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January 30, 2008

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Re: Bond Insurer Transparency; Open Source Research

Ladies and Gentlemen:

In an attempt to improve the level of discourse in the marketplace regarding potential losses in the bond insurance industry, we are releasing today a dynamic financial model (the "Open Source Model") that contains extensive detail on the precise CDO and related

exposures of the insurance operating subsidiaries of both MBIA and Ambac. The Open Source Model can be customized to allow users to estimate losses using their own assumptions.<sup>1</sup>

**The Open Source Model has been posted on the Internet at:**

<http://www.yousendit.com/download/Mmd0UXVuQzMzeUxIRGc9PQ>

Our primary goal is to initiate what we call “Open Source Research” where all market participants can have equal access to the primary source data and construct their own views of losses without reliance on the analytical judgment of rating agencies or the bond insurance industry. By focusing the discussion on a fundamental, data-driven approach, we expect that the dissemination of the Open Source Model will enable market participants and regulators to accurately estimate probable losses by relying on rigorous fundamental analysis of specific credit exposures, a departure from relying on the opaque, faith-based pronouncements that the bond insurance industry has promulgated to the marketplace.

In order to facilitate a comprehensive and accurate estimate of probable losses in the bond insurers’ exposures, we believe that you, as their regulators, must require the bond insurance companies to provide full disclosure to the market of their entire portfolio of insured exposures. This should include not only confirmatory data on CDO and related RMBS exposures detailed in the Open Source Model, but also municipal and other structured finance exposures, especially those exposures that have been or are in remediation, are rated below-investment grade, require claim payments or otherwise have been or are carried on so-called “classified watch lists.” Additionally, companies must disclose which exposures have been reinsured along with the names and specific exposures of their reinsurance counterparties. Only with a complete understanding of all of the bond insurers’ gross exposures to potential losses can the market gain a complete understanding of the insurers’ capital adequacy.

If the bond insurers truly believed that greater disclosure would help confirm the veracity of their loss estimates, one would have expected them to provide full transparency to the marketplace. Indeed, given the announced plan for a public rights offering by MBIA, it is difficult to see how that offering will proceed without adequate disclosure. If disclosing more granular detail to the market would confirm the bond insurers’ capital adequacy, it begs the question as to why have they not already done so? We believe the answer to this question can be found in the conclusion of a detailed analysis of the facts that are presented below. The detailed methodologies and assumptions in the Open Source Model are disclosed in the attached Exhibit.

The Open Source Model will materially improve the quality of information in the market in the following ways:

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<sup>1</sup> This model is quite large – approximately 110Mb. Each recalculation of this model on a typical workstation – 3.4GHz Dual Core Pentium D with 3Gb of 800 MHz FSB DDR2 RAM – benchmarks at 25-30 minutes. We run this model on an advanced workstation – twin Intel 3.16GHz Quad Core Xeon X5460’s (a total of eight cores sharing 2 x 6Mb of L2 Cache on a 1333MHz front-side bus) with 4Gb of 800MHz DDR2 ECC SDRAM. Recalculating the model on the advanced workstation takes approximately 45 seconds.

- All of MBIA's CDOs of ABS and CDO-Squareds from 2005-2007 are identified by name, information MBIA has been unwilling to disclose to date.
- All of the underlying collateral within the CDOs of both Ambac and MBIA are identified by CUSIP, along with a description of collateral type, par outstanding, and original and current rating, where available.
- The data distinguish among subprime, midprime, Alt-A, and prime RMBS collateral within CDOs, material distinctions that MBIA and Ambac have failed to provide in their disclosures.
- Users of the model can drill down multiple layers to identify and analyze individual credits of not just the outer CDOs, but those exposures of the CDOs owned by outer CDOs ("inner CDOs") and further, to identify the specific exposures of the "inner-inner CDOs" owned by those inner CDOs that are, in turn, owned by the outer CDOs that have been guaranteed by MBIA and Ambac.
- The Open Source Model may contain information on collateral within inner CDOs and inner CDOs of inner CDOs that even the bond insurers themselves do not have.<sup>2</sup>

How did we compile this data? For some time, we have endeavored to obtain high quality data on MBIA's and Ambac's ABS CDO portfolios. Recently, a global bank (the "Global Bank") has contributed to our open source research by collecting the detailed information described above. The Global Bank has identified all but a handful of the thousands of subprime, midprime, prime, Alt-A, HELOC and Closed-End Second RMBS and CDO transactions guaranteed by MBIA and Ambac, and provided a CUSIP-by-CUSIP analysis of all CDOs, CDOs within CDOs, and CDOs within CDOs within CDOs by stressing the underlying exposures on a CUSIP-by-CUSIP basis within these transactions. While we do not know the specific pecuniary interest of the Global Bank that has contributed to this project, you should assume that it (like we) have bearish positions on the bond insurers' holding companies.

