# EXHIBIT 81

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From:

Howard, Mark: Research (NYK) [/O=BZW/OU=USA/CN=NYK AD

USERS/CN=USERS/CN=HOWARDM]

Sent:

Wednesday, January 30, 2008 6:34:08 PM

To:

Keegan, Mike: Barclays Capital; King, Stephen: CDO (NYK)

Subject: Attachments:

Monoline / Bank write-up CIBC Monolines 013008.pdf

Attached is the CIBC write-up on US bank exposure to monolines that has caught the attention of the WSJ. Thought that you might find it interesting.



PLAINTIFF'S EXHIBIT 358



## **US Banks**

# The Big "What If": \$40-\$70B In Est. Damage Caused By Monoline Downgrades

January 29, 2008

#### **OUTPERFORM**

Morgan Stanley(MS \$49.46)
Goldman Sachs Group, Inc.(GS \$196.05)
Lehman Brothers Holdings Inc.(LEH \$62.53)

#### **PERFORM**

BEAR STEARNS COS THE(BSC \$91.58) JP Morgan Chase & Company(JPM \$47.45) BAC(BAC \$41.94) Wachovia(WB \$37.90)

UNDERPERFORM
UBS AG(UBS \$43.05)
Merrill Lynch & Co.(MER \$57.47)
CITIGROUP INC(C \$27.91)

Meredith Whitney 212-667-6897 Meredith.Whitney@opco.com

**Kaimon Chung, CFA** 212-667-7675 Kaimon.Chung@opco.com **Summary:** We have dramatically changed our thought process with respect to the monolines and their impact on banks and the larger financial market. While we had previously believed the monoline insurers MBI and ABK were too important to fail due to the threat of systemic risk and thus would likely be bailed out, we no longer think systemic risk is even realistic or a bailout of the monolines even viable. Accordingly, herein we assess what we believe is the highly concentrated collateral damage to the banks under our coverage. We estimate that additional write-downs could be as large as \$70 billion, but would more likely be roughly \$40 billion throughout 2008. Importantly, however, we believe the majority of those write-downs will be concentrated amongst three institutions: C, MER, and UBS.

- Among the myriad of negatives that surround financial stocks today, we see no issue more critical than the fate of the monoline insurers. The fate of the monoline insurers is of paramount importance to financial stocks, as further downgrades of major monoline insurers by the rating agencies could put another \$100 billion in assets held by banks in jeopardy of further write-downs. This is significant, as many investors are of the belief that the fourth quarter was a "kitchen sink" for all of the outstanding capital hits this credit cycle. When it becomes clear (as we think it will) that more charges are on the horizon, we believe the market will take another turn for the worse.
- While a little over a month ago we argued that the failure of more than one major monoline would create a risk of systemic proportions, we now no longer believe this to be the case. We now believe that the risk of downgrades of the monolines is concentrated in so few that a systemic risk is simply not a question. Further, as we believe C, MER, and UBS hold over 45% of the entire market risk, few if any will feel the need for a systemwide bailout. The implications of no rescue plan/bailout are clearly negative for these companies. We believe the charges specific to these companies will approach \$40 billion at a minimum (note, MER has already charged off \$2 billion associated with ACA alone).
- In aggregate, we believe the collateral damage to financial institutions caused by the potential rating agency downgrades of the monolines is at least \$40 billion and could be as great as \$70 billion. Importantly, because we estimate that almost half of this risk is concentrated amongst 3 financial institutions with the remainder broadly distributed amongst many, there is no systemic risk at hand or immediate justification for a systemwide bailout, in our view.

See pages 30 - 32 for important disclosures



## The Big "What If": \$40-\$70 Billion In Additional Write-downs Caused By Downgrades Of Monoline Insurers

## Are the Monoline Insurers In Fact Too Important to Fail? We No Longer Think So

We have dramatically changed our thought process with respect to the monolines and their impact on banks and the larger financial market. While we had previously believed the monoline insurers MBI and ABK were too important to fail due to the threat of systemic risk and thus would likely be bailed out, we no longer think systemic risk is even realistic or a bailout of the monolines even viable. Accordingly, herein we assess what we believe to be the highly concentrated collateral damage to the banks under our coverage. We estimate that additional write-downs could be as large as \$70 billion, but will more likely be roughly \$40 billion throughout 2008. Importantly however, we believe the majority of those write-downs will be concentrated amongst three institutions: C, MER, and UBS.

Among the myriad of negatives that surround financial stocks today, there is no issue more critical than the fate of the monoline insurers. Over the past few months, the monoline insurance stocks such as ABK, MBI, ACA, and SCA have lost more than 75% of their market value and their actual survivability has come into question. The fate of the monoline insurers is of paramount importance to financial stocks as further downgrades of major monoline insurers by the rating agencies could put another \$100 billion in assets held by banks in jeopardy of further write-downs. This is significant, as many investors are of the belief that the fourth quarter was a "kitchen sink" for all of the outstanding capital hits this credit cycle. When it becomes clear (as we expect it will) that more charges are on the horizon, we believe the market will take another turn for the worse.

While a little over a month ago we argued that the failure of more than one major monoline would create risk of systemic proportions, we now no longer believe this to be the case. We now believe that the risk of the downgrades of the monolines is concentrated with so few that a systemic risk is simply not a question. Further, as we believe C, MER, and UBS hold over 45% of the entire market risk, few if any will feel the need for a systemwide bailout. The implications of no rescue plan/bailout are clearly negative for these companies. We believe the charges specific to these companies will approach \$40 billion at a minimum (note, MER has already charged off \$2 billion associated with ACA alone).

In aggregate, we believe the collateral damage to financial institutions caused by the potential rating agency downgrades of the monolines is at least \$40 billion and could be as great as \$70 billion. Importantly, because we estimate that almost half of this risk is concentrated amongst 3 financial institutions with the remainder broadly distributed amongst many, there is no systemic risk at hand or immediate justification for a systemwide ballout, in our opinion.

## To Backstop The Monolines Creates Both Moral Hazard And A Bizarre Circular Argument In Our Opinion

On January 23<sup>rd</sup>, New York State Insurance Superintendent Eric Dinallo met with industry executives in an effort to formulate a rescue package with help from the banks and securities firms for the bond insurers.

Dinallo's main area of concern, and we believe most politicians' main area of concern, is safeguarding the municipal market from the potential resulting risks of the downgrades of the



monolines. In brief, local governments currently receive wider investor interest and therefore lower borrowing costs as a result of the AAA insurance they buy from the monolines. If that AAA rating disappears, it is believed that so too do their wide investor base and lower borrowing costs. Specifically, we do not believe the municipal market is in jeopardy. Here we believe there is a high degree of probability that businesses will be economically inspired to reinsure these books of businesses without any type of government intervention. Further Warren Buffet is already going through the motions to start a new insurer to underwrite this very type of paper. As a result, we absolutely do not believe the downgrade of one or many existing monoline insurers to below AAA would have a systemically detrimental impact.

What has created gaps in monoline insurers' capital positions and has in fact put their survivability into question has been their exposures to structured CDOs involving sub-prime mortgage securities, not municipal or corporate CDOs. As the value of the mortgage related securities has dropped more than 75% in many cases, the capital required against these securities and the losses associated with such securities have risen dramatically and in fact threatened to erase the underlying capital bases of monoline insurers providing protection against such securities. Further, as the value of homes has only begun to decline on a national level and the losses on sub-prime and high LTV homes have doubled on a sequential basis for more than a few lenders, we believe the underlying fundamentals for these securities will on deteriorate further. In sum, we believe the underlying value of these structured CDOs will worsen, related pressure on the monolines will increase, and the chances of finding interested investors to replace such insurance will be akin to finding reinsurers for the 9<sup>th</sup> Ward after Hurricane Katrina.

During the meeting, Dinallo asked the banks and securities firms to provide \$5 billion to \$15 billion of funds for the bond insurance sector, according to the Financial Times. We also understand that one of his proposals suggested that each firm put up the same amount to backstop the monolines regardless of risk exposure and involvement. This not only creates moral hazard in our opinion as the monolines' AAA rated future impacts so few specifically, but this also seems economically impossible to rationalize with the publicly owned financial institutions that are materially exposed. Three firms, C, MER, and UBS, have over 45% of the total risk exposure by our estimate, no other firm has greater than 5% estimated exposure with the exception of WB at 8%.

In 2007, Merrill Lynch originated almost \$31 billion of structured CDOs and gamered an 18% share of the entire origination market. To put into context, Citi originated \$28 billion with a 16% market share, UBS originated \$21 billion with a 12% share, but Goldman Sachs, Bank of America, Deutsche, and Lehman each originated less than one third of the volume Merrill Lynch was responsible for. GS, BAC, DB, LEH, MS, and others all had a 5% market share or less, less than 1/3 of the market share of MER and C and far less than ½ of UBS. The market share of origination was so skewed toward the top 3 issuers that they encompassed the equivalent of 13 of the top 20 issuers' volume between 3 companies.

As an aside, Superintendent Dinallo had served at the Office of Attorney Eliot Spitzer from 1999 to 2003. During that time, Dinallo led many investigations into Wall Street: cases such as conflicts of interests in the financial services including research analyst cases and the spinning of hot initial public offerings. Eric Dinallo was nominated by Governor Eliot Spitzer and confirmed by the New York State Senate on April 18, 2007 as the 39th Superintendent of the New York State Insurance Department.

Recapping our main argument, there does not have to be systemic risk created by allowing these monoline insurers to fail, as we believe most of the major monolines' businesses will find



interested buyers/reinsurers for their non-sub-prime mortgage related businesses, and the sum of the parts may in fact be worth far more than their current market values. However, getting an investor to take on the risk associated with all the monolines' exposure, inclusive of their sub-prime mortgage related exposure, is simply not an obviously profitable enough proposition to make it viable. Put simply, there are parts of certain monoline books that have real value, but the sub-prime CDO book is not one of them. We believe the desirability of salvaging the sub-prime CDO book (the real root of the issue, as these books have been hemorrhaging the monolines' capital) is akin to the desirability of reinsuring the 9<sup>th</sup> Ward after Hurricane Katrina.

#### Median Housing Prices By Region

	Media	n Sales Price	of Existing H	omes	
	Northeast	Midwest	South	West	u.s.
2004	243,800	154,600	170,400	286,400	195,400
2005	271,300	170,600	181,700	335,300	219,600
2006	271,900	167,800	183,700	342,700	221,900
Dec-06	284,000	166,200	180,900	348,300	221,600
Jan-07	262,200	161,300	175,200	321,700	210,900
Feb-07	263,000	155,300	178,600	336,700	213,600
Mar-07	272,500	160,900	179,900	335,000	217,400
Apr-07	283,000	164,000	179,800	343,400	219,800
May-07	285,400	166,100	182,800	342,000	222,700
Jun-07	293,000	170,100	189,500	347,400	229,200
Jul-07	292,300	173,800	185,500	349,400	228,700
Aug-07	282,300	177,800	183,200	332,300	224,400
Sep-07	260,800	166,000	174,200	312,300	210,400
Oct-07	258,400	160,500	171,100	315,900	206,900
Nov-07	258,000	160,500	172,700	325,800	208,700
Dec-07	258,600	159,800	173,400	309,800	208,400
YoY Change	-9%	-4%	-4%	-11%	-6%

Source: National Association of Realtors

For the month of December 2007, U.S. median housing prices dropped 6% YoY to \$208,400. The West and Northeast realized the sharpest YoY declines in median housing prices, falling 11% and 9%, respectively.

## The Remaining Exposures

Clearly, those companies with remaining CDO exposures are the most at risk here. While only MER has disclosed its exposure to date at roughly \$12 billion, we believe C's exposure could be \$10 billion. Thus far, UBS has provided no disclosure with respect to its hedges and as a result our estimates are the rawest in nature. As there is literally no disclosure and therefore no way for us to know who specific monoline's actual counterparties are, we simply look at the banks that had the greatest structured product underwriting market share in 2007 and apply a best guess on the possible exposure those banks could have. As shown below, Merrill Lynch had an almost 18% market share in CDO underwriting in 2007 followed by C at 16% and UBS at 12%. We believe however this doesn't tell the full story as market shares shifted throughout the year. While Merrill was the biggest underwriter of ABS CDOs for the year and during the 1st quarter, C was the largest underwriter in the 2nd quarter and UBS was the largest underwriter in the 3rd quarter, when, for example, ACA placed the greatest amount



of exposure. What we also know is what remaining CDO exposures are at the banks. C, MER, and UBS also have the greatest gross exposures by several multiples of their peers.

## Comparison of U.S. Sub-Prime and Sub-Prime CDO Related Exposures by Brokers

	MS	UBS	MER	BSC	GS	LEH	C	JPM <sup>(1)</sup>	BAC	WB
			ĺ							
	Net	Net	Net	Net	Net	Net	Net	Gross	Net	Net
Exposures (USS in billions)	11/30/2007	11/30/2007	12/31/2007	11/9/2007	11/30/2007	11/30/2007	12/31/2007	12/31/2007	12/31/2007	12/31/20
ABS CDO Super Senior Exposure	1 1		İ			ŀ				
High-Grade	\$0.0	\$3.1	\$4.4	90.2			\$25.5		\$3.8	50
Mezzanine	\$3.9	39.6	\$2.2	\$0.7			\$3.6		\$1.2	50
CDO-Squared	\$0.1	\$0.2	\$0.3	\$0.0		L	\$0.2		\$3.2	SC
Total ABS CDO Super Senior Exposure	\$4.0	\$12.9	\$6.8	50.9	< \$0.4	\$0.0	\$29.3		\$8.2	50
Other Retained and Warehouse Exposure					1	ĺ				1
ARS CDO CDS	(\$1.5)			90.9		l		į .		i
ABS CDO Bonds	\$1,1		Į.	ł		l		l .	l .	l
CDO Warehouse	\$0.0		l	\$0.0			\$0.2	<u> </u>		L
Total Other Retained and Warehouse Exposure	(\$0.4)	\$0.0	(\$2.0)	\$0.9		L	\$0.2	<b>!</b>	\$0.8	50
Subtotal ABS COO Related Exposure	\$3.6	\$12.9	\$4.8	51.8	< \$0.4	\$0.0	\$29.5	\$0.2	\$9.0	31
U.S. Subprime Mortgage Related Exposure	1 1		ļ	l			1	ł	ŀ	
Subprime Loans	50.6		1	50.5	ı	\$3.2	34.0	\$0.7	\$0.3	
Subprime Securities	1 ****		l	51.3	l	\$2.1	\$3.8		\$02	ł
Subprime Residuals	1 1		1	l	i	i .		\$0.3	1	1
Drawn Liquidity Facilities				1	l	i	l	\$0.3		1
Total Rate of Return Swaps	\$0.0		l .		l		1			i
ABS Eonds	\$2.7		1		l		l	\$1.2	l .	l
ABS CDS	(\$5,1)			(\$1.9	<b>1</b>	Ļ	ļ	<b></b>	<u> </u>	<b>├</b>
Subtotal U.S. Subprime Mortgage Related	1							****	\$0.50	S1
Exposure	(\$1.8)	\$16.0	\$2.7	(\$0.05)	\$1.5	\$5.3	\$7.80	\$2.50	\$0.50	1 31
Total ABS COO & Subprime Exposure	\$1.8	\$28.9	\$ \$7.5	\$1.7	< \$2.0	\$5.3	\$37.3	\$27	\$9.5	s

(1) JPM's \$2.7 gross exposure to subprime and CDO related exposures is off-set by \$2 billion in hedges (as of 12/51/2007).

Source: Company reports and Oppenheimer

The table above highlights that Citigroup and UBS have the highest sub-prime and CDO related net exposures with \$37.3 billion and \$28.9 billion. Merrill Lynch reduced these net exposures to \$7.5 billion at the end of 4Q07 from \$21.5 billion at the end of the 3Q07. C's and MER's ABS CDO super senior exposure is more weighted to the high-grade while UBS is more weighted to the mezzanines. We note Merrill Lynch still has roughly \$30.4 billion of long exposures as of 12/31/2007. As we have stated repeatedly, apart from Goldman Sachs, none of these institutions have actually sold down any of their exposures. Therefore the reduced exposures can only play "catch-up" with market values which continue decline. In other words, there is absolutely no certainty against (but rather greater probability of) further writedowns.

As shown below, a total of \$78 billion in write-downs has already occurred amongst the companies under our coverage alone. Such directly led to the single greatest dilutive round of capital raising in Wall Street history.



#### Sub-prime Related Exposures for Select Brokers and Banks

Subprime and Mortgage Related Write-downs				
and Charges (US\$ in millions)	Reported 3Q07	Pre-announced 4Q07	Reported 4Q07	Total 3Q & 4Q
Morgan Stanley	(1,420)	(3,700)	(9,400)	(10,820)
Bear Stearns	(700)	(1,200)	(1,900)	(2,600)
Lehman Brothers	(700)		(1,500)	(2,200)
Goldman Sachs	(1,500)			(1,500)
Merrill Lynch	(7,900)		(11,500)	(19,400)
UBS	(3,799)	(10,000)	, , ,	(3,799)
Citigroup	(6,400)	(11,000)	(18,100)	(24,500)
Bank of America	(1,647)	(3,500)	(5,280)	(6,927)
JPMorgan	(1,639)		(1,300)	(2,939)
Wachovia	(1,300)	(1,100)	(1,700)	(3,000)
Total	(27,005)		(50,680)	(77,685)

Source: Company reports and Oppenheimer

Out of the brokers and banks that we follow that have reported in the 4Q07, Citigroup took the largest sub-prime related write-down with \$18.1 billion in 4Q07. Merrill Lynch came in second with \$11.5 billion of sub-prime related write-downs in 4Q07. Morgan Stanley came in third with \$9.4 billion of sub-prime related write-downs in 4Q07.

