section 1.2, on page ending 048, this is the Board Committee Report section. The first one there is the report of the Board Risk Committee meeting held on 19 March 2008, which I believe is the one that was referenced by the memo that we were looking at in the last exhibit. If you look down on section C of that part of the report --

A. Did you say section B?

Q. Section C, excuse me. It says: "Wholesale credit and stress testing."

A. Yes.

Q. It says: "Net exposures to the asset

backed securities and leveraged finance markets have not moved materially since the year-end. The outlook for the Alt A market has deteriorated, but the position on the monoline insurers has improved, and the new injections of capital have allowed them to retain their AAA rating."

It says: "The committee has discussed two different stress scenarios. First, a short-term severe stress environment and the potential losses that could be incurred in one month. This could result in the loss of up to £850 million before tax in a reasonably severe scenario."

Do you see that?

A. Yes.

Q. Were the discussions of the stress scenarios which are outlined here something that you were involved in?

A. I was not a member of the Risk Committee but I did regularly review the stress testing work that Robert Le Blanc and team conducted across the group.

Q. When it says "in a reasonably severe scenario", can you explain to us what that means?

MR. TOMAINO: Objection, form.

Q. Let me ask this way. What is your understanding of what "reasonably severe scenario"

means?

A. Beyond the literal meaning of the words, I don't think I can add anything.

Q. But in the context of discussing different stress scenarios within Barclays that you were obviously involved in reviewing, at a minimum, a "reasonably severe scenario", is that a level of stress that was typically used as part of your stress testing?

MR. TOMAINO: Objection, form.

A. I think the more important word is "severe". So this is talking about a severe scenario, it is not talking about the most extreme severe scenario, but it is talking about a severe scenario. The way in fact that the stress tests were conducted was not by reference to adverbs like "reasonably". We would take specific situations, say 10 percent decline in the UK housing market, 20 percent decline in the US housing market, you know, specifics, and then we would see how the book performed and therefore the bank performed in those stress situations.

Q. And then were those specific scenarios that you used, were those categorized in some manner, such as "severe", "moderate", "mild"?

A. I don't recall. I don't recall, but the inputs and the assumptions were shared, for example, with the Financial Services Authority.

Q. It goes on to say: "That level of loss could be absorbed without breaching minimum capital ratios." Do you see that?

A. Yes.

Q. Obviously the Barclays Capital ratio was something that was very important to you --

A. The Barclays Capital ratio?

Q. Barclays Group capital ratio, excuse me, was something at the time that was very important to you, is that correct?

A. Yes.

Q. Could you explain very briefly for a layman what that means, what the capital ratio refers to?

MR. TOMAINO: Objection, form.

A. Yes, it refers to the relationship between a bank's equity and a bank's risk positions.

Q. Okay, and how was that important to you, as the CEO?

A. Because the strength of a capital ratio goes to two important points. One is the confidence that the regulator has at the bank, because the regulator operates minimum ratios. The other is the

confidence that the market has in the bank, because the market sees capital ratios as a proxy for strength and resilience.

Q. When it says "breaching minimum capital ratios", is that referring to the minimum capital ratios that are set by the regulators?

A. I believe that is what it is referring to, yes.

Q. So in situations where Barclays was getting close to breaching a minimum capital ratio, what steps could you take to increase that ratio?

MR. TOMAINO: Objection, form.

A. I see no evidence here, nor is it in my recollection that we ever got close to breaching a regulatory minimum. We always managed group in such a way as to ensure that we had a substantial buffer above the regulatory minimum.

Q. I am sorry, I didn't mean to imply that you ever did. As a further way of understanding your testimony I would like to have an example, if you can provide me with an example, of what you could do to raise your capital ratio, if necessary?

A. In the papers that we have been looking at, I think you will have seen reference from time to time to a tier-one ratio of 6.5 percent or 7.5 percent

of whatever it is. To try to give context to my answer to your question, relative to those numbers of 6.5 or 7 or 7.5, the FSA regulatory minimum was 4 percent.

Q. So therefore, in order to raise the bank's tier-one ratio that you said was 6.5 --

A. Yes.

Q. -- what steps would you have to take to raise that ratio?

A. Two obvious things to do. One was to ensure the profitability of the group. In my earlier answer I said that the regulatory ratio represents the relationship between equity and risk positions. The amount of equity was increased each year, provided we were profitable, and the amount of equity would be the difference between the post tax profits of the group and the amount paid away on dividends. So that is one way of doing it, is being profitable, and as you see we were profitable.

The second way of managing the capital ratio would be to reduce the size of the balance sheet. So you reduce -- either you increase the numerator or you reduce the denominator, or you do both.

Q. Could you turn to page ending 059. Please obviously feel free to read this section in

context. The page on 058 is the enumerated section for this subsection I am going to ask you about, the enumerated section is 2.2: "Capital management update", and it says: "Mr. Lucas referred the Board to his presentation entitled 'capital management update', which had been sent to directors in advance of the meeting, and highlighted the following points."

I am going to ask you about point D, as in dog.

A. Thank you.

Q. Point D is entitled: "Proposed capital issuance." Under "Proposed capital issuance", it states:

"To achieve an equity ratio of 5 percent by June 2008, the group would need to reduce RWAs by £38 billion or increase equity by £1.9 billion. Discussions were underway with a Japanese bank and a Korean insurance company to enter into strategic partnerships, which would include them taking equity stakes amounting to between £1 billion and £2 billion. Plans were also being formulated to release equity Tier 1 through changing the ESAS hedge from an equity holding to a derivative, which will release some of the £500 million on a conservative estimate. The businesses have also been challenged to reduce RAWs by £20 billion by 30 June 2008."

I have a few questions about that. It says: "To

EXHIBIT 51

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

Barclays Capital U.S.
Analysis of CDO, ABS, & CDS Pricing

As of December 31, 2007

Prepared as of January 25, 2008

PRICEWATERHOUSECOOPERS

1. Scope & Background

The Financial Analytics group "we," "us," or "Financial Analytics" within PricewaterhouseCoopers LLP "PwC" Advisory performed an analysis of financial instruments selected and provided to us by the BarCap Capital U.S. ("BarCap") assurance engagement team. The selection consists of Collateralized Debt Obligations "CDOs", Collateralized Synthetic Obligations CSOs" and Asset-Backed Securities "ABS" with subprime or Alt-A exposure, Negative Basis Trades wrapped with a CDS on monoline counterparty insurers, single name CDS on reference bonds that are included in the ABX indices and Commercial Loans priced to the Lehman commercial loan index.

We were specifically asked to assist the BarCap engagement team in the audit of the valuation assertion of the selected financial instruments as of 12/31/07. Financial Analytics overall approach to assisting the BarCap engagement team is discussed in section 3 below.

The following provides an explanation of interim procedures performed over the selected financial instruments as of 10/31/07 and a breakdown and further description of the products we reviewed as of 12/31/07.

October 31 Review

We reviewed BarCaps pricing of the selected products at 10/31/07 to prepare for our year end review. Originally, the BarCap assurance engagement team asked us to assess 10/31 prices and, dependent on the findings, identify areas of focus for our 12/31 year-end review. However, due to the very volatile market and the nature and timing of the work performed, it was difficult to finalize our 10/31 findings. Rather, we focused on a comprehensive review of BarCap' 12/31/07 prices, targeting our attention on price movements in the fourth quarter. Ultimately, our October 31 analysis allowed us to gain familiarity with the products contained in each book, the mechanisms by which they are priced, and the format in which the data would be provided. Through our assessment of the 10/31/07 pricing we further developed and honed our approach and methodology for reviewing the products within each business at December 31, 2007.

December 31 Review

Product	Business	Oct 07 NPV	Dec 07 NPV	Periods Reviewed	Comments
CDO ABS/Corp	CDO Agency NY & Risk Finance	925m	576m	October and December	
ABS - HEL	CDO Agency NY, ABS Secondary, ABS Warehouse (Prudential), October CDO London (Mainsail) and December workout book (Prudential & Mainsail)	2.2b	2.2b	October and December	
CDS	CDO Agency NY	503m	863m	October (only single name CDS) and December	Reviewed single name CDS Indices and CDS CDO
Negative Basis Trades (NBT)	US Negative Basis	4.7b	4.7b	October and December	Only reviewed NBTs wrapped by monocline insurers
Liquidity Facilities (NAV)	Banking	Not Reviewed	3.4b	December	Only reviewed 7 liquidity facilities valued using the NAV/fair value approach
ABS CSO	CSO	1.4b	1.4b	December	

In order to assess the 10/31/07 and 12/31/07 prices we were provided with the following information from the BarCap engagement team:

Description of Information Provided	Files Provided
CDO ABS / Corp	CDO Agency NY Inventory, Risk Finance
ABS HEL	CDO Agency NY Inventory, ABS Secondary, US Portfolio Workout Bond Inventory, ABS Warehouse, CDO LN
CDS	CDO Agency NY Inventory
NBT	US Neg Basis Price Test
Liquidity Facilities (NAV)	Markov, Pamp I, Pamp II, Silverton, Stack, Tenorite, Tourm I, Tourm II, Trading Book SS - Underlying Collateral
ABS CSO	CSO Raw Files

2. Market Environment and the use of Credit Indices

Volatility in the credit markets has been significant during the second half of 2007. The credit markets declined significantly particularly beginning after two prominent hedge funds operated by Bear Stearns Asset Management collapsed in June. The resulting impacts on the credit markets were:

- Market credit spreads increased dramatically
- Secondary market trading in CDOs has been minimal
- Price quotes from dealers have decreased in volume and increased in volatility
- CDO issuances have declined significantly

Indicative of the disruption in the credit markets, USD CDO issuances declined by nearly 65% in the third quarter of 2007 from the first quarter of 2007 and 52% in the fourth quarter:

CDO Issuances[1]

	Global Total ($MM)		USD Total ($MM)		Structured Finance Collateral ($MM)	
Q1 2006	$	108,019	$	91,272	$	66,220
Q2 2006	$	125,110	$	91,921	$	63,050
Q3 2006	$	138,741	$	112,079	$	89,230
Q4 2006	$	177,409	$	123,006	$	92,071
Q1 2007	$	172,117	$	126,890	$	99,934
Q2 2007	$	141,455	$	109,004	$	74,121
Q3 2007	$	63,043	$	44,543	$	23,462

[1] "Global CDO Market Issuance Data", Securities Industry and Financial Markets Association

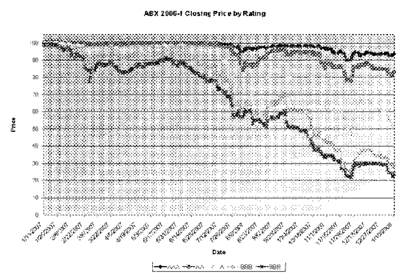
	Global Total ($MM)	USD Total ($MM)	Structured Finance Collateral ($MM)
Q4 2007	$ 29,956	$ 19,219	$ 12,932
Structured Finance Collateral are CDOs with underlying collateral in MBS, ABS, CDO, and CDS			

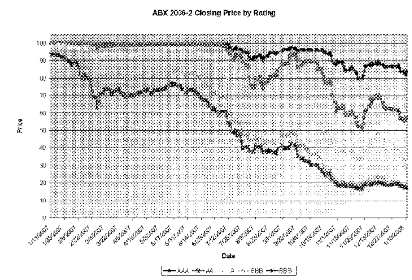
Credit indices have similarly experienced significant volatility. However, unlike many non-index credit markets, certain credit indices were traded actively during the third and fourth quarter of 2007. To the extent that type and vintage of collateral is similar, and given extremely limited price points in many non-index credit markets, these actively traded indices provide the most relevant benchmark price points. While we understand that, given the specificity of each deal, there will be inherent differences in BarCap's financial instruments and those financial instruments which the relevant indices reference, we expect a similar trending over time.

We have provided some of the most pertinent sub-prime indices below:

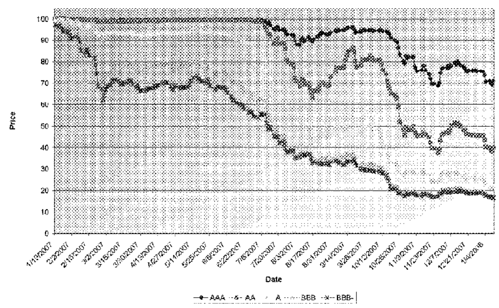
- ABX - Series of Credit Default Swaps based on 20 bonds backed by Home Equity ABS tranches with that rating.
- TABX - References 40 BBB and BBB- rated underlying bonds backed by US Sub-prime Mortgages

Throughout 2007 prices of both the ABX & TABX Indices have declined significantly:

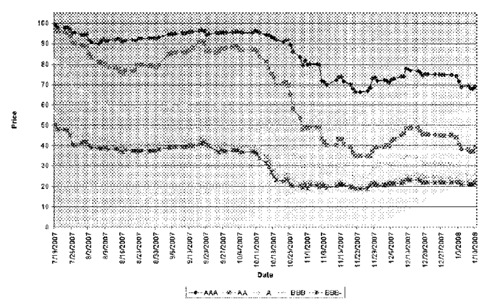




ABX 2007-1 Closing Price by Rating

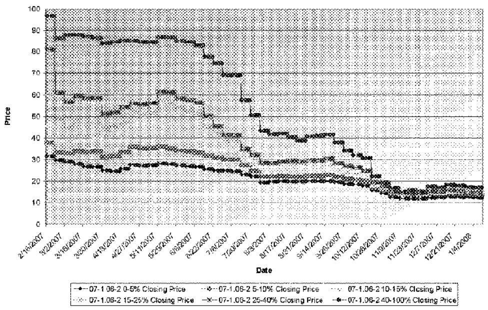


ABX 2007-2 Closing Price by Rating

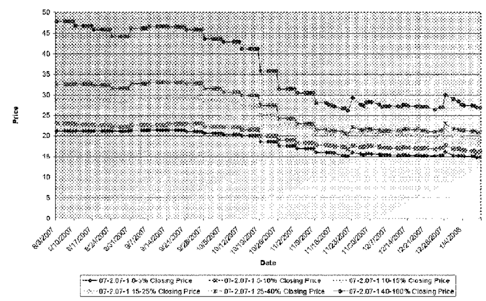


Confidential and Restricted Delivery

TAB 07-1.06-2 Daily Closing Price



TAB 07-2.07-1 Daily Closing Price



In addition to ABX and TABX, we have also benchmarked certain financial instruments to the CDX Investment Grade Index and CMBX.

3. Overall Approach

As noted in 2 above, to the extent that type and vintage of collateral is similar, and given extremely limited price points in many non-index credit markets, actively traded indices provide the most relevant benchmark price points and that although inherent differences exist, we expect a similar trending over time. Based on the extreme volatility in the market place and very limited transactions to use as price points, the approach we took was to:

1. Benchmark the direction and magnitude of changes in the selected financial instruments' marks to the relevant credit indices, with the objective of identifying outliers which formed a systematic bias.
2. Perform consistency checks between vintages and credit rating within businesses
3. Perform consistency checks for individual financial instruments among businesses.

In order to cohort the financial instruments for the benchmarking exercise, we obtained information about the financial instruments' structure, class, subordination, credit ratings, and collateral and grouped the financial instruments into similar "buckets."

Based on extremely limited price points in the market for sub-prime collateral, the most relevant benchmark was the ABX and TABX. Both indexes were actively traded in the fourth quarter of 2007, and contain similar collateral in terms of type (sub-prime HEL), and vintage (2005, 2006, and 2007) as the products analyzed. The ABX was used for Home Equity deals and the TABX was used for CDOs based on similarity and tranched nature of the collateral. In addition, CDX and CMBX index were used as benchmark for corporate and commercial credits, respectively, due to their similar collateral.

The table below shows the deal information requested and reviewed by us and provided to us by the assurance engagement team, which was used in evaluating the pricing levels of CDO, ABS, and MBS securities:

1st Order Effects - CDO Deal Structure	2nd Order Effects - Underlying ABS/MBS Structure	3rd Order Effects - Underlying Collateral Characteristics	4th Order Effects - Collateral Performance
- Attachment Point	- Bond Class	- Type of Collateral	- Delinquency Rates
- Tranche Width	- Bond Deal Structure	- Type of Interest Rate (Fixed vs. Floating)	- Default Rates
- Portfolio Credit Quality	- Bond Subordination	- Portfolio Borrower Credit Quality	- Portfolio Recovery Rates
- Portfolio Recovery Rates		- Loan Documentation	- Prepayment Rates
- Maturity		- Year Class of Origination	- Discount Rates
- Default Correlation		- Secured vs. Unsecured	- Remaining Collateral Balance
		- Loan to Value	- Remaining Collateral Maturity
		- Amortization	- Remaining Collateral Coupon Rates
		- Geographic location	

Based on the information available to us, we determined that the most relevant attributes were the nature of the deal (e.g. CDO, MBS, etc), the credit rating (e.g. AAA, AA, etc.), the vintage of the deal (e.g. 2006, 2007), the composition of the collateral (e.g. Investment-grade Corporates, Subprime MBS, etc.), and where available the attachment points (% of deal whereby losses are absorbed by subordinate tranches.)

4. Results, Analysis and Conclusion

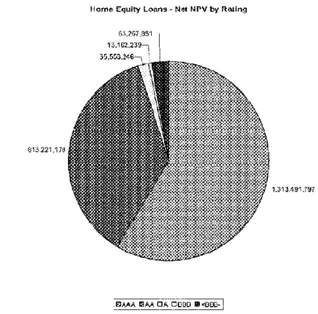
Note: The electronic workpapers supporting the analysis and conclusions included in section 4 of this document have been provided to the assurance engagement team for inclusion on their workpapers.

4.1. Home Equity Loans

We reviewed approximately $2.2 billion NPV in Home Equity Loans held in the CDO Agency NY and ABS Secondary (including the Prudential warehouse ABS positions) books and the underlying collateral within the Mainsail Structured Investment Vehicle. The Net NPV and number of positions reviewed within each book are summarized in the following chart:

Business	Sum of December Net NPV	Count
ABS Secondary	$102,417,559	58
CDO Agency	609,532,134	128
Mainsail	549,439,329	101
Prudential	977,307,380	108
Total	$2,238,696,402	395

- Over 95% of the positions reviewed were rated AAA or AA by S&P as of December 31, 2007



- Over 85% of the positions reviewed were 2006 or 2007 vintage.

Vintage	Net NPV
<2005	34,003,394
2005	250,538,105
2006	1,537,505,566
2007	416,649,337
Total	2,238,696,402

Based on rating and vintage we mapped each position to the closest fit ABX benchmark index and compared the average price of the home equity positions to index price. Based on a review of the index data provided in section 3 above, we determined that the deterioration in subprime related prices for 2006 and 2007-1 AAA to A commenced in July '07 whereas 2006 and 2007-1 < A began to fall in late May '07. All classes of 2007 notes did not commence price deterioration until October '07. The benchmarking exercise we performed over Home Equity ABS and CDO positions looked at the direction and magnitude of changes from July to December 31, 2007, however, the graphs below also explain why we believe the 12/31/07 actual mark is reasonable compared with the 12/31/07 ABX mark and therefore a review of the May and June data was not deemed necessary. The following chart summarizes the positions we reviewed by credit rating and the index they were mapped to:

Rating	Mapping Index	Sum of December Net NPV	Count of CUSIP	Average of 12/31/07 Desk	12/31/07 ABX Closing Price
AAA	ABX 06-1	141,809,101	26	89.10	93.74
	ABX 06-2	393,576,936	42	86.04	86.84
	ABX 07-1	566,422,980	52	77.90	75.64
	ABX 07-2	181,451,509	20	78.86	74.66
	Not Available	30,231,271	1	97.88	N/A
AAA Total		1,313,491,797	141	82.67	82.72
AA	ABX 06-1	246,959,783	41	75.00	84.98
	ABX 06-2	346,588,501	66	60.36	62.15
	ABX 07-1	132,046,043	26	48.64	45.53
	ABX 07-2	87,625,700	18	53.54	45.01
	Not Available	1,151	2	30.00	N/A
AA Total		813,221,178	153	60.91	59.42
A	ABX 06-1	26,699,842	8	50.77	61.00
	ABX 06-2	140,000	1	7.00	39.48
	ABX 07-1	-	1	30.00	25.90
	ABX 07-2	2,762,604	2	30.88	31.41
	Not Available	5,950,799	6	52.51	N/A
A Total		35,553,246	18	45.55	39.45
BBB	ABX 06-1	7,695,750	9	34.03	33.50
	ABX 07-1	2,894,880	4	20.95	19.87
	ABX 07-2	2,571,609	3	21.88	24.03
BBB Total		13,162,239	16	28.48	24.47
<BBB-	ABX 06-1	15,229,708	10	24.64	29.44
	ABX 06-2	28,998,072	17	23.33	19.33
	ABX 07-1	16,158,589	27	17.08	18.89
	ABX 07-2	2,881,345	3	19.04	22.00
	Not Available	137	7	25.93	N/A
<BBB- Total		63,267,851	64	20.98	22.42
Total		2,238,696,402	395	N/A	N/A [2]

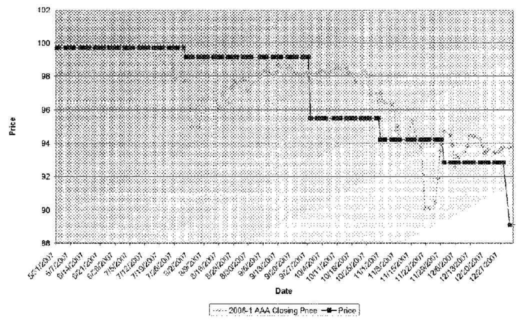
As the AAA and AA bucket were the largest cohorts (95% of net NPV) we focused our analysis on these two cohorts. For the remaining 11 cohorts, the client was conservative or within one point of the index in all but 2 buckets. As such, no systematic bias was not found in these lower rated cohorts.

[2] Note: Positions originated in 2005 were mapped to the ABX 2006-1 index, as this series contains loans originated in the second half of 2005. Also, there were 13 deals ($34m NPV) that were issued prior to 2005, these were also mapped to the ABX 2006-1 Index as it was the closest available benchmark.

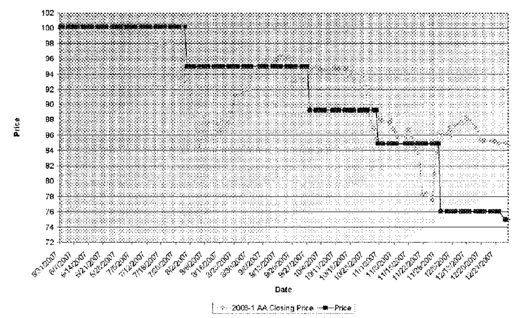
The following graphs illustrate price movement in the ABX indices against BarCap' average home equity price for the most material cohorts (AAA & AA-rated 2006-1, 2006-2, 2007-1, 2007-2 indices) between May 31, 2007 and Year-end. As noted in section 3 above, based on the specificity of each home equity deal we do understand that there will be inherent differences in Barclay's home equity portfolio and the ABX indices, however we expect a similar trending over time and therefore expect the direction and magnitude of price movements of the BarCap financial instruments to be consistent with the ABX (from July to December 2007), given the ABX is one of very few traded sub-prime related products in the current market place.

For the Home Equity ABS and CDO positions, however, we also assessed the reasonableness of the actual average 12/31/07 selected financial instruments' marks versus the closing 12/31/07 ABX marks. Due to these inherent differences, we have cannot set a threshold to determine outliers, but rather we have analyzed the underlying collateral performance of BarCaps' deals compared to the ABX where there is a large "bucket" level average price difference as of 12/31/07. Overall, BarCaps' prices trend in line with the closest fit ABX index across the period of interest, with limited areas of divergence. See the graphs below.