We have reviewed the methodology and source data underlying the model and we believe them to be reasonable; however, we can make no representations regarding the accuracy or completeness of the materials. To improve the model, we welcome any suggestions from you and/or other market participants. To the extent that the companies themselves continue to refuse to make full and fair disclosure regarding their exposures, we hope that others update and publicly release their own improved models and valuation analyses.

Under the assumptions used in the Open Source Model, the losses to MBIA and Ambac from these exposures are materially higher than suggested by the rating agencies or the

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<sup>2</sup> In an 8-K filed 1/9/08, MBIA states, "The modeling of multi-sector CDOs requires analysis of both direct ABS as well as CDO collateral within the multi-sector CDOs, known as "inner securitizations," and we do not consistently have access to all the detailed information necessary to project every component of each inner securitization."

bond insurers themselves. They are closer, in fact, to public estimates by certain other global banks:

- Ambac will incur approximately \$11.61 billion of losses on its net RMBS and ABS CDO exposures.

**Summary of Ambac Projected Losses**

*(\$ in millions)*

<b>Collateral Type</b>	<b>Loss to Net Par Insured</b>
ABS CDOs	\$6,953.1
Additional CDO <sup>2</sup> Commitment	498.3
Closed End Seconds	1,884.3
HELOCs	1,002.3
Direct Subprime	700.7
Direct Alt/A	566.9
<b>Total</b>	<b>\$11,605.5</b>

- MBIA will incur approximately \$11.63 billion of losses on its net RMBS and ABS CDO exposures and \$12.56 billion of losses if one reincorporates certain 2007 CDOs of ABS that have been reinsured.<sup>3</sup>

**Summary of MBIA Projected Losses**

*(\$ in millions)*

<b>Collateral Type</b>	<b>Loss to Net Par Insured</b>	<b>Loss to Gross Par Insured</b>
ABS CDOs	\$5,737.6	\$6,665.6
Closed End Seconds	2,809.6	2,809.6
HELOCs	2,948.6	2,948.6
Direct Subprime	8.5	8.5
Direct Alt/A	129.5	129.5
<b>Total</b>	<b>\$11,633.8</b>	<b>\$12,561.8</b>

- MBIA will have an additional \$928 million of losses on just those 2007 ABS CDOs it reinsured with a reinsurer which we believe to be Channel Re, in the likely event that Channel Re will not have the wherewithal to make good on its obligations to MBIA.
- MBIA's and Ambac's losses may be larger when the questionable creditworthiness of their reinsurers is incorporated into this analysis.

<sup>3</sup> Assumes that only the ABS CDOs have been reinsured

### **Other Important Findings**

- We believe the Open Source Model is more rigorous and complete than the analysis published by the rating agencies whom we believe have not done a security-by-security analysis within the inner CDOs of MBIA's and Ambac's insured CDOs.<sup>4</sup>
- The Open Source Model allows users to evaluate the losses of inner CDO collateral by looking at the specific collateral underlying each individual inner CDO rather than by using generalized assumptions. By failing to analyze the specific underlying collateral of all inner CDO exposures, we believe that rating agency loss results are understated by billions of dollars as these additional losses typically impair the AAA tranches guaranteed by the insurers dollar for dollar.
- From 2005-2007, the total universe of ABS CDOs outstanding is comprised of approximately 534 deals. While MBIA and Ambac appear to have only limited direct exposure to this pool (having directly guaranteed only 25 and 28 CDOs, respectively), in fact, MBIA and Ambac are actually exposed to at least 420 and 389, respectively, of the 534 total CDOs outstanding if you include the CDO exposures within the CDOs they have guaranteed. The fact that MBIA and Ambac have direct or indirect exposure to 79% and 73%, respectively, of all ABS CDOs issued from 2005-2007 directly contradicts the insurers' public statements about their "highly selective" approach to CDO guarantees.
- MBIA and Ambac's exposure to nearly the entire universe of CDOs also compounds their exposure to many other classes of RMBS securities with MBIA and Ambac being exposed to 3,131 and 4,179 unique tranches of ABS respectively. These large numbers of exposures will likely cause MBIA and Ambac to experience losses similar to that of the entire RMBS market.

The Open Source Model provides information useful for determining the extent of CDO losses in the bond insurance, banking industry, and capital markets, at large.