#### **Capital Raises**

Date Announced	Recipient	Source	Type	Sbn
		Citic Securities	Convertible trust preferred securities	10
		Abu Dhabi Investment Authority	Equity units mandatory convers to common shares	7.5
		Government of Singapore Investment		
		Corporation, an undisclosed Middle East Investor,	Mandatory converts, new common shares, dividend	
12/10/2007		and public investors	cash for stock swap	15.6
12/19/2007	Morgan Stanley	China Investment Corp	Equity units mandatory converts to common shares	5.0
12/24/2007		Temasek and Davis Select Advisors	Common stock	6.2
			Convertible and straight (non-convertible) preferred	
1/15/2008	Citigroup		securities	14.5
		Korean Investment Corporation, Kuwait	OF WARRING DESCRIPTION OF THE PROPERTY OF THE	
		Investment Authority, Mizuho Corporate, and		200
			Mandatory convertible preferred seburities	6.6,
1/22/2008			Preferred stock and trust preferred	3.1
			Depository securities and non-cumulative perpetual ((1911))	rioc.
1/24/2008	Bank of America	Public offering	convertible preferred stock	12:0

Source: Company reports and disclosures; Oppenheimer & Co.

Since October 2007, the banks and brokers under our coverage raised over \$71 billion of capital to shore up their regulatory capital base. Citigroup raised the largest amount of capital with \$22 billion capital from investors that include Abu Dhabi and the Government of Singapore Investment Corporation. UBS raised the second largest amount of capital with \$15.6 billion from investors that include the Government of Singapore Investment Corporation and an undisclosed Middle East investor. In third place, Merrill Lynch raised \$12.8 billion of capital from investors that include Temasek, Davis Advisors, Korean Investment Corporation, Kuwait Investment Authority, and Mizuho Corporate.

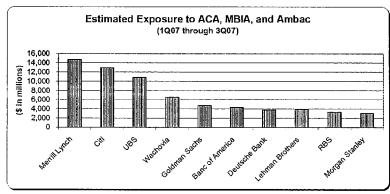


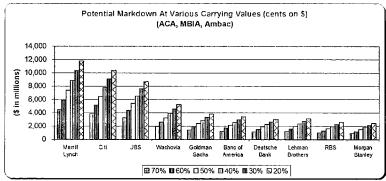
## Potential Write-Downs to ACA, MBIA, and Ambac

## Analysis of ACA, MBIA, and Ambac Exposures and Potential Write-Downs

(S in millions)  Estimated Exposures to ACA, MBIA, and Ambac					Potential Markdowns Based Carrying Values (cents on \$)								
Pos. Bookrunner Parents	Q1	Q2	03	Total	80%	70%	60%	5C%	40%	30%	20%	10	
1 Merrill Lynch	8,888	4,750	1,091	14,729	2,946	4,419	5,892	7,3€4	8,837	10,310	11,783	13,25	
2 Ctí	5,442	5,618	1.871	12,931	2,586	3,879	5,172	6,465	7,758	9,052	10,345	11,63	
3 UBS	4.273	4,191	2.381	10,846	2,169	3.254	4.338	5,423	6,508	7,592	8,677	9,76	
4 Wachovia	1,685	3,956	914	6,556	1,311	1,967	2,622	3,278	3,933	4,589	5,244	5,90	
5 Goldman Sachs	1,068	3,198	484	4,750	950	1,425	1,900	2,375	2,850	3,325	3,800	4,27	
6 Banc of America	2.028	1,653	596	4,277	855	1,283	1,711	2,139	2,566	2.994	3,422	3.84	
7 Deutsche Bank	1,559	2,227	0	3,786	757	1,136	1,514	1,893	2,271	2,650	3,029	3,40	
8 Lehman Brothers	1,982	852	1,102	3,936	787	1,181	1,575	1,968	2,362	2,755	3,149	3,54	
9 RBS	2,760	383	125	3,268	654	980	1,307	1,634	1,961	2,288	2,615	2,94	
10 Morgan Stanley	780	893	1,352	3,025	605	908	1,210	1,513	1,815	2,118	2,420	2,72	
Subtotal	30,465	27,722	9.917	68,104	13,621	20,431	27,242	34,052	40,863	47,673	54,483	61,29	
Total	35,163	37,371	15,020	87,554	17,511	26,266	35,022	43,777	52,532	61,288	70,043	78,79	
Total industry SF CDO													
Deal Transactions	81,489	69,230	20,949	171,668	1								
Est. Exposure to ACA,	1				ı								
MBIA, and Ambac as %	1				l								
of Total Industry	13.2%	54.0%	71.7%	51.0%									

\* Estimated exposures based on applying an estimated market share to total industry newly issued CDO transaction industry data for 2007.





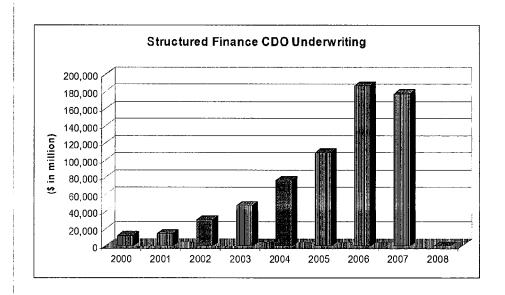
Source: Dealogic, ACA. MBIA Inc., and Ambac Financial Group company reports, and Oppenheimer & Co.



Shown above, we performed a market share analysis on the banks by quarter and then estimated potential write-down scenarios to the three monolines (ACA, MBIA, and Ambac). Our conclusions are that Merrill Lynch has the greatest potential write-down exposure ranging from \$7.4 billion to \$11.8 billion, Citi ranging from \$6.5 billion to \$10.3 billion, and UBS ranging with \$5.4 billion to \$8.7 billion in potential write-down exposure based on a markdown to 50 or 20 cents on the dollar. We note that Merrill Lynch took a \$1.9 billion negative credit valuation adjustment to a non-investment grade counterparty hedge which we believe is ACA. Therefore, Merrill Lynch's potential write-down exposure, accounting for the credit valuation adjustment, would be roughly \$5.5 billion to \$10 billion. In aggregate, we believe the collateral damage to financial institutions caused by the potential rating agency downgrades of the monolines is at least \$40 billion and could be as great as \$75 billion. Importantly, because we estimate that almost half of this risk is concentrated amongst 3 financial institutions with the remainder broadly distributed amongst many, there is no systemic risk at hand or immediate justification for a systemwide bailout, in our opinion.

We note that our rating on Merrill Lynch, Citigroup, and UBS are at Underperform as these companies have the greatest downside risk to potential write-downs.

## Structured Credit CDOs and the Financial Guarantors





Deal Pricing Date by Year	Deal Value \$ (Proceeds) (m)	YoY Chq
2000	11,875.30	
2001	14,049.59	18%
2002	30,341.53	116%
2003	46,959.52	<b>5</b> 5%
2004	76,596.73	63%
2005	108,847.61	42%
2006	186,727.92	72%
2007	177,588.29	-5%
2008	17.45	-100%
Total	653,003,94	

<sup>\* 2008</sup> YTD is as of 1/28/2008

Source: Dealogic and Oppenheimer & Co.

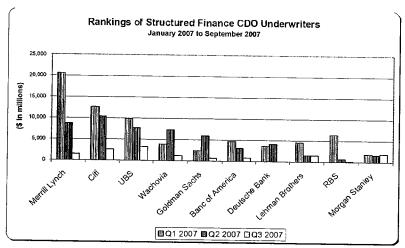
The new issuance activity for structured finance CDOs grew to \$177.6 billion in 2007 from \$11.9 billion in 2000, according to data compiled from Dealogic. The growth in structured finance CDO new issues started accelerating in 2002 with a growth rate of 116%. Thereafter, structured finance CDO origination grew more than 40% each year from 2003 to 2006. In 2007, structured finance CDO origination declined for the first time in seven years, down 5% YoY to roughly \$177.6 billion. However, since 1Q07, structured product issuance has steadily grinded to a halt. We are not optimistic of a near or even medium term revival. As a result, there is absolutely no present need for AAA rated monolines to support an effectively non-existent market here.



## Structured Finance CDO Underwriting By Quarter For Top 10 Underwriters 2007

	Q1 2007	Q2 2007	Q3 2007
Pos. Bookrunner Parents	Deal Value (\$ in millions)	Deal Value (\$ in millions)	Deal Value (\$ in millions
1 Merrill Lynch	20,597.86	8,799.25	1.521.34
2 Citi	12,611.04	10,408,04	2,609.03
3 UBS	9,903.41	7,764,45	3,321,14
4 Wachova	3,905.47	7,328,50	1.275.31
5 Goldman Sachs	2,474.52	5.925.27	675.00
6 Banc of America	4.70C.0G	3,062.12	831.50
7 Deutsche Bank	3,613,01	4,125,10	631.50
8 Lehman Brothers	4,593,20	1,578,28	1,537.50
9 RBS	6,395.21	710.00	175.00
10 Morgan Stanley	1,807.00	1,655.05	1,885.96
Subtotal	70,600,73	51,356.06	
Total	81,489.00	69,230.09	13,831.79 20,948.69

<sup>\*</sup> Rankigns are based on deal value YTD as-of December 20, 2007



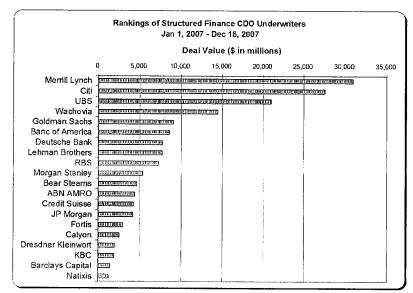
Source: Dealogic and Oppenheimer.

In 2007, the top three structured finance CDO underwriters were Merrill Lynch, Citigroup, and UBS. During 2007, Merrill Lynch underwrote approximately \$31 billion, Citigroup \$28 billion, and UBS \$21 billion of structured finance CDOs. These three companies took over 45% market share of the structured finance CDO underwriting in 2007.



#### Ranking of Structured Finance CDO Underwriting

Pos.	Bookrunner Parents	Deal Value (\$ in millions)	No.	% share
1	Merrill Lynch	30,918.46	37	17.61
2	Citi	27,555.26	24	15.70
3	UBS	20,989.00	34	11.96
4	Wachovia	14,436.41	21	8.22
5	Goldman Sachs	9,074.79	17	5.17
6	Banc of America	8,593.62	11	4.90
7	Deutsche Bank	7,738.11	13	4.41
8	Lehman Brothers	7,708.98	14	4.39
9	RBS	7,280.21	13	4.15
10	Morgan Stanley	5,355.33	73	3.05
11	Bear Steams	4,650,67	12	2.65
12	ABN AMRO	4,405.26	2	2.51
13	Credit Suisse	4,256.50	5	2,42
14	JP Morgan	4,204.96	9	2.40
15	Fortis	2,971.82	4	1.69
··16	Calyon	2,558.65	4	1.46
17	Dresdner Kleinwort	2,000 00	1	1.14
18	KBC	1,927.81	3	1.10
19	Barclays Capital	1,450.00	2	0.83
20	Natixis	1,249.22	3	0.71
	Subtotal	169,325.05	289	96.45
	Total	175,552.37	307	100.00

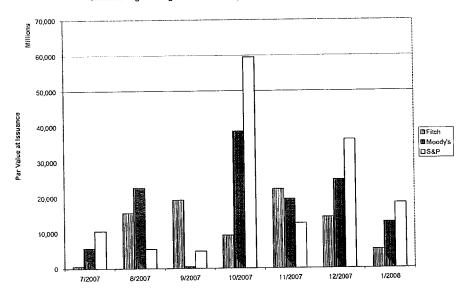


Source: Dealogic and Oppenheimer.



## Credit Rating Downgrades Since July 2007

Credit Ratings Downgrade on U.S. Subprime Mortgage Related Securities



NOTE: The graph above has been revised from prior publications to exclude negative watch actions from credit rating agencies.

\* Jan-2008 is as of 01/25/2008

Source: Bloomberg and Oppenheimer

According to data compiled from Bloomberg, in the month of December, the three rating agencies downgraded in aggregate roughly par amount of U.S. sub-prime and mortgage related securities of \$76 billion on par amount in December. That compares to an aggregate downgrade of \$54 billion on par amount in November and \$107 billion on par amount in October.

## **Financial Guarantors**

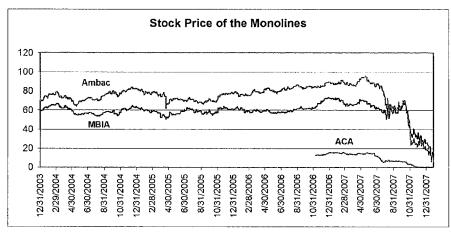
The Financial Guarantor industry consists of seven public players with a total market cap of under \$7 billion. MBI is the largest by market cap (roughly \$2 billion), while ACAH is the smallest at roughly \$30 million. ACAH was delisted from the NYSE late last year as its market cap fell below the \$75 million threshold for more than 30 days. The group on average is trading well below 1X book value. The companies with the greatest concentrations of structured CDOs as a percentage of total exposures carry the lower valuations, in general.



## Financial Guarantor Comp Table

Financial Guarantors 3Q07 \$ Millions	Ticker	Current Market Cap	Total Equity	Total Assets	Total Revenue	Net Income	ROAA	ROAE	P/B	Р/ТВ	P/LTM EPS	Div Yield
MBIA Inc.	MBI	1,862	6,531	45,329	58	-37	0%	-2%	0.3x	0.3x	3x	9%
Ambac Financial Group, Inc.	ABK	1,130	5,650	21,981	-301	-361	-7%	-25%	0.5x	0.5x	NM	8%
Assured Guaranty Ltd.	AGO	1,802	1,604	3,138	-133	-115	-15%	-28%	0.9x	1.0x	9x	1%
Security Capital Assurance Ltd	SCA	209	1,594	2,985	-53	-81	-11%	-20%	0.2x	0.2x	1x	3%
Primus Guaranty, Ltd.	PRS	207	310	927	-112	-128	-47%	-137%	0.7x	0.7x	NA	0%
RAM Holdings Ltd.	RAMR	49	390	790	-3	-15	-8%	-15%	0.1x	0.1x	NA	0%
ACA Capital Holdings, Inc.	ACAH	30	-883	4,953	-1,505	-1,041	-75%	NM	NM	NM	NA	0%
AVERAGE		755	2,171	11,443	-293	-254	-23%	-38%	0.4x	0.5x	4x	3%

<sup>\*</sup> Current market cap as of 1/29/2008 Source: SNL Financial



Source: Bloomberg and Oppenheimer & Co.

Over the past few months, the monoline insurance stocks such as ABK, MBI, ACA, and SCA have lost more than 75% of their market value and their actual survivability has come into question. Since the end of June 2007, MBI, Ambac, and ACA lost 76%, 87%, and 94% of their stock value, respectively.



## CDS Historical Spreads for MBIA and Ambac <FELP> for explanation. EMANP226 CurncyCDSH CDS Historical Spreads Ref Names Currency 51) 1Yr ⊠3) 3 Yr 舞4) 4 Yr 5) 5 Yr ₫7) 7 Yr ≅ 10) 10 Yr <PELP> for explanation. P226 CurncyCDSH CDS Historical Spreads



Source: Bloomberg

The CDS spreads for MBIA and Ambac have spiked up dramatically since the summer of 2007, reflecting the increased risk of bankruptcy for these companies. These spreads have fallen recently due to prospects of a rescue package for the bond insurers coordinated by New York Insurance Superintendent Eric Dinallo.



#### **Timeline of Monoline Events**

Date	Action
Aug 2007 - YTD	Since August 2007, over \$60 billion of U.S. structured finance CDOs have been downgraded by Fitch, Moody's
911458 972005/3420000000000000000000	and S&P.
Aug 2007- YTD	Since August 2007, monoline stocks have fallen oven 75%
12/19/2007	Standard & Poors downgrades ACA Capital Holdings to CCC from A. Standard & Poors downgrades Ambac to
1/18/2008	AA Negative from AA Stable and downgrades MBIA to AAA Negative to AAA Stable.
2007001 (1007075 (100	
1/23/2008	New York Insurance Superintendent Eric Dinallo with banks and securities firm executives to formulate a rescue
	plan for the bond insurers.

Source: Financial Times, Bloomberg, CNN, and Yahoo Finance.

On December 19, 2007, S&P announced that it had reduced the credit rating of ACA Financial Guaranty Corp. (ACA FG) to 'CCC' from 'A'. The reduction in ACA FG's credit rating will likely have severe consequences for banks that have securities insured with ACA FG. Specifically, banks will likely be on the hook for losses generated by the insured securities, as the insurance or hedges will be valued lower or even worthless in some cases.

In early November, S&P placed ACA FG's 'A' credit rating on CreditWatch with negative implications. ACA FG is a subsidiary of ACA Capital Holdings (ACA). The announcement was directly attributable to a quarterly net loss of \$1 billion reported by ACA just days earlier. The loss was triggered by \$1.7 billion in net unrealized marked to market losses on the company's structured credit portfolio. Specifically, losses were concentrated in the residential mortgage backed securities market.

What happens when a monoline insurer is downgraded is simply that the underlying value of its written protection declines. If a monoline insurer were to file for bankruptcy, the underlying protection would effectively be worthless. The consequence for a bank that bought insurance or protection from such a monoline would be for such bank to take such assets back on balance sheet and appropriately mark those assets at fair value. Interestingly though, as banks have carried such exposures "protected" by insurance as "netted" positions, any inkling of such exposures is unknown to investors, as we simply see "netted" values and rarely if ever gross values. One exception here is Goldman Sachs, which on the fourth quarter call gave its gross exposure to ABS/CDO at under \$400 million.



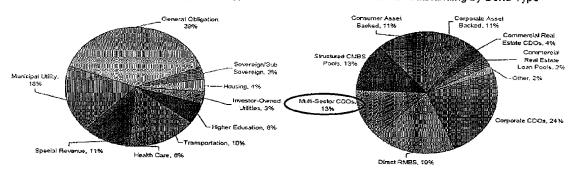
## **MBIA**

## MBIA's Insured Portfolio is Large and Diverse

## Total of \$673 billion Net Par Outstanding as of 9/30/07



#### \$240.2 billion Structured Finance Insured Portfolio Percent of Net Par Outstanding by Bond Type



Multi Sector CDOs	Net Par (\$Bn)	Compend
High Grade	\$16.1	·High quality, low risk book
Mezzanine	3.7	Only 1 US deal written since 2004
Secondary Market	1.8	*Diversified across 2000-2004 origination
CDOs of CDOs	9.0	•70% of collateral Triple-A rated with 41% originated 2005 or prior
Total Multi-Sector CDO	\$30.6 Bn	*\$200mm impairment in portfolio     13% of Structured Finance Insured Portfolio;     < 5% of Total Insured Portfolio

Source: MBIA company reports

MBIA's total insured portfolio, composed of public finance and structured finance, net par outstanding amounts to \$672.9 billion as of 9/30/2007. The structured finance insured portfolio net par outstanding was \$240.2 billion, or 36% of the total insured portfolio. Within the structured finance insured portfolio, multi-sector CDOs represent roughly \$31 billion or 13% of the structured finance insured portfolio (or less than 5% of the total insured portfolio). The Multi-Sector CDOs are transactions that include a variety of structured finance asset classes in the collateral pools. The collateral in MBIA's multi-sector CDOs includes asset-backed securities (e.g., securitizations of auto receivables, credit cards), commercial mortgage-backed securities, CDOs and various types of residential mortgage-backed securities including prime and sub-prime RMBS. The CDO sub-prime related exposures that



have been most stressed in this environment would be most prevalent in the multi-sector CDO portion of the structured finance portfolio, according to a representative at MBIA.