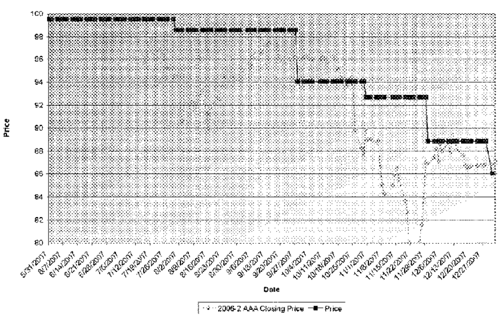
ABX 2006-1 AAA Price v. Home Equity Average Price (Net NPV $142M)



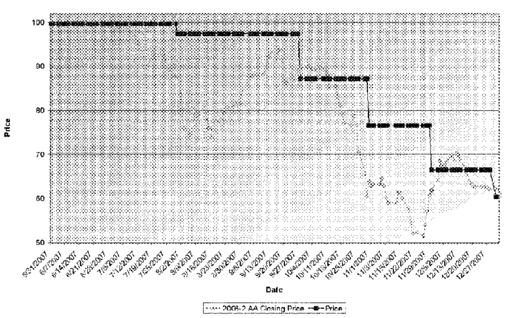
ABX 2006-1 AA Price v. Home Equity Average Price (Net NPV $247M)



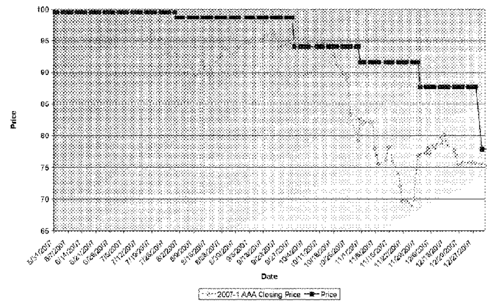
ABX 2006-2 AAA Price v. Home Equity Average Price (Net NPV $394M)



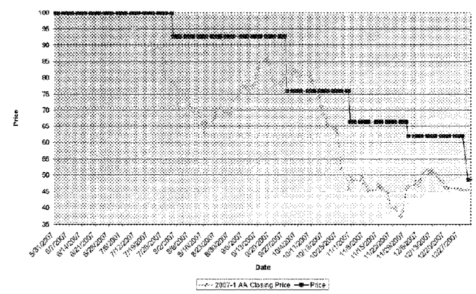
ABX 2006-2 AA Price v. Home Equity Average Price (Net NPV $347M)

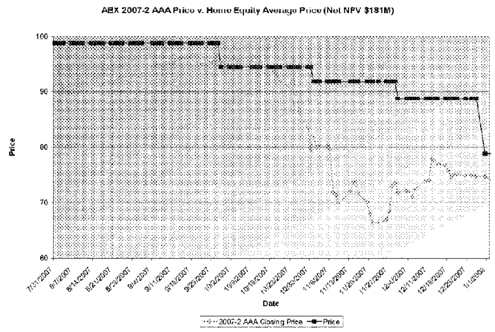


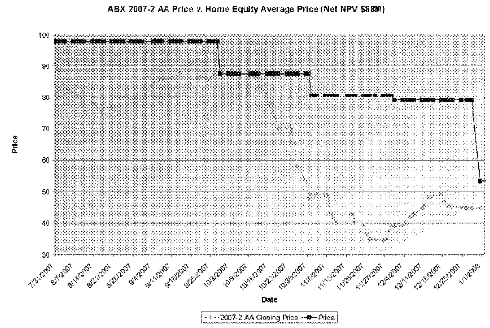
ABX 2007-1 AAA Price v. Home Equity Average Price (Net NPV $566M)



ABX 2007-1 AA Price v. Home Equity Average Price (Net NPV $132M)







To evaluate discrepancies between BarCap's December 31st 2007 pricing and the price of the benchmark ABX index we compared various weighted-average attributes of the ABX index reference obligations with the attributes of the underlying collateral within the closest fit Home Equity population. After examining attributes such as delinquency rates, credit support, foreclosure rates, and real-estate owned, we arrived at the following conclusions:

Finding	Comments
AAA & AA 2006-1: The average BarCap's price is slightly lower than the relative ABX index for the AAA & AA 2006-1 Mapping Buckets.	The current credit support of the underlying collateral in the pre-2006 vintage AAA rated home equity is significantly lower than the underlying collateral in the ABX index. This could explain BarCap's lower 12/31 prices for the AAA-rated positions. In our comparison of the collateral underlying the AA-rated positions to the ABX index, we found that a significant portion of BarCap's positions were the M3 tranche; while the ABX index only includes M1 and M2 tranches, which could explain BarCap's lower 12/31/prices. Also, there is one CUSIP # 542514MF8 that is priced at $20, which is driving the average down; however, due to the low NPV (<60k) no further work was deemed necessary on this position. The BarCap's average price when excluding the M3 tranches and CUSIP # 542514MF8 were much more inline with the ABX index. These findings were discussed with the assurance engagement team and no further

Finding	Comments
	work was required as the overall trending and magnitude of change in BarCap's price compared to the ABX index and price levels are not outside an unreasonable range of fair value for this bucket.
AAA & AA 2006-2: The average BarCap & ABX prices were very similar at 12/31 within this cohort.	Our review of the underlying collateral found similarities across many of the attributes, as expected.
AAA & AA 2007-1: The average BarCap's price is slightly higher than the ABX index at 12/31/07.	Our review of the underlying collateral found that the average performance of this bucket, denoted by foreclosure and real-estate owned rates, were lower for BarCap collateral than the ABX index collateral, which could explain the slight deviation from the ABX index. These findings were discussed with the assurance engagement team and no further work was required as the overall trending and magnitude of change in BarCap's price compared to the ABX index and price levels are not outside an unreasonable range of fair value for this bucket
AAA & AA 2007-2 The average BarCap's price is slightly higher than the relative index.	AAA & AA 2007-2: Similar to the 2007-1 review, we found that the underlying collateral of BarCap Home Equity had significantly lower foreclosure & real-estate owned rates than the reference obligations of the ABX. This disparity helps explain BarCap higher 12/31 marks when compared to the closest fit ABX benchmark. These findings were discussed with the assurance engagement team and no further work was required as the overall trending and magnitude of change in BarCap's price compared to the ABX index and price levels are not outside an unreasonable range of fair value for this bucket.

In addition to the above trending analysis we assessed outliers in the home equity population by performing the following tests:

- Grouped positions in cohorts based on credit rating, vintage, and tranche type and assessed relational pricing from May to December 2007;
- Assessed changes in price between May 31 and December 31, 2007 to identify stale prices and any prices trending upwards;
- Examined positions consistently priced above the closest fit ABX index;
- Reviewed prices for CUSIPs held in multiple books for consistency;
- Examined price relationships for CUSIPs of the same deal but different tranches across all the business lines for consistency.

Our review yielded the following outliers:

CUSIP	Business	Asset Type/Industry	Collateral Type	PCG Type	Rating	Vintage	Net NPV 12/31/07	12/31/07 Desk Px	11/30/07 Desk Px	10/31/07 Desk Px	7/31/07 Desk Px	Diff in Oct to Dec Px	Reason of Exception
65536HCS5	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2006	4,322,975	91.01	81.22	79.66		11.35	Price increase frm Oct to Dec
126685CE4	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	4,665,245	98.48	95.62	87.80		10.68	Price increase frm Oct to Dec
542514QV9	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	14,458,500	96.39	90.14	87.31		9.08	Price increase frm Oct to Dec
65536HBC1	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2005	9,712,000	97.12	96.27	88.38		8.74	Price increase frm Oct to Dec
65536HCR7	Mainsail	ABS Home	ABS Home	HOME EQUITY	AAA	2006	6,825,000	97.50	93.48	91.93		5.57	Price increase frm Oct to Dec
3623414R7	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	4,880,000	97.60	94.71	92.52		5.08	Price increase frm Oct to Dec
46625SAD8	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	3,880,400	97.01	93.82	92.52		4.49	Price increase frm Oct to Dec
40430HDZ8	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	3,848,000	96.20	93.38	92.23		3.97	Price increase frm Oct to Dec
46626LAS9	Mainsail	ABS Home	ABS Home	HOME EQUITY	AAA	2005	4,213,308	99.16	96.72	95.23		3.93	Price increase frm Oct to Dec
17307G4Y1	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2006	5,460,800	68.26	66.52	65.34		2.92	Price increase frm Oct to Dec
46628MAE6	Mainsail	ABS Home	ABS Home	HOME EQUITY	AAA	2006	5,880,000	98.00	95.69	95.32		2.68	Price increase frm Oct to Dec
9497EUAC1	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	4,865,500	97.31	94.30	94.92		2.39	Price increase frm Oct to Dec
3623414T3	Mainsail	ABS Other	ABS Other	HOME EQUITY	AA	2006	3,919,500	78.39	73.91	76.47		1.92	Price increase frm Oct to Dec
12498QAC0	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	3,884,000	97.10	94.07	95.25		1.85	Price increase frm Oct to Dec
36244KAG0	Mainsail	ABS Other	ABS Other	HOME EQUITY	AA	2006	9,231,600	65.94	62.37	64.38		1.56	Price increase frm Oct to Dec
04542BPE6	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2005	7,593,600	94.92	84.84	93.39		1.53	Price increase frm Oct to Dec
17307G4V7	Mainsail	ABS Home	ABS Home	HOME EQUITY	AAA	2006	9,774,000	97.74	93.36	96.22		1.52	Price increase frm Oct to Dec
07387UHS3	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2006	4,634,850	75.48	74.19	74.28		1.20	Price increase frm Oct to Dec
65536HBW7	Mainsail	ABS Home	ABS Home	HOME EQUITY	AAA	2006	4,875,500	97.51	93.95	96.35		1.16	Price increase frm Oct to Dec
126670XR4	Mainsail	ABS Other	ABS Other	HOME EQUITY	AA	2006	3,876,000	77.52	76.93	76.60		0.92	Price increase frm Oct to Dec
61748LAH5	Mainsail	ABS Home	ABS Home	HOME EQUITY	AA	2006	2,976,898	45.70	41.91	44.85		0.85	Price increase frm Oct to Dec
46628RAD7	Mainsail	ABS Other	ABS Other	HOME EQUITY	AAA	2006	3,917,600	97.94	95.56	97.42		0.52	Price increase frm Oct to Dec
14986PAG8	Mainsail	ABS Other	ABS Other	HOME EQUITY	NR	2006	5,215,500	57.95	51.84	66.70			Dec price higher than other securities within cohort and ABX
75156XAB7	Mainsail	ABS Other	ABS Other	Home Equity	AAA	2006	9,106,000	91.06	90.07	95.11			Dec price significantly higher than ABX
12667CAC6	Mainsail	ABS Other	ABS Other	Home Equity	AAA	2006	9,119,000	91.19	90.48	94.83			Dec price significantly higher than ABX
14986PAG8	Mainsail	ABS Other	ABS Other	Home Equity	NR	2006	5,215,500	57.95	51.84	68.70			Dec price significantly higher than ABX
78402KAA3	CDO Agency	CMBS	CMBS	HOME EQUITY	AAA	2007	867,271	97.88	97.32	97.44	97.39	0.44	Price increase frm Oct to Dec
65535VTX6	CDO Agency	Home Equity	RESB	HOME EQUITY	B	2006	805,921	50.94	97.42	97.41	97.26		Dec price higher than other securities within cohort and ABX
05530PAF9	CDO Agency	RMBS			AA	2007	1,365,286	62.00					Dec price significantly higher than ABX
41164MAH0	CDO Agency	RMBS	ARMS	HOME EQUITY	AA	2007	2,120,725	70.00	87.73	87.73	87.73	99.06	Dec price significantly higher than ABX
576431BJ8	CDO Agency	RMBS	ARMS	HOME EQUITY	AA	2007	3,183,004	70.00	87.73	87.73	87.73	99.51	Dec price significantly higher than ABX
02150PAG3	CDO Agency	RMBS	AltAA5.1	HOME EQUITY	AA	2007	3,766,461	70.00	87.73	87.73	87.73	99.75	Dec price significantly higher than ABX
57645NAX8	CDO Agency	RMBS	#N/A	HOME EQUITY	AA	#N/A	1,966,441	70.00	87.73	87.73	87.73	99.60	Dec price significantly higher than ABX
59024BAD5	CDO Agency	RMBS	AltAA6.4	HOME EQUITY	AA	2007	2,540,351	70.00	87.73	87.73	87.73	100.00	Dec price significantly higher than ABX
75115YAF6	CDO Agency	RMBS	ALT A	HOME EQUITY	AA	2007	1,356,418	70.00	87.73	87.73	87.73	99.36	Dec price significantly higher than ABX
02146SAN9	CDO Agency	RMBS	ALT A	HOME EQUITY	AA	2006	1,034,340	75.00	87.73	87.73	87.73	99.58	Dec price significantly higher than ABX
23332QAG8	CDO Agency	RMBS	ARMS	HOME EQUITY	AA	2006	1,028,246	75.00	87.73	87.73	87.73	99.72	Dec price significantly higher than ABX
41162DAK5	CDO Agency	RMBS	ARMS	HOME EQUITY	AA	2006	7,718,436	75.00	87.73	87.73	87.73	99.62	Dec price significantly higher than ABX
751150AT0	CDO Agency	RMBS	ALT A	HOME EQUITY	AA	2006	2,577,460	75.00	87.73	87.73	87.73	99.67	Dec price significantly higher than ABX
9497ENAB9	ABS Seconda	Home Equity	HOME EQUI	HOME EQUITY	AA	2005	7,315,000	77.00	80.00	75.00		2.00	Price increase frm Oct to Dec
040104FN6	ABS Seconda	Home Equity	HOME EQUI	HOME EQUITY	A	2004	6,700,000	67.00	67.00	65.00		2.00	Price increase frm Oct to Dec

Client Response Concerning Outliers

Business	Client Response
US Portfolio Workout Group/Mainsail	The Product Control Group ("PCG") noted to the trading desk that they are aggressive on the positions we identified. Individual positions were not marked down due to a conservative $1.5M net variance at the portfolio level.
CDO Agency NY	Large majority of outliers are net notional 0, whereby BarCap' owes both the cash and synthetic side of the trade, presenting minimal risk to the firm. These positions were unchanged due to lack of materiality. Any material positions identified were close to market benchmarks, and pricing was conservative compared to FTID. Therefore, pricing on these positions remained unchanged.
ABS Secondary	Both outliers were marked down during the 4th quarter due as per requests from price testing. Net variance is conservative on these positions.

CONCLUSION ON HOME EQUITY: Based on benchmarking the ABS and CDO Home Equity selected financial instruments, we are satisfied that direction and magnitude of the movement in BarCap's prices is consistent with the ABX within a reasonable range of fair value. In addition, outliers we identified were appropriately explained by management and no individually material outliers or systematic bias was detected from our benchmarking procedures.

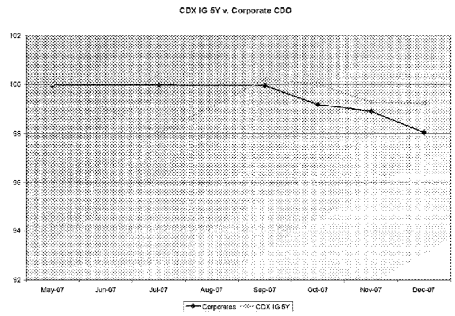
4.2 Negative Basis Trades

We reviewed the Negative Basis Trades ("NBT") wrapped by monolines of approximately $4.7 billion dollars, all of which are AAA-rated and pre-2006 vintage (2004 -2005), with the exception of one AA-rated position. As we understand, BarCap has entered into CDO transaction hedged with a CDS (short risk) on each respective CDO tranche and a single name CDS on the monoline insurance counterparty. The purpose of these trades is to take advantage of a tighter swap spread than the underlying CDO spread. Although these trades are PnL neutral (other than the monoline counter-party risk captured in the credit valuation adjustment) the assurance engagement team requested Financial Analytics to review the CDO position valuations as these are priced using the same valuation techniques as other residual CDO positions.

The methodology we took to analyzing the wrapped NBTs was to trend the underlying CDO value over time to ensure that the price levels were moving in accordance with market benchmarks of similar collateral. We obtained the underlying collateral type for 97% of the NBT CDO positions (see table below) using Lehman Live via BondHub and grouped the CDOs based on collateral type. BarCap's average prices for each CDO cohort are summarized in the following chart:

Product Type	Average of 5/31 Price	Average of 7/30 Price	Average of 9/28 Price	Average of 10/31 Price	Average of 11/30 Price	Average of 12/31 Price	Sum of Net NPV
Corporate	99.97	99.97	99.95	99.19	98.90	98.05	3,138,206,972
ABS	100.06	100.06	96.84	93.69	87.18	76.01	1,038,510,557
CMBS	100.13	100.13	99.47	98.16	97.02	90.67	382,721,181
Unknown	99.99	99.99	100.00	100.02	98.19	91.69	110,040,226
Total	100.00	100.00	99.17	97.84	95.90	91.87	4,669,478,935

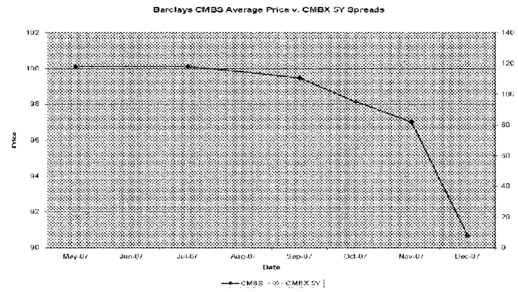
- NBT Corporate - CDO securities backed by corporate bonds accounted for approximately two-thirds of the wrapped NBTs we reviewed. We mapped the average price of these positions to the CDX Investment Grade Index, and found that overall prices trend in line with the benchmark, particularly in the fourth quarter of 2007. CDX index was used as the benchmark due to similar collateral and proximity of rating.



- NBT ABS - There were 8 ABS positions, as summarized in the following chart, which account for nearly 25% of the total Net NPV of wrapped negative basis trades. Due to the limited number of positions, we reviewed each CDO individually to determine outliers.

Product Type	Issuer	Rating	Vintage	12/31 Price	11/30 Price	10/31 Price	9/28 Price	7/30 Price	5/31 Price	Net NPV as of 12/31	Comments
ABS CDO	CBASS CBO XIII CLASS A	AAA	2005	60.97	90.44	100.00	95.68	100.00	100.00	157,926,782	The most comparable benchmark for this trade is the ABX 2006-1 A due to the underlying rating and collateral which has a price of 61 at 12.31.07. This trade is the Senior Class, ~26% subordination, 42% fixed rate, 60% HEL, 25% RMBS. 22% A- or better, 11% BBB, 56% NR. Most NR rated BBB/A range by S&P. Passing all Coverage tests, 100% current collateral is performing. The weighted average 60+ performance for the collateral we could identify was ~14%, much better than the 2006-1A of ~24%. Weighted average loan age of underlying is mid 2004. Based on performance and seasoning, price appears reasonable when compared to the ABX 2006-1 A (61).
ABS CDO	G-STAR 2005-5 CLASS A-2	AAA	2005	70.59	71.44	76.26	87.62	99.82	99.81	60,773,858	The most comparable benchmark for this trade is the ABX 2006-1 A due to the underlying rating and collateral which has a price of 61 at 12.31.07. Senior Class, ~20% subordination, 59% HEL Collateral, 57% BBB+ or better. Passing All Coverage Tests. 100% of original collateral is currently performing. The weighted average 60+ delinquency percentage for the collateral we were able to identify was ~24%, which is similar to the current HE 2006-1A performance ~23% on average, however, given the weighted average age of the underlying collateral that we could identify was late 2004 early 2005, the performance of the underlying supports a premium over the 2006-1 BBB and closer to the A rated price. Appears reasonable.
ABS CDO	HILLCREST CDO I CLASS A-1A	AAA	2004	55.98	84.66	92.06	93.32	100.06	100.06	75,975,691	Given the vintage of the deal, there is no market benchmark available, however, to understand where collateral of this type might trade near we can use the ABX 2006-1 A as a reference due to the underlying rating and collateral which has a price of 61 at 12.31.07. This transaction is a Senior Class ~25% subordination 48% HEL, 27% RMBS Collateral, mostly low A to BBB range. Due to high subordination level, and vintage a 55 price does not seem unreasonable.
ABS CDO	C-BASS CBO XI CLASS A	AAA	2004	71.70	93.94	100.00	100.00	100.00	100.00	58,875,987	Given the vintage of the deal, there is no market benchmark available, however, to understand where collateral of this type might trade near we can use the ABX 2006-1 A as a reference due to the underlying rating and collateral which has a price of 61 at 12.31.07. This transaction is a Senior Class, ~25% subordination, 49% HEL, 35% RMBS Collateral. 41% BBB+ or better, 19% BB. Passing all Coverage Tests. 100% Performing Collateral. The weighted average 60+ performance for the collateral that we could identify was ~12%, much better than the 2006-1A of ~24%. In addition, the weighted average age of the collateral is ~mid 2004. The average age and performance support a premium over the 2006-1 A index.
ABS CDO	G-STAR 2004-4 CLASS A-1	AAA	2004	64.15	66.93	99.35	100.21	100.21	100.21	411,907,256	Given the vintage of the deal, there is no market benchmark available, however, to understand where collateral of this type might trade near we can use the ABX 2006-1 A as a reference due to the underlying rating and collateral which has a price of 61 at 12.31.07. This transaction is a Senior Class, ~15% subordination, 63% HEL, 23% Other Collateral. 57% BBB+ or better. Passing all Coverage Tests, 100% of collateral is performing. We would expect this type of collateral to trade at premium to 2006-1 A based on seasoning of Collateral.
ABS CDO	NEWCASTLE CDO IV CLASS I	AAA	2004	89.97	97.09	100.00	100.00	100.00	100.00	50,707,174	Priced slightly higher than cohort, however, based on seasoning of collateral and overall immateriality of net position as discussed with Engagement Team, we do not take exception.
ABS CDO	PACIFIC BAY CDO LIMITED SERIES 2003-1A CLASS A1	AAA	2003	100.04	95.51	92.00	100.37	100.37	100.37	113,315,899	Senior Class, ~45% Subordination, 58% HEL, 16% RMBS, 15% AAA rated, remaining even throughout credit spectrum. Price appears high compared to cohorts, however based on seasoning of collateral and overall immateriality of net position, as discussed with the audit team, we do not take exception.
ABS CDO	TRICADIA CDO 2004-2 CLASS A	AAA	2004	94.66	97.44	89.88	97.48	100.00	100.00	109,027,911	Priced much higher than cohort, however, based on seasoning of collateral and overall immateriality of net position,as discussed with the audit team, we do not take exception.

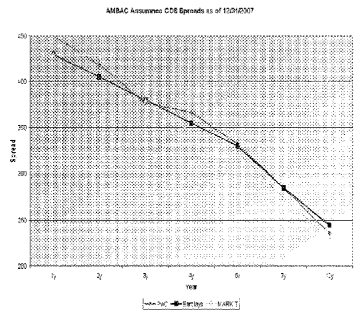
- NBT CMBS - We also compared BarCap average CMBS CDO prices to spreads on the 5Y CMBX, and found that as spreads widened on the benchmark CMBX in the fourth quarter of 2007, prices on CMBS CDOs declined as expected. Note: we used the 5Y CMBX index because it is the most liquid of the CMBX Indices. Further, as all of the CMBS collateral is AAA rated, we compared the average price as of 12.31.07 to the AAA CMBX Series 1 index, ~97 to the average client price ~91. As the two deals that make up this cohort are not 100% CMBS, but also have RMBS exposure, we would expect a discount to the CMBX index. Based on the pricing trend downward, and the 6 point discount to the CMBX index, we are satisfied that the direction and magnitude of the movement in BarCap's prices from May-December 2007 is not inconsistent with the referenced index within a reasonable range of fair value.



In addition, as these positions are fully hedged with a credit default swap on the underlying CDO as well as a single name credit default swap on counterparty of the above mentioned swap, we ensured that the 12.31.07 par asset swap spreads were the same for each pair of CDO and CDS, no exceptions were found. Further, we recalculated the total M-T-M for the CDO and swap side of the trades to ensure that they were reasonably close. At 12.31.07 the CDO side had a $454 million loss, and the swap side had a $417 million gain. As such, this difference is not enough to conclude there is a systematic pricing bias in for the wrapped CDO population.

Date	Change in MTM of Wrapped CDOs	NPV of CDS
5/30/2007	N/A	18,250,490
7/31/2007	(46,509,235)	18,440,408
9/28/2007	(31,201,851)	42,126,905
10/31/2007	(40,807,038)	77,649,407
11/30/2007	(175,291,895)	240,577,272
12/31/2007	(160,222,226)	416,822,494
Total as of 12/31	(454,032,246)	416,822,494

We also independently obtained single name credit default spreads to compare to CDS on the monoline insurance names. As of 12/31 there were a total of 9 single name credit default swaps on 7 individual names. The counterparty to all these trades, except one, are large mortgage insurers (AMBAC, FGIC, etc). We were able to independently pull single-name CDS spreads via JP Morgan on Bond Hub for 3 out of the 7 names, which represent over 80% of total Net NPV as of 12/31. We graphed the spreads over the 1,2,3,4,5,7,and 10 year points. Overall, the spreads appear to be reasonable. Note: there was some variance in the earlier years of the XL Capital credit curve; however, PCG's testing shows that the XL Capital spreads agree with MARKIT (a leading provider of credit information on these types of instruments) spreads and the XL Capital position represents <$1m NPV; therefore, this does not appear to be a valuation issue. In addition, we examined the PCG testing of these positions, as they independently pull MARKIT credit spreads on these names, compare the spread at each tenor, and multiply the difference by BarCap DV01 to arrive at an estimated variance in dollar terms. As of 12.31.07, the net dollar variance according to PCG was (~1.4million). Based on the reasonableness of the spreads we independently pulled and in light of PCG testing, BarCap spreads on these single name CDS appear reasonable.


AMBAC Assurance CDS Spreads as of 12/31/2007
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Year
PwC
Barclays
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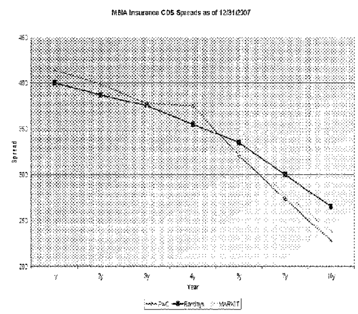
MBIA Insurance CDS Spreads as of 12/31/2007
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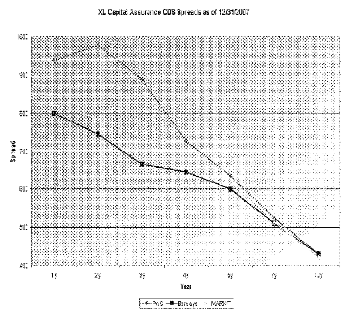
XL Capital Assurance CDS Spreads as of 12/31/2007
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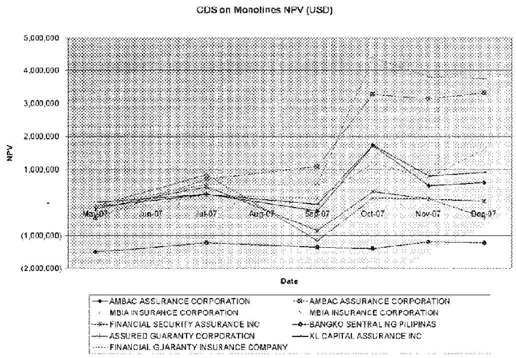


CONCLUSION ON NBTs: Based on benchmarking the Corporate CDOs to CDX, benchmarking the CMBS CDOs to CMBX and reviewing the ABS CDOs individually for the selected NBTs, we are satisfied that direction and magnitude of the movement in BarCap's prices is not inconsistent with the referenced indices index within a reasonable range of fair value. In addition, outliers we identified were appropriately explained by management and no individually material outliers or systematic bias was detected from our benchmarking procedures.

4.3 CDO

Note that for most of the CDO population, except the Super Senior Liquidity Facilities, we had little or no information of the underlying collateral. To obtain the underlying collateral detail for every CDO position held is not practical for the client or Financial Analytics. In the absence of the underlying collateral, a high-level bucketing and benchmarking approach was the most efficient and meaningful approach.

For the CDOs backed by Residential Mortgage Collateral, (majority of CDOs), we assessed the attachment points using Capital Structure information available on Bloomberg and Mapped Deals originated in 2005, 2006, and 2007, to a corresponding TABX price with the closest attachment point.[3] We realize the specificity of each deal and the indirect mapping approach limits our ability to clearly define a true benchmark price, however we feel that the trending over time

[3] The TABX index contains 2006 and 2007 collateral and is tranched into different levels of subordination. Therefore, we only were able to compare CDOs issued between 2005-2007 where we could determine the attachment points to the TABX. All the 2005 CDOs were mapped to the TABX index with the earliest vintage collateral, which is the (2006.02/2007.01 TABX series.

of price levels should be consistent with the underlying index given similar collateral types and price levels should be within a reasonable range as of 12.31.07. Where we see large differences in price levels, we inspect the collateral in order to determine how the CDO should be priced relative to the index. Therefore, the purpose of this analytic is to identify large outliers, further review outliers according to the collateral behind the bond, and to identify stale or inconsistent price movement with each relative index. In addition, we compared the prices of the ABS CDOs within the same credit rating bucket to identify outliers.

For the CDOs backed by corporate debt or loans, we compared the CDO prices to the corresponding CDX price. We realize the specificity of each deal and the indirect mapping approach limits our ability to clearly define a true benchmark price, however we feel that the trending over time of price levels should be consistent with the underlying index given similar collateral types and price levels should be within a reasonable range as of 12.31.07. Whereby we see large differences in price levels, we inspect the collateral in order to determine how the CDO should be priced relative to the index. Therefore, the purpose of this analytic is to identify large outliers, further review outliers according to the collateral behind the bond, and to identify stale or inconsistent price movement with each relative index. In addition, we compared the prices of the Corporate CDOs within the same credit rating bucket to identify outliers.

Agency NY/Risk Finance Business CDOs (Vintage)

Agency NY/Risk Finance Business CDOs (Rating)

Sum of 12/31 NPV			
PCG Type	Asset Cohort2	Rating	Total
CDO	CDO ABS	AAA	217,675,942
		AA	57,933,180
		A	13,584,926
		BBB	52,052,391
		<BBB-	58,836,284
		Unknown	376,294
	CDO CORP	AAA	101,715,600
		AA	4,217,163
		A	5,242,052
		BBB	20,132,111
		<BBB-	44,355,913
Grand Total			576,121,856

Sum of 12/31 NPV			
PCG Type	Asset Cohort2	Vint Catg.	Total
CDO	CDO ABS	<2005	29,076,979
		2005	10,187,229
		2006	155,201,259
		2007	163,532,808
		Unknown	42,460,744
	CDO CORP	<2005	74,797,502
		2005	7,718,765
		2006	3,145,210
		2007	90,001,361
		Unknown	0
Grand Total			576,121,856

Credit Rating/Outlier Analysis

IPV Type	Asset Cohort	Rating	Sum of 12/31/07 NPV	Count	Average12/31/07 Desk Px	Max 12/31/07 Desk Px	Min 12/31/07 Desk Px
CDO	CDO ABS	AAA	217,675,942	19	48.71	99.30	23.00
		AA	57,933,180	6	44.08	60.00	29.41
		A	13,584,926	2	30.24	32.89	27.59
		BBB	52,052,391	6	27.07	88.61	3.55
		<BBB-	58,836,284	5	39.66	100.57	9.90
		Unknown	376,294	4	0.29	1.00	0.01
	CDO CORP	AAA	101,715,600	3	95.45	100.05	89.00
		AA	4,217,163	1	92.35	92.35	92.35
		A	5,242,052	1	43.38	43.38	43.38
		BBB	20,132,111	3	79.45	100.00	39.19
		<BBB-	44,355,913	6	57.40	97.15	0.01
CDO Total			576,121,856	56	46.73	100.57	0.01

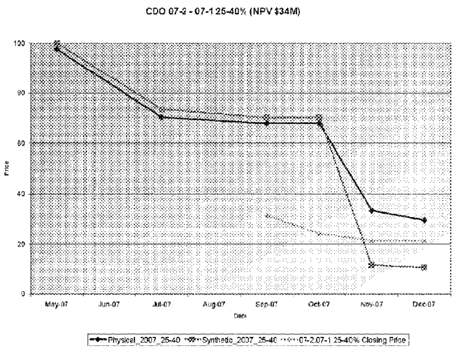
Finding	Comments
CDO ABS: As we would expect the prices to deteriorate as the credit quality worsens, we cannot achieve an accurate account of the mean prices due to the outliers on the high side as of 12.31.07. As such, we identified each outlier and researched the collateral in order to assess the reasonableness of the price (note: the outliers are highlighted in the above table).	AAA bucket: There were two outliers in the AAA bucket. One CDO marked at 99.3. This is 2003 vintage, total NPV at 12.31.07 was ~$4 million. Due to the older more established vintage, a 99 price does not appear unreasonable. The other outlier is a CDO^2 marked at 98, with NPV of ~400K. Due to the low factor a price near par does not seem unreasonable, also as this is the only CDO^2 priced at this level, we are comfortable that this does not represent a systematic basis. BBB bucket: The CDO marked at 88 is a 2004 vintage, subordinate tranche with ~$5 million NPV. This CDO was marked in the high 90s through November, then came down to 88 in December. Based on older better performing vintage an 88 price does not seem unreasonable. <BBB- bucket: CDO marked at 100.57 is a 2001 vintage. This CDO was marked at a premium through November and has ~$11 million NPV. Based on vintage we do not take exception and given that this is the only position priced at this level for its credit rating bucket, we are comfortable that this does not represent a systematic basis.
CDO Corporate: Similar to the CDO ABS we cannot achieve an accurate account of the mean prices across the credit spectrum due to outliers, as well as very thin buckets. However, highlighted in yellow are certain areas we felt	AAA bucket: 100.05 price is 2003 vintage CLO with NPV of $12 million. Based on vintage and collateral type we do not take exception. Note that this cohort consists of the largest CDO by NPV of $85 million. This is CUSIP #

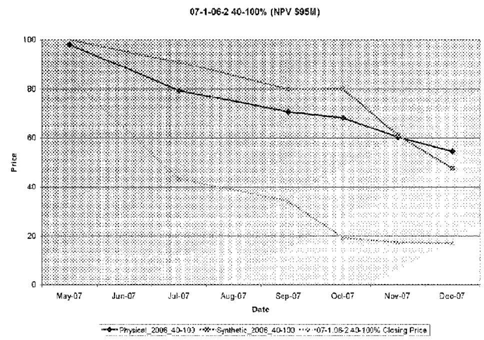
Finding	Comments
required further research into prices that were greater than par.	26358EAA0, Duane Street CLO Series 2007-4A Class A1T priced at 97.31. This CLO is made up of 94% loans, across a very diverse group of industries; it is the top class in the structure with ~45% subordination. In addition, based on the IG CDX index trading ~99 as of 12.31.07 the 97.31 price does not look unreasonable. BBB bucket: CDO marked at par is a 1998 vintage. As this is the only CDO priced at this level in this bucket, we are comfortable that this does not represent a systematic basis. <BBB- bucket: CDO marked at 97 is a 2004 vintage BB rated synthetic CDO backed by Senior Notes with ~$11 million NPV. This CDO was marked at 109-106 from May through November and fell to 97 at 12.31. Based on trending of price, and as this is the only CDO priced at this level in this bucket, we are comfortable that this does not represent a systematic basis.

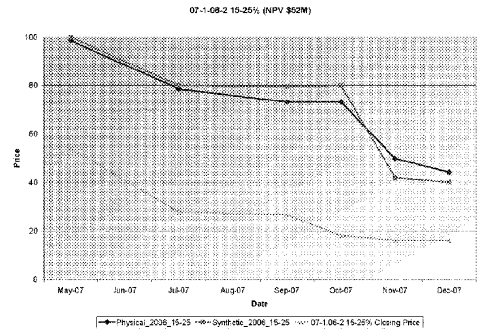
TABX Mapping

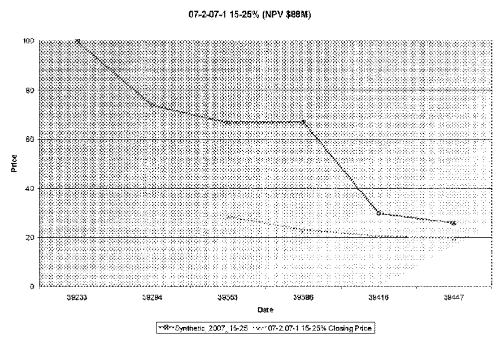
The below graphs illustrate the mapping of the most material buckets (approximately $270million of the total $370 million) that we were able to map to a TABX price based on attachment point availability and seasoning of collateral. In addition, the table below illustrates the relative prices for bucketed attachment points of the ABS CDOs we reviewed. The attachment points were bucketed by current collateral balances from Bloomberg as of 12/31/07.

Attachment Points	Count	Sum of 12/31/07 NPV	Average of 12/31/07 Desk Price
40-100	11	136,375,725	45.62
25-40	5	44,443,628	31.91
15-25	12	145,520,302	32.36
10-15	3	31,529,137	29.89
5-10	2	10,741,154	9.47
0-5	1	5,553,094	40.77
Total	34	374,163,040	35.26


CDO 07-2 - 07-1 25-40% (NPV $34M)
100
80
60
40
20
0
Price
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07
Nov-07
Dec-07
Date
Physical_2007_25-40
Synthetic_2007_25-40
07-2.07-1 25-40% Closing Price


07-1-06-2 40-100% (NPV $95M)
100
80
60
40
20
0
Price
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07
Nov-07
Dec-07
Date
Physical_2006_40-100
Synthetic_2006_40-100
07-1.06-2 40-100% Closing Price


07-1-06-2 15-25% (NPV $52M)
Price
100
80
60
40
20
0
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07
Nov-07
Dec-07
Date
Physical_2006_15-25
Synthetic_2006_15-25
07-1.06-2 15-25% Closing Price


07-2-07-1 15-25% (NPV $88M)
Price
100
80
60
40
20
0
39233
39294
39353
39386
39416
39447
Date
Synthetic_2007_15-25
07-2.07-1 15-25% Closing Price

CDX Mapping

We mapped the material CORP CDOs positions to the CDX based on credit rating, which covered approximately $160 million out of the total $170 million in NPV. The average price of BarCap's IG positions is $98.64, verses the CDX IG Index price of $99.23; and the average of the BarCap's HY positions is $91.33 verses the CDX HY Index price of $95.56.

Finding	Comments
ABS CDO: The prices appear to decrease as the attachment points decrease as expected, except for slight deviations in the 25-40, and 15-25 range, and 0-5 (which only has one CDO with ~$5 million NPV).	Based on the TABX pricing for all buckets except the 2007 40-100% tranche are in the high teens, we would not expect to see much variation from the 10-40% range. In addition, most of the attachment points across the 15-25 and 25-40 are in the high teens and low 30s respectively. Overall the price trend appears reasonable.
ABS CDO: CDOs mapped to 2007-1 and 2006-2 40-100% TABX prices appear much higher than the TABX index at high 50s average price, vs ~20 for TABX.	The Physical bucket was made up of two CDOs, the first priced at 76 and the second at 32. The 76 price CUSIP # 036510AB1, is 2006 vintage, backed by 80% CMBS collateral (which performs significantly better than ABS collateral of similar vintage); therefore, it is reasonable that this CDO is priced significantly higher than the TABX, which consists of BBB/BBB- ABS 2006-2007 collateral. The second physical CDO is much closer to the TABX. The synthetic bucket was made up of 5 CDOs. 48% of the NPV in this bucket is composed of one CDO priced at 28, which is close to the TABX. The next largest CDO was priced at 60. This CUSIP was priced at par through November and written down to 60 at 12.31. This CDO is very subordinated compared to other CDOs in this cohort at 84%. As such, we would expect a significant premium to the TABX. The remaining 3 CDOs in this bucket comprise $14 million, which after discussion with the engagement team was deemed immaterial for further work.
ABS CDO: CDOs mapped to 2007-1 and 2006-2 15-25% TABX prices appear much higher than the TABX index at ~40 average price, vs ~20 for TABX.	The Physical bucket is made up of 4 CDOs. The first CUSIP# 98886DAB0, Zing 8A2 priced at 56, is the second tranche in the structure with updated subordination from Lehman Brothers Surveillance (BB attachment points used in this analysis), was ~51%. As such, we would expect it to trade at significant premium over TABX. CUSIP # 26925WAB2 is E* Trade CDO I, priced at 47, is the junior subordinated tranche ~22% subordination. As most of the collateral is BBB- or worse, this price appears to be marked aggressively, however, based on the overall relatively low NPV (~$11 million), based on discussions with the assurance engagement team due to immateriality, no further work was deemed necessary for this individual position. The other two positions are much closer to the TABX. The synthetic bucket is made up of one CDO priced at 44, with an NPV of $13 million, where as the TABX is around ~20. Since we do not have enough information regarding the underlying collateral we cannot assess the proximity

Finding	Comments
	to the TABX; however, we can determine that the direction of the price change is reasonable because it decreased significantly since May. Based on discussions with the assurance engagement team due to immateriality, no further work was deemed necessary for this individual position.
CORP CDO: The average BarCap CDO Corp IG price is inline with the CDX IG Index and the average BarCap CDO Corp HY price is lower then the CDX HY Index.	There was one CDO priced at 84 in the HY bucket that significantly brought the average down. This CDO was marked at 95 as of 11.30 and was subsequently marked down to 85 in December. Due to the relative proximity to the CDX indices coupled with the fact that the corporate CDOs are priced consistent with credit rating, they 12.31 marks do not appear unreasonable.

CONCLUSION ON CDOs: Based on benchmarking the Corporate CDOs to CDX and benchmarking the ABS CDOs to TABX where applicable, we are satisfied that direction and magnitude of the movement in BarCap's prices is consistent with the referenced indices index within a reasonable range of fair value. In addition, outliers we identified were appropriately explained by management and no individually material outliers or systematic bias was detected from our benchmarking procedures.

4.4 Super Senior Liquidity Facilities

BarCap has re-evaluated its Super Senior ABS CDOs Liquidity Facilities using various techniques, including cash flow scenario analysis and implied market pricing in order to determine their exposure.[4] We were provided with 15 deals in total, 7 of which were valued using a NAV approach to estimate a fair market value in order to calculate the mark-to-market loss on three facilities held in the trading book and the impairment on four facilities held in the banking book. The other 8 are tested for impairment via a "PV" or modelled cash flow approach. As the PV approach does not consider liquidity issues and hence is not a "fair value", we addressed only the 7 CDO Liquidity Facility valuations under the NAV approach. The approach we took was to compare the write downs with other banks as of the fourth quarter 2007 for similar collateral and compare these prices to that of the BarCap other CDO-ABS portfolio. It is important to realize that the information related to collateral types and deal characteristics for other banks was limited; however this high level comparison provides a reasonable basis on which to compare the magnitude of BarCap write-down. See Table below for BarCap Super Senior exposure.

NAV Method Comparison (#s in Billions)

4 See "Super Senior ABS CDO Overview" November 9, 2007, Updated January 16th, 2008.

	Barclays	Citi	Merrill*
High Grade Exposure	4.3	9.5	8.9
High Grade Write Down	2.1	4.9	5.5
% HG Write Down	49%	52%	62%
Mezzanine Exposure	2.1	8.3	5.2
Mezzanine Write Down	1	5.2	2.9
% Mezz Write Down	48%	63%	56%

**Per Merrill Lynch Press Release January 17, 2008 Net write-downs related to these exposures were $9.9 billion in the fourth quarter. The majority of these write-downs were related to the high-grade super-senior ABS CDO exposures, the collateral for which is primarily comprised of 2006 vintage mortgages.*

NAV Super Senior

Deal	Notional	Type	Book	Shortfall	WD%	12.31 Px
Pamp1	1,063	HG	Trading	421	40%	60.4
Pamp2	1,600	HG	Trading	838	52%	47.63
Markov	1,600	HG	Trading	826	52%	48.38
Silverton	450	MEZZ	Banking	250	56%	44.44
Camber VI	487	MEZZ	Banking	212	44%	58.11
Stack 05-2	350	MEZZ	Banking	123	35%	66
Tenor	800	MEZZ	Banking	419	52%	49.63
Total	6,350			3,089	49%	

BFC Silverton Collateral Characteristics

Vintage	Subprime	Alt-A	ABS CDO	CMBS/Other ABS	Option ARM	Other	Total
1st half 2003	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%
2nd half 2004	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%
1st half 2005	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%
2nd half 2005	41.77%	1.36%	0.00%	0.00%	0.75%	0.00%	43.87%
1st half 2006	12.47%	0.53%	1.12%	0.73%	0.00%	0.00%	14.85%
2nd half 2006	16.70%	5.00%	1.22%	1.03%	0.00%	0.00%	23.96%
1st half 2007	0.40%	0.00%	0.00%	0.24%	0.00%	0.00%	0.64%
2nd half 2007	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.82%
Unknown	0.00%	0.00%	7.46%	0.00%	0.00%	0.00%	7.46%
Total	80.56%	6.88%	9.81%	2.00%	0.75%	0.00%	100.00%

Camber VI Collateral Characteristics

Vintage	Subprime	Alt-A	ABS CDO	CMBS/Other ABS	CMBS CDO	Total
2nd half 2004	6.08%	0.00%	0.00%	0.45%	0.00%	6.53%
1st half 2005	17.47%	0.00%	0.00%	0.54%	0.00%	18.01%
2nd half 2005	49.65%	0.00%	0.00%	0.60%	0.00%	50.25%
1st half 2006	13.18%	2.03%	0.65%	1.43%	1.01%	18.29%
2nd half 2006	0.44%	0.98%	1.79%	0.53%	0.00%	3.74%
1st half 2007	0.14%	0.00%	0.00%	0.00%	0.00%	0.14%
Unkown	0.00%	0.00%	3.04%	0.00%	0.00%	3.04%
Total	86.95%	3.01%	5.48%	3.55%	1.01%	100.00%

Tenorite Collateral Characteristics

Vintage	Subprime	Alt-A	ABS CDO	CMBS/Other ABS	Total
2nd half 2003	0.80%	0.00%	0.00%	0.00%	0.80%
1st half 2004	0.00%	0.00%	2.21%	0.00%	2.21%
2nd half 2004	4.66%	0.00%	1.78%	0.00%	6.44%
1st half 2006	2.00%	0.00%	5.43%	0.00%	7.44%
1st half 2005	11.37%	0.00%	9.08%	0.00%	20.45%
2nd half 2005	12.38%	0.00%	9.91%	0.20%	22.49%
2nd half 2006	3.04%	0.00%	12.90%	1.60%	17.55%
1st half 2007	3.42%	1.22%	9.59%	0.00%	14.22%
2nd half 2007	0.40%	0.00%	8.01%	0.00%	8.41%
Total	38.08%	1.22%	58.91%	1.80%	100.00%

Stack 05-2 Collateral Characteristics

Vintage	Subprime	Alt-A	ABS CDO	Total
2nd half 2003	0.67%	0.00%	0.00%	0.67%
1st half 2004	0.81%	0.00%	0.00%	0.81%
2nd half 2004	17.74%	0.77%	0.00%	18.51%
1st half 2005	29.12%	3.12%	0.00%	32.24%
2nd half 2005	26.55%	9.49%	0.92%	36.96%
1st half 2006	1.96%	0.00%	2.86%	4.83%
2nd half 2006	0.88%	0.00%	0.22%	1.10%
1st half 2007	2.54%	0.20%	0.00%	2.73%
2nd half 2007	2.15%	0.00%	0.00%	2.15%
Total	82.42%	13.57%	4.01%	100.00%

Finding	Comments

Finding	Comments
It appears that the HG write-down which is comprised of the three CDOs in the trading book is similar in magnitude to Citi, and slightly less than Merrill.	Most of BarCap' exposure in these deals was 2006 vintage RMBS Sub and Mid Prime collateral, while the majority of Merrill's exposure was to 2006 vintage. Two of the HG Super Senior CDOs, Pamp2, and Markov, the write-down appears inline with the other Banks (52%, and 51% respectively). Pamp1 which is priced at 61 with ~40% write-down which maybe due to slightly older collateral (26% from the 2nd half of 2005) and a considerable amount of mid-prime RMBS of ~28%. Based on benchmarking to the write-downs of other Banks, BarCap's writedowns on HG Super Seniors do not appear to be unreasonable.
It appears that BarCap overall MEZZ write-down (48%) is less than Merrill's writedown (56%) and considerably less than Citi's (63%). The writedown for two out of the four Mezz deals (Silverton and Tenorite) are inline with Merrill's writedown, while the writedown for the other two deals (Camber & Stack-05) is considerably less; therefore, we reviewed the nature of the underlying collateral of these deals.	We do not have details regarding the underlying collateral of Merrill or Citi's Mezz deals. Since two of BarCap's deals (Silverton and Tenorite) are inline with Merrill's average writedown, we compared the underlying collateral of Silverton and Tenor to the two BarCap's deals (Camber and Stack-05) that had smaller writedowns then Merrill, in order to determine if it was reasonable that Camber and Stack-05 had a smaller writedown than Silverton and Tenor. The collateral breakdown of the four deals are as follows: *Silverton*: Deal consists of 81% Subprime collateral, 42% of which issued in the 2nd half of 2005 and 29% issued in 2006 & 2007; and about 10% of ABS CDO. Out of the four deals Silverton has the most subprime/ABS CDO exposure during the mid-2005 to 2007 period; therefore, it is not unreasonable that this deal has the largest writedown. *Tenorite*: Deal consists of 59% ABS CDO collateral 10% which was originated during to the second half of 2005 and about 23% issued 2006-2007; and about 38% Subprime collateral, 12% which was originated during ht second half of 2005 and 8% originated in 2006-2007. *Camber VI*: Deal consists of 87% subprime collateral, 50% of which was issued in the second half of 2005, and 25% originated prior to the second half of 2005. Since Camber the majority of Camber's subprime exposure is in the 2005 vintage which performed better than the 2006 & 2007 originated subprime and that Camber's attachment point is 10% higher than Tenorite; it is not unreasonable that Camber's writedown is less than Tenorite. *Stack 05*: Deal consists of 82% Subprime collateral; 38% of which was originated prior to the second half of 2005, 27% originated during to the second half of 2005 and about 7% issued 2006-2007. Since Stack's exposure to subprime/ABS CDO during the mid-2005 to 2007 is about 33% of the total collateral (which is significantly lower than Silverton's ~71% and Tenorite's ~53% exposure) and Stack's attachment point is 10-15% higher than Silverton and Tenorite; its not unreasonable that Stack writedown is significantly less

Finding	Comments
	than Silverton and Tenorite.