The \$31 billion net par multi-sector CDOs is composed of 53% high grade, 12% mezzanine, 6% secondary markets, and 29% CDO-squared.

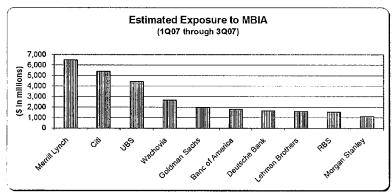
MBIA, the specialist bond insurer, on December 10, 2007, secured a \$1 billion funding commitment from Warburg Pincus, the US private equity group. Warburg will initially invest \$500 million into MBIA by purchasing 16.1 million of MBIA's shares at \$31 each. Warburg Pincus will then receive a \$500 million rights issue which MBIA expects to complete early next year.

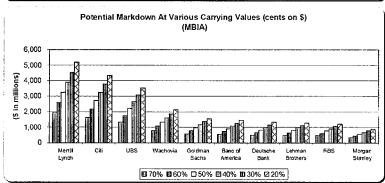


#### Analysis of MBIA Exposures and Potential Write-Downs

(\$ in millions)	Ectim	ated Expo	euroe to B	ADIA	Pot	ontial Mi	rkdown	e Basad	Carning	Values	(cents o	n C)
Pos. Bookrunner Parents	Q1	Q2	Q3	Total	80%	70%	60%	5C%	40%	30%		10%
1 Merrill Lynch	4,256	1,927	304	6,487	1,297	1,946	2,595	3,244	3,892	4,541	5,190	5,839
2 Citi	2,606	2,279	522	5,407	1,081	1,622	2,163	2,704	3,244	3,785	4,326	4,866
3 UBS	2,046	1,700	664	4,411	882	1,323	1.764	2,206	2,647	3,088	3,529	3,970
4 Wachovia	807	1,605	255	2,667	533	800	1,067	1,334	1,600	1,867	2,134	2,400
5 Goldman Sachs	511	1,298	135	1,944	389	583	778	972	1,166	1,361	1,555	1,750
6 Banc of America	971	671	166	1,808	362	542	723	964	1,085	1,266	1,446	1,627
7 Deutsche Bank	747	903	0	1,650	330	495	660	825	990	1,155	1,320	1,485
8 Lehman Brothers	949	346	308	1,602	320	481	641	8C1	961	1,122	1,282	1,442
9 RBS	1,321	155	35	1,512	302	454	605	756	907	1,058	1,210	1,361
10 Morgan Stanley	373	362	377	1,113	223	334	445	557	668	779	890	1,002
Subtotal	14,588	11,247	2,766	28,602	5,720	8,581	11,441	14,301	17,161	20,021	22,882	25,742
Total	16,838	15,162	4,190	36,190	7,238	10,857	14,476	18,095	21,714	25,333	28,952	32,571
Total Industry SF CDO												
Deal Transactions	81,489	69,230	20,949	171,668								
Est. Exposure to MBIA												
as % of Total Industry	20.7%	21,9%	20.0%	21.1%								

\* Estimated exposures based on applying an estimated market share to total industry newly issued CDO transaction industry cata for 2007.





Source: Dealogic, MBIA Inc. company reports, and Oppenheimer & Co.

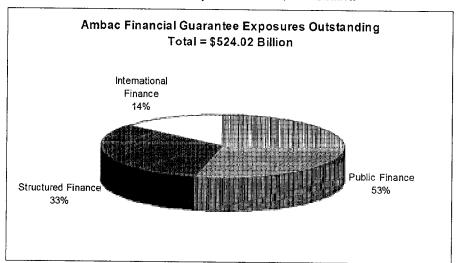


In the exhibits above, we apply a more precise market share analysis on the banks by quarter and then estimate potential write-down scenarios to MBIA. First, we estimated MBIA's market share for each quarter in 2007. We estimated that MBIA's market shares for 1Q to 3Q were 20.7%, 21.9%, and 20%, respectively. Next, we applied MBIA's market share to the quarterly underwriting volume for each underwriter to come up with an estimated exposure to MBIA for each underwriter.

Our conclusions are that MER has the greatest potential write-down exposure to MBIA at \$5.2 billion, C with \$4.3 billion, and UBS with \$3.5 billion in potential exposure based on a markdown to 20 cents on the dollar.

## **AMBAC**

## Ambac's Total Financial Guarantee Exposures Totals \$524.02 billion



\$ in millions net par value		% of
Portfolio	12/31/2007	Total
Public Finance	280,953	54%
Structured Finance	170,698	33%
International Finance	72,374	14%
Total	524,025	100%

\* As of 12/31/2007

Source: Ambac company reports

Ambac's total financial guarantee exposures totaled \$524.02 billion as of 12/31/2007. Ambac's total structured finance guarantee exposures totaled \$170.7 billion, or 33% of the total portfolio, as of 12/31/2007. Within the structured finance portfolio, pooled debt obligations represent 30% (\$51.2 billion) of the portfolio. Asset-backed and conduits represent 21% (\$35.8 billion) and mortgage-backed and home equity represent 25% (\$42.7 billion) of the portfolio.

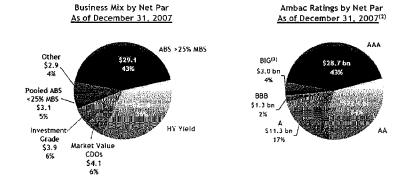


#### A. Overview of Ambac's participation

Ambac has participated in the Collateralized Debt Obligation ("CDO") market since 1998. The majority of CDO exposure has been executed through credit default swap agreements. In mid 2007, the CDO market began to experience stress and significantly reduced issuance. CDOs of ABS > 25% MBS experienced the most stress and as a result, Ambac has not underwritten transactions in that market since the second quarter of 2007. CDO transactions underwritten since the second quarter 2007 have been limited to Collateralized Loan Obligations and even that market has experienced significantly reduced volume. Ambac's current outstanding CDO exposures are comprised of the following asset types and credit ratioss:19:

#### Ambac Collateralized Debt Obligations Exposure(1)

#### Total = \$66.9 billion



- (1) Amounts exclude an outstanding commitment with respect to approximately \$2.9 billion of ABS CDOs. This commitment is disclosed in further detail in Section D herein and in Ambac's June 30, 2007 and September 30, 2007 Form 16-Q filed with the Securities and Exchange Commission.
- Octain in Section to Prefer and in Ambac edit retings are provided sclely to includes the underlying credit quality of guaranteed guarantees and Exchange Commiss of Ambac. In cases where Ambac has insured multi-lie transhes of an issue with varying internal ratings, a weighted servage rating is used. Ambac a ratings as forth above reflect internal Ambac ratings as of December 31, 2007, and may be changed at any time based on our internal credit review. Ambac undertakes no obligation to update such ratings more frequently shan as of the enc of each quarter. This does not constitute Investment advice. Ambac or ore off its affiliates, has insured the other products or services to the issuers of these obligations for which Ambac may have received premiums or fees.
- (3) "BIG" represents ratings below BBB-/Baa3.

Source: Ambac company reports

Ambac's collateralized debt obligations exposure totaled \$66.9 billion as of 12/31/2007. This represents approximately 13% of the total financial guarantee exposure and 40% of the structured finance portfolio. CDOs of ABS with greater than 25% MBS have experienced the most stress in 2007. These exposures represent 43% (\$29.1 billion) of the CDO portfolio. On a ratings basis, AAA represent of 43% (\$28.7 billion) and BBB represent 2% (\$1.3 billion) of the CDO portfolio.

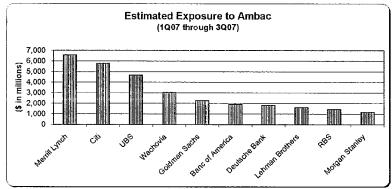
In mid-January 2008, Fitch cut Ambac's insurer rating to AA from AAA after Ambac abandoned a plan to raise \$1 billion in capital to cover potential losses from downgraded securities insured by Ambac.

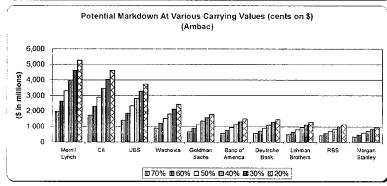


#### Analysis of Ambac Exposures and Potential Write-Downs

(\$ in millions)	Estima	ited Expos	ures to A	mbac	Pot	ential Ma	arkdown	s Based	Carrying	Values	(cents o	n \$)
Pos. Bookrunner Parents	Q1	Q2	Q3	Total	80%	70%	60%	50%	40%	30%	20%	109
1 Merrill Lynch	3,808	2,471	304	6,583	1,317	1,975	2,633	3,292	3,950	4,608	5,267	5,925
2 Cti	2,332	2,923	522	5,776	1,155	1,733	2,310	2,888	3,466	4,043	4,621	5,198
3 U3S	1,831	2,180	664	4,675	935	1,403	1.870	2,338	2,805	3,273	3,740	4,208
4 Wachovia	722	2,058	255	3,035	607	910	1,214	1,517	1,821	2,124	2,428	2,731
5 Goldman Sachs	457	1,664	135	2,256	451	677	903	1,128	1,354	1,579	1,805	2,031
6 Banc of America	869	860	166	1,895	379	569	758	948	1,137	1,327	1,516	1,708
7 Deutsche Bank	668	1,158	0	1,826	365	548	731	913	1,096	1,278	1,461	1,644
8 Lehman Brothers	849	443	308	1,600	320	480	640	800	960	1,120	1,280	1,440
9 RBS	1,182	199	35	1,417	283	425	567	708	850	992	1,133	1,275
10 Morgan Stanley	334	465	377	1,176	235	353	470	588	706	823	941	1,058
Subtotal	13,053	14,420	2.766	30.239	6,048	9.072	12,096	15,120	18,144	21,168	24,192	27,215
Total	15,066	19,439	4,190	38,695	7,739	11,608	15,478	19,347	23,217	27,086	30,956	34,825
Total Industry SF CDO												
Deal Transactions	81,489	69,230	20,949	171,668								
Est. Exposure to Ambac												
as % of Total Industry	18.5%	28.1%	20.0%	22.5%								

Estimated exposures based on applying an estimated market share to total industry newly issued CDO transaction industry data for 2007.





Source: Dealogic, Ambac Financial Group company reports, and Oppenheimer & Co.

In the exhibits above, we apply a more precise market share analysis on the banks by quarter and then estimate potential write-down scenarios to Ambac. First, we estimated Ambac's



market share for each quarter in 2007. We estimated that Ambac's market shares for 1Q to 3Q were 18.5%, 28.1%, and 20%, respectively. Next, we applied Ambac's market share to the quarterly underwriting volume for each underwriter to come up with an estimated exposure to Ambac for each underwriter.

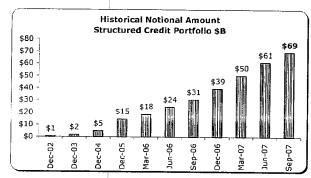
Our conclusions are that MER has the greatest potential write-down exposure to Ambac at \$5.3 billion, C with \$4.6 billion, and UBS with \$3.7 billion in potential exposure based on a markdown to 20 cents on the dollar.

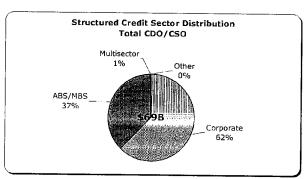
## **ACA**

## Dissecting ACA and Estimating Write-Down Risk Exposures

ACA's structured credit portfolio had an outstanding notional amount of \$69 billion as of 3Q07. Asset backed and mortgage backed securities accounted for 37% or \$26 billion of the portfolio. ACA classifies almost its entire structured credit portfolio as AAA, but within such a classification, we are necessarily unsure as to the concentration of high grade, mezzanine, and CDO squared.

#### **ACAH's Structured Credit Portfolio**





Source: ACA company reports and Oppenheimer & Co.

Of greatest interest to us was the rate of growth in ACA's total portfolio since 2002 but particularly over the past year. During 2007, ACA doubled its ABS/CDO portfolio from \$12.9 billion at the end of 2006 to \$26 billion at the end of the third quarter. ACA's market share of total notional written climbed from 4% in the 1st and 2nd quarter to 32% in the 3rd quarter. In the 3rd quarter, we estimate that ACA wrote a record \$7 billion of credit insurance compared with under \$3 billion in the 2nd quarter and just over \$3 billion in the 1st quarter.

As there is literally no disclosure and therefore no way for us to know who ACA's actual counterparties are, we simply look at the banks that had the greatest market share in 2007 and apply a best guess on the possible exposure those banks could have. As shown below,

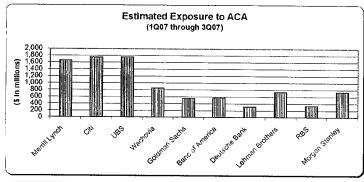


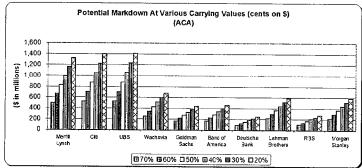
Merrill Lynch had an almost 18% market share in CDO underwriting in 2007 followed by C at 16% and UBS at 12%. We believe however this doesn't tell the full story as market shares shifted throughout the year. While Merrill was the biggest underwriter of ABS CDOs for the year and during the 1st quarter, C was the largest underwriter in the 2nd quarter and UBS was the largest underwriter in the 3rd quarter when ACA placed the greatest amount of exposure. These three companies accounted for over 45% of the market share in ABS CDO underwriting in 2007.

## Analysis of ACA Exposures and Potential Write-Downs

	(\$ in millions)	Estir	nated Expo	sures to	ACA	Pote	ntial Ma	rkdown	s Based	Carryin	a Value	s (cents	on S\
Pos.	Bookrunner Parents	Q1	Q2	Q3	Total	80%	70%	60%	50%	40%	30%		
	Merrill Lynch	824	352	482	1,658	332	497	663	829	995	1,161	1,327	1,49
	Citi	504	<b>416</b>	S 827	1.748	350	524	699	874	1,049	1,223	1,398	1,57
	UBS	396	311	(1,053)	1,760	352	528	704	880	1,056	1,232	1,408	1,58
	Wachovia	156	293	404	854	171	256	341	427	512	598	683	76
	Goldman Sachs	99	237	214	550	110	165	220	275	33C	385	440	49
	Banc of America	188	122	264	574	115	172	230	287	344	402	459	51
7	Deutsche Bank	145	165	0	310	62	93	124	155	186	217	248	27
8	Lehman Brothers	184	63	487	734	147	220	294	367	441	514	587	68
9	RBS	256	28	55	340	68	102	136	170	204	238	272	30
10	Morgan Stanley	72	66	598	736	147	221	295	368	442	515	589	66
	Subtotal	2,824	2,054	4,385	9,263	1.853	2,779	3,705	4,631	5.558	6.484	7,410	8.33
	Total	3,260	2,769	6,641	12,669	2,534	3,801	5,068	6,335	7,602	8.869	10.136	11,40
	Total Industry SF CDO												
	Deal Transactions	81,489	69,230	20,949	171,668								
	Est. Exposure to ACA as												
	% of Total Industry	4.0%	4.0%	31.7%	7,4%								

\* Estimated exposures based on applying an estimated market share to total industry newly issued CDO transaction industry data for 2007.





Source: Dealogic, Ambac company reports, and Oppenheimer & Co.



Above we apply a more precise market share analysis on the banks by quarter and then estimate potential write-down scenarios to ACA. First, we estimated ACA's market share for each quarter in 2007. We estimated that ACA's market share for 1Q to 3Q were 4%, 4%, and 31.7%, respectively. Next, we applied ACA's market share to the quarterly underwriting volume for each underwriter to come up with an estimated exposure to ACA for each underwriter. We had estimated that Merrill Lynch's exposure to ACA was \$1.7 billion versus the \$1.9 billion exposure reported by Merrill Lynch in 4Q07 (Merrill Lynch incurred a 4Q07 \$1.9 billion credit valuation adjustment to a non-investment grade financial guarantor with 100% credit reserve to the exposure).

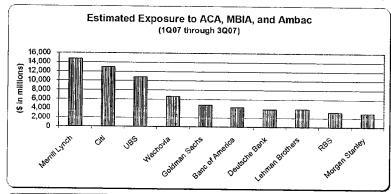
Our conclusions are that UBS has the greatest potential write-down exposure at \$1.41 billion, C with slightly under \$1.4 billion, and MER with \$1.33 billion in potential exposure based on a markdown to 20 cents on the dollar. We note that Merrill Lynch took a negative credit valuation adjustment of \$1.9 billion to a non-investment grade financial guarantor in 4Q07. We believe that the \$1.9 billion related to non-investment grade counterparty exposure was primarily from ACA Capital Holdings given the fact that ACA was the only financial guarantor rated below investment grade.