In addition, as the majority of the underlying collateral was sub-prime with respect to the Mezzanine deals, and sub/mid prime for the high-grade deals, we benchmarked the underlying ABS collateral to the ABX and TABX index where applicable. We applied the benchmarked ABS prices to the overall deal to compare the overall benchmark adjusted price to the client price. The results of this review are shown in the table below.

Finding	Comments
We benchmark the BarCap's price of the underlying sub/midprime collateral to the ABX index and ABS CDO to the TABX of all three HG super senior deals, to gain comfort regarding the pricing levels of the underlying collateral.	*Pamp1:* Deal consists of 26% Subprime, 28% Midprime, and 15% CDO collateral. We benchmarked the sub and midprime collateral to the applicable index (all 2005 originations were mapped to the 2006-1 index). In addition, we took an average of all ABS CDOs and compared it to the range of TABX series 12.31 price. If we apply the benchmark price for the subprime and midprime deals, our benchmark price for the overall deal would suggest a price of ~70 Vs the client price of 60. Considering that this deal hit EOD triggers when BarCap's model this deal, it is not unreasonable that the average BarCap price is lower than the benchmark price. The average price for the ABS CDOs in the portfolio is ~$17. Based on the 2006-2/2007-1 40-100% attached trading at ~$17, and the 2007-1/2007-2 40-100% attached trading at ~27, an average price of 17 does not seem unreasonable. *Pamp2:* Deal consists of 19% Subprime, 29% Midprime, and 23% CDO collateral. We benchmarked the sub and midprime collateral to the applicable index (all 2005 originations were mapped to the 2006-1 index). In addition, we took an average of all ABS CDOs and compared it to the range of TABX series 12.31 price. If we apply the benchmark price for the subprime and midprime deals, our benchmark price for the overall deal would suggest a price of ~66 Vs the client price of 47. Considering that this deal hit EOD triggers when BarCap's model this deal, it is not unreasonable that the average BarCap price is lower than the benchmark price. The average price for the ABS CDOs in the portfolio is ~$17. Based on the 2006-2/2007-1 40-100% attached trading at ~$17, and the 2007-1/2007-2 40-100% attached trading at ~27, an average price of 17 does not seem unreasonable. *Markov:* Deal consists of 26% Subprime, 33% Midprime, and 20% CDO

Finding	Comments
	collateral. We benchmarked the sub and midprime collateral to the applicable index (all 2005 originations were mapped to the 2006-1 index). In addition, we took an average of all ABS CDOs and compared it to the range of TABX series 12.31 price. If we apply the benchmark price for the subprime and midprime deals, our benchmark price for the overall deal would suggest a price of ~59 Vs the client price of 48. Considering that this deal hit EOD triggers when BarCap's model this deal, it is not unreasonable that the average BarCap price is lower than the benchmark price. The average price for the ABS CDOs in the portfolio is ~$17. Based on the 2006-2/2007-1 40-100% attached trading at ~$17, and the 2007-1/2007-2 40-100% attached trading at ~27, an average price of 28 does not seem unreasonable. Based on benchmarking the subprime, mid-prime and ABS CDO to the ABX and TABX, respectively, BarCap's price levels of this collateral are not outside an unreasonable range of fair value.
We benchmark the BarCap's price of the underlying sub/midprime collateral to the ABX index and ABS CDO to the TABX of all four MEZZ super senior deals, to gain comfort regarding the pricing levels of the underlying collateral.	*Stack 05:* Deal consists of 82% Subprime collateral, 53% of which was issued prior to the second half of 2005. Based on the high percentage of subprime collateral we benchmarked the home equity deals to the applicable ABX index (all 2005 originations were mapped to the 2006-1 index). No other collateral was benchmarked. If we apply the benchmark price for the subprime deals, our benchmark price for the overall deal would suggest a price of ~56 Vs the client price of 66. However, as 53% of the collateral was originated prior to the second half of 2005 for which we mapped to the 2006-1 index, a price of 66 does not seem unreasonable due to the more seasoned collateral. *Camber VI:* Deal consists of 87% subprime collateral, 50% of which was issued in the second half of 2005, and 25% originated prior to the second half of 2005. Based on the high percentage of subprime collateral, we benchmarked the home equity deals to the applicable ABX index (all 2005 originations were mapped to the 2006-1 index). No other collateral was benchmarked. If we apply the benchmark price for the subprime deals, our benchmark would suggest a price of ~55 Vs the client price of 58. Given inherent structural differences in the collateral and the ABX index, this range does not appear to be unreasonable. *Silverton:* Deal consists of 81% Subprime collateral, 44% of which issued in the 2nd half of 2005, and about 8% issued in the first half of 2005. Based on the high percentage of subprime collateral we benchmarked the home equity deals to the applicable ABX index (all 2005 originations were mapped to the

Finding	Comments
	2006-1 index). No other collateral was benchmarked. If we apply the benchmark price for the subprime deals, our benchmark would suggest a price of ~41 Vs the client price of 44. Based on the slightly more seasoned collateral (~9% issued prior to the first half of 2005), and inherent structural differences in the collateral and the ABX index, a 3 point difference does not appear unreasonable. *Tenorite*: Deal consists of 38% Subprime collateral, 17% of which issued prior to the 2nd half of 2005. Further 59% of the deal was composed of ABS CDO collateral 19% of which was originated prior to the second half of 2005. The average price for the CDOs in the portfolio is $21. Based on the 2006-2/2007-1 40-100% attached trading at ~$17, and the 2007-1/2007-2 40-100% attached trading at ~27, an average price of 21 does not seem unreasonable. Also based on the high percentage of subprime collateral we benchmarked the home equity deals to the applicable ABX index (all 2005 originations were mapped to the 2006-1 index). If we apply the benchmark price for the subprime deals, our benchmark would suggest a price of ~47 Vs the client price of 49.63. Based on the slightly more seasoned collateral (~17% issued prior to the second half of 2005), and inherent structural differences in the collateral and the ABX index, a 6 point difference does not appear unreasonable. Based on benchmarking the subprime, mid-prime and ABS CDO to the ABX and TABX, respectively, BarCap's price levels of this collateral are not outside an unreasonable range of fair value.

CONCLUSION ON NAV FOR SUPER SENIOR LIQUIDITY FACILITIES:
Based on the proximity of the writedowns of Barcap's super senior High-Grade positions with other writedowns in the marketplace and review of the collateral supporting the High-Grade deals in light of other Bank's collateral (Merrill), we are comfortable with the overall price level of the super senior High-Grade positions. For the mezzanine CDOs, as the writedown for the Mezzanine super seniors was less than other market benchmarks (for two deals in particular); therefore, we reviewed the underlying collateral of these deals to determine that is was not unreasonable for the writedown would be less for BarCap's MEZZ deals. In additional, benchmarking the underlying subprime and ABS CDOs to the ABX and TABX index provided comfort that the pricing levels are not inconsistent with the referenced indices index within a reasonable range of fair value. No systematic bias was detected from our benchmarking procedures.

4.5 CSOs

The CSOs are highly levered swaps referencing a basket of Subprime HEL and RMBS collateral which are subsequently sold into CDOs. Barclay's is short risk on these CSOs and as the fixed legs range from 47-400 basis points these instruments are deeply in the money and BarCap has realized large gains on these positions. The Net MTM on all 50 positions analyzed by us was ~$1.4 Billion.

Normally for instruments like these the approach we would take would be to analyze the spreads of the underlying CDS over time compared to a relative index with the best fit according to collateral type. While this is still a worthwhile exercise in order to understand the behaviour of the underlying spreads compared to a market benchmark, as these CSOs are almost all valued near the notional value denoting the underlying collateral is considered near worthless, we examined the performance of the underlying collateral to date to ensure it is made up of very subprime, underperforming low rated bonds. In other words, as we can't trend or benchmark these instruments given they are so deeply in the money, we need to understand the nature of the collateral which determines a near notional value for the overall CSO.

In addition, there were two CSOs (Pamp1 and Pamp2) that were also the underlying collateral of the Super Senior deal; where the CSOs in the CSO portfolio is buying protection and the CSOs within the Super Senior is selling protection. For these two deal we reviewed the consistently of pricing between the CSO portfolio and the Super Senior collateral (using the NAV approach) and found pricing to be consistent, (i.e a 95% price for the CSO portfolio corresponded to a 5% price for the CSO within the Super Senior).

The following table summarizes the MTM, Notional, Price (as defined as (100-(MTM/Notional)), and the fixed rate of the swap. Note that since July, the overall CSO portfolio has increased only ~7% or ~$87 million due to proximity of the Mark of the swap to the swap Notional.

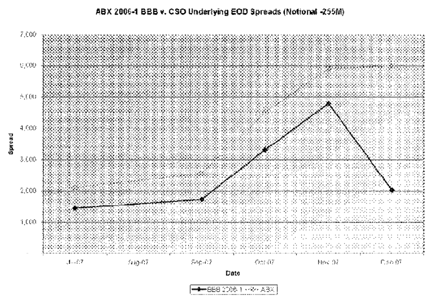
CSOs as of December 31, 2007

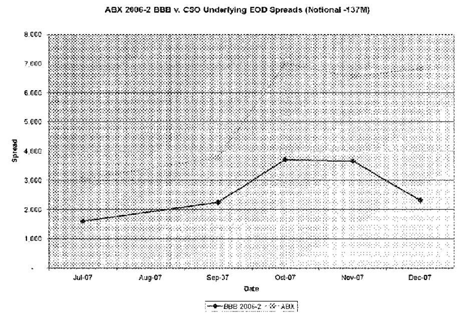
Product	Attach/Detach	MTM	Tranche Notional	Price*	Fixed Rate
Aozora	3-5	28,432,762	(30,000,000)	5.22	180
Benazzi 2005-1 (IKB)	10-17	46,625,273	(50,000,000)	6.75	103
Benazzi 2005-1 (IKB)	17-19	18,481,515	(20,000,000)	7.59	103
Benazzi 2005-1 (IKB)	7-10	28,200,045	(30,000,000)	6.00	103
BraddockA	5-7	10,661,187	(11,250,000)	5.23	383
BraddockB	5-7	10,665,490	(11,250,000)	5.20	383
BraddockC	5-7	10,653,029	(11,250,000)	5.31	383
BraddockD	5-7	10,672,676	(11,250,000)	5.13	383
BraddockE	5-7	10,669,309	(11,250,000)	5.16	383
CECA	20-30	27,403,249	(21,000,000)	34.75	170
CPIM1	5-7	7,022.679	(7,500,000)	6.36	400
CPIM2	5-7	7,043,267	(7,500,000)	6.09	400
CPIM3	5-7	7,005,073	(7,500,000)	6.60	400
DeerfieldA	12-14	17,859,005	(18,750,000)	4.75	60
DeerfieldA	7-9	17,893,821	(18,750,000)	4.57	60
DeerfieldB	12-14	17,866,056	(18,750,000)	4.71	60
DeerfieldB	7-9	17,895,617	(18,750,000)	4.56	60
HighLand-12.2-15.7%	12-16	14,229,087	(15,000,000)	5.14	70
HighLand-8.7-12.2%	9-12	7,077,809	(7,500,000)	5.63	200
HighLand-9.4-12.9%	9-13	7,081,755	(7,500,000)	5.58	175
KBC	8-10	9,272.263	(10,000,000)	7.28	180
MaximA Series 2006-6	8-11	9,387.775	(10,000,000)	6.12	220
MaximC Series 2006-4	11-13	14,160,895	(15,000,000)	5.59	80
MaximD Series 2006-5	11-13	14,168,636	(15,000,000)	5.54	80
MLBUSA1-1-7.5-9.4CS	8-9	9,509,494	(10,000,000)	4.91	185
MLBUSA1-1-7.5-9.4SR	8-9	9,509,494	(10,000,000)	4.91	185
MLBUSA1-18.7-22HH	19-23	26,959,980	(28,750,000)	6.23	47
MLBUSA1-18.7-22HP	19-23	26,959,980	(28,750,000)	6.23	47
MLBUSA2-18.3-22OR	18-22	27,023,639	(28,750,000)	6.00	47
MLBUSA2-18.3-22PB	18-22	27,023,639	(28,750,000)	6.00	47
Pamp2_A	12-14	19,014,765	(20,000,000)	4.93	94.5
Pamp2_A	8-10	18,899,788	(20,000,000)	5.50	94.5
Pamp2_B	12-14	19,027,004	(20,000,000)	4.86	94.5
Pamp2_B	8-10	18,910,201	(20,000,000)	5.45	94.5
Pamp2_C	12-14	19,029,432	(20,000,000)	4.85	94.5
Pamp2_C	9-11	18,868,244	(20,000,000)	5.66	94.5
Pamp2_D	12-14	19,033,706	(20,000,000)	4.83	94.5
Pamp2_D	9-11	18,874,330	(20,000,000)	5.63	94.5
Pamp2_E	12-14	18,998,246	(20,000,000)	5.01	94.5
Pamp2_E	9-11	18,833,598	(20,000,000)	5.83	94.5

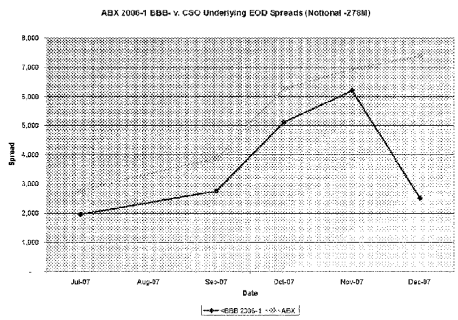
Product	Attach/Detach	MTM	Tranche Notional	Price*	Fixed Rate
PampelonA	10-12	11,864,177	(12,500,000)	5.09	65
PampelonA	7-9	11,846,626	(12,500,000)	5.23	65
PampelonA	9-10	9,454,763	(10,000,000)	5.45	65
PampelonB	10-12	11,827,815	(12,500,000)	5.38	65
PampelonB	7-9	11,817,493	(12,500,000)	5.46	65
PampelonB	9-10	9,425,835	(10,000,000)	5.74	65
PampelonC	10-12	11,860,730	(12,500,000)	5.11	65
PampelonC	7-9	11,855,771	(12,500,000)	5.15	65
PampelonD	11-13	11,824,390	(12,500,000)	5.40	65
PampelonD	7-9	11,820,152	(12,500,000)	5.44	65
PampelonE	10-12	11,853,889	(12,500,000)	5.17	65
PampelonE	7-9	11,832,404	(12,500,000)	5.34	65
PampelonE	9-10	9,443,394	(10,000,000)	5.57	65
SABS2006-13	7-8	14,745,531	(15,625,000)	5.63	55
Security Benefit Ser	6-8	23,563,341	(25,000,000)	5.75	80
SSGA1(Markov Chain I	18-20	23,261,729	(25,000,000)	6.95	121
SSGA1(Markov Chain I	20-23	23,227,677	(25,000,000)	7.09	121
SSGA1(Markov Chain I	23-25	23,160,490	(25,000,000)	7.36	121
SSGA2(Markov Chain I	18-20	23,248,794	(25,000,000)	7.00	121
SSGA2(Markov Chain I	20-23	23,217,388	(25,000,000)	7.13	121
SSGA2(Markov Chain I	23-25	23,151,443	(25,000,000)	7.39	121
SSGA3(Markov Chain I	18-20	23,295,248	(25,000,000)	6.82	121
SSGA3(Markov Chain I	20-23	23,259,931	(25,000,000)	6.96	121
SSGA3(Markov Chain I	23-25	23,195,294	(25,000,000)	7.22	121
SSGA4(Markov Chain I	18-20	23,244,006	(25,000,000)	7.02	121
SSGA4(Markov Chain I	20-23	23,212,885	(25,000,000)	7.15	121
SSGA4(Markov Chain I	23-25	23,143,608	(25,000,000)	7.43	121
TCW Series 2006-7 (S	11-13	9,398,463	(9,900,000)	5.07	80
Zander 2 Citius IIB	10-17	23,534,024	(25,000,000)	5.86	75
Zander 2 Series 2006	10-17	37,654,438	(40,000,000)	5.86	75
Zander 3 Citius IIC	6-9	23,670,645	(25,000,000)	5.32	160
Zander 4 Citius IID	6-9	23,706,379	(25,000,000)	5.17	160
Zander 4 Series 2006	6-9	18,016,848	(19,000,000)	5.17	160
Zander I Citius IIA	10-17	23,502,160	(25,000,000)	5.99	75
Zander I Series 2006	10-17	37,603,455	(40,000,000)	5.99	75
Zander3 Series 2006	6-9	17,989,690	(19,000,000)	5.32	160

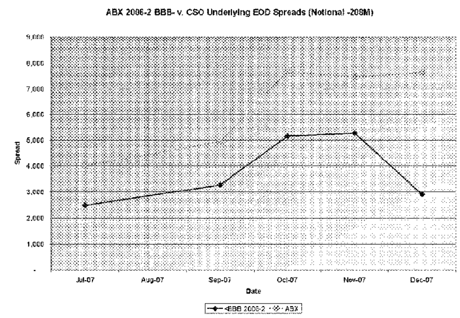
**Price calculated using the following formula: 100 -((MTM/abs(Tranche Notional)*100)*

The following graphs Average EOD spreads on underlying CDS against closest fit ABX index spreads:









CSO Underlying Bond Performance

Bookname	Average of 90+ Delinq	Average of 60+ Delinq
Aozora	23	26
Benazzi 2005-1 (IKB)	22	25
BraddockA	23	27
BraddockB	23	27
BraddockC	23	27
BraddockD	24	27
BraddockE	24	27
CECA	24	28
CPIM1	24	28
CPIM2	23	27
CPIM3	22	26
DeerfieldA	22	26
DeerfieldB	22	26
HighLand-12.2-15.7%	23	26
HighLand-8.7-12.2%	23	26
HighLand-9.4-12.9%	23	26
KBC	23	27
MaximA Series 2006-6	24	27
MaximC Series 2006-4	24	27
MaximD Series 2006-5	23	27
MLBUSA1-1-7.5-9.4CS	22	25
MLBUSA1-1-7.5-9.4SR	22	25
MLBUSA1-18.7-22HH	22	25
MLBUSA1-18.7-22HP	22	25
MLBUSA2-18.3-22OR	23	27
MLBUSA2-18.3-22PB	23	27

Bookname	Average of 90+ Delinq	Average of 60+ Delinq
Pamp2_A	22	26
Pamp2_B	22	25
Pamp2_C	22	26
Pamp2_D	22	26
Pamp2_E	21	25
PampelonA	24	27
PampelonB	23	26
PampelonC	23	27
PampelonD	23	26
PampelonE	23	26
SABS2006-13	23	26
Security Benefit Ser	23	26
SSGA1(Markov Chain I	21	24
SSGA2(Markov Chain I	20	24
SSGA3(Markov Chain I	20	24
SSGA4(Markov Chain I	21	25
TCW Series 2006-7 (S	23	27
Zander 2 Citius IIB	23	26
Zander 2 Series 2006	23	26
Zander 3 Citius IIC	23	27
Zander 4 Citius IID	23	27
Zander 4 Series 2006	23	27
Zander I Citius IIA	23	27
Zander I Series 2006	23	27
Zander3 Series 2006	23	27

Finding	Comments
We noted a very pronounced deviation of the underlying spreads compared to each relative market benchmark. While we do understand that there is little	Deviation mostly explained through BarCap prepayment speeds decreasing in December as the Matrix pricing spreads were calibrated. Furthermore, we

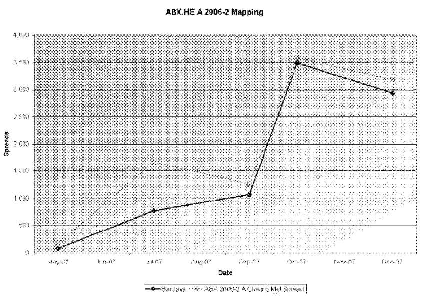
Finding	Comments
market value impact on the CSO portfolio as a whole from November to December ($75 million) or ~5%, we considered it a finding and discussed with Kapil Agrawal, in the front office.	obtained spreads from another dealer that showed a decline ~700 bps in this same period. As the ABX index trades on price, the difference in dealer spreads evidences the fact that a final "price" is dependent on other factors such as cash flow modelling assumptions rather than spread alone. As such, it is more relevant to look at the overall value at the CSO level than the underlying spreads due to the moneyness of the CSO. The underlying spread decrease from November to December does not significantly affect the overall CSO portfolio. See comment below for conclusion of portfolio levels.
All underlying references were extremely poor performing subprime collateral, almost all issued in 2006-2007.	This is poorly performing collateral as can be seen in the performance chart above, the 60+ and 90+ loan percentages range in the low 20%s to high 20%s respectively. The credit rating for most of this collateral was in the BBB- and <BBB- range. Similar rated Home Equity collateral we examined in section 4.1 was on average in the ~$18 range, denoting extremely low prices for poorly performing collateral. As CSOs are highly leveraged buy protection swaps on a basket of subprime home equity tranches, as the underlying prices approach zero, the swap approaches deal notional. Given the poorly performing collateral, a value near the deal notional does not seem unreasonable.

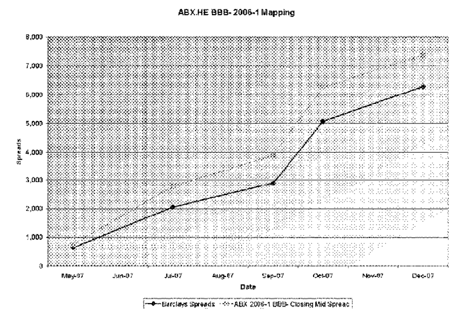
CONCLUSION ON CSO:
As CSOs are highly leveraged buy protection swaps on a basket of subprime home equity tranches, as the underlying prices approach zero, the swap approaches deal notional. Given the poorly performing collateral and that these positions are so deeply in the money, a value near the deal notional appears for these CSO does not appear unreasonable. No systematic bias was detected from our review.

4.6 CDS Indices

The CDS Indices portfolio consists of both single name CDS on names that are included in one of the four ABX indices, as well as CDS on the index itself. For 12.31.07 year end review, our methodology was to determine which index each name was in (provided by client), and trend the spreads over time to ensure that the spreads BarCap used are within a reasonable range of independent spreads pulled from JP Morgan via their data query in Bond Hub.

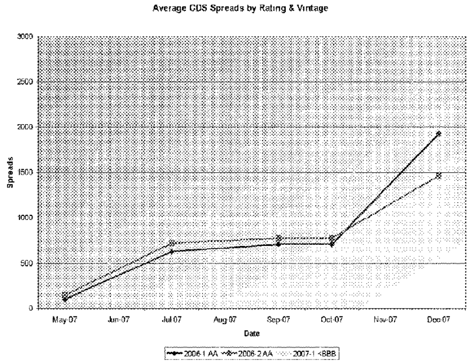
ABX Mapping	Avg. 12.31 Spread	Avg. 10.31 Spread	Avg. 9.28 Spread	Avg. 7.31 Spread	Avg. 5.31 Spread	NPV from PNL sheet
ABX.HE.A.06-2	2,935	3,494	1,070	769	81	512,668,793
ABX.HE.BBB-.06-1	6,277	5,069	2,886	2,054	630	106,751,618





Finding	Comments
Single Name CDS: As expected the spreads trend very close to the ABX index for which the individual underlying Bond is a part of. Whereby there is a slight divergence in the 2006-1 BBB- spreads, most of the NPV ~83%, is in the 2006-2 A mapping. As such, we do not take exception to the Single Name CDS positions we examined.	Spreads trend with swap spreads as expected

In addition to the above, there was a population of CDS on CDO tranches for which BarCap has purchased protection. These are the positions denoted as "CDO CDS" in the PCG report in the CDO Agency New York file provided by the assurance engagement team. The total NPV for these positions as of 12.31 was $~244 million. As we couldn't find a market benchmark to compare to, we reviewed the reasonableness of the change in the CDS spread from May to December 2007 to ensure that spreads were widening during this period and to check if there were any stale spreads. No issues were identified.



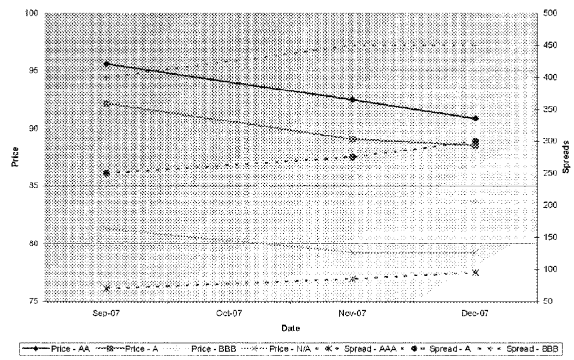
CONCLUSION ON CDS:
Based on benchmarking the single name CDS Indices spreads to the ABX spread where applicable, we are satisfied that direction and magnitude of the movement in BarCap's spread is consistent with the referenced indices index within a reasonable range of fair value. In addition, we are satisfied that the relationship between CDS spreads holds across rating buckets and change in spreads over time does not appear unreasonable. No systematic bias was detected from our benchmarking procedures.

4.7 European CLOs

We reviewed pricing on the European CLOs held in the CDO Agency London book at 12/31/07. The population consisted of 13 positions, with credit ratings ranging from BBB- to AA and a total NPV of $78.5M at year-end. Our methodology was to bucket the CLOs by rating, and trend prices over time against European CLO spreads obtained from BondHub. The following chart and graph trends average BarCap' price by rating against spreads in the 4th quarter of 2007.

Date	European CLO - Average Barclays Desk Price				European CLO - Spread to Libor		
	AA	A	BBB	N/A	AAA	A	BBB
9/28/2007	95.59	92.20	86.32	81.30	70	250	400
11/30/2007	92.50	89.08	84.25	79.24	85	275	450
12/31/2007	90.90	88.52	83.75	79.24	95	300	450

European CLO - Average Price v. Spreads



Finding	Comments
As expected, prices on the CLOs decline steadily, as spreads gradually widen in the fourth quarter. Furthermore, average price of positions with lower credit ratings are lower than those with higher credit ratings at each date.	Pricing of the most material cohort (~50% of NPV), AA-rated CLOs, appears reasonable given AAA & A European CLO spreads.

CONCLUSION ON EUROPEAN CLOs:

Based on benchmarking BarCap's European CLO price movement to the European CLO spread movement, we are satisfied that direction and magnitude of the movement in BarCap's price is not inconsistent with the referenced spreads. From our review no systematic bias was detected from our benchmarking procedures.

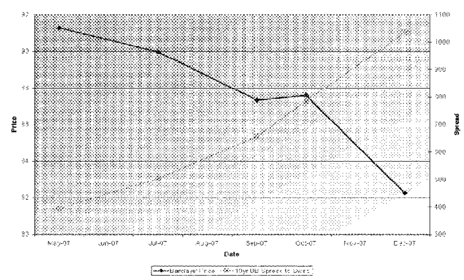
4.8 CMBS

We reviewed pricing on the CMBS positions held in the Risk Finance book at 12/31/07. The population consisted of 77 positions, all pre-2006 vintage with credit ratings ranging from AAA to CCC and a total NPV of $177 M at year-end. Our methodology was to bucket the CMBX by rating, and trend prices over time against spreads on the closest fit CMBX index obtained from BondHub. The following chart summarizes total NPV by rating bucket:

Rating	Count	Sum of Net NPV
AAA	18	-
AA	3	-
A	6	7,596,707
BBB	12	26,848,553
<BBB	36	143,177,342
Total	75	177,622,602

We focussed our analysis on the most material bucket, <BBB-rated CMBS, which represents over 80% of the total NPV. Our review found that the average price of <BBB-rated positions trended downwards as spreads on the 10Y BB CMBX index widen, as illustrated by the following graph.

<BBB-Rated CMBS Px v. BB 10Y CMBX Spreads (NPV $144M)



Finding	Comments
Our review found no systematic bias in the pricing of CMBX positions in the Risk Finance book.	Pricing of the most material cohort (~80% of NPV), <BBB-rated CMBS, appears reasonable given BB 10Y CMBX spreads. In addition, given that the BBB CMBX Series 1 index (closest fit given older vintage of collateral), was trading around 83, and BBB- index was trading at 78 as of 12.31.07, the average client price of ~82 does not appear unreasonable.

CONCLUSION ON COMMERCIAL MORTGAGES:
Based on benchmarking BarCap's CMBS price to the CMBX index, we are satisfied that direction and magnitude of the movement in BarCap's price is not inconsistent with the referenced index. From our review no systematic bias was detected from our benchmarking procedures.

EXHIBIT 52

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

Barclays Capital Credit Valuation at December 31, 2007

Critical Matter

2/7/2008

Contents

1. Description of the Matter:

1.1 General markets discussion

The credit markets in 2007 have experienced significant disruption due to the following factors in the residential mortgage loan markets:

a) Underwriting standards: loose underwriting standards in sub-prime[1] and alt-a[2] mortgages (collectively, "sub-prime") prior to the second half of 2007 (e.g. high loan-to-value ratios, low documentation requirements for loans);
b) Interest rate resets: Significant volumes of interest rate resets from initial "teaser rates" to high spreads above prime, particularly in relation to 2/28 and 3/27 loans[3];
c) House prices: depreciation or significantly slowed appreciation across many national housing markets resulting from over leverage and worsening payroll statistics (e.g. California, Florida and Texas);
d) Refinancing: The combination of recent tightening of underwriting standards and decreasing house values has significantly reduced the ability of borrowers to refinance before the interest rate reset periods described in b) above.

The results of these factors have been significant increases in sub prime delinquency and default levels during the last quarter of 2006 and 2007. The worsening metrics prompted financial institutions which extended collateralized loans to sub-prime originators to demand additional collateral and in many cases lines of credit were suspended. These highly leveraged originators quickly became illiquid and many stopped taking applications in early 2007. In the past year, approximately 150 mortgage operations have failed including American Home Mortgage Investment, Mortgage Lenders Network USA, New Century Financial and Option One Mortgage Corp.

Many debt financial instruments have exposure to sub-prime loans. Whole loans were sold into securitizations, mortgage-backed securities ("MBS") were repacked and asset-backed securities issued ("ABS") and ABSs were purchased by collateralized debt

[1] Generally, sub prime mortgages are for borrowers with credit scores under 620. The adoption of the Depository Institutions Deregulatory and Monetary Control Act in 1980 eliminated rate caps and made sub prime lending more feasible for lenders. In addition, the Tax Reform Act of 1986 eliminated interest deductions on consumer and auto loans while allowing interest deductions on mortgage debt, thus making the latter a more attractive source of financing. These legislative reforms enabled lenders to deliver risk-adjusted pricing and the beginning of sub prime securitizations and the willingness of investors to buy those securities represented an endorsement of this product segment and was the impetus for rapid expansion. By the end of 2006, sub prime mortgages comprised about 15 percent ($1.5 trillion) of outstanding mortgages, of which $600 billion were originated in 2006 and approximately 90 percent were adjustable-rate mortgages (Source: IMF).

[2] The traditional definition of Alt-A has been loans that have less than full documentation, also referred to as low doc/no doc loans. Alt-A loan is not really a loan type but rather a way lenders have of grading or categorizing a loan. For many lenders, Alt-A would be synonymous with A-minus which traditionally has been used to designate borrowers whose credit scores are somewhat below those of A grade borrowers, typically under 680.

[3] These are 30 Year adjustable-rate mortgages ("ARMs") which reset after two or three years.

obligations ("CDO"). Financial institutions provided liquidity support to ABS and CDO structured-investment vehicles ("SIVs"). Benefiting from the additional credit enhancement SIVs issued commercial paper ("CP") and CP in turn was purchased (in some cases even by money-market funds) by investors as short-term highly rated yield enhanced debt. Therefore, increased default and delinquency rates has impacted the valuation of all these financial instruments and global sub prime related losses now exceed $170 billion.

Although increased delinquency and default levels are largely concentrated in 2006 and 2007 vintage sub prime loans (underwriting standards were at their most lax and these loans have not hit their interest reset periods), the significant market disruptions described above has caused a "credit crunch". Investor demand for sub prime loans, other than certain Federal Mortgage Agency deals, has all but disappeared. The home equity ABS and CDO securitization markets have ceased. Investor confidence in asset-backed commercial paper has been eliminated and certain money market funds are concerned about "breaking the buck". Credit spreads have widened significantly and there have been significant decreases in liquidity of the credit markets.

Financial institutions have been challenged with estimating the fair value of financial instruments impacted by the credit crunch in the absence of readily observable market prices. International Accounting Standard 39, *Financial Instruments: Recognition. and Measurement* ("IAS 39"), contains a hierarchy for the determination of fair value and recognizes the use of valuation techniques in determining the fair value of financial instruments. IAS 39 requires that the chosen valuation technique should establish a transaction price i.e. what that price would have been on the measurement date in an arms length exchange motivated by normal business considerations. IAS 39 states that fair value is not the amount that an entity would receive or pay in a forced transaction, involuntary liquidation or distress sale as there is a presumption that the entity is a going concern without any intention or need to liquidate, to curtail materially the scale of its operations or to undertake a transaction on adverse terms.

In response to valuation difficulties caused by market illiquidity, the Center for Audit Quality ("CAQ")[4] and the Global Public Policy Committee (GPPC)[5] issued whitepapers titled "Measurement of Fair Value in Illiquid (or less Liquid) Markets" and "Determining Fair Value of Financial Instruments under IFRS in Current Market Conditions." The objective of both papers was to provide guidance to preparers and auditors of financial statements on the application of GAAP in the context of illiquid market conditions. The guidance in both whitepapers clarified that an imbalance between supply and demand is

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[4] The CAQ is an autonomous, nonpartisan, nonprofit group based in Washington, D.C. and is governed by a Board that comprises leaders from the public company auditing firms, the American Institute of CPAs and the investor and issuer communities.

[5] The Global Public Policy Committee (GPPC) of the six largest international accounting networks comprises representatives of BDO International, Deloitte, Ernst & Young, Grant Thornton International, KPMG and PricewaterhouseCoopers, and focuses on public policy issues for the profession.

not the same as a forced transaction or distressed sale and that transactions occurring between willing buyers and sellers in a manner that is usual and customary for transactions involving such instruments are not forced transactions or distressed sales.

1.2 Barclays Capital U.S. credit business

Barclays Capital U.S. ("BarCap") operates within a global credit business. The global fair value of cash and synthetic credit financial instruments, which are recorded at fair value in accordance with IFRS (which excludes certain loans carried at amortized cost which are discussed below) as of December 31 and October 31, 2007 was $154bn and $149bn[6], respectively

The fair value of BarCap's (defined above as the U.S. business) credit portfolio as of December 31 and October 31, 2007 was approximately $83bn and $80bn, respectively. Appendix 1 includes a breakout of the credit business by geographic region, by business and by product, as of December 31 and October 31, 2007.

As noted in the previous paragraph, the fair values above do not reflect certain loans which are recorded at amortized cost in accordance with IFRS. At December 31, 2007 there was $9.1bn of such loans within the U.S. credit business, all of which were drawn liquidity facilities (see paragraph below). Appendix 2 includes a reconciliation of the loan sub-ledger to the general ledger, as of December 31, 2007.

As of December 31 and October 31, 2007, BarCap had issued liquidity facilities with a notional value of $15.7bn to CDOs with significant exposure to sub prime assets. Three facilities (notional $4.3bn) were held in the trading book and therefore were carried at fair value (fair value of $-2bn at 12/31/07, representing the trading losses on the derivatives). These are included in the CDO Agency New York business in Appendix 1. The remaining twelve facilities (notional $11.4bn), representing $8.3bn of the $9.2bn which was discussed in the paragraph above, were recorded at amortized cost, less impairment charges of $1.7bn at 12/31/07.
As discussed further in section 3 below, the engagement team segregated the entire credit business into three categories:

1. Trading financial instruments carried at fair value, with sub prime exposure, excluding super senior liquidity facilities;
2. Super senior liquidity facilities carried at fair value or amortized cost, given the unique complexities these instruments pose; and

[6] Note that the total and U.S. NPVs (i.e. fair value) presented are adjusted to exclude the Alt-A, Commercial and Sub prime businesses which represent (i) alt-a and sub prime whole loans and securities; and (ii) commercial real estate loans , both of which are covered under separate critical matters.

3. Other financial instruments i.e. cash and derivative financial instruments (including certain loans) carried at fair value and loans carried at amortized cost less impairment.

1.3 Controls considerations

In advance of designing specific procedures to address the implications above, the engagement team first considered the information flows, processes and controls tested during our interim controls work (documented in section 3000 of the MyClient file) to understand the controls over relevant financial statement assertions and control assertions over credit financial instruments in-scope for 404. A flow chart is attached in Appendix 3.

Key controls over the existence, completeness, accuracy and valuation of credit financial instruments carried at fair value include:

1. Trade Input (Front Office) - Derivatives are input to SDAPS, other than bespoke CDS, Indices, AB CDS, and CMBX positions which are input to SABS. Cash securities are input to SDAPs via an automated feed from BBG . SDAPS and SABS calculate risk and are in-scope applications covered by ITGC testing. Trade initiation is not considered a key control.

2. Front Office to Back Office - Daily front office to back office ("FOBO") reconciliations compare position, price, NPV/fair value and P&L. Certain reconciliations, automated in Glacier, have been tested by the assurance team (control ref. PC060-1) and SPA has tested the ITGC's and Automated Business Controls (ABCs) for system flows, with no exceptions noted.
Manual reconciliations compare flows between SDAPS/SABS and Platinum, FISS and Impact (which are all in-scope applications). We have relied on BIA's testing of the manual reconciliation (control ref. PC060-2) and no exceptions were noted.
In addition, we have performed substantive testing over the 12/31/07 Glacier break reports and the CDO Agency manual reconciliation to ensure all material breaks were identified and no exceptions were noted.

3. PCG Price Testing Group - Price testing group (PT) verifies internal desk prices against external sources on a monthly basis. PT obtains the position inventory from the front office systems and perform a completeness reconciliation (control ref. PC031), which has been tested by the assurance team with no exceptions. Price testing results are aggregated and reported to senior management, (control ref. PC031) the completeness and accuracy of which has been tested by the assurance team without exception.

4. Sub-ledger to Custodian - Daily position reconciliations ("Depot Recs") for cash instruments between sub-ledger and custodian are performed (controls ref. OPRE40) and were tested without exception.
The assurance team independently confirmed securities held with the Bank of New York ("BNY") and Citibank at year end and no exceptions were noted.
For positions with custodians other than BNY and Citibank, the Depot Recs are performed in London and therefore we rely on PwC London.

5. Derivative confirmations and nostro reconciliations - Derivatives are held in Platinum which is controlled in London and therefore we rely on PwC London for confirmation and nostro testing.

6. Sub-ledger to SAP General Ledger - the U.S. credit portfolio is posted in trial balances 8725 and 8850. Positions in Platinum, FISS, and Impact are automatically posted to the SAP general ledger for trial balance 8725. To ensure completeness of the feed, a monthly reconciliation is performed (control ref. FCLA140). In addition, we have reperformed this reconciliation as of year end and no exceptions noted. Platinum positions in trial balance 8850 are manually reconciled to SAP for the derivative accounts. We substantively tested the reconciliation at 12/31/2007 and no exceptions were noted.

Key controls over the existence, completeness, accuracy and valuation of credit financial instruments carried at amortized cost include:

1. GFRM Credit Risk Management - all liquidity facilities are approved and periodically reviewed for impairment by GFRM. GFRM must approve all liquidity facilities at inception and at each annual renewal. GFRM Credit also reviews all liquidity facilities on a monthly basis at the GFRM Watchlist Meeting to assess for impairment. The review performed by GFRM is an ELC covered for SOX testing by the Group team in London.

2. ACBS input and processing - Loan details are entered and approved by GFRM in ACBS. A second team leader reviews, approves, and books the commitments and evidences their part by initialling the loan package after completion. The entire population of loan input and processing into ACBS has been tested by Barclays Internal Audit ("BIA") for SOX purposes and no issues were noted; therefore, we have controls comfort over the existence and accuracy of loan amounts in ACBS.

3. Nostro (Cash) Reconciliation (OPRE40) - Operations Control performs daily cash reconciliations between ACBS and the external bank, which is a back-test for existence and valuation. BIA has tested this control for the full population of cash reconciliations; therefore, we have controls comfort over this process. The undrawn liquidity facilities earn interest and commitment fees

4. GCIS to ACBS Reconciliation (GSTR20-3) - In addition, GFRM monitors the risk associated with each facility that Barclays has entered and GFRM has approved in GCIS. This control has been tested by BIA for the entire population of loans in ACBS and no issues noted.

5. ACBS to SAP Reconciliation (FCLA140) - All amounts per the subledger ACBS are reconciled to the SAP general ledger on a monthly basis by Finance. This is an automated reconciliation that has been tested by the PwC SPA.

Based on our independent testing, reliance placed on PwC London and reliance placed on BIA, we have achieved high controls reliance over the existence, completeness, accuracy and valuation of credit financial instruments.

1.4 Change in nature, timing and extent of our substantive tests of detail

Based on the state of the current markets (as described in section 1.1. above), our cumulative audit knowledge, our management update inquiries during the year and additional review procedures performed over losses reported in press releases in August (for the half-year) and in November (addressing rumours in the press that over $10bn of write-downs at Barclays Capital were imminent), the engagement team was aware that BarCap (defined above to mean BarCap U.S.) had significant exposure to the sub prime markets.

The engagement team considered the high controls reliance achieved, discussed in 1.3 above, over the entire BarCap credit portfolio. We considered what additional substantive procedures were required to address the increase in valuation risk. Therefore, conclusions on the valuation assertion related to specific products are done considering high controls reliance.

The engagement team recommended to the Barclays Capital Global engagement team in PwC London that we, assisted by PwC valuation experts, would perform additional audit procedures over the products within the U.S. credit businesses that have a material exposure to sub prime. The purpose of the deep-dive was two-fold:

1 Develop a deeper understanding of the U.S. credit business so we could understand all the exposures to sub prime sufficient to allow us to scope our year-end audit effectively; and
2 Perform interim procedures over the product areas with material exposure to sub prime to identify any issues in advance of our year end audit.

The Barclays Capital Global engagement leader, Jon Holloway, discussed this with the Barclays Capital Global CFO, Patrick Clackson, and it was agreed that the engagement team would commence a review of BarCap's October 31, 2007 portfolio.

2. Implications of the Matter:

As discussed in section 1.3 above, the engagement team segregated the entire credit business into three categories:

1. Trading financial instruments carried at fair value, with sub prime exposure, excluding super senior liquidity facilities;
2. Super senior liquidity facilities carried at fair value or amortized cost, given the unique complexities these instruments posed; and
3. Other financial instruments i.e. cash and derivative financial instruments (including certain loans) carried at fair value and loans carried at amortized cost less impairment.

The implications arising from the credit crunch for BarCap are that:

1. For credit financial instruments carried at fair value with sub prime exposure, where there is limited or no available observable market data, the use of valuation techniques may not result in an accurate measure of fair value (i.e. transaction price);
2. The super senior liquidity facilities, similar to 1 above due to their exposure to sub prime, have limited market data available and therefore the fair value and

impairment calculations are model driven, which may result in inaccurate valuation measures. In addition, conclusions regarding complex accounting issues (e.g. consolidation, embedded derivatives) have a direct impact on the basis by which management determine the appropriate valuation method. These accounting judgements may not be in accordance with IFRS; and

3. For other financial instruments, the general disruption to the credit markets may impact the ability to obtain accurate pricing information which may not result in accurate measures of fair value or impairment.

3. Actions Taken to Address these Matters:

The engagement team considered the high controls reliance, achieved from the information in 1.3 above over the entire BarCap credit portfolio and determined what additional substantive procedures were required to address the increase in valuation risk. Therefore, conclusions on the valuation assertions as it relates to specific products areas are drawn taking into account the controls work as well as the specific substantive tests of detail performed by the engagement team or the experts.

3.1 Credit financial instruments carried at fair value with sub prime exposure

On October 25, 2007, the engagement team and members from PwC's Financial Analytics group ("FA"), Lisa Waldie and David Schmid (working under the direction of FA partner Douglas Summa), met with members of BarCap's Credit Product Control Group ("PCG"), Sean Teague, John Duer, Katharine Gee, and Kevin Jhea. The October IPV report was provided to PwC and we discussed each product area to gain an understanding of the exposures to sub prime assets (the minutes of this meeting are documented in section 4000 of the MyClient[7] database)..

The engagement team, in consultation with FA, identified the businesses and product types where the material exposures to sub prime assets existed, based on the information gathered in the above mentioned meeting and our cumulative audit knowledge and experience.

The engagement team requested the FA team to perform substantive audit procedures over the valuation of these product areas. The specific requirements of AU 328 and AU 336 (using the work of experts) are documented in section 4000 of the MyClient database. In summary, the scope and approach was agreed between the engagement team and FA and a memo documenting their scope, approach, assumptions, analyses, results and conclusions is attached in Appendix 4.

The following is a summary of Appendix 1 and includes the businesses and products identified (and their linkage to the names used in the FA report in Appendix 3) are listed in the table below:

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[7] References to the MyClient Database in this memo refer to the Barclays Derivatives and Other (Group Audit) 2007 MyClient file.