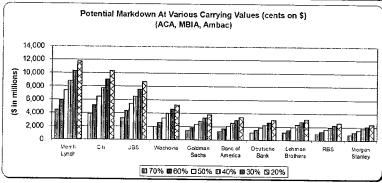


## Analysis of ACA, MBIA, and Ambac Exposures and Potential Write-Downs

	(\$ in millions)	Estimate	d Exposu	res to AC	A, MBIA,								
	• • · · · · · · · · · · · · · · · · ·		and A	mbac		Pot	ential M	arkdown	s Based	Carrying	Values	(cents o	n S)
Pos.		ā	Q2	Q3	Total	80%	70%		50%	40%	30%		
	Merrill Lynch	8,888	4,750	1,091	14,729	2,946	4,419	5.892	7,364	8,837	10,310	11.783	13,250
	Crti	5,442	5,618	1,871	12,931	2,586	3,879	5,172	6,465	7,758	9.052	10.345	11.638
	UBS	4,273	4,191	2.381	10,846	2,169	3,254	4,338	5,423	6,508	7,592	8,677	9.761
4	Wachovia	1,685	3,956	914	6.556	1,311	1.967	2.622	3.278	3,933	4.589	5,244	5.900
5	Goldman Sachs	1,068	3,198	484	4.750	950	1.425	1,900	2,375	2,850	3,325	3.800	4.275
6	Banc of America	2,028	1,653	596	4.277	855	1,283	1,711	2,139	2,566	2.994	3,422	3.849
7	Deutsche Bank	1,559	2,227	0	3,786	757	1.136	1.514	1,893	2,300	2,650	3,422	3,407
8	Lehman Brothers	1,982	852	1,102	3,936	787	1,181	1.575	1,968	2,362	2,755	3,149	3,543
9	RBS	2,760	383	125	3.268	654	980	1,307	1,634	1,961	2,733	2,615	2,941
10	Morgan Stanley	780	893	1.352	3,025	605	908	1,210	1,513	1,815	2,200	2,420	2,723
	Subtotal	30,465	27,722	9,917	68,104	13,621	20,431	27,242	34,052		47,673	54.483	61,294
	Total	35.163	37,371	15.020	87,554	17,511	26,266	35,022	43,777		61,288	70,043	78,799
	Total Industry SF CDO	-											
	Deal Transactions	04.400											
	Est. Exposure to ACA,	81,489	69,230	20,949	171,668								
	MBIA, and Ambac as %												
	of Total Industry	40.00											
	or rotal industry	<b>4</b> 3. <b>2</b> %	54.0%	71.7%	51.0%								

\* Estimated exposures based on applying an estimated market share to total industry newly issued CDO transaction industry data for 2007.





Source: Dealogic, ACA. MBIA Inc., and Ambac Financial Group company reports, and Oppenheimer & Co.



## **Banks and Brokers**

(\$ in billions)	Net Exposure Pre-3Q07 Net Write- Downs	Exposure	Net Exposure as-of Dec. 31, 2007	Estimated Carrying Value <sup>(1)</sup>	Net Exposure as-of Sep. 30, 2007	Net Exposure as-of Dec. 31, 2007	Estimated Carrying Value <sup>(1)</sup>	Net Exposure Pre-3Q07 Net Write- Downs		Carrying	and
AAA-rated super senior exposures: ABCP/CDD High-grade Mezzanine CDO-squared Total ABS CDO super senior exposures Other <sup>(2)</sup> Total ABS CDO-related exposures	\$10.8 8.3 1.4 \$20.6 2.1 \$22.7	\$8.9 5.2 0.6 \$14.8 1.0 \$15.8	\$4.4 2.2 0.3 \$6.8 (2.0) \$4.8	40.5% 26.2% 19.0% 33.2% (93.9%) 21,3%	24.9 9.5 8.3 0.2 \$42.9	4.9 3.6 0.2 \$29.3	51.6% 43.4% 100.0% 58.3%	3.8 16.8 0.8 \$21.4	3.1 9.6 0.2 \$12.9	81.6% 57.1% 25.0% 60.3%	57.5 22.0
Total U.S. sub-prime mortgage related exposures	6.7	5.7	2.7	40.3%	\$42.9 11.7	\$29.3 8.0	68.3% 68.4%	\$21.4 16.8	\$12.9 16.0	60.3% 95.2%	60.0 7 (long only)
Totals for Sub-prime and CDO related exposures	\$29.4	\$21.5	\$7.5	25.6%	\$54.6	\$37.3	68.3%	\$38.2	\$28.9	75.7%	

<sup>(1)</sup> Estimated carrying-values are calculated by dividing the most recent reported net exposure by the net exposure pre-3Q07 net write-downs (if available).

(3) Source: UBS company reports

The exhibit above highlights the net sub-prime and CDO related exposures and estimated carrying values for Merrill Lynch, Citigroup, and UBS. As of 12/31/2007, Merrill's total ABS CDO related net exposure was \$4.8 billion, down from \$15.8 billion as of 9/30/2007. As of 12/31/2007, Citigroup's total ABS CDO related net exposure was \$29.3 billion, down from \$42.9 billion as of 9/30/2007. As of 12/31/2007, UBS's total ABS CDO related net exposure was \$12.9 billion, down from \$21.4 billion as of 9/30/2007.

We approximate the carrying values for U.S. ABS CDO super seniors as of December 31, 2007 by dividing the net exposure as of 12/31/07 (or as of 11/30/2007 for UBS) by the net exposure as of September 28, 2007. This assumes that the 3Q07 net exposure is close to par value. Based on these calculations, we approximate the carrying values for Merrill's high-grade at 41 cents on the dollar and mezzanine at 26 cents on the dollar. We estimate the carrying values for Citigroup's high-grade at 52 cents on the dollar and mezzanine at 43 cents on the dollar. For UBS, we estimate the carrying values for high-grade at 82 cents on the dollar and mezzanine at 57 cents on the dollar. We note UBS reported average marks (3Q, Oct/Nov 2007) for high-grade and mezzanine at 81 cents and 58 cents on the dollar, respectively.

<sup>(2)</sup> Other classified as "Secondary Trading" for Merrill Lynch. Previously disclosed as

<sup>\*</sup>Other retained and warehouse net exposures.



#### Merrill Lynch: Long and Short Exposures to U.S. Super Senior ABS CDOs

(\$ in billions) U.S. Super Senior ABS CDOs	9/28/2007	12/31/2007	Increase (Decrease)	% Increase (Decrease)
Long exposures	\$46.1	\$30.4	(\$15.7)	(34%)
Short exposures	31.3	23.6	(7.7)	(25%)
Net Position	\$14.8	\$6.8	(\$8.0)	(54%)

<sup>\*</sup> Long and short exposures include associated gains and losses reported in income and other net changes. Short exposures primarily consist of purchases of credit default swap protection from various third parties, including monoline financial guarantors, insurers, and other market participants.

Source: Merrill Lynch company reports and Oppenheimer

For Merrill's U.S. super senior ABS CDO exposures, long exposures decreased \$15.7 billion and short exposure decreased \$7.7 billion from the third quarter to the fourth quarter. These exposures include the net write-downs and other net changes. The reduction in short exposures suggests that the hedges against the long exposures were not entirely effective. Some of the losses on the hedges were due to reserves taken against the monolines, according to management. We note that MER has \$30.4 billion of long exposures as of 12/31/2007.

#### Citigroup: Long and Short Exposures to U.S. Super Senior ABS CDOs

(\$ in billions)			Increase	% increase
U.S. Super Senior ABS CDOs	9/30/2007	12/31/2007	(Decrease)	(Decrease)
Long exposures	\$53.4	\$39.8	(\$13.6)	(25%)
Short exposures	10.5	10.5	0.0	0%
Net Position	\$42.9	\$29.3	(\$13.6)	(32%)

Source: Citigroup company reports and Oppenheimer & Co.

As of 12/31/2007, Citigroup's total CDO super senior gross exposures was \$39.8 billion offset by hedged exposure of \$10.5\$ billion.

UBS: Long and Short Exposures to U.S. Super Senior ABS CDOs

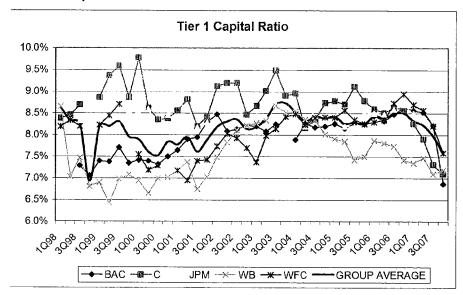
(\$ in billions) U.S. Super Senior ABS CDOs	9/30/2007	11/30/2007
Long exposures	NA	NA
Short exposures	NA	NA
Net Position	\$21.5	\$12.9

Source: UBS company reports and Oppenheimer & Co.

As of 11/30/2007, UBS's total CDO super senior net exposures was \$12.9 billion, down from \$21.5 billion as of 9/30/2007. We note UBS did not disclose any details regarding its gross exposures and offsetting hedges.



## **Bank Tier 1 Capital Ratios**



Tier 1 Ratio (%)	1Q05	2Q05	3Q05	4005	1Q06	2Q06	3Q06	4006	1007	2007	3007	4007
BAC	8.3%	8.2%	8.3%	8.3%	8.5%	8.3%	8.5%	8.6%	8.6%	8.5%	8.2%	6.9%
С	8.8%	8.7%	9.1%	8.8%	8.6%	8.5%	8.5%	8.6%	8.3%	7.9%	7.3%	7.1%
JPM	8.6%	8.2%	8.2%	8.5%	8.5%	8.5%	8.5%	8.7%	8.5%	8.4%	8.4%	8.4%
wa	7.9%	7.9%	7.4%	7.5%	7.9%	7.8%	7.7%	7.4%	7.4%	7.5%	7.1%	7.2%
WFC	8.4%	8.6%	8.4%	8.3%	8.3%	8.4%	8.7%	9.0%	8.7%	8.6%	8.2%	7.6%
GROUP AVERAGE	8.43%	8.27%	8.29%	8.26%	8.44%	8.40%	8.50%	8.51%	8.33%	8.23%	7.98%	7.58%

Source: SNL Financial and Oppenheimer

#### **Brokers Comp Tables**

Price to Book Ratio

Company flame	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Current	HIGH	LOW	MEAN
Sear Steams Companies Inc.	1 3x	1.3x	1 5x	184	1.2x	1.5>	1.4x	1.7x	2.4x	1.5x	1.5x	1.7x	1 6x	1.5x	1.7x	1.6x	1.8x	1 2x	1.0x	244	1 Or	1.5r
Goldman Sachs Group, Inc.	NA	NA	NA	AΥ	NA.	NA.	NA	NA	NA	3.6x	2.64	2.4A	2.0x	2.2x	2.1x	2.3x	2.7x	2 5x	2.14	3 6x	2.0x	2 4x
Lehman Brothers Holdings Inc.	NA	NA	NA	NΑ	0.6x	0.9>	1.0x	1.5x	1.3x	1.7x	1.7x	2.1x	1.8x	1.6x	1.7x	2.24	2.2	1 Ex	1.5¢	2 21	0.6x	1 6x
Merrill Lynch & Co., Inc.	C 7x	1.7x	1.4x	1 5x	1.2t	1.6>	2.1x	3.1x	2.5x	2.5x	3.1x	2.2x	*.4x	2.00	1.8x	1.9x	2.3x	182	1.9x	3.1x	0.7x	1 9x
Morgan Stantey	NA	NA	NA	٧A	NA	1.6>	1.9x	2.5x	2.9x	4.1x	3.7x	3.Cx	2.2x	2.4x	2.Cx	2.00	2.31	181	1.7x	4 1x	1.63	2 4x
HIGH	1 3x	1 7z	1.Ex	1 8 x	1.2x	1.5×	2.1x	3,1x	2.9x	4.1x	3.7×	3.0x	2.2x	2.4x	2.1s	2.3x	2 7±	251	2.1x	4.11	2 Or	2.4x
LOW	0 7x	1 3%	1.4%	168	0.6x	0.9x	1.0x	1 5x	1.3x	1.5x	1.5x	1 7x	1.4x	1.5x	1.7x	1.5x	1.81	121	1.04	2.21	Cex	1.5>
NEAN	1 0 x	1 5:	1.49	17.	1 ()	1.4%	1 5x	2.2×	2 3∗	2 72	2.5×	2.3x	1 8x	1.9x	1 8x	2.00	2 2:	18:		3.14	1 21	20>
SNL Broker/Dealer Index	۸A	NA	NA.	NA	NA.	19	2.4	3.5	6.0	€ 3	4.5		2.0	2.5	2.5	2 4	2.9	3 5	2.6	6.34	1 97	3.3x
S&P 500	NA.	NA.	NΑ	NA	NA	NA	3.2	3.9	4.7	5.1	4 1	3.5	2.8	3.5	3 C	2.9	2.9	2.8	2.5	5 1x	2.5z	3.4x

Source: Company data and SNL BrokenDealer Index provided by SNL: S&F 500 Index data provided by Spontoers

Source: SNL Financial and Oppenheimer & Co.



Company Name	Current	2008E	2009E	HIGH	LOW	MEAN
Bear Stearns Companies Inc.	1.1x	1.0x	0.9x	1.1x	0.9x	1.0x
Goldman Sachs Group, Inc.	2.2x	1.7x	1.4x	2.2x	1.4x	1.8x
Lehman Brothers Holdings Inc.	1.6x	1.4x	1.2x	1.6x	1.2x	1.4x
Merrill Lynch & Co., Inc.	2.0x	1.8x	1.6x	2.0x	1.6x	1.8x
Morgan Stanley	1.7x	1.4x	1.2x	1.7x	1.2x	1.5x
HIGH	2.2x	1.8x	1.6x	2.2x	1.6x	1.8x
LOW	1.1x	1.0x	0.9x	1.1x	0.9x	1.0x
MEAN	1.7x	1.5x	1.3x	1.7x	1.3x	1.5x

<sup>\*</sup> Price to forward book ratios are based on Oppenheimer forward book estimates Source: SNL Financial and Oppenheimer & Co.



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Sell - anticipates that the shares will depreciate 10% or more in price within the next 12 months, due to fundamental weakness perceived in the company or for valuation reasons, or are expected to perform significantly worse than equities within the peer group.



		Dis	tribution	of Ratings
			IB Serv/Pa	st 12 Mos.
Rating	Count	Percent	Count	Percent
OUTPERFORM [O]	373	47.82	58	15.54
PERFORM [P]	376	48.20	44	11.70
UNDERPERFORM [U]	23	2.91	0	0.00
NOT RATED [NR]	8	1.02	0	0.00

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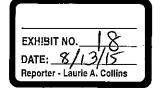
Monoline insurer losses

Attachments:

pat174599674

S&P assumes very light losses at the monolines on ABS CDO's...around 6%. Must be based on credit ratings.

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# Fixed Income Quantitative Research Structured Credit Strategy

1 February 2008

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## Assessing the impact of monoline downgrades

### Summary points

- Despite bailout efforts, monoline downgrades still look quite likely
- The main problem is a potential \$34 billion in losses, primarily on CDOs of ABS
- This would likely create nasty headlines and further writedowns for dealers
- Broader forced selling in municipals and elsewhere should, however, be limited

All of a sudden, the world has been gripped by monoline fever. Are they indeed the next example of the glue which holds together the world financial system and prevents it coming apart? A potential bank consortium for bailing out the monolines, reported today by Bloomberg, underlines their importance. Yet we think the recent mammoth intra-day swings in equities and credit probably have more to do simply with macroeconomic uncertainty.

As the impact of monoline downgrades would be quite broad-based, this note is inevitably a little shallow; rather than provide a comprehensive treatment, this note tries to tie together opinions and information gleaned from a variety of internal experts at Citi across credit, equities, munis and elsewhere. Effectively, we argue that downgrades themselves seem quite likely, and would indeed have a significant effect in terms of further writedowns at a number of the banks, but that they are unlikely to create more systemic problems of forced selling. In addition, large though the associated writedowns would be, we think they would fall far short of the \$200 billion or so referenced in some of the recent headlines.

In sum, the monolines are indeed a big deal, and downgrades seem likely to cause further negative pressure on a number of financials. However, because we expect the impact to be limited to relatively few institutions, and despite our longer-term gloom about non-financial corporate credit, in most markets significant fallout following downgrades would probably make us more inclined to buy.

#### Why has no one bailed them out already?

Perhaps the first surprising feature of the monolines' story is that it has taken so long for investors to step in. Having had a seemingly profitable franchise for many years, and with stock prices now typically trading at far less than 1x book value, it is striking to us that no one has snapped them up. While MBIA has now secured a \$2 billion capital injection, the most notable entrant to the sector, Warren Buffett, chose to set up a new business – with all the administrative effort that this entails – rather than to buy into any of the existing incumbents

But a moment's reflection explains why new ventures may be the more rational strategy. Even now, equity and credit analysts alike are grappling with the true extent of monolines' CDO of ABS exposures. Obtaining information on total portfolio sizes is easy enough; estimating the size of potential writedowns is not. Not all RMBS are subprime; not all CDOs are CDOs of ABS; not all CDOs of ABS are based on the recent vintages which are most vulnerable. Most importantly, non existent primary and illiquid secondary markets make valuation challenging and risk profiles hard to gauge.

Berkshire Hathaway, FSA and AGO are re-wrapping much of FGIC and SCA's muni books selectively, which enables them to take on the lower-risk munis while avoiding CDOs. It is also relatively easy business to write because it has already been wrapped, so the paperwork is squared away, there is reasonable dispersion, the performance is known and yet spreads are very attractive.

Figure 1 (reproduced from a piece by our equity analyst, Heather Hunt), shows the monolines' main exposures, and the sort of writedown assumptions that many equity analysts have been using, driven in turn largely by figures from the rating agencies. The total "stress case losses" of \$10 billion or so are large, yet individually require capital injections which look quite manageable. The trouble is, the \$10 billion pales into insignificance compared with the total portfolio exposures of just over \$230 billion. While we would dismiss out of hand recent newspaper reports suggesting writedowns of north of \$200 billion, for a potential investor the lingering possibility of larger losses may well prove enough to deter entry. The private owners of FGIC, for example, have refused to add more capital. For those who like the look of the business, either setting up anew — or at most buying better parts of the business, such as muni portfolios, without taking exposure to the CDOs of ABS — would seem a more logical course.

gure 1. Monoline Portfolio Sizes and Sa	&P Loss Es	timates (Dolla	rs in Millio	ns)				
	FGIC	SCA	CIFG	MBIA	Ambac	Assured	FSA	ΤΟΤΛΙ
AAA status at S&P currently	AA	CreditWatch Negative	Affirmed , Neg. Outlook	CreditWate h Negative	CreditWatch Negative	Affirmed, Stable	Affirmed Stable	
Total RMBS portfolio in focus	28,977	8,770	3,348	29,674	34,728	10,325	18,636	134,458
Total CDO portfolio in focus	10,934	16,877	9,394	30,403	29,194	448	364	97,614
Total portfolio	39,910	25,646	12,742	60,077	63,922	10,773	19,000	232,070
Current Loss Estimates as of Jan 18								
Stress case after-tax. PV of losses								
RMBS portfolio	1,315.0	339.4	90.8	1,694.2	968.9	29.4	219.6	4,657
CDO portfolio	1,239.7	633.7	909.2	1,826.5	1,280.1	2.2	1.1	5,893
Total stress case after-tax, PV of losses	2,554.7	973.1	1,000	3,520.7	2,249.0	31.6	220.7	10,550
Change in PV loss expenses	384	89	2087	340	410	0	4	3,314
RMBS losses % of exposure	4.5%	3.9%	2.7%	5.7%	2.8%	0.3%	1.2%	
CDO losses % of exposure	11.3%	3.8%	9.7%	6.0%	4.4%	0.5%	0.3%	
Loss Estimates at Dec 19 report								
Stress case after-tax, PV of losses								
RMBS portfolio	1,297.5	335.4	90.8	1,693.8	917.1	29.0	215.3	4,579
CDO portfolio	873.6	645.6	701.6	1,486.7	921.8	2.1	1.1	4,633
Total stress case after-tax, PV of losses	2,171.1	884.0	792.5	3.180.5	1,838.9	31.1	216.4	5,934
Capital Adequacy								
Capital cushion	300-350	600-650	150-200	1,750- 1,800	1,550-1,600	250-300	700-750	
Identified capital raises	n/a	n/a	1,500	2,000	255	n/a	n/a	
Total capital cushion	325	325	1,675	3,750	1,805	275	725	
New capital needed / (excess)	(2,255)	(375)	675	229	(444)	243	504	
Change in capital needed	(4,126)	(657)	1,532	798	(478)	462	988	
Original capital needed	1,871	284	(857)	(569)	34	(219)	(484)	

Source: S&P, Citi Investment Research, MBIA and Ambac - Curting to Hold, 17 January 2008.

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#### How severe would losses be?

Strangely, estimating how much the monolines might lose is probably easier than estimating how much they may be downgraded. To our minds, the key is working out how much of their exposure lies in recent vintages of CDOs of ABS.

Outside of the muni market, much of what the monolines have wrapped to AAA probably carried a standalone AAA rating in the first place. The extra capital costs associated with wrapping lower-rated underlying paper up to a AAA level – and the abundance of AAAs in structured credit space – made such lower-rated wraps unnecessary. But outside of CDOs of ABS, there actually are very few AAAs we are worried about – at least in terms of actual defaults. Even in subprime RMBS, our long-standing bearish analyst's new (and even more bearish!) assumptions imply some losses at AA level, but almost none at AAA. And away from RMBS, AAA losses are even more unthinkable to us – indeed, we have argued elsewhere that their current spread levels stem entirely from technicals, and that they are one of the best long-term investments in fixed income markets today. The major exception is 2<sup>nd</sup> lien HELOC exposures, which do seem significantly riskier and with which the monolines were often associated. In sum, though, the estimated RMBS/HELOC portfolio "stress case" losses shown in Figure 1, which total some \$4.7 billion as of 18 January across all the monolines, seem to us fairly appropriate.

CDO of ABS exposures, though, are a different kettle of fish. Again, we have argued elsewhere<sup>3</sup> that their very construction – featuring an extra layer, or a securitization of a securitization – makes their payouts uniquely binary, and hence their senior tranches particularly vulnerable to default. While not all of the CDO exposures in Figure 1 are CDOs of ABS, the majority are. And yet the assumed "stress case" loss of less than \$6 billion – on a total notional of close to \$100 billion – is clearly well lower than the percentages banks reportedly have been taking on similar exposures recently.

Figure 2. La	gure 2. Latest Known Subprime-Related CDO Exposure at Insurers (Dollars in Millions)					
	Total ABS CDOs	06-07 HG	06-07 Mezz	Estimated 06-07 write down		
Ambac	29,248	19,044	2,910	7,459		
ΛСΛ	22,408	10,495	10,280	9,317		
MBIA	17,339	14,361	473	4,592		
XLCA	16,078	14,587	-	4,376		
FGIC	10,278	5,949	2,228	3,122		
CIFG	9,414	1,600	4,718	3,311		
Radian	770	-	•	-		
Assured	594	-	-	-		
FSA	373	-	-	-		
Total	106,502	66,036	20,609	32,176		

Source: S&), Citi. Excerpted from The Effect of the ARS CDO Melitdown on Monoline Insurers (R. Roy & E. Trampolsky, 29 November 2007)

<sup>&</sup>lt;sup>1</sup> See Bond Market Roundup: Strategy, (R. Parulckar, 11 January 2008, page 31)

<sup>&</sup>lt;sup>2</sup> See *Quantifying the credit crunch*, (H. Lorenzen, 21 December 2007)

<sup>&</sup>lt;sup>3</sup> See *Quantifying the credit crunch*, (H. Lorenzen. 21 December 2007, page 16) and 'AA CDOs of ABS more vulnerable than BBB', p13, *TotalCredit*, 19 March 2007.

Figure 2 provides more detail on the crucial numbers. Within CDOs of ABS, it tends to be the more recent vintages which concern us most. Older deals should have not only better recovery rates on foreclosures (due to house price appreciation since origination), but are also likely to have better subordination protection on the underlying RMBS (because of the way in which the deals work, with excess spread accumulating to provide protection over time). The combination of the two should make older deals relatively immune, unless house prices fall very hard indeed, but conversely makes the recent ones relatively vulnerable.

At banks, we have estimated elsewhere that appropriate writedowns on super-senior are about 30% on high grade deals and 60% on mezzanine deals. We think those estimates are also appropriate for the insurers. There may be the odd exposure where, at a late stage, a bank bought protection on a senior tranche of its own super senior holdings from an insurer (in which case recoveries would be higher), but the vast majority of the monoline exposure seems likely to be standard super senior, guaranteed at deal origination or shortly afterwards. That leads us to estimate a total writedown on CDOs of some \$32 billion, plus another \$2 billion or so from HELOCs and other direct RMBS exposures.

#### How large might downgrades be?

If the monolines are sitting on potential losses of \$34 billion, this would help explain why they have difficulty raising capital, but what might it do to their credit ratings?

In our view, it remains extremely difficult to tell, despite recent clarifications from MBIA, for example, and is really rather binary. Our best guess (and what should happen in theory) is that downgrades should be modest, and that the insurers should go into 'run-off' mode. After all, the payouts on all the CDOs of ABS are 30 years or so in the future, so PVed reserves required today are significantly smaller. And even without capital injections, most insurers can in theory continue to receive premium on existing contracts, build up their capital bases, and eventually return to AAA status and begin underwriting new business again. If they absolutely needed to raise capital sooner, they ought to be able to sell off existing healthy parts of their businesses, such as the muni portfolios.

Yet as ACA shows, the situation in practice is more complex. The greater the downgrade, the larger the collateral payment required on existing contracts – and the greater the likelihood that existing policyholders would try to find some way out of paying future premiums. Even though we cannot see an easy way in which this would happen – and indeed, in municipals most protection is paid for entirely up front, and then released only gradually into earnings – things remain quite finely balanced. If either the agencies or the insurance regulators were to look at the total losses and to take a sterner line, it might not take too much to push them over the edge to a point where they could not make collateral payments, and into bankruptcy. We reckon such an outcome is unlikely, but given the pressure on the agencies not to repeat mistakes made on CDOs of ABS, it is difficult to rule it out entirely.

#### Who else would be affected?

In the event even of downgrades, and definitely of bankruptcies, the parties most directly affected are the banks who own protection on CDOs of ABS. Counterparties holding wrappers on other products ought to be far less affected.

<sup>&</sup>lt;sup>4</sup> See Estimating CDO of ABS Writedowns 6 November 2007

Effectively, the banks concerned (Figure 3) are the obvious suspects: the largest originators of CDOs of ABS. Different dealers used the monolines to differing extents, but we would expect all of them to increase their estimates of "gross" CDO of ABS exposures relative to the "net" ones already reported. Whether they would actually take writedowns is less clear. If downgrades are only modest, and monolines still seem likely to make eventual payouts, they may not. But since downgrades to single A or below will necessitate the holding of greater capital against monoline CDS, dealers may be tempted simply to take the writedowns and move on.

Their total size would, of course, again be the same \$34 billion loss we estimated for the insurers. While we emphasize that the full amount would be realized only in the unlikely event of bankruptcy of all the monolines, the prospect of a "double hit" – both to the insurers and then, once again, to the insured – is nevertheless a worrisome one.

Figure 3. Estimates of Different Banks' CDO of ABS Super Senior Exposure and Potential Writedown Sizes Assuming Similar Loss and Proportions Retained across all Banks (Dollars in Billions, ex Citi)<sup>e</sup>

	Notional SS Exposure			e	Writedowns, 30% HG, 60% Mezz			
	Total issuance			Increase	\ <u></u>		% increase	
	(HG + Mezz)	All vintages,	All vintages, all	when all is	Recent vintages,	Recent vintages,	when all	
Arranger	all vintages	part retained	retained	retained	part retained	all retained	retained	
Merrill Lynch	84,520	38,029	63,869	25,840	10,176	16,559	63%	
UBS	45,197	18,110	30,337	12,227	7,172	11,658	63%	
Deutsche Bank	22,509	180,0	15,257	6,176	3,334	5,506	65%	
Goldman Sachs	40,859	19,067	31,731	12,654	4,276	7,000	64%	
RBS	12,427	5,021	8,434	3,413	1,933	3,194	65%	
Calyon / Cred Ag	20,127	8,804	15,039	6,235	2,583	4,510	75%	
Morgan Stanley	12,022	4,670	7,898	3,228	1,723	2,777	61%	
Barclays	24,258	11,513	19,234	7,721	2,857	4,790	68%	
Lehman Brothers	12,473	5,738	9,033	3,295	1,382	1,868	35%	
Credit Suisse	29,851	13,252	22,535	9,283	2,180	3,652	68%	
Bear Stearns	13,654	5,434	9,430	3,996	1,518	2,593	71%	
Wachovia	25,817	12,394	20,854	8,460	1,853	3,183	72%	
Bank of America	13,298	5,852	10,128	4,276	1,412	2,486	76%	
BNP Paribas	2,120	959	1,500	541	275	399	45%	
JPMorgan	3,871	1,486	2,525	1,039	239	299	25%	
WestLB	21,162	10,380	17,349	6,969	684	1,139	67%	
Total (including all banks)	474,853	212,169	355,742	143,572	53,388	87,678	64%	

all this table we assume attachment points of 83% and 60% for HG and Mezz super senior ABS CDOS respectively; recent vintages refer to 2006 and 2007; "part retained" relates to 50% of HG and 50% for Mezz pre 2007 and 80% for Mezz in 2007.

Source: Creditflux, Citi.

The bank write downs for 2006 and 2007 vintages assuming a partial retention of super-senior CDO of ABS (\$53 billion; see Figure 3) are probably underestimated. First, we are missing synthetic unrated issuance in our data sources and, second, there is a variation in retention rates among the issuers.

Our larger writedown number of \$88 billion for recent vintages (2006, 2007) assumes that banks retained all super senior and excludes any wrap or hedging. This estimate seems excessive because banks are likely to have sold some super senior and a monoline downgrade would not necessarily result in increased writedowns (at least initially). While it might be thought that the prospect of this would spur the banks into buying out the monolines, in practice we consider this unlikely. The banks most directly exposed are typically those who have just raised lots of capital thanks to their existing CDO of ABS losses. Their newfound shareholders would be unlikely to take gladly to immediately spending their hard-earned capital on additional losses at monolines. Given the near-certain prospect of losses in the event of bailing out the insurers, relative to the much vaguer future prospect of losses if the monolines go into run-off, we think most banks will choose the latter.

#### What about the muni market?

Despite our pessimism about the immediate impact on the banks, we are surprisingly sanguine about the effect of downgrades elsewhere. Much has been made of the high proportion of retail ownership (funds and households in Figure 4) in the muni market and the prospect of forced selling as a result. Yet while it is true that muni wrapping has greatly facilitated and homogenized that market, and that the retail ownership creates a broader political sensitivity, we struggle to see much fallout from a sell-off.

	3007 (Dollars in Billions)

Financials	251
Insurance	385
Funds	896
Households	911
Other*	128
Total	2571

\*Other includes nonfarm nonfinancial corporate business, nonfarm noncorporate business, local government and sponsored enterprises, foreign holdings Source: Flow of Funds Accounts of the United States, Federal Reserve Statistical Release

The reasons for thinking the risks are exaggerated are effectively twofold. First, the muni market is relatively unusual in that it is quite straightforward to compare wrapped and unwrapped bond spreads for the same issuer. While there is some variation among names (most munis' standalone ratings are AA, with others in the A category), the typical difference is on the order of 0-30bp negative value for wrapped bonds. Therefore, the fundamental risk of monoline default has been largely taken into account. Widespread forced selling could conceivably cause widening of more than this, especially if monolines are downgraded to single A or lower, but we reckon it still suggests a worst-case scenario of 20bp or so — hardly a catastrophe.

Secondly, for any investors who are indeed extremely rating-sensitive, it is possible to buy secondary wraps from other insurers (such as the still AAA-rated reinsurers, or such likely new entrants as Berkshire Hathaway)<sup>5</sup>. Such wraps often make economic sense, when the cost (around 30bp) of the secondary wrap is compensated by an even larger appreciation of the re-wrapped bond.

As such, and even allowing for the natural tendency of muni market participants to want to downplay risks to their market, we struggle to become particularly concerned.

#### And exposures and forced selling elsewhere?

The same principle applies to almost every other place we look outside of CDOs of ABS. In principle, yes, monoline portfolios are massive. And counterparty capital charges elsewhere could increase slightly as a result of downgrades. But, by definition, counterparty credit risks are contingent upon the simultaneous default of both the underlying and the counterparty. Outside of CDOs of ABS – and especially on the sort of high-quality structured and municipal portfolios monolines have wrapped – we are simply not that concerned about defaults. Other market participants may likewise confess to having large nominal monoline exposures, but unless the exposures are on CDOs of ABS, or on low-rated securitized product tranches which were then wrapped to AAA, we would not expect them to have to take much by way of writedowns at all.

<sup>&</sup>lt;sup>5</sup> For more details – and some subsidiary reasons why not to be overly concerned – see <u>Muni market looks for answers</u>, G. Friedlander, 24 January 2008.

Similarly, as we look at markets in general, monoline downgrades appear, by and large, priced in. Quite apart from the still-distressed CDS levels on the monolines themselves, in almost every product we look at, wrapped and unwrapped paper trades at about the same level – be that 5 cents in the case of CDO of ABS tranches, or 95 cents or more in the case of CLO or other securitized product AAAs. In the majority of cases in structured credit, we would not expect monoline downgrades even to result in downgrades to the securities concerned.

One possible exception is for AAA paper held by conduits. If conduits are holding wrapped AAAs and funding them through ABCP, it is possible that the ABCP buyers have not "looked through" to the underlyings and could be disturbed by downgrades. But even here, unless the underlying was subprime RMBS (which most ABCP buyers have been wary of already), we would not expect follow-on downgrades to the underlyings.

#### **Our conclusion**

To sum up, monolines are a big issue, and the market is right to focus on them. But, th us, they are a big issue primarily because of their impact on the major banks, not because of the broader fallout some investors seem concerned about. Any further weakening of the banks is, of course, a significant concern. But here – as elsewhere – there seems to be insufficient recognition of the massive damage caused by one particular product, namely CDOs of ABS, and of the relatively limited effect of writedowns on other securities. At the monolines, as at the banks and the rating agencies, to our minds the picture emerging is one of one enormous trade, which a large number of participants got wrong, with individually deleterious effects. Severe as this is, we think it is considerably less than a systemic meltdown; we reckon the glue will hold.

### Disclosure Appendix A1

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# EXHIBIT 83

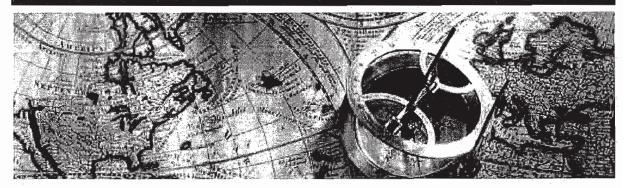


# RESEARCH

# European Alpha Anticipator

## **European Credit Research**

25 January 2008



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# Decoding the Fed and monolines

Credit views on a page 2

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Monoline downgrades – implications for the financial sector 8

We focus on the potential monoline-related exposures and capital impact on the financial sector if further downgrades for monolines materialise in the coming weeks/months. Weakness in credit and equity markets has curtailed the monolines' ability to raise fresh capital. While moves are in place to avert further downgrades, we note that these may take some time – and headline risks are likely to mean that holders of monoline wrapped securities will continue to face pressure to set aside provisions.

#### Rate cuts: A bearish signal for credit?

The Federal Reserve's 75bp surprise cut of the fed funds rate this week has important implications for credit. Empirically, we find that speculative grade default rates increase in the 12 months after the inception of a period of rate cuts. Furthermore, based on the tightening seen in Q4 07 and recent global lending standards tightening, we project the Q1 08 net tightening in C&I lending standards to be around 34%.

#### Forecast revision: US federal funds outlook 21

We have lowered our forecast for the fed funds rate in response to the Fed's aggressive inter-meeting cut this week. We now look for the Fed to cut 50bp at the next two meetings and then to hold the funds rate at 2.5% through 2008. While the stock market decline of recent weeks poses some near-term risk to business confidence and medium-term risk to consumer spending, the lower funds rate will be stimulative and, on balance, we have left our economic forecast unchanged. We still expect a period of sluggish US GDP growth, but not a recession.