Business	Product	FA Name
ABS Secondary	ABS Home Equity	HEL
CDO Agency London	CDO	CDO
CDO Agency New York	ABS CSO, CDO, CDO CDS, CDS Indices, Home Equity CDO Super Senior,	CDO HEL Liquidity Facilities
GCD U.S.	Negative Basis Trades	NBT
Risk Finance	CDO	CDO
US Workout Group	Bonds	Liquidity Facilities

The source data used by FA was provided by Credit PCG and tied-out by the engagement team to the IPV report. The source files and tie-out work performed is documented in section 4000 of the MyClient file.

3.2 Super senior liquidity facilities carried at fair value or amortized cost

The "Aggregate File" is maintained by front-office and summarizes the exposure and valuations of the fifteen ABS CDO super senior liquidity facilities. It is attached in Appendix 5.

On November 13, 2007, prior to BarCap's press release, the engagement team and FA partner Doug Summa met with the trader responsible for the newly created US Portfolio Workout Group, Stephen King and the U.S. CFO, James Walker. Management explained the valuation approach as of October 31, 2007 for the ABS CDO super senior liquidity facilities which resulted in mark-to-market losses of $1.9bn and impairment charges of $1.4bn (note these numbers are as of 10/31/07).

As discussed in section 1.2 above, as of December 31 and October 31, 2007, BarCap's CDO Agency New York business issued liquidity facilities with a notional value of $15.7bn to CDOs with significant exposure to sub prime assets. Three facilities (notional $4.3bn) were held in the trading book and therefore were carried at fair value (NPV $-2bn at 12/31/07). The remaining twelve facilities (notional $11.4bn), held in the banking book, were recorded as loans held at amortized cost, less impairment charges (impairment $1.7bn). The liquidity facilities act in one of two manners:

1. They are drawn down by Cash CDOs to fund super senior notes which were previously funded through CP which could not be rolled/funded
2. They are drawn by Synthetic CDOs to cover payments due on CDS contracts (sold protection which gave the CDO its exposure to reference obligations) where the CDO does not have sufficient cash assets to settle its CDS obligation.

The 15 facilities can be further segregated as follows:

1. Six of the twelve facilities (notional $8.3) held in the banking book were issued to High Grade Cash CDOs. In light of market events, CP could not be rolled and

therefore the liquidity facilities were drawn. As of December 31, 2007 the six facilities were fully drawn.

2. Two of the twelve facilities (notional $1.1) held in the banking book were issued to Mezzanine Hybrid CDOs (approx. 60% synthetic, 40% cash). Management has represented that the assets in these CDOs are 2004 and 2005 vintage collateral. As of December 31, 2007 no draw downs have occurred..
3. Four of the twelve facilities (notional $2.0) held in the banking book were issued to Mezzanine Synthetic CDOs. One CDO hit event-of-default ("EOD") triggers and was liquidated in January 2008. As of December 31, 2007 no draw downs had occurred.
4. The three facilities (notional $4.3bn) held in the trading book were issued to High Grade Synthetic CDOs. These CDOs hit EOD triggers (none have been liquidated at the date of this memo). As of December 31, 2007 no draw downs had occurred.

BarCap is also the buyer of the protection from the Synthetic CDOs through single-name and bespoke CDS contracts. From discussion with management, in order to hedge this exposure, equal and offsetting CDS contracts were executed with the Street. The engagement team did not perform substantive procedures to audit this fact due to high controls reliance which we are satisfied would adequately capture any hedge ineffectiveness i.e. the individual contracts are all entered into SDAOs/SABS and flow to Platinum therefore the profit and loss on any mismatch will flow through income the same as any other derivative.

The above facts are included because, as discussed in section 1.3 above, PCG performs its price testing on positions from SDAPs/SABS which report risk and therefore risk neutral positions (other than counter-party risk which is captured by GFRM London in the credit valuation adjustment) are not price tested. However, the liquidity facilities were not hedged initially (subsequently, hedges using CDS on the ABX were entered but there is basis risk with this trade). The desk prices the CDS contracts but PCG does not as the positions are risk neutral. PCG instead prices the liquidity facilities, which is the net exposure, which effectively derive their value from the underlying CDS contracts less the over-collateralization and any assets in the CDO.

3.2.1 Events of default and their impact on consolidation and valuation

Events of default (EOD) are typically legal, credit and/or structural protections extensively used in CDOs of ABS/Hybrids usually to provide additional protection to the senior notes (e.g. overcollateralization ratio test may result in cash flow diversion mechanisms).

In our discussion on November 13, 2007, S King noted that identifying all the EODs can be difficult as some are very subtle. Therefore, management engaged outside counsel to review all the deal documents related to the CDOs and identified the contractual EODs. Front-office then reviewed the EODs identified and modelled the likelihood of default (2 worked examples were provided to the engagement team and are attached in Appendix 6). Management concluded that:

1. The EOD triggers in the six High Grade Cash CDOs are actual defaults to the non-pik'able (payment in kind) tranches and therefore EOD within at least the next 12 months of the balance sheet date is considered unlikely, given the levels of losses suggested in the client's valuation of the CDO versus the over-collateralization;
2. EOD triggers exist in the two Mezzanine Hybrid CDOs however these CDOs are performing significantly better than the Mezzanine Synthetic and High Grade Synthetic CDOs and therefore EOD within at least the next 12 months of the balance sheet date is considered unlikely;
3. The four Mezzanine Synthetic CDOs are expected to default (one has already defaulted as of the balance sheet date); and
4. The three High Grade Synthetic CDOs have defaulted.

The engagement team reviewed the current losses reported in the Aggregate File (we have audited the summary schedule and the valuations, see 3.2.1.2 below) and noted that the percentage losses in the six High Grade Cash and two Mezzanine Hybrid CDOs were significantly less than the other facilities. The engagement team also reviewed external counsels' legal analyses of the six High Grade Cash and two Mezzanine Hybrid CDOs to determine whether any triggers were identified that would appear to contradict management's assertion that EOD is unlikely in the next 12 months. Our review did not identify triggers that, given the current loss rates, would suggest EOD is imminent within twelve months. Unlike management, we did not model all the EODs and recognize that management's assessment and therefore our review is very subjective. In addition, we relied on external counsels' legal analysis for completeness of the EOD triggers identified.

The remaining unconsolidated CDOs (i.e. the three Mezzanine Synthetic facilities) are assumed to trigger EOD and, given the percentage losses already incurred, they are very close to default. Based on the relative performance of these CDOs (mark-to-market losses of 35%-55%) and the fact that one Mezzanine Synthetic CDO has already defaulted, we did not take exception to management's conclusion that default in less than 12 months is imminent. The EOD analysis is documented in section 4000 of the MyClient file.

3.2.1.1 Consolidation

The accounting policies as they relate to the super senior liquidity facilities were documented by BarCap's Technical Accounting Group ("TAG") and are attached in Appendix 7.

If the CDO defaults, BarCap, as the Super Senior note holder can accelerate the transaction or liquidate the CDO. Therefore, if EOD has occurred BarCap controls the entity and must consolidate the assets and liabilities at fair value. At December 31, 2007

BarCap consolidated the three High Grade Synthetic CDOs and the one Mezzanine Synthetic CDO, which were in default. The assets and liabilities were consolidated at their fair values.

The engagement team reviewed the journal entries posted to the general ledger to record the consolidation of the four CDOs in EOD at December 31, 2007. The tie-out of the journal entries is documented in section 4000 of the MyClient file.

3.2.1.2 Impairment Charge - Fair Value versus Present Value

See Appendix 7 for BarCap accounting policy. IAS 39 states that impairment should be recognized based on the future cash flows expected to be received on the asset discounted at the original coupon of the asset. Fair value may be used as a practical expedient.

If EOD is imminent, management assumes that it will consolidate the CDO in the near future. As noted in 3 directly above, three Mezzanine Synthetic CDOs have not yet triggered EOD but imminent default in the short-term is assumed. Therefore management expects to consolidate these CDOs at fair value in the near future and therefore believes the amortized cost of these CDOs should be written down to fair value (through an impairment charge). The engagement team believes this is a reasonable methodology as this represents the losses that BarCap expects in the future.
The six High Grade Cash CDOs and the two Mezzanine Hybrid CDOs are not expected to default in the near future. Therefore, management believes that the impairment loss should be based on the cumulative expected loss discounted at LIBOR flat (which management believes is more conservative than expected future cash flows discounted at the liquidity facility coupon). The engagement team believes this is a reasonable methodology as this represents the loan amount less losses that BarCap expects it will incur.

3.2.2 Assessment of embedded derivatives upon draw-down of liquidity facilities

See Appendix 7 for BarCap's accounting policy.

The liquidity facilities related to the three High Grade Synthetic CDOs were documented as part of the master swap agreements governing the bought protection from the CDOs and therefore were accounted for as derivatives under IAS 39 and marked-to-market. The four Mezzanine Synthetic and two Mezzanine Hybrid liquidity facilities were documented as separate liquidity agreements and not included in the master swap agreements. Therefore, the six Mezzanine liquidity facilities were treated as loans and receivables under IAS 39, carried at amortized cost less impairment. The six High Grade Cash liquidity facilities, as noted above, were revolving loan facilities carried at amortized cost.

For the facilities at amortized cost, the client considered whether an embedded derivative would arise upon draw-down because parties who hold interests in the CDO are able to assume the credit risk of reference assets which it does not own.

IAS39.AG30(h) states that "Credit derivatives that are embedded within a host debt instrument which allow one party (the beneficiary) to transfer the credit risk on a particular reference asset, which it may not own, to another party (the guarantor) are not closely related to the host debt instrument."

Mat Falconer, PwC London and Karen Hong, PwC NY, discussed the matter with Charles Utley, BarCap TAG and did not take exception to the client's conclusion that an embedded derivative does not exist in the High Grade Cash CDO liquidity facilities as the liquidity facilities are closely related to the credit risks of CDO. This is documented in section 5000 of the MyClient file.

Upon draw down, the two Mezzanine Hybrid CDOs will have embedded derivatives which will have to be bifurcated and marked-to-market in accordance with IAS 39. The three unconsolidated Mezzanine Synthetic CDOs will also have embedded derivatives upon draw down but are already marked at fair value as discussed in 3.2.1.2 above and therefore the derivatives and host contract are already marked at fair value.

<u>3.2.3 Impairment and NAV valuation methodology</u>

A high level summary prepared by the Global Head of Credit PCG, Marcus Morton, and reviewed by the U.S. CFO, James Walker, titled "Super Senior Liquidity Valuations" is attached in Appendix 8 which discusses the valuation approaches.

<u>3.2.3.1 Impairment Present Value Model</u>

The front-office prepared a document titled "Super Senior ABS CDO Overview" (updated January 16, 2008) describing the impairment approach, which is attached in Appendix 9. In addition, the engagement team and FA partner Doug Summa met with S King, Head of the U.S. Portfolio Workout Group, to discuss the impairment calculation on November 13, 2007.

As noted in section 3.2.1.2, IAS 39 requires expected future cash flows discounted at the original coupon in determining impairment. BarCap's model predicts expected losses and discounts those losses to the valuation date using Libor flat. This results in a more conservative impairment (as the contractual rate is higher than Libor therefore this would result in the loss being discounted at a higher rate) and therefore we did not take exception given the highly subjective nature of the calculation.
The expected losses on super senior liquidity facilities carried at amortized cost is calculated by projecting the losses of the underlying reference assets using two different methodologies, depending on asset type:

1. Sub prime, alt-a & Option ARM RMBS - cash flows are modelled in Intex using default rates, prepayment speeds and discount rates; and

2. For all other asset classes specific assumptions are being made regarding loss severity and timing e.g. non-RMBS backed securities prices are calculated as the weighted average of the RMBS prices in the CDO issuer's underlying portfolio, ABS CDO & 2nd liens are valued at zero etc.

Based on our review of the collateral detail underlying the CDOs, which has been agreed to the Trustee statements as of 12/31/07 (see 'Test Liquidity Facilities Step" in section 4000 of the MyClient file), the heaviest weighting of assets is in sub prime ABS, alt-a ABS and prime RMBS. The majority of the remaining collateral is CMBS and other ABS. Therefore, the following are the key assumptions:

For sub prime & Alt-a:

1. Cash flows are modelled using Intex. The starting point is a generic Cumulative Default Rate ("CDR") curve. If the estimated cumulative loss is greater than the break loss, the loss of the bond is computed as the notional balance times severity. Prepayment speeds are determined based on collateral type and vintage.
2. A roll rate analysis based on industry published delinquency rates was created
3. Average is 40% for Sub prime first lien RMBS and 30% for Alt A / Option ARM RMBS.
4. The Cumulative Default Rate ("CDR") curve for each bond was determined using the roll rate analysis
5. The CDR assumes such losses commence at the 18 month period.

For other Asset Classes:

1. Prime RMBS losses are assumed to be 25% of sub prime and alt-a

The engagement team performed the following audit procedures over the sub prime & alt-a assumptions:

1. The roll rates used were agreed to the published data from which they were sourced. Management used the most conservative delinquency percentage in each bucket (see 4 below for assessment of reasonableness). No exceptions noted.
2. The typical period from delinquency to foreclosure is 18 months and this an industry standard.
3. The severity rate of 40% is within a typical range of 30-40%. From our valuation work over mortgages, 35% is used. The reasonableness of the more conservative estimate of 40% is assessed in 4 below.
4. Management, using Intex calculated the aggregate implied cumulative loss rates for the 20 bonds underlying the ABX index and compared the results to the projected losses published by third-parties. BarCap's cum loss rates were in the middle of the range, suggesting that management's estimate was within an acceptable range of other market participants' assumptions regarding cumulative loss rates. The engagement team agreed the output from Intex to the published data.

The engagement team and FA partner discussed the assumptions with Stephen King at the November 13, 2007 and January 7, 2008 meetings. Although the assumptions are very subjective, they are conservative and given the inherent level of imprecision in a projected future cash flow model as it relates to these structured credit products and the fact that the majority of the assets are sub prime and alt-a, the assumptions used for other assets were deemed reasonable.

As noted earlier the engagement team agreed the collateral detail underlying the CDOs to the Trustee statements as of 12/31/07 (see 'Test Liquidity Facilities Step" in section 4000 of the MyClient file). The engagement team observed the front-office re-run the collateral tied out by the engagement team through Intex as of January 31, 2008. The engagement team in discussions with front-office did not expect a significant difference in valuation from the December 31, 2007 impairment calculation due: (i) the use of 12/31/07 collateral; and (ii) the 6,000 cusips downgraded by S&P did not include any of the underlying collateral according to the front-office; and (iii) actual defaults were not expect to change significantly in the 30 day period. The engagement team reviewed the output file and again tied the collateral detail to the Trustee Reports. A $20m difference in impairment resulted, which is considered reasonable given the 30 day time lag and in-line with our expectations.

3.2.3.2 NAV Valuation Model

The front-office prepared a document titled "Super ABS CDO Note Valuation Methodology" (updated January 16, 2008) describing the NAV approach, which is attached in Appendix 10. In addition, the engagement team and FA partner Doug Summa met with S King, Head of the U.S. Portfolio Workout Group, to discuss the NAV calculation on November 13, 2007.

The engagement team agreed with FA that the scope of their work would include a review of the NAV prices for the underlying collateral supporting the ABS CDO Super Senior positions. The engagement team and Doug Summa and Lisa Waldie, FA, met with S King again on January 7, 2008 to discuss any open questions.

FA concluded that the use of the NAV approach was reasonable and widely used in industry. In addition, from FA's discussions with S King, no fatal flaws in the model were detected. FA then performed a benchmarking exercise comparing the percentage write-downs by capital note to other financial institutions' write-downs published during quarter four. FA concluded that the magnitude of the High Grade write downs appear in line with other financial institutions and the Mezzanine write-downs, although considerably less than Citibank and Merrill Lynch, did not appear unreasonable given. See FA's report titled "Barclays Capital Analysis of CDO, ABS & CDS Pricing," which is attached in Appendix 4.

In January 2008, BarCap exercised its right to liquidate the one Mezzanine Synthetic CDO which was in EOD. Upon liquidation, BarCap was contractually required to obtain third-party executable broker quotes for all underlying collateral (i.e. CDS contracts). Marcus Morton, Global Head of Credit PCG and Tom McKosker, PCG, explained that prices received from third-parties were within the 6 point bid/offer spread of front-office's price. We have audited the January 2008 transaction and confirmed that executable prices were received for all CDS contracts and the quotes were within a reasonable range of the bid/offer spread of the prices on the date of sale. We also compared the quotes to the 12/31 prices and not material differences were noted.

The above price points are evidence that the CDO NAV pricing model used by front-office is calibrated to market participants' views on CDO pricing and that use of ABX prices as a benchmark of where vintages and credit ratings price is consistent with market participants' views.

3.2 Impact of credit events on the remaining portfolio

We discussed in section 3.1 above the controls which exist over valuation of the entire credit portfolio and the controls testing relied upon by the engagement team. .

In addition to our controls work we have performed tests of detail which have been performed over the December 31, 2007 credit portfolio, except for those products reviewed by FA and loans held at amortized cost. Appendix 1 explains the scope of work performed over the remaining U.S. credit trading portfolio. The procedures performed are:

- Cash positions, other than leveraged loans, are targeted on a risk basis and sent to PwC's IMSAG group to obtain vendor prices. These prices are compared against front-office and PCG's price testing price and differences are investigated; and
- Derivative positions and leveraged loans sample prices are agreed to the source pricing file, which is independently obtained from the vendor by PwC

.

In addition to the tests of detail above, we review the IPV report (which we have controls comfort over as discussed in section 1.3 above) to ensure that senior management has reviewed the month end price testing pack. We review the price variances, quality of pricing (hard, medium, soft) and the untested portfolio, understand the support behind these metrics and understand how management approved the pricing package. The results of our review are documented in section 4000 of the MyClient file. In summary:

- There was $18.4bn untested as of 12/31/07. $17.4bn represent negative basis trades which are P&L neutral, other than the counter-party risk which is separately calculated. Per the TARC report, the related DVO1 net exposure, or the unhedged risk within the book, is ($177K) and $(3K), respectively. Of the remainder, $0.4bn is CDOs and CDS on CDOs, $0.2bn is emerging markets bonds and other, and a further $0.2bn is largely made up of equities (tested by PwC London) within the special situations group.

- The price testing variances by product area and in the aggregate ($31m) not material.
- The areas with soft price testing were in line with our expectations.

Regarding the untested portfolio, it is usual in the investment banking industry to have untested portfolios. However, that does not suggest that there are not significant controls surrounding the valuation of these products. Some of the controls that management and PwC looked to in assessing the potential impact of untested portfolios are:

- Approval of a business that would include traded products.
- Trader mandates provide an outline of the products and risks that each trader is allowed to undertake.
- Approval of all products by the risk committees including senior members of the support functions.
- If models are used to price for execution, risk manage and value positions, the models are controlled through the model validation policies and review
- Risk and transaction limits are set, and re-evaluated, at least annually.
- Daily marking to market of trading positions, with daily reported P&L which is reviewed by PCG. The P&L results are reported daily, with wide distribution within the trading organization and senior management.

4. Evidence Obtained including Supporting and Opposing Evidence:

The following is a summary of the evidence that has been gathered to address the three implications included in Section 2 of this memo.

4.1 Financial instruments carried at fair value with sub prime exposure

In concluding, for credit financial instruments carried at fair value with sub prime exposure, where there is limited or no available observable market data, whether the use of valuation techniques resulted in an accurate measure of fair value (i.e. transaction price), we considered:

1. High controls reliance over the existence, completeness, accuracy and valuation has been achieved
2. Our interaction with Finance, PCG and the front-office has demonstrated the individuals involved in the valuation of these instruments are competent and experienced individuals;
3. There has been significant involvement from senior management, especially the global Barclays Capital CFO, Patrick Clackson and the global Head of PCG, Paul Copson. In addition, the global Barclays PLC CFO, Chris Lucas and global Barclays PLC Head of Risk, Robert LeBlanc, attended an all day meeting in the US to discuss the valuation process and results;
4. The procedures performed by PwC FORCe concluded that the magnitude and direction of the price changes were consistent with benchmark indices, there was

no systematic bias in pricing detected and there was consistency in pricing within and among the various books;

5. In January 2008, executable broker quotes for approximately 80 CDS contracts related to the liquidation of a CDO, priced within the bid/offer reserve of where the positions were marked at December 31, 2007.

4.2 Super senior liquidity facilities at fair value or amortized cost

The super senior liquidity facilities, similar to 1 above due to their exposure to sub prime, have limited market data available and therefore the fair value and impairment calculations are model driven, which may result in inaccurate valuation measures. In addition, conclusions regarding complex accounting issues (e.g. consolidation, embedded derivatives) have a direct impact on the basis by which management determine the appropriate valuation method. In concluding whether these accounting judgements are in accordance with IFRS, we considered:

1. The evidence supporting the valuation of the super senior positions is consistent with 5.1. above
2. The largest concentration of collateral is in sub prime and alt-a for the facilities carried at amortized cost. The cumulative loss rates used in the calculation of expected losses were in the middle of a range of loss rates published by market participants. The other assumptions are subjective but through our audit procedures are believed to be reasonable.
3. We reviewed the accounting judgements made and believe the conclusions reached by management are appropriate.

4.3 Other credit financial instruments

In concluding, for other credit financial instruments, whether the general disruption to the credit markets impacted the ability to obtain accurate pricing information which resulted in accurate measures of fair value or impairment, we considered:

1. No material errors were detected in valuation from the results of our cash and derivative independent price testing
2. The overall price variance between front-office and PCG was immaterial
3. The level of untested positions when negative basis trades are appropriately isolated (due to low inherent valuation risk) have been reviewed by management, are consistent with the products previously untested and as a percentage of the overall portfolio appear to be reasonable.

5. <u>Final Conclusions Reached and Basis Thereof:</u>

1. Based on our controls work and substantive procedures, we believe that the fair value of credit financial instruments is within a range of acceptable fair values. That acceptable range has been impacted by the current credit environment and is wider than it would otherwise be in a normal market because of the high level of

subjectivity required due to the lack of observable market data. We have added a matter of emphasis to our inter-office opinion to highlight this and have recommended to senior management and PwC UK that significant enhanced disclosure should be made to explain to a reader the inherent risks in these fair value estimates resulting from the credit crunch.

2. Based on our controls work and substantive procedures, the impairment methodology appears reasonable. The calculation is inherently subjective and conservatism in the assumptions has been viewed as compensatory for the inherent lack of precision.

6. <u>Information identified that is inconsistent with or contradicts our final conclusions:</u>

None noted.