# Credit Views on a Page (1-3 month horizon)

Main category	Class			E CONTRACTOR
Overall positioning	IG	Valuations are fair but subject to volatility over the coming weeks. We see greater risks to spreads over the longer term.	Underweight; expect Main to reach 100bp by the macro index positioning trades: Buy Main vs XO, Main vs fin.	end of 2008. We like out HI-Vol vs Main and buy
	HY	Underweight	We maintain our long-term Underweight - held since in 2008, LevX looks attractive vs Crassover but prefer	
Credit curve	Bonds	We prefer the short/medium part of the curve.	Expect cash curves to flatten further, marketweight long end telcos/autos (except Oil 33).	Expect cash curves to flatter further; recommend long end of £ utilities.
	CDS	We expect continued flattening across IG and HY credit curves.	Expect CDS curves to remain rangebound-front end of cyclical non financial names could flatten in 2008.	
			Expect HY curves to stay flat given the weaker economic outlook, Sell Tyr protections.	
Rating		We favour BB/Bs in High Yield.	In HY, we prefer BB/B names, given that the lower/non-rated portion has not sold off by as much as expected.	
Sector Overweights		Healthcare, Energy, Utilities, IG Telecom, IG Cable, IG Consumer Products.	Senior financials, utilities, telecoms	Senior financials, utilities, telecoms
Beta (IG)		Beta dose to 1.	Beta less than 1.0.	
Key longs		Telefonica, Vodafone, Pair Long PGN (CDS) with Short SRE (CDS). Aftria (binds), General Mills, Reynolds American, RRI 6.75%, BG&E bonds, Vlacom, Tribune (1yr CDS), Time Warner Cable, Entergy CDS, Pair DUK (long) with D (short), DYN, EME, TCD1,	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Anglian Water '29, '30 '37 '40, Centrica '16, E.ON'19, '37, iberdirola, Kelda '10, '31, National Grid '11 &
		AYE, SRP, CMS, CNP, XEL, Consumers Energy, FT \$11	Telefonica '16, Olivetti '33.	'13, NGET '10, Enel, RWE '30, South East Water,
			Schirel T1, Oldmut UT2, AlG LT2, AxaT1.	Veolia, Wessex Water
			In CDS: Sell France Telecom and Vodafone.  CEZ, Dong, E.ON, Fortum '16, Iberdrola '13' 15, EDP. Endesa '13, National Grid, Suez, Veolta in CDS sell Enel, National Grid, Iberdrola, Veolta and Endesa	AIGUT2, QBE T1, ZFS UT2, AxaT1 Northern Rock Senior
			Flat Nov'11, méric '16s.	
			Bank Senior & LT2 FRNs (SG vs BNP)	
			In CDS: Sell Flat, Confinental.	
Key shorts		Short Black & Decker, Pair Short SRE (CDS) with Long PGN (CDS), Sara Lee, Clorox, MIR CDS, CenturyTel, Cannett, Liberty Media, Home Depot, Lowes, Jones Apparel, Sears, Limited Brands, Pair D (short) with DUK (long), MIR, EXCg, CEG.	In HY avoid: Europear fixed, Hombach, ONO, Waterford, Cognis CDS, Chesapeake, Yhoula, Thiel. Deutsche Telekom (CDS), KPN (CDS). KWE, EWE, CDF '18, Cas Natural, Union Fenosa, Hanrue TI,	United Utilities Electricity, RWE '10, UU Water '35 Severn Trent, RSLLN T1, RSA T1/UT2,
			In CDS: Lufthansa, Scania, Cmzb, BNP, TKA, ING vs Hanrue.	ASSCENT1 Tomkins '11.
Key structured credit trades		Ks We recommend selling 5yr IG.9 3-7% protection and buying 7- 10% protection against it on a DV01-neutral basis (1.75x). The trade has a net carry of 100hp and has flat to slightly positive roll- down. With 5yr Index expected losses at 5.3 pts, we expect any further index widening to cause losses to flow into the 7-10% tranche, causing it to widen delta-adjusted. If the index tightens, the 3-7% tranche could retrace some of the delta-adjusted widening it has had recently relative to the 7-10% tranche. The DV01-neutral 3-7% (7-10% basis is at its highest level since March 2005, making this a good entry point for the trade.	We continue to recommend 5x10 equity tranche steepeners—buy 10yr delta-hedged equity protection and sell 5yr delta-hedged equity protection—and long credit positions in 7yr and 10yr senior tranches. Investors taking a longer-term view on default rates picking up can also sell super- senior protection to finance shorts in Crossover and equity tranches.	
Equity volatility		With extreme spot market swings, short-term index implied volatilit some way in explaining the magnitude of a couple of recent moves very likely to be driven by sentiment, the outlook for monoline insu sufficient appetite to add risk, we recommend considering short cohighs.	Nevertheless, we remain cautious in the near term givers and further newsflow from the ongoing earnings	ven that market direction is season. For investors with
Dividend swaps market		All dividends at all maturities heavily sold off over the week. Nearer 2008 European dividends at these levels.	end Euro STOXX 50 dividends pricing in flat to negati	ve growth. We recommend

Note: Recent changes are in bold text. Source: Barclays Capital

# Key drivers

# Next week

## The week after

Date	Company	Release/event	Economic data	Date	Сотралу	Release/event	Economic data
Mon, 28 Jan			US: New Home Sales	Mon, 4 Feb			EU: Eurozone PPI US: Factory orders
Tue, 29 Jan	Gitnir Prudential Imperial Tobacco	FY 07 results New business AGM	US: S&P/CS Home Price Index (- 6.1%), Durable goods orders (0.1%), Consumer confidence (88.6)	Tue, 5 Feb	KPN UPM	FY 07 results FY 07 results	EU: Eurozone retail sales US: ISM non manufacturing (53.9), ABC consumer confidence
Wed, 30 Jan	Standard Life SCA Vivendi	FY 07 results Year-end report 07 FY 07 revenues	US: FOMC rate decision (3.25%, 3.5%), Advanced Q4 GDP (4.9%)	Wed, 6 Feb	FT Daily Mail Volvo SAS Electrolux Scanla	FY 07 results AGM FY 07 results Q4 07 results Q4 07 results FY 07 results	UK: Nationwide cons, Confidence (85) US: MBA mortgage applications, non farm productivity, unit labour costs (-2%)
Thur, 31 Jan	Danske Bank Kaupthing Piraues AXA Friends Provident Vinct Vodafone Fortum Gaz de France	FY 07 results FY 07 results FY 07 results New business New business Q4 07 revenue Q3 08 results FY 07 results FY 07 results	US: Initial jobless claims; PCE Deflator y/y (3.6%) EC: Eurozone CPI y/y (3.1%)	Thur, 7 Feb	BT Unilever Norske Skog Syngenta British Land GlaxoSmithKline Vattenfall	9M 08 results FY 07 results FY 07 results FY 07 results FY 07 results Q3 results Q4 results FY 07 results	UK: Industrial production, BoE rates (5.25%, 5.5%) 5.5%) EU: ECB rates (4%, 4%), consumer credit
Fri, 1 Feb	British Airways	Q3 results	US: Nonfarm payrolls (18K), Unemployment rate (5.0%), U of Mich confidence, ISM Manufacturing (47.7)	Fri, 8 Feb	TCNZ TellaSonera Ciba Compass	Q2 08 results FY 07 results FY 07 results AGM	US: Wholesale Inventories (0.6%)

Note: Consensus economic forecasts in bold, previous data release unbolded where available. Source: Company reports, Barclays Capital

# Strategic market overview

Mahesh Bhimalingam, Eugene Regis

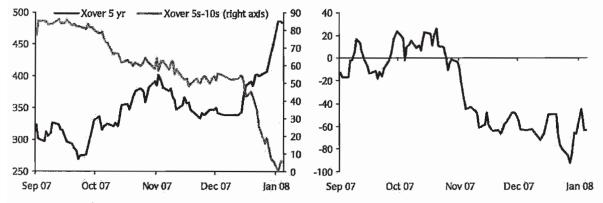
# "The only thing we have to fear is fear itself..."

Expect markets to stay volatile with elevated spreads Fear and panic gripped the markets at the beginning of this week. Events on Monday and the first half of Tuesday saw:

- Massive falls in European and Asian Equities, pushing several major markets into bear territory;
- A fall in the yield on the US 2yr note to sub-2% (a 140bp tightening in around four weeks); and
- As Figure 1 shows, the iTraxx Crossover breaching 500bp, with the 5s/10s curve moving to inverted territory and the cash-CDS basis between the high-yield index and the iTraxx Crossover remaining in negative territory. However, it did not skew further due to the underperformance of the crossover relative to cash.
- Though the EUR7bn in write-downs by Societe Generale, which included c.EUR5bn in trading losses, were exceptional, the credit market was not spooked by this as the bank was able to fund the losses by a fully underwritten rights issue worth EUR5.5bn. This clearly shows that banks are still able to raise capital when needed.

Global markets are clearly concerned about recessionary risks Clearly, markets have been spooked by the potential for what looks like a slowdown in the US to turn into a recession, regardless of its potential length or severity, a lack of liquidity due to the US holiday on Monday and further concern about the situation of the monoline insurers and the implications for the securities they have wrapped, as well as bank hedges to the monolines themselves.

Figure 1: Crossover 5yr and 5s/10s curve (Series 8) and cash-CDS basis



Source: Markit, Barclays Capital

Mixed reaction to a surprise 75bp cut in Fed Funds Hence, in a rare intra-meeting decision, the FOMC cut the fed funds rate by 75bp to 3.5% as it sought to avoid a big fall in equities on Tuesday's opening. The FOMC's statement highlighted a weakening economic outlook and downsides to growth but also emphasised deteriorating financial market conditions and tightening C&I lending, a clear nod to banks restricting lending.

Term funding rates fell on the cut along with a still-elevated I/MM OIS spread Markets greeted this cut cautiously with a small bounce, but US equities were still down on the day by about 1% (versus the futures contracts initially pricing in falls of 5%), while credit indices moved marginally tighter. The reaction in credit the following day seemed muted given a cut of this magnitude. However, the move did improve money market conditions, with overnight USD Libor falling by over 50bp and avoiding the prospect of some credits trading upfront in the CDS market when they were not actually fundamentally distressed.

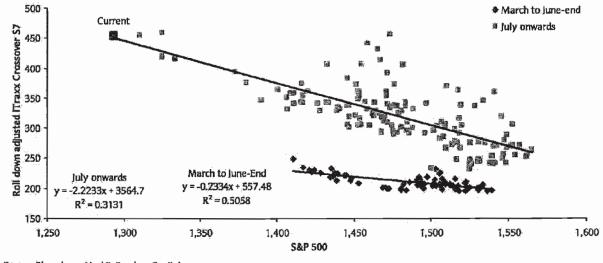
More rate cuts ahead but credit will be trading relatively wide, especially if equities underperform Looking forward, we do not expect markets to trade with full conviction, given that a big short-covering rally does not seem to have happened so far. As such, our US economists have revised their US fed funds view, now expecting a 50bp cut next week and a 50bp cut in March. While this loosening bias in monetary policy obviously helps, the issues driving the fate of credit valuations over the next few weeks will be the link with equities, the performance of the economy and housing market, the scope for further bank write-downs and with it the fate of the monoline insurers.

Signs of an attempted workout on the monolines but there is a long way to go The key issues for the monolines are: 1) the potential downgrade of all structured securities they wrap, ranging from municipal bonds to routine ABS transactions to structured deals with the potential for forced selling and further writedowns; and 2) whether there will have to be further bank write-downs on the value of the hedges investment banks sell to them. While the New York State Regulator's attempt to rescue the monolines, by trying to encourage Wall Street banks to invest c.\$15bn in fresh capital, is encouraging (with an extremely positive initial reaction in spreads and equities), this is obviously at a very early stage and potentially involves interested parties with their own capital issues. Hence, the 30bp rally on this news may well be premature, and we could see spreads snap out again if a rescue is not forthcoming. On the filp side, credit could grind tighter if a monoline rescue is quickly implemented and rating downgrades are avoided.

450-500bp short-term trading range on the Crossover

As Figure 2 shows, credit is still fair value relative to equities. If the current lacklustre performance of the equity markets continues, we would expect the crossover index to move in line with equities but we could see a breakout and testing of new wides if single-name credits begin to underperform radically. Given our current rate call we do not expect a big breakout from the current trading range of 450-500bp on the current on-the-run-index.

Figure 2: Rolldown-adjusted Series 7 iTraxx Crossover versus the S&P 500

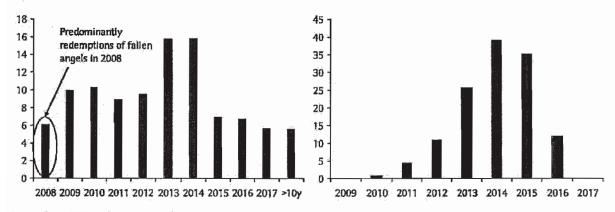


Source: Bloomberg, Markit, Barclays Capital

Q4 EPS numbers in the US are reasonably resilient, but financial stocks are skewing their overall index EPS number Otherwise, corporate fundamentals in Q4 seem reasonably resilient so far. Of the 500 names in the S&P 500, 115 have reported earnings, with 67 reporting EPS growth and 32 reporting falls in EPS. Approximately 70 out of the 115 names have also reported positive EPS surprises. However, there has been a clear dichotomy between financial and corporate earnings, with recent Q4 write-downs in several names larger than expected. This is leading to a negative skew in the overall EPS performance of the index itself. On an aggregate basis, corporate fundamentals still seem reasonably strong on the investment-grade side despite high oil and soft commodities costs. In high yield, defaults are still low, and many names used 2006 and early 2007 to refinance debt and term out their maturity structures at both the bond and loan level.

HY corporates have termed out their maturity profiles As we discussed recently in our *European High Yield Outlook for 2008*, high-yield borrowers have termed out their maturities leaving relatively few leveraged loan maturities until 2013.

Figure 3: European HY Bond (LHS) and leveraged loan maturity profiles (RHS)



Source: IBoxx, S&P LCD, Barclays Copital

As Figure 3 shows, much of the scheduled high-yield bond maturities in 2008 derive from failer angel constituents, especially autos, and with the recent HY results season in Q4 still showing significant cash generation, we do not expect a large deterioration in fundamentals in the short term. The key question will be how resilient fundamentals are to the combination of high input costs and any economic downturn, especially in more cyclical credits.

With the probability of default risk over the course of next year considerably lower than over the 30yr horizon, we would capitalise on this by selling 1yr protection on names our analysts have a positive view on and that have seen severe curve flattening. These trades are likely to earn substantial carry and high breakevens even if there was no normalisation of the curves, (Further details were published in our recent *Relative Value Recommendation Summory*, 16 January 2008.)

Fed funds and GDP are among the important numbers out next week With the recent FOMC statement obviously distracting growth concerns away from inflation, next week's data releases could be prescient. Monday sees new home sales (0% consensus) and Tuesday sees Durable goods (1.6%/0% including/excluding Transport consensus) and ABC consumer Confidence. Importantly GDP data (1.2% Q4 annualised consensus) in published on Wednesday, followed by the PCE Core data (0.2% m/m consensus) and the FOMC decision on Wednesday. The consensus view for the FOMC is for a 25bp cut with the current options pricing in a 60% probability of a 50% cut. Finally, non-farm payroll numbers are released on Friday (the market expects +53k) along with University of Michigan Confidence numbers (79 forecast), ISM

manufacturing (47 forecast) and Auto sales (16.1mn forecast). For the eurozone, M3 numbers are released on Monday, the CPI estimate and Consumer Confidence on Thursday and PMI on Friday. The UK also has a relatively light data week, with M4, Consumer Credit and mortgage Lending/Approvals on Tuesday, House Prices on Wednesday and the PMI numbers on Friday.

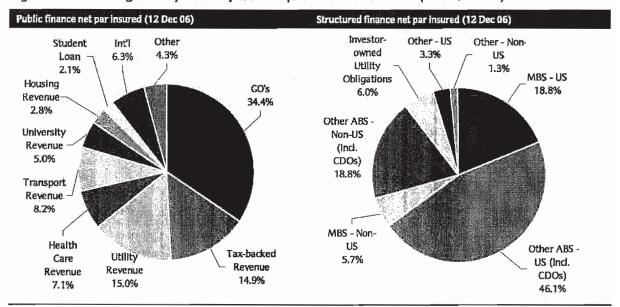
# Monoline downgrades: Implications for the financial sector

Seth Glasser, Joseph Lesko, Vince Breitenbach, Paul Fenner-Leitao, Vincent Cooper, Manish Bakhda

## Monolines: The current state of play

The business model is run with extremely high operating leverage Financial guaranty insurance is a form of credit enhancement provided to bond issuers in the municipal and structured finance markets, both in the US and internationally. Financial guaranty policies unconditionally and irrevocably guarantee payment when due of the principal and interest on guaranteed obligations. The foremost principle of the financial guaranty business is underwriting to a so-called "no loss" standard, which, though impossible to achieve in reality, has historically driven a conservative, "remote loss" credit culture that since the industry's inception has contributed to an extremely low level of losses. Because the industry has been so successful at avoiding losses over time, the business model is run with extremely high operating leverage, meaning that fairly small capital and reserve positions have been held relative to the risk insured. In the past, this was viewed as an acceptable way for the monolines to operate, but has become a major concern now that financial guarantors are clearly heading into the first cyclical loss period in their history.

Figure 4: Financial guaranty industry insured portfolio distribution (total \$2.1trn)



Note: Public finance is 62%, structured finance is 38%. Source: Association of Financial Guaranty Insurers (AFGI)

During H2 07, it became more clear that the monolines will need to pay cyclical claims on exposures Concerns about the financial guaranty industry's exposure to current stress in the subprime mortgage and consumer lending arena tend to centre on two main areas of the insured portfolio: direct subprime mortgage risk within MBS and ABS securities that monolines have wrapped, and CDOs, many of which contain various types of subprime collateral (including residential mortgages) among the diversified assets underlying deals. During the second half of 2007, it became increasingly clear that the monolines will need to pay cyclical claims on exposures in these this time around, whereas they have never needed to do so before. In the last six weeks or so, Fitch, Moody's, and S&P

have all completed changes to their monoline capital models to reflect a higher expected incidence of downgrades to underlying deals and increases in recognised losses for which the monolines will ultimately need to boost reserves. The result of the more stringent model assumptions was that several monolines have fallen short of the minimum capital required to maintain their AAA ratings.