Appendix 3

Credit Businesses Flowchart

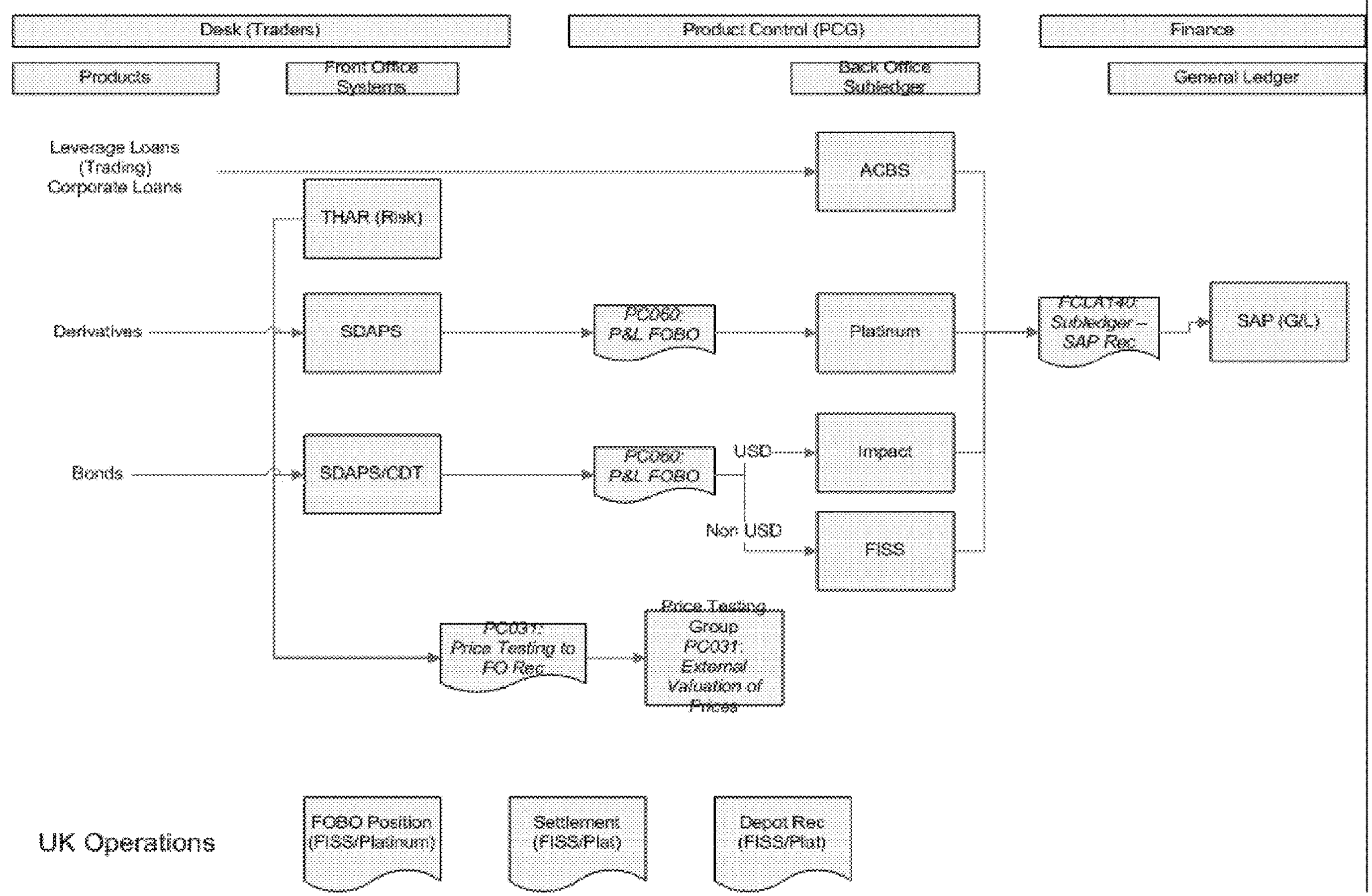

EXHIBIT 53

FILED UNDER SEAL PURSUANT TO THE STIPULATION AND PROTECTIVE ORDER DATED FEBRUARY 3, 2015, DOCKET NO. 98

Barclays Capital Mortgages Valuation at December 31, 2007

Critical Matter

2/12/2008

1. Description of the Matter:

1.1 Deterioration in residential mortgage loan performance and related impact on the mortgages market

The residential mortgage loan market in 2007 has experienced significant disruption due to the following factors:

a) Underwriting standards: loose underwriting standards in sub-prime[1] and Alt-A[2] mortgages prior to the second half of 2007 (e.g. high loan-to-value ratios, low documentation requirements for loans);
b) Interest rate resets: Significant volumes of interest rate resets from initial "teaser rates" to high spreads above prime, particularly in relation to 2/28 and 3/27 loans[3];
c) House prices: depreciation or significantly slowed appreciation across many national housing markets resulting from over leverage and worsening payroll statistics (e.g. California, Florida and Texas);
d) Refinancing: The combination of recent tightening of underwriting standards and decreasing house values has significantly reduced the ability of borrowers to refinance before the interest rate reset periods described in b) above.

The results of these factors have been significant increases in sub prime and Alt-A delinquency and default levels during the last quarter of 2006 and 2007. The worsening metrics prompted financial institutions which extended collateralized loans to sub-prime originators to demand additional collateral and in many cases lines of credit were suspended. These highly leveraged originators quickly became illiquid and many stopped taking applications in early 2007. In the past year, approximately 150 mortgage operations have failed including American Home Mortgage Investment, Mortgage Lenders Network USA, New Century Financial and Option One Mortgage Corp.

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[1] Generally, sub prime mortgages are for borrowers with credit scores under 620. The adoption of the Depository Institutions Deregulatory and Monetary Control Act in 1980 eliminated rate caps and made sub prime lending more feasible for lenders. In addition, the Tax Reform Act of 1986 eliminated interest deductions on consumer and auto loans while allowing interest deductions on mortgage debt, thus making the latter a more attractive source of financing. These legislative reforms enabled lenders to deliver risk-adjusted pricing and the beginning of sub prime securitizations and the willingness of investors to buy those securities represented an endorsement of this product segment and was the impetus for rapid expansion. By the end of 2006, sub prime mortgages comprised about 15 percent ($1.5 trillion) of outstanding mortgages, of which $600 billion were originated in 2006 and approximately 90 percent were adjustable-rate mortgages (Source: IMF).

[2] The traditional definition of Alt-A has been loans that have less than full documentation, also referred to as low doc/no doc loans. Alt-A loan is not really a loan type but rather a way lenders have of grading or categorizing a loan. For many lenders, Alt-A would be synonymous with A-minus which traditionally has been used to designate borrowers whose credit scores are somewhat below those of A grade borrowers, typically under 680.

[3] These are 30 Year adjustable-rate mortgages ("ARMs") which reset after two or three years.

Although increased delinquency and default levels are largely concentrated in 2006 and 2007 vintage sub prime and Alt-A loans (underwriting standards were at their most lax and these loans have not hit their interest reset periods), the significant market disruptions described above has caused a "credit crunch". Investor demand for sub prime and Alt-A loans, other than certain Federal Mortgage Agency deals, has all but disappeared. The home equity ABS and CDO securitization markets have ceased.

The cessation of trading in sub prime and alt-financial instruments has resulted in limited to no pricing in the markets. Financial institutions have been challenged with estimating the fair value of these financial instruments in the absence of readily observable market prices. International Accounting Standard 39, *Financial Instruments: Recognition, and Measurement* ("IAS 39"), contains a hierarchy for the determination of fair value and recognizes the use of valuation techniques in determining the fair value of financial instruments. IAS 39 requires that the chosen valuation technique should establish a transaction price i.e. what that price would have been on the measurement date in an arms length exchange motivated by normal business considerations. IAS 39 states that fair value is not the amount that an entity would receive or pay in a forced transaction, involuntary liquidation or distress sale as there is a presumption that the entity is a going concern without any intention or need to liquidate, to curtail materially the scale of its operations or to undertake a transaction on adverse terms.

In response to valuation difficulties caused by market illiquidity, the Center for Audit Quality ("CAQ")[4] and the Global Public Policy Committee (GPPC)[5] issued whitepapers titled "Measurement of Fair Value in Illiquid (or less Liquid) Markets" and "Determining Fair Value of Financial Instruments under IFRS in Current Market Conditions." The objective of both papers was to provide guidance to preparers and auditors of financial statements on the application of GAAP in the context of illiquid market conditions. The guidance in both whitepapers clarified that an imbalance between supply and demand is not the same as a forced transaction or distressed sale and that transactions occurring between willing buyers and sellers in a manner that is usual and customary for transactions involving such instruments are not forced transactions or distressed sales.

1.2 Barclays Capital U.S. sub prime and Alt-A businesses[6]

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[4] The CAQ is an autonomous, nonpartisan, nonprofit group based in Washington, D.C. and is governed by a Board that comprises leaders from the public company auditing firms, the American Institute of CPAs and the investor and issuer communities.

[5] The Global Public Policy Committee (GPPC) of the six largest international accounting networks comprises representatives of BDO International, Deloitte, Ernst & Young, Grant Thornton International, KPMG and PricewaterhouseCoopers, and focuses on public policy issues for the profession.

[6] For the purposes of our analysis, we considered Barclays Capital's non-agency prime financial instruments similar to Alt-A financial instruments and therefore for the purposes of this memo the term Alt-A is used to describe the two product types collectively.

[Note 1: In this section we discuss entities which are all consolidated by Barclays PLC. The entities marked with the symbol * are Barclays Capital entities of which certain balances are included in our opinion to PwC London. The entities discussed are: Barclay Oversight Management Inc. ("BOMI")*, EquiFirst Corporation ("EquiFirst"), New York Branch ("NYBR")*, HomEq (not a stand-alone legal entity but included within NYBR)*, Sutton Funding LLC ("Sutton")*].

In November 2006, in anticipation of further penetrating the sub prime market, BarCap purchased HomEq, the sub prime servicer operations previously owned by Wachovia. As of December 31, 2007 HomEq was servicing approximately $50bn of sub prime loans, including the loans originated at EquiFirst (see below).

In April 2007, Barclays Capital US ("BarCap") purchased EquiFirst, a sub-prime originator based in Charlotte, NC. EquiFirst was originating approximately $1.0bn in sub prime mortgages per month and was budgeted to increased production to $1.2bn. EquiFirst is financed by third-party credit lines and production is sold to NYBR or Sutton. Prior to the cessation of the sub prime securitization market, NYBR (or Sutton prior to December 2007 when all whole loans were transferred to NYBR) would securitize the loans via a series of trusts known collectively as SABR/SABN.

Prior to the events described in section 1.1, BarCap also provided lines of credit to third-party sub prime originators(e.g. CBass, New Century, ResMae) and Alt-A (e.g. American Home Mortgage, Countrywide) in the form of collateralized loan facilities. These relationships existed to provide pipeline for sub prime and Alt-A loans issued from the SABR/SABN and BCAP trusts, respectively.

In addition to sub prime and Alt-A whole loans:

- Residuals of the SABR/SABN and BCAP securitizations were typically retained by BOMI;
- The mezzanine tranches of their own securitizations were occasionally retained by businesses within Global Credit (see separate Barclays Capital Credit Valuation at December 31, 2007 Critical Matter in the Barclays Derivatives and Other (Group Audit) 2007 database);
- The Alt-A business retained senior and mezzanine notes in own securitizations and purchased senior and mezzanine securities from third-parties.

In summary, BarCap's exposure to whole loans and securities across the two loan types was derived in the following ways:

1. Sub prime whole loans originated by EquiFirst;
2. Sub prime whole loans acquired on foreclosure of collateralized loans to sub prime originators;
3. Sub prime residuals retained in own securitizations;
4. Alt-A whole loans purchased from third parties;
5. Alt-A securities retained in own securitizations or purchased from third parties; and
6. Alt-A residuals retained in own securitizations.

As of December 31 and October 31, 2007, BarCap's exposure to sub prime and Alt-A whole loans and securities, which are all carried at fair value, was as follows:

Sector	Entity	Product	Balance Per PT Report 10/31/07	Balance per GL as of 12/31/07	Balance per GL as of 12/31/07 - Post late adjustments
Subprime	BOMI	PNRs	688,289,024	278,387,400	241,996,766
Subprime	BOMI	NIMS	443,895,022	272,386,590	225,165,542
Subprime	BIHI, NYBR & Sutton	WLS	5,111,207,564	5,987,526,510	5,916,038,933
Subprime	Conduits	Securities			121,156,660
		NY Totals * :	**6,243,391,610**	**6,538,300,501**	**6,504,357,901**
Alt-A	BOMI	Residuals	85,772,584	77,490,643	50,631,896
Alt-A	NYBR	WLS	1,926,115,348	1,886,477,242	1,824,531,873
Alt-A	BCI	Securities	1,867,565,327	1,366,261,831	1,337,137,957
Alt-A	LNBR	Securities	2,973,796,032	3,212,210,483	3,116,338,710
Alt-A	Conduits	Securities			1,801,412,806
		Totals:	**6,853,249,291**	**6,542,440,199**	**8,130,053,242**
		Totals:	**13,096,640,901**	**13,080,740,700**	**14,634,411,143**

* The sub prime totals do not include EquiFirst's November and December production of approx. $250m which remained on EquiFirst's balance sheet at December 31, 2007.

1.3 BarCap's valuation challenges

As well as volatile market conditions and lack of price transparency, BarCap was faced with the challenge of having to create a fair value methodology for its whole loans. Previously, whole loans were purchased with the intent to securitize and therefore were held on-balance sheet for very short periods of time (i.e. less than 3 months). Therefore, no valuation methodology was previously required as the purchase price approximated fair value given the short time period from purchase to sale date and the active, robust markets which existed. This fair value methodology included the development of models which required significant management judgment and estimates on assumptions into the models.

The majority of the sub prime whole loans are serviced by HomEq and therefore the servicer data and loan level detail for the sub prime pools were available to management.

The same level of detailed information was not available until November 2007 on the Alt-A whole loans as these loans are not serviced by HomEq.

A model did previously exist and was used for valuing the sub prime residuals i.e. the net interest margins ("NIMs") and post-NIM residuals ("post-NIMs")[7]. Historically, liquidity in this market has been thin and therefore price transparency has been limited, requiring the use of significant management judgment and estimates regarding the associated valuation techniques. However, in our update meetings during 2007, PCG reported that large price differences between the front-office and PCG as it related to the NIMs and post-NIMs began to exist. These differences grew from the summer through the fall, at which point significant write downs started to be recorded

Historically, the Alt-A securities were valued from broker-quotes. With the cessation of the Alt-A trading market price transparency and the availability and reliability of broker quotes diminished, causing the need for significant management judgment and estimates to go into a valuation model used to arrive at a fair value.

1.4 Controls considerations

The engagement team considered the information flows, processes and controls tested during our interim controls work (documented in section 5006 of the MyClient file[8]) to understand the controls over relevant financial statement and control assertions over all mortgage financial instruments.

Key controls over the existence, completeness, accuracy and valuation of mortgage financial instruments include:

1. Trade Input (Front Office) - Alt A and subprime whole loans, securities and residuals are input to Winfits. Trade initiation is not considered a key control.

2. Front Office to Back Office - Daily front office to back office ("FOBO") reconciliations compare position, price, and P&L from Winfits to Impact (loan subledger). The FOBO reconciliation for Alt A securities and whole loans, automated in FIAT, has been tested by the assurance team as a dual purpose test, and SPA has tested the ITGC's and Automated Business Controls (ABCs) for system flows, with no exceptions noted (controls ref PC060).
Manual reconciliations compare P&L flows between Winfits and Impact for subprime whole loans and residuals. Positions flows are reconciled via an automated reconciliation from Intellimatch. These reconciliations have been tested by the assurance team as a dual

[7] Barclays typically securitized the whole loans through the SABR trusts. The "X" interests (i.e. excess interest) and "P" interests (i.e. prepayment penalties) of those securitizations are then simultaneously securitized via a series of Net Interest Margin ("NIM") trusts known collectively as the SABN trusts. The NIMS are DTC-eligible bonds. Post NIM Residuals ("PNRs" or "Post-NIMs") are the residuals of the NIM securitizations.
[8] References to the MyClient database in this memo refer to the Barclays Loans, Conduits and NYBR (2007) database.

purpose test, and SPA has tested the ITGC's and Automated Business Controls (ABCs) for system flows, as applicable, with no exceptions noted (controls ref PC060).

3. PCG Price Testing Group - Price testing group (PT) verifies internal desk prices against external sources on a monthly basis (controls ref PC031). PT obtains the position inventory from the front office systems and performs a completeness reconciliation which has been tested by the assurance team with no exceptions. Price testing results are aggregated and reported to senior management, the completeness and accuracy of which has been tested by the assurance team without exception.

4. Sub-ledger to Custodian - Daily position reconciliations ("Depot Recs") for Alt A securities and NIMS between sub-ledger and custodian are performed (controls ref. OPRE40). These reconciliations have been tested by the assurance team as a dual purpose test, and SPA has tested the ITGC's and Automated Business Controls (ABCs), as applicable, with no exceptions noted. Additionally, the assurance team independently confirmed securities held with the Bank of New York ("BNY") and DTC at year end, and no exceptions were noted.

5. Sub-ledger to Servicer - Monthly reconciliations for Alt A whole loans and sub prime whole loans between sub-ledger and servicer are performed (controls ref OPCA13-1). These reconciliations have been tested by the assurance team as a dual purpose test, with no exceptions noted. The assurance team independently confirmed a sample of whole loans held with the custodians (BNY and Wells Fargo), and no exceptions were noted.

6. Vault Count - A monthly vault count is performed. PwC attended the 12/31 vault count and confirmed that the Alt A residuals and subprime PNRs are held. No exceptions noted.

7. Nostro reconciliations - Daily cash reconciliations between sub-ledger and bank are performed. These reconciliations have been tested by the assurance team as a dual purpose test, and SPA has tested the ITGC's and Automated Business Controls (ABCs), as applicable, with no exceptions noted.

8. Sub-ledger to SAP General Ledger - Positions in Impact are automatically posted to the SAP general ledger. To ensure completeness of the feed a monthly reconciliation is performed (control ref. FCLA140). In addition, we have reperformed this reconciliation as of year end and no exceptions noted.

Based on our independent testing, reliance placed on PwC London and reliance placed on Barclays Internal Audit ("BIA"), we have achieved high controls reliance over the existence, completeness, accuracy and valuation of mortgage financial instruments.

1.5 Changes in nature, timing and extent of our substantive tests of detail

Based on the state of the current markets (as described in section 1.1. above), our cumulative audit knowledge, our management update inquiries during the year (especially the valuation challenges discussed in 1.3 above) and additional review procedures performed over losses reported in press releases in August (for the half-year) and in November (addressing rumours in the press that over $10bn of write-downs at Barclays were imminent), the engagement team was aware that BarCap (defined above to mean BarCap U.S.) had significant exposure to the sub prime markets.

In addition, at the November 13, 2007 meeting between the PwC engagement team, including by David Guy and Jason Roos, members of PwC's Consumer Finance Group ("CFG") and the sub prime loans head trader (John Carroll), and Mortgages PCG (Joseph Kaczka and Richard Landremann), it was explained that October was the first month that PCG had performed valuation testing over the whole loan pools. In addition, there were large price testing differences on the sub prime residual positions. The engagement team and CFG raised a number of questions and were sceptical that the whole loans and residuals values represented fair value.

The engagement team therefore identified valuation of sub prime and Alt-A whole loans, residuals and securities as key risks and, although we recognize that we have high controls reliance over all mortgage financial instruments, we are required to perform tests of detail over the valuation assertion as it relates to the aforementioned products.

The engagement team recommended to the Barclays Capital Global engagement team in PwC London that we, assisted by PwC valuation experts, would perform additional audit procedures over the products within the U.S. mortgages businesses that have material exposure to sub prime and Alt-A. The purpose of the deep-dive was two-fold:

1 Develop a deeper understanding of the U.S. mortgages businesses so we could understand all the exposures to sub prime and Alt-A sufficient to allow us to scope our audit effectively; and
2 Perform interim procedures over the product areas with material exposure to sub prime and Alt-A to identify any issues in advance of our year end audit.

The Barclays Capital Global engagement leader, Jon Holloway, discussed this with the Barclays Capital Global CFO, Patrick Clackson, and it was agreed that the engagement team would commence a review of BarCap's October 31, 2007 mortgage portfolio.

2. Implication of the Matter:

Sub prime and Alt-A whole loans, residuals and securities are carried at fair value. There is limited or no available observable market data and the use of valuation modelling techniques is therefore required. The valuation of these financial instruments (especially whole loans and residuals) is very subjective and this is exacerbated by the fact that these are sub prime and Alt-A loans. The valuation techniques adopted by management may not result in an accurate measure of fair value (i.e. transaction price).

3. Actions Taken to Address the Matter:

[Note: As part of our valuation procedures, a series of meetings were held from June 2007 to January 2008 with the sub prime and Alt-A front office, the Asset Securitization Group ("ASG"), Mortgages Product Control Group and the U.S. CFO, James Walker. Meetings may be referred to in the discussions below and a list of all the meetings held and the major topics covered is attached in Appendix 1.]

The engagement team divided the mortgages portfolio into four discrete areas:

1. Sub prime residuals
2. Sub prime whole loans
3. Alt-A residuals and securities
4. Alt-A whole loans.

We engaged specialists from PwC's Structured Finance Group ("SFG"), led by partner Frank Serravalli, and Consumer Finance Group ("CFG"), led by partner David Guy, to assist the engagement team in designing and executing procedures to audit the valuation assertion.
The approach to the sub-prime and Alt-A areas were broadly as follows:

1. Sub prime whole loans and residuals - The engagement team, assisted by CFG, performed tests of details over the completeness and accuracy of management's inputs to the models. SFG reviewed the reasonableness of the valuation approaches and requested PCG do additional benchmarking to observable market data to assess the accuracy of the assumptions; and
2. Alt-A whole loans and securities - PCG price tests alt-securities in two ways: (a) where a broker quote can be obtained for securities (approximately 20% of the securities portfolio), PCG obtains the broker quote and compares to the front-office price. The engagement team used PwC's IMSAG group to obtain prices for the securities where PCG was able to obtain prices (approximately 22% or $1.3bn of the portfolio) and compared the IMSAG price to the PCG price. The PwC IMSAG and PCG broker quotes were consistent; and (b) where no price is discoverable (all whole loans and approximately 80% of Alt-A securities), a mark to model approach is used. We have achieved high controls reliance over PCG's price testing controls. SFG reviewed the reasonableness of the valuation approaches, benchmarked assumptions to observable market data with the assistance of PCG to assess the accuracy of the assumptions and performed a price dispersion analysis over Alt-A securities to assess inconsistencies.

As noted above, CFG aided in the execution of detailed audit work as it related to tying out certain assumptions in the valuation models. SFG analyzed surveillance data provided by the client, performed benchmarking exercises and analyzed price dispersion analyses to determine the reasonableness of managements' prices. The specific requirements of AU 328 and AU 336 (using the work of experts) are documented in section 5005 of the MyClient database. CFG documented their work in discrete steps in the MyClient file and therefore no separate memo was required. SFG's scope and approach was agreed between the engagement team and SFG and a memo documenting their scope, approach, assumptions, analyses, results and conclusions is attached in Appendix 2.

The source data used by SFG was provided by mortgages PCG and tied-out by the engagement team to the IPV report. The source files and tie-out work performed is documented in section 5005 of the MyClient file.

3.1 Sub prime whole loans

Following PwC's review comments from the November 13, 2007 meeting (see section 1.5 above), ASG under the direction of Managing Director Mike Wade, was charged with valuing the sub prime whole loan pools. ASG prepared a memo titled "Sub prime Whole Loans & Securities - Subprime Valuation Year End" (see Appendix 3) describing their approach and concluding on why they believe the whole loan prices represent fair value.

Page 4 of the client's memo describes the breakout of the sub prime whole loan inventory between EquiFirst originated ($5.1bn) and Non-EquiFirst originated ($0.8bn, of which $0.5bn is performing), which represent loans acquired from New Century and ResMae upon foreclosure of collateralized loans. In the "Whole Loan Inventory Valuation Methodology" presentation made to PwC on December 4, 2007 (see Appendix 5) approximately $4.4bn of the $5.1bn was classified as originated by EquiFirst from March and July. The loan characteristics of the post July production support the statement on page 10 of the client's memo discussing improvements in underwriting standards.

We discuss the assumptions used in the valuation model in detail below. If the model results in a price greater than par plus origination costs for post July EquiFirst production, the price is held at par. Pages 12 and 13 of the "Whole Loan Inventory Valuation Methodology" presentation show prices of 98.21 to 101.61 for March to July production as of October 31, 2007. These prices were reflective of a Libor + 225bps discount margin. In valuing the portfolio as of December 31, 2007, management increased the discount margin spread on the March to July production to 300 bps (see discussion in section 3.1.3 below).

BarCap sold $150m of August through October EquiFirst originated Agency eligible sub prime loans with a 9.29% weighted average coupon to Freddie Mac for 101.93. As discussed above, these loans were carried at par. Using management's prepayment, cumulative loss and discount rate assumptions (i.e. Libor + 225), the model's price for the portfolio sold to Freddie was 104.8 (with servicing retained by HomEq). Management has documented why they do not believe that the Freddie price is an exit price, but rather a distressed price. However, the August through December EquiFirst originations were all ultimately priced at par. The engagement team does not agree with management's view that the Freddie price is a "distressed price." However, the engagement team does recognize that this is only $150m, does not necessarily represent the best loans (may be others that have higher coupons and sound fundamental characteristic loans that are not Agency eligible) and higher exit prices in non-Agency markets may be achievable (e.g. the imminent American General deal).

The following is a summary of the significant assumptions and models used by ASG and PCG in pricing and price testing, respectively, the sub prime whole loan pools:

Assumptions	ASG	PCG
Prepayment	80% of original curves developed in 2005 (ARM and Fixed, applied to each pool)	Use of desk's ARM and Fixed curves (at 80%), except the ARM curve represents the 2/28 collateral and PCG pushed out the prepayment spike to months 37 and 61 for 3/27 and 5/25 collateral, respectively. PCG has a second lien curve based on curves used to bid for MSRs.
Loss	Average of Moody's and S&P loss model output using underlying collateral data.	A 6 month average roll rate based on matrix developed from HomEq data.
Yield	Libor + 225 bps	Libor + 225 bps * stress based on delinquency buckets
Model	Intex	MIAC

The engagement team audited the assumptions as follows:

3.1.1 Prepayment

1. PCG utilizes the CPR curves generated by the desk. PCG adjusts the shape of the curves for 3-27 and 5-25 ARMs by delaying the spike in CPR to month 37 for 3-27 ARMs and month 61 for 5-25 ARMs. We obtained the cash flow export files from MIAC for a tranche of each product type and graphed the modelled CPR to review the consistency of the prepayment assumption with the price testing package. We verified the shape and CPRs utilized in the curve were consistent with that of the price testing package. PCG uses a separate curve for 2nd lien positions based on the CPR curves used to bid for MSRs. PwC obtained the source CPR curves from the MSR bids and agreed the 2nd lien CPR curve to the average of those used in the bids with an 80% factor applied (consistent with the 1st liens).
2. We compared PCG prepayment curves (e.g. shape, levels, etc) to published Fitch Ratings sub prime prepayment curves for reasonableness. Note that, as opposed to the residuals, the WLS PCG prepayment levels are already at reduced speeds as these curves were obtained from MIAC which is the price testing model. We noted that although shapes may differ for the various curves employed by Barclays, the ARM curves do peak at the reset date and slow after that date, similar to the Fitch curve, and the FXD curves do ramp up to a peak and relatively flatten, similar to the Fitch curve.

Therefore, the shape of the prepayment curves agrees to the source data and based on our review of similar Fitch Ratings curves, the shape appears reasonable.

3.1.2 Loss Rates used by PCG

1. We obtained the underlying queries from the HomEq loan level data and recalculated each of the one month roll rates for the 6 months used in the average roll rate as well as the 6 month average used to calculate the monthly net loss estimates;
2. We agreed the roll rate matrix applied to each deal in the monthly net loss estimates to the recalculated 6 month average roll rates from step 1
3. We validated the UPB and delinquency bucket breakout used as the initial starting point to calculate the monthly net loan losses to exported Intex values.
4. For each investor, we ensured that the 6 month average roll rate and severity factor is applied accurately to the UPB in order to calculate the monthly net loss estimates used in Intex. We noted the use of a 35% severity factor, which was consistent with the severity assumption reviewed for the credit loss assumption for the Residuals.
5. We traced and agreed the monthly net loss for each investor from the monthly net loss estimates from step 4 to the monthly net loss used to calculate the MDR. We Recalculate the MDR and agree the MDRs to the default curve assumptions in MIAC.

No exceptions were noted.

3.1.3 PCG Yield

In October, PCG looked to the discount rate on the last sub prime securitization deal done in July 2007 (an average weighted rate across the capital structure of 150 bps), which was then stressed by 50% to 225 bps, to determine if the average discount rate used by the front-office was reasonable. PCG then stressed the rate another 40%, representing the change in ABX during October through December, which was used a benchmark for indicative additional liquidity premium required at year end. The additional stress was applied to the March to July production, as management is satisfied that the enhanced coupon in the August to December production compensates for the additional risk premium, as well as the sale to Freddie being an indicator of a supportable discount.

We noted that PCG applies a 300 bps spread for March through July originations and a 225 bps spread for August through December originations, with additional adjustments made to increase the spreads for delinquent loans to reflect the greater level of risk inherent in the delinquencies. We recalculated the additional spreads based on the delinquency factors outlined in the Company's whole loan valuation and agreed the calculated spreads to those used in MIAC. No exceptions noted.

3.1.5 SFG's review of reasonableness of assumptions

1. ASG used historical prepayment data from the 2003 and 2004 vintage as a basis for the shape of the prepayment curves. To reflect for decreased housing price

appreciation and the inability of subprime borrowers to refinance given tighter lending standards, ASG applied a 20% haircut to the base prepayment speeds to reflect the current market conditions. SFG compared the methodology for adjusting prepayment spikes based on product type to other actions taken by market participants and found it to be reasonable. Other market participants have taken similar haircuts to prepayment speeds to account for slowdowns due to limited refinancing opportunities.

2. Both S&P and Moody's are market accepted platforms for projecting cumulative loss rates and are utilized by market participants in securitization decision making. It is a reasonable for the Company to use S&P Levels program to project losses on their portfolio. ASG noted that the standard market practice that the "B" rating level is considered the expected loss for the pool
3. To compensate for spread widening due to credit and liquidity risk associated with sub prime collateral, the Company applied a 1.5x factor to the average spread of 150 bps for the last Barclays securitization (SABR 2007-BR5 in July) resulting in a discount rate of 225 bps. The Company further increased the discount rate to 300 bps for the EquiFirst originations between March and July 2007. To support their discount rate of 225 basis points, SFG asked the Company to create a proxy capital structure using new rating agency models and estimated spreads. The resulting weighted average spread was 220 bps, providing reasonable support for their application of 225 bps. The application of a projected securitization model to determine the discount rate for a whole loan portfolio is a reasonable approach and one used by other market participants.

Conclusion: The prepayment and loss assumptions used in the model have been sourced from actual loan data and adjusted for current market conditions in a manner consistent with other market participants. The change in the discount rate has been benchmarked to ABX. Management do not believe the Freddie Mac price is a transaction price for the reasons articulated in their memo. In any event, the price does support the post July production being priced at par. The discount rate on the earlier production has been increased by 40%, or another 75bps.

Therefore, based on the use of an industry standard model and the use of inputs sourced from actual loan level data (made possible though access to the granular loan detail through its servicing platform) or correlated to observable market data points, we concluded that the fair value is acceptable and supportable. We acknowledge the extremely subjective nature of the estimate and believe there is a wide range of fair values due to illiquidity in the market. SFG have advised the engagement team that BarCap are on the high end of this range. Management believes that market participants are inappropriately marking to ABX and have documented on page 10 that their portfolio has distinct risk characteristics that differ from the ABX HE index. Therefore, the Barclays PLC GRP, Phil Rivett and the Global BarCap engagement leader, Jon Holloway, along with the U.S. engagement leader and SFG partner, Frank Serravalli, communicated to senior management at Barclays PLC and Barclays Capital[9] that their prices are at the high end of the range and therefore may be subject to scrutiny.

3.2 Sub prime residuals

Post-NIMS and NIMS have been written down by $875million leaving an exposure of $468million. These assets have always been highly illiquid and there are no observable prices or reliable data to determine fair value. The residual assets above include those originated in 2006 and 2007 that have been written-down by 75% to $286million. The remaining positions continue to produce cash flows.

The following is a summary of the significant assumptions and models used by ASG and PCG in pricing and price testing, respectively, the sub prime residuals:

Assumption	ASG	PCG
Prepayment	90% of original curves developed in 2005 (ARM and Fixed, applied to each deal). 2007 vintage dropped to 75% as of 12/31/2007.	90% of original curves based on LoanPerformance data (ARM, Fixed and Blended). 2007 vintage dropped to 75% as of 12/31/2007.
Loss	A 6 month average roll rate based on matrix developed from HomEq data.	A 6 month average roll rate based on matrix developed from HomEq data.
Yield	Original yields used to price deal. Yields stressed by 40% as of 12/31/2007.	Original yields used to price deal. Yields stressed by 40% as of 12/31/2007.
Model	Intex	Intex

The engagement team audited the assumptions as follows:

<u>3.2.1 Prepayment</u>

1. PCG developed its own prepayment curves based on data from LoanPerformance, a database of securitization data. Fixed and floating CPR curves were developed to apply on a loan level basis in Intex. A blended curve was developed based on the fixed and floating curve to compare expected to actual within the residual price testing package. We obtained the fixed, floating and blended CPR curves from PCG, and graphed the blended curve to review the consistency of the prepayment assumption with the price testing package. We verified the shape and CPRs utilized in the curve were consistent.

[9] Barclays PLC: CFO, Chris Lucas; Head of Risk, Robert LeBlanc. Barclays Capital: COO, Rich Richie; CFO, Patrick Clackson; PCG, Paul Copson; US CAO, Gerard LaRocca. Collectively, "Senior Management."

2. We compared PCG prepayment curves (e.g. shape, levels, etc) to published Fitch Ratings sub prime prepayment curves for reasonableness. We noted that although shapes may differ for the various curves employed by Barclays, the ARM curve does peak at the reset dates and slows after that date, similar to the Fitch curves, and the FXD curve does ramp up to a peak and relatively flatten, similar to the Fitch curve.
3. As of the date of review, PCG had slowed the original curve levels to 90%, and by 12/31 the curve levels applied to the 2007 vintage positions had slowed to 75%.

Therefore, the shape of the prepayment curves agrees to the source data and based on our review of similar Fitch Ratings curves, the shape appears reasonable.

3.2.2 Loss Rates used by PCG

1. We obtained the underlying queries from the HomEq loan level data and recalculated each of the one month roll rates for the 6 months used in the average roll rate as well as the 6 month average used to calculate the monthly net loss estimates;
2. We agreed the roll rate matrix applied to each deal in the monthly net loss estimates to the recalculated 6 month average roll rates from step 1
3. We validated the UPB and delinquency bucket breakout used as the initial starting point to calculate the monthly net loan losses to exported Intex values.
4. For each deal, we ensured that the 6 month average roll rate and severity factor is applied accurately to the UPB in order to calculate the monthly net loss estimates used in Intex. We noted the use of a 35% severity factor, which was consistent with the severity assumption reviewed for the credit loss assumption for the whole loans, with the exception of the following positions that applied at 15% severity as a result of pool level mortgage insurance: SABN05F3; SABN05F3; SABN05O2; SABN06O1.
5. We traced and agreed the monthly net loss for each investor from the monthly net loss estimates from step 4 to the Intex input values.

No exceptions were noted.

3.2.3 PCG Yield

We noted that PCG begins with original yields used to price the securitization. These yields were stressed by 40% at 12/31. We agreed the yields input into Intex to the pricing package. No exceptions noted.

3.2.4 SFG's review of reasonableness of assumptions

1. ASG used historical prepayment data from the 2003 and 2004 vintage as a basis for the shape of the prepayment curves. To reflect for decreased housing price appreciation and the inability of subprime borrowers to refinance given tighter lending standards, ASG applied a 10% haircut to the base prepayment speeds to

reflect the current market conditions. SFG compared the methodology for adjusting prepayment spikes based on product type to other actions taken by market participants and found it to be reasonable. Other market participants have taken similar haircuts to prepayment speeds to account for slowdowns due to limited refinancing opportunities.

2. PCG provided SFG with extensive surveillance including the factors above and back testing their projections against historic performance and the cashflow status of these deals. During the fourth quarter, the Company took significant write downs across the Positions of their NIMS, Post-NIMS and Residuals, consistent with the surveillance data listed above. The surveillance provided by the Company is consistent with surveillance performed by other market participants. SFG reviewed the Company's surveillance data and resulting changes in valuation and found them to be reasonable.

Conclusion: The prepayment and loss assumptions used in the model have been sourced from actual loan data and adjusted for current market conditions in a manner consistent with other market participants. The change in the discount rate has been benchmarked to ABX. Therefore, based on the use of an industry standard model and the use of inputs sourced from actual loan level data or correlated to observable market data points, we concluded that the fair value is acceptable and supportable. We acknowledged the extremely subjective nature of the estimate and believe there is a wide range of fair values due to the illiquidity in the market. SFG have advised the engagement team that BarCap are on the high end of this range as some participants have written-down all NIMS and post-NIMs to zero. Management believes a complete write off is not appropriate as the residuals not marked at zero are currently cash flowing and therefore have value. The Barclays PLC GRP, Phil Rivett and the Global BarCap engagement leader, Jon Holloway, along with the U.S. engagement leader and SFG partner, Frank Serravalli, communicated to senior management at Barclays PLC and Barclays Capital[10] that there is significant downside risk remaining in the residuals.

<u>3.3 Alt-A Whole Loans</u>

There are $1.8bn of Alt-A whole loans, $53m of which are prime non-Agency whole loans and $25m of which are non-performing. ASG under the direction of Managing Director, Mike Wade, was charged with valuing the Alt-A whole loan pools. ASG prepared a memo titled "Alt-A Whole Loans & Securities - Alt-A Valuation Year End" (see Appendix 4) describing their approach and concluding on why they believe the whole loan prices represent fair value. Section 3.3 and 3.4 of the client's memo compare the collateral characteristics of BarCap's portfolio to industry average collateral characteristics published by Deutsche Bank. The conclusion is that BarCap's whole loan portfolio has better characteristics than those of its peers. The following is a summary of the significant assumptions and models used by ASG and PCG in pricing and price testing, respectively, the Alt-A whole loan pools:

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[10] Barclays PLC: CFO, Chris Lucas; Head of Risk, Robert LeBlanc. Barclays Capital: COO, Rich Richie; CFO, Patrick Clackson; PCG, Paul Copson; US CAO, Gerard LaRocca.

Assumptions	ASG	PCG
Prepayment	Historical prepayment data on similar Alt A whole loans and recent prepayment performance.	Straight CPR curve using base case of 20 CPR, stressed to 10/15/25 CPR.
Loss	S&P loss model output using underlying collateral data. Minimum of 2% loss applied.	Use the front-office cum loss rates and stress losses deemed not be in-line with market sentiment to 2% and 4%,
Yield	Average base discount margin is swap plus 294 for performing pools. This discount is stressed for non-performing.	Use the last Alt-A securitization weighted average discount rate stressed 50% and tracks the magnitude of changes from October to benchmark indicies.
Model	Intex	Intex

3.1.1 Prepayment

The Company uses historical data adjusted for the underlying characteristics of each loan including rate resets and fixed versus floating collateral. In November and December 2007, management began receiving the servicer tapes with loan level detail (HomEq does not service the Alt-A portfolio) and therefore the detailed information becoming available improved precision of the assessment of prepayment speeds improved). Prepayment curves were adjusted to reflect a tightening in the lending environment by reducing the spikes in the curve at ARM resets dates. This was done to reflect the fact that prepayement speeds in the current market have slowed due to the inability of these borrowers to refinance to another product.

PCG uses a flat 20CPR and stressed the prepayment curve noting that market value did not significantly change. PCG therefore concluded that the impact of prepayment speeds is limited.

From SFG's experience and by inquiries of the client, a flat 20 CPR is a logical and reasonable starting point because Alt-A loans were typically priced with a 20CPR as a base case. Historically, prepayments were never a significant factor in Alt-A due to the inability of these borrowers to refinance to another product. In this market prepayment speeds have slowed from current levels but the move is not expected to be significant. PCG, in assessing the sensitivity of slowing prepayment speeds, slowed the CPR of 20 to 10 and no significant change in the valuation was noted (sections S1-S14 Surveillance File, held on the external file).

Based on the facts provided above, SFG concluded that the CPR rate used was appropriate.

3.1.2 Loss Rates used by PCG

The Company uses an S&P Level (B- loss level) projection model to determine the base case expected loss on loan pools. Where PCG judgementally determines that the model results do not reflect market sentiment, they stress test these pools using 2% and 4%, representing a range of cum loss rates for 2007 vintage Alt-A collateral (see table below). No significant change in the valuation was noted from the stress tests (sections S1-S14 Surveillance File, held on the external file).

SFG performed two tests of the reasonableness of cum loss rates:

1. They examined the detailed loan level data for a sample of pools (i.e. LTVs, etc); and
2. Requested the client obtain third-party published data and compared the average cumulative loss rates output from the S&P model to the third-party data.

Appendix B of the client's Alt-A valuation Memo shows the following:

	2006 Alt-A Hybrids	2007 Alt-A Hybrids	2006 Alt-A Fixed	2007 Alt-A Fixed
BarCap	4.4	5.62	2.91	3.07
UBS	4.5	4.5	5.4	5.4
Lehman	1.7 - 5.0	not quoted	1.1 - 3.5	not quoted
Bear Stearns	8.2	9.5	3.7	4.9

The analysis shows that BarCap's cum loss rates are within a wide range of cum loss rates published by other market participants. SFG concluded that the cum loss rates used were reasonable.

<u>3.1.3 PCG Yield</u>

Front-office uses the SWAP curve as a baseline benchmark for determining the discount rate for ALT-A whole-loans. The 10-year Treasury curve is an industry standard for mortgage products, and the swap curve closely approximates the 10 year Treasury curve. SFG concurred that was a reasonable approach.

SFG requested that management provide market observable benchmarks for the discount rate. From October to December, PCG looked to 5 benchmark sub prime and Agency TBA indices (FNMA 15 and 30 Mortgage Yields, the ABX, HEL Fixed Rates and Floaters). Given the lack of observable market data, management provided an analysis of the characteristics of their whole loans in comparison to the TBA market. The implied average spread over the SWAP rate at 12/31 was 209 and was stressed by an additional 40% (calculated using an average spread widening from October to December of the benchmark indices). This resulted in PCG's determination that the front-office's average discount rate spread at 12/31/07 of 294 was reasonable when benchmarked to the sub prime whole loan discount spread used at 12/31/07.

SFG, assessing that the pool characteristics are indicative of a AA rating, looked to the 10 year AA MBS yield which was quoted at 290.

Conclusion: The prepayment and loss assumptions used in the model have been sourced from actual loan data and adjusted for current market conditions in a manner consistent with other market participants. Therefore, based on the use of an industry standard model and the use of inputs sourced from actual loan level data or correlated to observable market data points, we concluded that the fair value is acceptable and supportable.

The change in the discount rate has been benchmarked to the average of various observable indices. The resulting discount margin is approx. 7.5%. SFG have observed a very wide range of discount rates in the marketplace, and therefore have communicated that BarCap are at the very low end of the range. BarCap responded that the characteristics of their portfolio are better than the industry average when compared to Deutsche Bank Loan Performance data. The BarCap Alt-A loan portfolio features no "alt-b" loans, longer reset product types and the pools have higher documentation standards than average industry pools. The pools comprise jumbo, prime and longer dated reset hybrids and hybrid option ARMs. The average LTV is 81%, there are no second liens and the less than 2% of the portfolio is "no-doc." There are only 8.35% Investor loans. We acknowledged the extremely subjective nature of the estimate and believe there is a wide range of fair values due to the illiquidity in the market. The Barclays PLC GRP, Phil Rivett and the Global BarCap engagement leader, Jon Holloway, along with the U.S. engagement leader and SFG partner, Frank Serravalli, communicated to senior management at Barclays PLC and Barclays Capital that their discount rate is outside the range and therefore may be subject to scrutiny.

3.4 Alt-A Residuals and Securities

There are $4.9bn of Alt-A securities at December 31, 2007. Over 90% of the portfolio are 2006 and 2007 vintage and 90% is rated AAA. The engagement team adopted two approaches:

1. For securities where price discovery was available, which represents approximately 22% of the portfolio, we used PwC's IMSAG group to obtain prices for the securities and no exceptions were noted; and
2. For securities where no prices were available, PwC's SFG reviewed the reasonableness of management's valuation approach and inputs as well as performed a price dispersion analysis.

3.4.1 Review of valuation approach and assumptions

The following is a summary of the significant assumptions and models used by the desk and PCG in pricing and price testing, respectively, the Alta-A residuals and securities:

Assumptions	ASG	PCG
Prepayment	Blackrock prepayment curve if available, or 25 CPB and 15 CPR for pass-throughs and floaters, respectively.	Same as front office.
Loss	Uses market data for comparable assets.	For Performing - use historical loss rates with a 40% severity and for Non-performing - use a roll rate analysis for non-performing loans (3 month history). Moody's default curve to determine loss timing.
Yield	Uses market data for comparable assets.	Benchmark the change is discount rate to the change in ABX.
Model	Some vendor prices, otherwise Intex and PolyPaths DCF (wrapper into Intex)	Intex

The engagement team audited the assumptions as follows:

3.4.1.1 Prepayment

SFG confirmed that the combination of the use of the Blackrock Loan Prepayment Model and constant speeds of 25 CPB and 15 CPR are acceptable assumptions that are used by other market participants.

3.4.1.2 Loss Rates

For performing deals, historical loss rates using a 40% severity rate are assumed. The period was shortened to 3 months to capture the current credit environment. A roll-rate analysis is used to create the non-performing deals' cum losses. The resulting rates from both analyses are distributed across the Moody's default curve for timing of losses.

Details of the roll-rate analysis applied to non-performing loans, with a 3 month lookback, were provided (section [ref], Surveillance File) . A roll-rate matrix is an industry accepted practice employing a combination of current delinquency performance with probability analysis resulting in a transition matrix moving loans from current, through various delinquency buckets, ultimately to foreclosure.

SFG reviewed the Company's roll rate analysis and found it to be consistent with techniques employed by other market participants. The use of historic loss rates is also reasonable for the performing deals, and in both cases the use of a 3 month look back period is appropriate in terms of capturing the current credit markets.

3.4.1.3 Yield

The front-office derives the discount rate on senior securities using market data for comparable assets or adjusting observed spreads based on changes in a comparable proxy. Such techniques and observable data points include changes in various tranches of the ABX index, spreads on relevant agency tranches, and information from 3rd party reports including JPMorgan.

PCG assessed the reasonableness of the magnitude of the change in front-office spreads by comparing the change in discount margin to the change in ABX. For pre-2005, 2005, 2006 and 2007 vintages, the front-office's change in discount margin was consistently higher than the change in ABX.

3.4.2 Price Dispersion Analysis

SFG performed a price dispersion analysis over the 480 Alt-A securities held as of December 31, 2007, in the Company's portfolio of Alt-A securities. The analysis consisted of:

(i) stratification of relevant data from both the client and Bloomberg;
(ii) an inquiry of PCG on attributes of sampled securities; and
(iii) an analysis of PCG's responses.

SFG concluded that the responses received to questions they raised to PCG on the outliers identified in the price dispersion analysis were reasonable.

Conclusion: Management use industry standard models, Intex and Polypaths. The prepayment speed approach is consistent with other market participants and the CPB & CPR were determined by SFG to be reasonable. The use a shorter time period to determine loss rates and the overall loss rate approach was also considered reasonable. The change in discount rates since deal inception has been benchmarked to ABX. We have concluded that the client has used an acceptable valuation technique and management's approach to determining assumptions is consistent with other market participants and attempts to correlate to observable data points (loss rates to actual deal performance and discount rate changes to ABX).

The review of the overall reasonableness of the prices through a dispersion analysis resulted in no exceptions.

We acknowledged the extremely subjective nature of the estimate and believe there is a wide range of fair values due to the illiquidity in the market. The Barclays PLC GRP, Phil Rivett and the Global BarCap engagement leader, Jon Holloway, along with the U.S. engagement leader and SFG partner, Frank Serravalli, communicated to senior management at Barclays PLC and Barclays Capital that their discount rate is outside the range, as advised by SFG, and therefore may be subject to scrutiny.

4. Final Conclusions Reached and Basis Thereof:

Based on our experience we believe that all mortgage positions covered in this memo are at the high end of a range of prices (recognizing that the range is expected to be large given market liquidity) when compared to prices calculated by other market participants for similar vintage products. This has been communicated to Senior Management. Management have used industry standard models and inputs sourced from actual loan level data or correlated observable indices. The sub prime pool has distinct risk characteristics from the ABX HE index and the Alt-A pools have better loan characteristics than the street. We have therefore concluded that the fair value for all product areas described above is reasonable and supportable.