Reinsurance is still an option, and we believe there is global capacity available We believe that during the coming weeks, the monolines will continue their efforts to raise capital and defend their AAA ratings. The capital markets are clearly closed to the monolines at present, given the post-issuance performance of MBIA's \$1.0bn surplus note, which fell 28 points in the week following the deal's launch, and Ambac's aborted equity raise last week. Reinsurance, however, is still an option, and we believe that there is global capacity available, seeking to take financial guaranty risk at attractive prices. We also believe that at least a few monolines are exploring the possibility of using a sidecar structure, similar to those put in place by a number of property-catastrophe underwriters after Hurricane Katrina. These vehicles would enable capital to flow into the financial guaranty business and take portfolios of risk off monoline books, thereby generating a capital benefit to the monoline.

We believe Moody's and S&P are likely to allow more time before taking any rating actions So what is next on the ratings front? We would expect more downgrades from Fitch in the very near term, with FGIC seemingly at greatest risk (SCA/XLCA has already been downgraded to A). Fitch has been the most aggressive of the three rating agencies thus far, in terms of the four- to six-week timeline given to each monoline to complete its capital raising. We have been of the view that such a tight window, which spanned the slow holiday season, was perhaps not realistic. We had wondered if Fitch might be encouraged by behind-the-scenes progress being made by the various companies, and agree to allow more time for execution. In light of the Ambac downgrade, this clearly will not be the case. Given that FGIC is nearing the end of its four- to six-week window as well, we expect that similar downgrades may take place, possibly this week. We believe that Moody's and S&P are likely to wait a bit longer before taking any rating actions, as each seemed more realistic about the time that might be required for the monolines to raise material amounts of capital in a difficult market environment. Back in mid-December, Moody's indicated that it could give companies up to one quarter to complete their capital plans, and we sense that S&P will offer a similar degree of flexibility. While all of the rating agencies appear to be under significant pressure on various fronts - meaning that their decisions can change quickly - we nonetheless believe that more time will be granted before the two arguably most important agencies would announce monoline downgrades.

## The nature of banks and insurer exposures

We care more about bank and insurance industry exposures than we do about fund/asset manager exposures, since wrapped securities at the former will often be held for their own account, Funds/managers, on the other hand, will hold the securities on behalf of investors who take the ultimate investment risk. Figure 8, Figure 9 and Figure 10 show the results of a survey we undertook of major banks and insurers to understand the scale of the exposures. These can fall into three categories:

- Direct holdings in the monoline equity/debt;
- Securities wrapped by monolines; and
- Potential liabilities via reinsurance and D&O coverages.

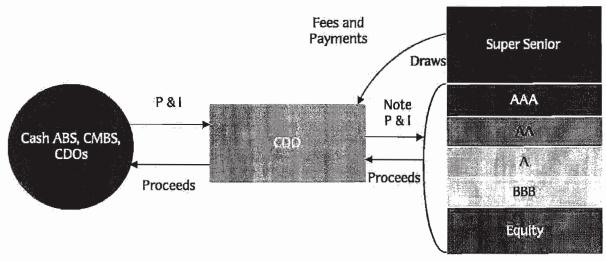
For insurers, we note that the bulk is in the form of the monoline wrap on securities held. Our sample suggests that, relative to the total asset portfolios, the monoline wrapped exposures are relatively small. In addition, the insurers have indicated that the

underlying credit quality of the wrapped securities is strong and they would not be forced sellers if the major monoline insurers were to lose their AAA ratings. The larger issue for these buyers would be the secondary impact on overall credit valuations were there to be further rating downgrades by S&P and Moody's of the major monolines. Bank exposures could be relatively high, on the other hand. So far, they have been reticent about giving too much detail.

## How banks take on structured counterparty exposure

The super senior tranche (the most senior tranche of the CDO) is typically retained by banks. Banks may then look to buy protection on this tranche from monoline insurers in order to guarantee payments and potentially reduce risk-weighted assets. The banks are then exposed to the more creditworthy of the two — the underlying quality of the super senior tranche or the counterparty risk of the monoline, typically AAA.

Figure 5: Monoline super senior exposure



Source: Barclays Capital

# The capital implications: More onerous for banks

Global banks could end up requiring up to \$143bn in additional capital In terms of our understanding of how banks' capital may be affected by monoline downgrades, we believe it is double-edged. On the one hand, bank equity will be hit by any negative mark to market on the difference in value between the wrapped (AAA) security and the underlying. On the other, as the security credit quality (and rating falls), the risk-weighting attached to it should rise. This puts additional pressure on bank capital requirements. Figure 6 exemplifies how, on aggregate, the combination of write-downs and risk-weightings might work. In the example, we use three scenarios; one where 75% of the structured exposure (insured by monolines) is held by banks, one where half is held by banks, and one where only 25% of the structured exposure is held by banks. Under these assumptions, global banks could end up requiring up to an additional \$143bn of fresh capital including equity and subordinated debt. The implied need for pure equity or Tier 1 is half that amount, or up to \$72bn. This is a huge amount, but the assumptions we use below are also very aggressive, designed only to show how, taken to its extreme and assuming all monolines get downgraded significantly, bank capital could be influenced.

Figure 6: The potential impact on global bank capital

	Bank holdings of structured	monoline expos	ure		75% 615	50% 410	25% 205
					***		
1	Write-downs (\$bn)	10 points			62	41	21
		20 points			123	82	41
2,	Risk weighting change	Risk wtg	Min Cap				
	AAA	10%	8%	0.8%	5	3	2
	AA	20%	8%	1.6%	10	7	3
	Α	50%	8%	4.0%	25	16	8
1+2	Implied add capital:						
	New rating AA				5	3	2
	New rating A				20	13	7

Note: Percentage of \$820bn (38% of \$2.1tm) wrapped structured product as per Figure 1. Source: Barclays Capital

For insurers, the potential capital requirements will vary across Europe due to the differences in the local regulatory requirements. As an example, we use the UK to illustrate how the potential capital requirements might change if downgrades to monolines feed through to the wrapped securities. The UK capital requirements are determined by the credit stress tests outlined in the PS04/16.

The credit stress test is based on the following formula:

Stress spread = square root of current benchmark spread x spread factor

(where the spread factors are: 3 for AAA, 5.25 for AA and 6.75 for A).

The RCM is determined (approximately) by multiplying the stress test by the duration.

Figure 7: The change in Risk Capital Requirement (RCM) for a notional monoline wrapped bond

Rating	Current benchmark spread (bp)	Spread factor	Stress test (bp)	Duration (yrs)	RCM (%)	Change in RCM (%)
AAA	130	3	34	15	5.1	
AA	145	5.25	53	15	9.5	185
Α	180	6.75	91	15	13.5	265

Source: Barclays Capital

We would not expect a material impact on insurers' overall capital requirements Figure 7 shows that if the monolines are downgraded to AA (or lower) then we could see the capital requirements under the UK regulations increase by almost 2x (or over 2.5x if the downgrades are more acute). Any hedging or protection on these wrapped securities could reduce the net capital impact of the monoline downgrades. In addition, given the relatively limited exposures to monolines in the sector, we would not expect a material impact on the overall capital requirements of insurers.

Figure 8: European bank disclosure on monoline exposure

European banks	Monoline exposure
ABN	Has not disclosed and is in close period.
AIB	No direct exposure and immaterial indirect exposure.
Banco Popular	"Have no exposure whatsoever".
Bank of Ireland	€120mm, €20mm of which is off balance sheet. Exposure is gross of any wraps.
BBVA	No exposure.
BNP	Has not disclosed exposure.
Commerzbank	€55mn of direct exposure. No numbers for indirect.
Credit Agricole	€800mm of the €2.5bn writedown is related to ACA.
Credit Suisse	"Some risk, not significant".
Danske Bank	Within conduit Polonius, ~€300mn of CDOs are guaranteed by AA-banks or AAA-insurance.
Deutsche Bank	No numerical, "Do not hedge exposures with monolines and have not bought meaningful protection from them".  May have some direct credit exposure and would likely be affected to some extent if larger one went down.
Deutsche Postbank	640mm exposure to wrapped structures. Credit, 610mm direct exposure. Municipal bond portfolio size not disclosed, although average AA rating on underlying municipals.
Dexia	€6bn Indirect exposure to ~Ambac guaranteed assets (at the Dexia level). 73% public sector, 18% project finance, 9% ABS. No Ambac CDOs. At FSA level – has €3.5bn of Ambac guaranteed investments and has also bought ~€1bn of reinsurance from Ambac.
DNB Nor	No direct exposure, ~£100mn of indirect exposure.
Glitnir	Not aware of any exposure.
HSBC	No info ahead of results.
Kaupthing	No direct exposure and insignificant indirect exposure.
Landsbanki	"No exposure".
Mediobanca	"We have no exposure".
RBS	Has not disclosed and is in close period.
RZB	Very small. €7mn of indirect exposure.
Santander	€320mm - related to Altamira conduit.
SEB	"Very limited".
Societe Generale	Net counterparty exposure of €1.2bn after €550mn of provisions for 2007.
Swedbank	"No exposure to monolines".
UBS	No info ahead of results.
Unicredito	No direct. Indirect exposure not yet available.

Source: Company presentations and investor relations

Figure 9: European insurer disclosure on monolines exposure

Insurer	Comment		N	禁禁 上漢法	N. P. S.
Axa	<€750mn - monoline v	vrapped securities in the UK with pr	offt fund.		
Aegon	6900mn - Represents i	monoline protection on \$1.2bn of a	AAA segment of sub	prime exposure.	
Allianz	"Minor" exposure via I	Oresdner. Part of a £10bn hedge on	an €18bn AB\$ portfo	ollo.	
Generall	€70mn - €34mn of dir	ect exposure to MBIA, FSA and Amb	oac bonds plus €42m	of wrapped bonds.	
ING	€955mn - Diversified o	over eight monolines and mix of cre-	dit enhancement/pr	otection.	
Prudential	No material exposure	and would not be forced sellers on a	ny downgrade.		
ZFS	<€1,000bn - represent	s wrapped securities split 50/50 US/	/non-US.		
Hannover Re	"Small" exposure to w	rapped product.			Bygger et
Munich Re	<€500mn - represents	wrapped securities.			
Scor	€83mn - répresents w	rapped securities, Approx. 50% issu	ed by municipals.		
Swiss Re*	€1,500mn - wrapped e	exposures across six monolines (mos	stly MBIA/Ambac).		

Note: Swiss Re also has  $\in$ 10bn of notional Financial Guarantee reinsurance exposure (78% public finance, 22% structured). Of this,  $\in$ 250mn is RMBS related. Source: Company presentations and investor relations

Figure 10: US banks disclosure on monolines exposure

US institution	Monoline exposure	
Bank of America	\$5,1bn of insured CDO exposure - no specific disclosure regarding monolines.	
BB&T	"Not material"	
Bear Steams	"Merchant banking funds own ACA stake, company exposure is not material, other monolines are benign and fully reserved, almost none on wrapped CDOs, some tradi and debt/CDS".	
Citigroup	\$10.5bn of hedged counterparty exposures - significant portion of this to monoline	
JPM	Did not answer direct question on conference call.	
Lehman Brothers	"Net exposure to monolines after hedges and credit reserves is minimal".	
Merrill Lynch	\$19.9bn of gross exposure for ABS CDOs; carrying value of \$3.5bn after hedges, MT adjustments.	M and credit valuation
Morgan Stanley	\$),5bn through its Utah-based ILC, \$1.5bn of wrapped municipal bonds, \$761mn (n	et) counterparty exposure,
Wachovia	\$2.2bn of hedged CDO exposure with monoline counterparties.	

Source: Company presentations and investor relations

## Credit market implications

Although the credit spreads of monolines and financial institutions potentially exposed to monoline downgrades have already widened to reflect the deteriorating outlook for the sector, we believe that, over the short to medium term, valuations will continue to be buffeted by headline risk.

The direct implications for the wider market are, however, to some extent limited — only MBIA insurance Corp is a member of the CDX and most companies in the sector have limited index-eligible debt. None of the monolines are index-included in European cash or CDS indices. Nevertheless, there are certainly indirect ramifications on the broader market, primarily via the negative sentiment generated by newsflow.

Meetings between regulators and US banks are at an early stage; few concrete details about the structure of a bank-led recapitalisation are known. The last attempted government-sponsored resolution for a financial market problem – the M-LEC "super-SIV" – suffered from such opacity and eventually failed. This is a possible outcome of these talks. Yet, because the broader implications of non-functioning monolines are so severe, we do believe that regulators and banks will be strongly incentivised to reach a workable solution.

# Rate cut: A bearish signal for credit?

Ulf Erlandsson, Graham Rennison

The Federal Reserve's 75bp surprise cut of the fed funds rate this week has important implications for the credit market. Empirically, there is a strong link between the inception of a sustained period of rate cuts and increases in speculative-grade default rates over the short to medium term. Moreover, with lending standards being flagged explicitly as a growing concern, we revisit our quantitative frameworks for analysing survey data. We project the January 2008 C&J lending standards net number of respondents reporting a tightening to be 34%, a significant uptick to the bearish side from the November number of 19%.

# Bearish signal or forcefully pre-emptive move?

Although the timing and scale of the FOMC's inter-meeting rate cut this week may well have been motivated by the extreme equity market volatility over the preceding days, there are also indications from the Fed that they do see further concerns in the credit markets. Specifically, the second sentence of the FOMC press release of 22 January 2008 says:

"While strains in short-term funding markets have eased somewhat, broader financial market conditions have continued to deteriorate and credit has tightened further for some businesses and households."

These concerns come at a time when there is increasing interest from a broad range of commentators on lending standard surveys from the world's central banks. The highlighting of this comment in the press release suggests to us that the tightening in corporate lending standards, non-economical as well as economical, that we saw in H2 07 may well have continued. Potentially, the Federal Reserve has some preliminary indications on the outcome of the Senior Loan Officer Survey, due to be around the official FOMC meeting on 29-30 January. In normal circumstances, the closing date of the survey would be around now, as it is conducted (with some discretion) in the two weeks prior to the FOMC meeting.

Based on a quantitative approach, not taking into account the FOMC statement, we estimate that the January survey will show around a net 34% commercial and industrial (C&I) lending standards tightening, with most of the risk to this forecast on the upside. We base this forecast on the Q4 data together with recent negative lending standard numbers in Europe and the UK (see ECB Lending survey – the credit perspective, 18 January, 2008 and Lending standards constriction: The UK joins in, 4 January 2008) . If our forecast materialises, tightening would be markedly up from 19.2% in November 2007. Further detail on the methodology behind the forecast is provided below.

Figure 11 gives an idea why a number in the 30%+ range could be worrying as a signal for an economic slowdown. It overlays C&I lending standards net tightening with NBER official recession dates over 1967-2007. The dashed line indicates the 34% forecast based on our statistical model. As we can see, the past five recessions have been preceded by significant tightening of lending standards with the only false signal around the LTCM crisis in 1998. Obviously, this signal should be interpreted in conjunction with incoming macro economic data and a broader economic perspective. Please refer to "Forecast revision: US federal funds outlook" in this *Alpha* for Barclays Capital's house view on the US economic outlook. For a perspective of the recent strong tightening data in Europe, please see "ECB bank lending survey suggest credit conditions moving to recessionary levels", *Global Economic Daily I*, 18 January 2008).

A further expose of the relationship between the business and credit cycles and the lending standards data can be found in "The Credit Cycle and the Business Cycle: New Findings Using the Loan Officer Opinion Survey" (Journal of Money, Credit and Banking, 2006) by Donald Lown and Cara Morgan. In an earlier paper: "The Credit Crunch" (Brooking's Papers on Economic Activity, 1991), Ben Bernanke and Cara Morgan find a significant effect of the 1990-91 credit crunch on the severity of that recession. They argue, however, that the reduction in bank lending effect on growth at that time was fairly small.

100 C&I lending standards (% net tightening, LH scale) NBER recessions 80 BarCap Q1 08 forecast of C&I tightening 60 40 No standards reported 20 n -20 \*4 40 lan 67 lan 72 lan 77 lan 82 Jan 87 Jan 92 Jan 97 Jan 02 Jan 07

Figure 11: C&I lending standards tightening and the business cycle

Source: Federal Reserve, Barclays Capital

Taken together, with the recent FOMC statement as the most pronounced data point, these earlier discussions indicate to us that the Federal Reserve is cognisant of the tightening in credit standards that is occurring. Global lending standards trends are clearly indicating a rapid tightening too (Figure 12).

Region Tightening Date Historical Euro 41.0% 17 Jan 07 70 Fed ECB IJK 42.2% 3 Jan 2008 60 US 19.5% (frc 34%) 5 Nov 07 BOE . Boj 50 Japan -4.0% 23 Jan 08 40 30 20 10 0 -10 -20 -30 -40 Jul 01 Aug 05 Jan 07 Mar 00 Nov 02 Apr 04

Figure 12: Global C&I lending standards tightening monitor

Source: Federal Reserve, European Central Bank, Bank of England, Bank of Japan, Barclays Capital

The tightening of corporate lending standards indicated in survey studies last year appears to have correctly anticipated the downturn in the credit cycle. With the default of Quebecor, a Canadian company in the CDX.HY9 index, the increase in speculative grade default rates postulated in our empirical model of lending standards and the

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default cycle, gives the first tentative signs of an actual turn in the default cycle as well. Recently, Moody's upgraded its default projection for US speculative grade to 5.3% for FY 08, just a shade south of our forecast of 5.4% (see *Q4 lending standards: Tighter again*, 6 November 2007).

## Forecasting the C&I tightening of the Q1 08 survey

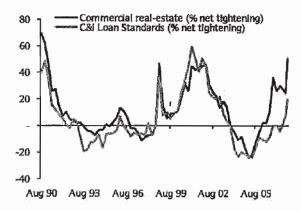
Similar to earlier studies, we project a C&I tightening number in the new survey based on a displacement between commercial real-estate lending standards and C&I lending standards. As Figure 13 shows, these variables have correlated very closely over the past two years, with only a displacement in the past few quarters. This displacement appears to be driven by commercial real estate being hit earlier and harder than C&I lending, which sits well with the subprime crisis being the initial driver of the current credit wee.

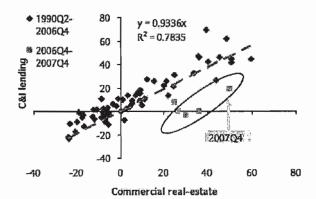
In the right hand panel, we see the direct statistical relationship between the variables. Using the estimated correlation coefficient, we can infer that the Q4 commercial realestate tightening number of 50% net tightening should imply a C&I tightening of 46%. We believe that this gap will not close instantaneously<sup>1</sup>, but potentially close by a factor of  $\frac{1}{2}$  per quarter. So, if the net 50% tightening in commercial real estate remains over this quarter, a scenario which is not implausible in our view, we would compute our forecast as  $19.2\% + 0.5 \cdot (46\%-19.2\%) = 34\%$  of net C&I tightening.

One can vary the assumptions a bit on this. For example, if commercial real-estate tightening hits 60%, we would expect a number around 38% of C&I instead. If there is a quicker catch up (change the factor from 0.5 to 0.75), the number would be 40%. The recent European numbers certainly suggest a higher number than the 34% in the basic forecast.

We do not incorporate the recent rate cut into this forecast as it has come very close in time to the actual survey. There is a further discussion on the empirical relationship between rate cuts and adjustment in lending standards in the section below.

Figure 13: Historical correlation between commercial real-estate and C&I lending (LHS) and regression analysis (RHS)





Source: Federal Reserve, Barclays Capital

<sup>&</sup>lt;sup>1</sup> We see strong auto-correlation in the regression errors over the past few quarters. There is no "best way" to treat this temporary auto-correlation from an econometric standpoint, hence we resort to a more ad hoc approach in terms of the reversion of this error term.

# The rate cut and the default cycle – assessing the empirical evidence

What effect can the Fed's reduction of the fed funds target rate be expected to have on the credit cycle? The initial reaction in credit markets was positive, but with a quick reversion. Markets may come to agree with most central bankers that monetary policy is a fairly blunt instrument with a substantial lagging effect. It is often assumed that there is a lag of around 12-18 months before interest rate decisions actually affect the "real" macro-economy.

Figure 14 tells an interesting story of how the Fed has, or has not, managed to avoid downturns in the credit cycle/upturns in default rates. In 1991 and again in 2001/02, the Federal Reserve was cutting rates fairly aggressively for a sustained period, and we see default rates peak in the middle of those cuts. Hence, history from the two latest credit cycles suggests that the Fed has not been able avoid rapid increases in default rates in the initial stage of the downturn despite being quite active. This is hardly surprising. If one expects a lagging effect of monetary policy, and the central bank does not have perfect foresight, then the rate cuts should be seen as measures to reduce the severity of a coming trough rather than avoiding a downturn completely.

Today's situation shows up as an important juncture in this chart. We are seeing fairly rapid cuts after prolonged stability in rates. This type of rate cut regime (highlighted in Figure 14) has historical precedents in 1989, 1996, 1998 and 2000. On each of these occasions, default rates appear to have risen from recent historical lows in the year following the inception of the rate cut regime, as shown by the arrows in the figure. In 1989 and 2000, we see a full-blown downtum in the credit cycle, whereas 1995 and 1998 saw far more moderate increases in default rates that eventually retraced to some extent.

14 Fed cutting rates Fed cutting rates Rate cut regime Moody's 1y speculative grade default rate 12 ed Funds target rate, % 10 8 6 2 Default rate increase from start of the first rate cut until 1 year lates Sep 91 Sep 01 Sep 87 Sep 89 Sep 93 Sep 07 Sep 95 Sep 97 Sep 99 Sep 03 Sep 05

Figure 14: Rate cuts and the default cycle

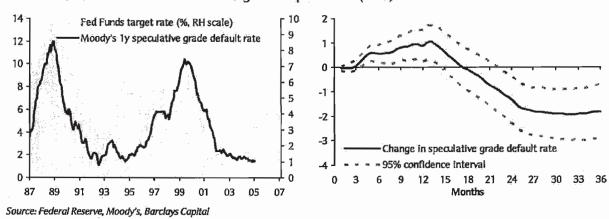
Source: Federal Reserve, Moody's, Barclays Capital

# Lead/lag relationship between rate cuts and changes in default rates

We provide some more detail on the lead/lag dynamics between rate cuts and default rates in Figure 15. In the left-hand panel, we overlay the fed funds target rate with default rates two years forward, and see a close relationship between the two. Hence, from this fairly simple exercise, we can identify a strong leading relationship where Fed cuts appear to have the largest effect at a two-year horizon. Cutting rates appears to decrease defaults roughly 18-24 months forward, pretty much as one would expect on the basis of the central bankers' rule of thumb of monetary policy. 1995 proves to be slightly different: we can see that the lead/lag relationship in that period was substantially shorter as the pick-up in default rates (on a forward basis) appears to the left of the rate cut period of 1995-1996.

In the right hand panel, we plot the impulse-response function of defaults to cuts in the fed funds target rate. The function, based on a vector auto-regression, allows us to analyse the time-varying effect of rate cuts in a statistically sound way. We can see that empirically, a rate cut has started to push default rates down only at around an 18-month horizon (where the dark line crosses below the horizontal axis). Before that, we have actually seen increases in default rates. From a statistical viewpoint, this appears to be a strongly significant dynamic, as can be inferred from the relatively tight confidence interval.

Figure 15: Fed funds target rate versus 24-month forward speculative grade default rates (LHS) and behaviour of default rates following a 100bp rate cut (RHS)



# Lead/lag relationship between rate cuts and easing of lending standards

As rates are lowered, there is a direct link to the cost of funding. In this credit crisis, however, it seems that it is the banks' relative unwillingness to lend that is the problem rather than the cost of credit. In the FOMC statement, which followed the recent intermeeting rate cut, Chairman Bernanke explicitly referred to lending standards:

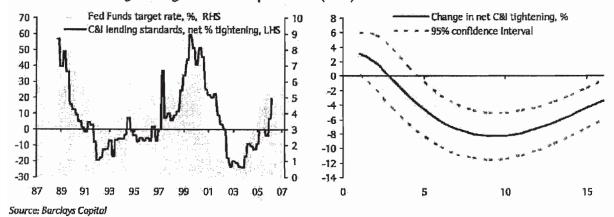
"While strains in short-term funding markets have eased somewhat, broader financial market conditions have continued to deteriorate and credit has tightened further for some businesses and households."

A natural question, then, is how rate cuts affect banks' willingness to lend. An indication of this can be seen in Figure 16, which shows how decreases in the fed funds rate are paired with a reduction in tightening of commercial and industrial (C&I) lending

standards approximately one year after the rate change. This implies that recent rate cuts, if we look at historical evidence, should start having an effect on lending conditions in H2 08 to H1 09.

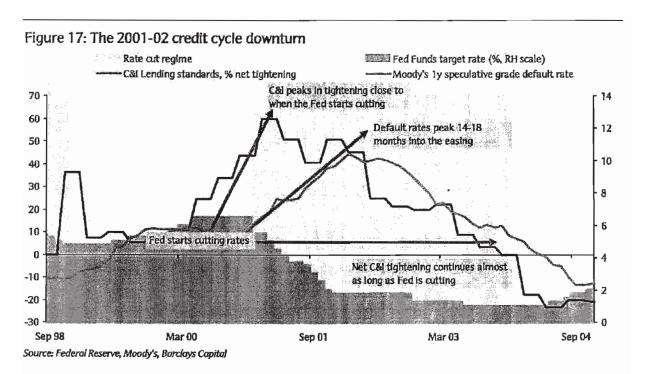
We have previously argued that a tightening in commercial and industrial (C&I) lending standards appears to be a good leading indicator of a pick-up in default rates (*Lending standards and default rates: Some numbers*, 5 October 2007). The Q4 survey showed a net 19.2% tightening, which in our framework has translated into a projected speculative grade default rate of 5.4% towards the end of 2008.

Figure 16: Fed funds target rate versus C&I lending tightening 12-month forward (LHS) and behaviour of C&I tightening after a 100bp rate cut (RHS)



## The credit cycle turn of 2001/02 - a closer look

Lastly, we take a closer look at the last downturn in the credit cycle, as in Figure 17. In 2000, the fed funds target rate was held constant, whereas the C&I lending was continually tightening. The Federal Reserve starts cutting rates in the first half of 2001, which is the same time at which C&I tightening peaked. Lending standards kept on tightening at a rate of around 50% per quarter for the next 12 months, and really started their trend towards credit easing 12 months later. Secondly, default rates peaked in mid 2002, between 14-18 months after the monetary policy easing had started. Hence, rate cuts were positively correlated with increases in defaults in the short term in the period after the initial wave of rate cuts. Thirdly, we see that the Fed was continually cutting rates throughout the period where default rates were above 6%.



## Select references

### Barclays Capital lending standards, credit and default cycle publications

Lending standards constriction: The UK joins in, 4 January 2008

Q4 lending standards: Tighter again, 6 November 2007

Global Credit Market Strategic Outlook 2008, 12 December 2007

European Alpha Anticipator: European lending standards and impact on credit, 12 October, 2007

Lending standards and default rates: Some numbers, 5 October 2007

Yield curve inversions, bank credit tightening, and the credit cycle, 8 February 2007

"Approaching the turning point? An econometric analysis" in: Global Credit Market Strategic Outlook 2007, 11 December 2006

#### External publications/articles

Berg, J, van Rixtel, A, Ferrando, A, de Bondt, G and Scopel, S (2005), *The Bank Lending Survey for the euro area, ECB Occasional Paper Series no.* 23.

Bernanke, B. and Lown, C. (1991). *The Credit Crunch*, Brookings Paper on Economic Activity 1991 (2):205-247.

Driver, R. (2007). *The Bank of England Credit Conditions Survey*, Bank of England Monetary Assessment and Strategy Division, available from www.bankofengland.co.uk/publications/quarterlybulleting/qb070303.pdf.

Lown, C. and Morgan, D.P. (2006). The Credit Cycle and the Business Cycle: New Findings Using the Loan Officer Opinion Survey, Journal of Money, Credit and Banking, 38:1575-1597.

# Forecast revision: US federal funds outlook

Dean Maki, Julia Coronado

The FOMC cut the federal funds rate and discount rate by 75bp Tuesday morning in an inter-meeting move. In response to this, we revised our forecast for the federal funds rate. We now think it will be cut 50bp to 3.0% at next week's meeting and by another 50bp to 2.5% at the March meeting. Following that cut, we expect the Fed to keep the federal funds rate at 2.5% through the end of 2008. The combination of a more aggressive Fed easing combined with a notable stock market decline has not led us to change our economic forecast. We continue to expect GDP growth of 1.0% in Q4 07 and Q1 08, followed by a gradual pick-up to 3.0% in H2 08.

Figure 18: Forecast summary: New versus old

	Q4 07	Q1 08	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
Fed Fund							keri 🕹 i		
New	4.25	2.50	2.50	2.50	2.50	2.75	3.25	3.25	3.25
Old	4.25	3.50	3.50	3.50	3.50	3.75	4,25	4.25	4.25

Source: Barclays Capital

We view Tuesday's move as a response to recent declines in global stock markets, so market movements will likely be the biggest factor in determining what the Fed does next week. If the stock market tone improves markedly by the time of next week's meeting, the Fed may consider a smaller, 25bp cut, but if it continues to fall sharply, another 75bp cut is possible. Our baseline forecast of 50bp assumes markets do not improve materially by next week but that the pace of decline does not intensify. Economic data will likely play a more important role by the time of the March 18 meeting, but stock market movements also will likely remain a critical variable. We do not expect a dramatic improvement in economic data by the time of that meeting. Tuesday's move signals that the Fed very much wants front-load easing, so we are most comfortable looking for a 50bp ease in March. We forecast the tone of economic data will have improved by the time of the April 30 meeting and so think the Fed will remain on hold at 2.5% at that meeting and keep the fed funds rate there through year-end. We believe the Fed will begin taking back rate cuts in early 2009, with the federal funds rate ending 2009 at 3.25%.

The statement announcing the decision said that the FOMC "took this action in view of a weakening of the economic outlook and increasing downside risks to growth." It noted that "strains in short-term funding markets have eased somewhat," but that "broader financial market conditions have continued to deteriorate and credit has tightened further for some businesses and households." It added that "incoming information indicates a deepening of the housing contraction as well as some softening in labour markets."

In our view, the near-term risk raised by the stock market drop, which appeared to be spurred by fears of a global economic downturn, is the loss of business confidence. If businesses stop hiring workers and investing in new capital, the economic outlook could deteriorate sharply, as has been the case in most prior recessions. The loss of wealth also poses a risk to consumer spending over the medium term, although changes in wealth affect spending gradually and the current decline would start being felt in H2 08. While the jump in the unemployment rate in December 2007 was an

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indication of slowing economic activity, initial claims for unemployment insurance have declined in January, suggesting that labour market conditions remain soft but are not deteriorating sharply, as typically happens during recessions. Likewise, while the December ISM manufacturing index pointed to contraction, the ISM nonmanufacturing index indicated that the service sector, which has been the engine of job growth during the current expansion, continues to grow. Thus we still conclude that the economy, while weak, is not currently on the brink of a recession and that the key indicator will be the health of the labour market.



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# EXHIBIT 84

## **MarketWatch**

# Banks may need \$143 billion in fresh capital

By Alistair Barr

Published: Jan 25, 2008 6:48 p.m. ET

# If bond-insurer ratings are cut deeply, banks' capital will be tested: study

SAN FRANCISCO (MarketWatch) -- If bond insurers are downgraded a lot, banks will need as much as \$143 billion in fresh capital to absorb the impact, Barclays Capital estimated Friday.

Citigroup Inc. <u>C, -1.48%</u> Merrill Lynch & Co. <u>MER, -1.94%</u> Bank of America Corp. <u>BAC, -2.03%</u> and Wachovia Corp. <u>WB, -0.65%</u> are among U.S. banks most exposed to bond insurers, or "monolines" as they're also known, Barclays Capital wrote to investors.

In Europe, Credit Agricole (004507), Dexia (000379613) and Societe Generale (013080) are among the most exposed, the firm said.

The consequences of bond-insurer weakness are so severe that regulators and banks in the United States have strong incentives to pump more capital into the sector to avoid downgrades, according to Barclays Capital analyst Paul Fenner-Leitao.

"Meetings between regulators and U.S. banks are at an early stage; few concrete details about the structure of a bank-led recapitalisation are known," he said.

The last attempted government-sponsored resolution for a financial-market problem -- the M-LEC "super-SIV" -- failed and the current bond-insurer talks could suffer a similar fate, Fenner-Leitao added.

Two bond insurers -- Ambac Financial Group <u>ABK, -1.61%</u> and Security Capital Assurance Ltd. <u>SCA, +0.00%</u> -- already have had their crucial AAA ratings cut by Fitch Ratings. Without top ratings, bond insurers' business models may be imperiled.

Downgrades also cut the value of the guarantees bond insurers have sold. Some banks have hedged complex mortgage-related securities known as collateralized debt obligations, or CDOs, by buying these monoline guarantees. That means more write-downs could come if bond insurers are downgraded. <u>See full story.</u>

Fenner-Leitao said that his \$143 billion estimate is based on "very aggressive" assumptions about how exposed banks are to bond insurers and how far monoline downgrades will go.

The estimate assumes that 75% of insured structured products like CDOs are held by banks. It is also based on bond-insurer ratings being cut to A from AAA and big write-downs following those downgrades, he indicated.

A more benign scenario, in which a quarter of insured structured products are held by banks and bond insurers are cut to AA from AAA, would leave banks needing as little as \$22 billion in fresh capital, according to Fenner-Leitao.

"Yet because the broader implications of nonfunctioning monolines are so severe, we do believe that regulators and banks will be strongly incentivised to reach a workable solution," he said.

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# EXHIBIT 85

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#### **WORLD BUSINESS**

# UBS Takes a \$14 Billion Write-Off

By DAVID JOLLY JAN. 30, 2008

PARIS — UBS, the largest Swiss bank, said Wednesday that it would write off \$14 billion in losses on the troubled U.S. housing market and post a net loss for 2007.

The write-offs will result in a record fourth-quarter net loss of approximately 12.5 billion Swiss francs, or \$11.4 billion, the bank said in a preliminary earnings statement. It also said it expected to report a full-year net loss of 4.4 billion francs for 2007.

The numbers "include around \$12 billion in losses on positions related to the U.S. subprime mortgage market and approximately \$2 billion on other positions related to the U.S. residential mortgage market," the bank said.

UBS said Dec. 10 that it was writing off \$10 billion of subprime investments for the fourth quarter, so the numbers Wednesday represented \$4 billion more in losses than it had previously disclosed.

"Once again this is a negative surprise," said Andreas Weese, a banking analyst at UniCredit in Munich. "I had assumed additional losses, but not of this magnitude."

The bank had already announced a \$4.4 billion loss on subprime investments in the third quarter. The figures Wednesday bring its 2007 U.S. residential mortgage-related losses to \$18.4 billion.

Mr. Weese said the bank had not provided much detail, but he theorized that the downgrades of "monoline" bond insurers in the United States had weighed on the results.

Because the values of U.S. mortgage securities have continued to deteriorate, there could still be more write-offs to come in the first quarter of 2008, Mr. Weese said.

UBS shares in Zurich slipped 64 centimes, or 1.3 percent, to 46.12 francs.

The UBS chairman, Marcel Ospel, has come under fire from investors for the recent losses and for plans to raise billions of dollars in capital from investors in the Middle East and the Government of Singapore Investment Corp.

Influential Swiss investors, including Dominique Biedermann, director of the Ethos Investment Foundation, which manages money for the Swiss public pension funds, has called for an independent audit of the bank's accounts and for shareholders to elect a new chairman. Ospel's tenure as chairman is set to end in April, but he must face shareholders at a special meeting scheduled for next month to approve the funding plans.

The bank, formed through a merger of Union Bank of Switzerland and Swiss Bank Corp. in June 1998, had never reported an annual net loss before, said Christoph Meier, a UBS spokesman.

Banks worldwide have announced more than \$135 billion in credit losses and write-downs since the turmoil in the U.S. housing market started last year, and some analysts estimate that total write-downs could reach \$800 billion.

UBS said it would provide further details on its financial performance on Feb. 14, when it publishes its final full-year and fourth quarter 2007 results.

The bank also said it had taken efforts to strengthen its capital base in the last quarter.

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