- The Open Source Model estimates that probable losses on the entire universe of 534 ABS CDOs issued between 2005-2007 will be approximately \$231 billion, with super senior tranches accounting for approximately \$92 billion of this total.
- Assuming a combined market share of guarantees to ABS CDOs for MBIA and Ambac of approximately 48%<sup>5</sup> implies that the bond insurance industry as a whole stands to incur losses of \$27.5 billion from ABS CDOs alone, before taking into consideration the

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<sup>4</sup> In S&P's report dated 12/19/07 titled "Detailed Results of Subprime Stress Test of Financial Guarantors", S&P states that "Incremental losses on that portion of CDO collateral made up of tranches of other CDOs were determined based on the typical asset composition of such CDOs."

<sup>5</sup> S&P's Detailed Results of Subprime Stress Test of Financial Guarantors, December 19, 2007, Page 11.

questionable creditworthiness of its reinsurance agreements and additional exposures to troubled direct HELOC and Closed-End Second mortgage exposures.

We believe the assumptions used to calculate the above losses provide a reasonable basis for estimating probable losses on these exposures. We believe many of the model's assumptions are conservative. For example, the Open Source Model intentionally makes overly conservative assumptions because of a lack of data or for simplification purposes. The Open Source Model assumes:

- Zero losses on \$5.3 billion of MBIA CDO exposure to European mezzanine and other collateral, CDOs insured in the secondary market or multi-sector CDOs insured prior to 2004 that have not been identified.
- Zero losses on CMBS, Prime RMBS, CLOs, Corporate Bonds and Other ABS securities (Auto Loans, Student Loans, Credit Card Securitizations, etc.).
- Zero losses on pre-2005 CDOs of ABS and direct RMBS exposures.
- Zero losses on RMBS or CDO securities held in bond insurer investment portfolios.
- Zero losses on direct HELOC exposure for which detailed underlying data is unavailable.<sup>6</sup>

### **Open Source Model version 1.0**

The Open Source Model is a preliminary attempt to provide the marketplace with a comprehensive set of fundamental data and a construct for analyzing the information using customizable assumptions. There are limitations to the Open Source Model v1.0. For example:

- While CUSIP information is listed for direct RMBS exposures, including HELOCs and Closed-End Second mortgages, the assumptions that drive loss estimates for these securities are not currently dynamic. These losses were estimated by the Global Bank's model and assumptions which its proprietary trading desk uses to value RMBS securities based on loan-level performance data.
- The model assumes that the performance of a sample set consisting of 1,267 subprime (44% of sample, FICO below 625) and midprime (56% of sample, FICO of 625-700) RMBS securities within the outer CDOs is representative of the entire universe of subprime and midprime RMBS securities held by all inner CDOs. We and the Global Bank believe that the performance of this data set is a fair representation of the entire

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<sup>6</sup> For example, Ambac has \$3.3 billion of net par exposure to two 2007-vintage HELOCs underwritten by Wachovia for which performance data was not available. The Open Source Model assumes zero losses on these exposures because of a failure to obtain detailed underlying data with which to estimate losses.

universe of similarly rated and identified securities. Furthermore, if one accepts MBIA's and Ambac's public statements that they have been highly selective in the RMBS securities they have guaranteed, one can safely assume that using the performance of this 1,267 security sample set to estimate the performance of RMBS securities within inner CDOs is necessarily a conservative assumption because these inner RMBS securities were not selected by the bond insurers.

- The impact of reinsurance is imperfectly captured by the model. For example, reinsurance detail is not readily available for direct RMBS exposures for either MBIA or Ambac. Losses are only analyzed on a gross basis before reinsurance for a portion of MBIA's CDO transactions. The credit quality of the reinsurers is also not considered by the model.

We encourage all market participants to use the Open Source Model as a tool to arrive at their own conclusions and report their findings to the market to further improve the process of evaluating the risk of loss in the bond insurance industry. With each iteration and enhancement, the Open Source Model will become an even more useful tool for regulators, rating agencies, and investors.

In particular, we would encourage the rating agencies to update their analysis, specifically their approach to estimating losses on inner CDOs. With the detail provided by the Open Source Model, a full analysis of all collateral within the inner CDOs can be accomplished, including those securities held by the inner CDOs within the inner CDOs. As stated above, we believe that incorporating these additional layers of detail will likely increase rating agency loss estimates by billions of dollars as additional losses likely impair the AAA tranches of the primary CDOs on a dollar-for-dollar basis.

### **The Self-Graded Exam: Historical Disclosures and Understated Losses**

Until now, investors have had to estimate bond insurer potential losses based on the limited information that is available. We believe that this has enabled the bond insurers to understate the amount of losses they report in their SEC and statutory filings because it is difficult for an outsider to validate their estimates.

The critical importance for the capital markets of ascertaining the amount of these losses is self evident. Perhaps most importantly for policyholders, the accuracy of management's judgment in estimating losses is critical because it determines how much capital can be extracted from an insurance subsidiary for the benefit of holding company debt and equity holders. It is also essential for determining GAAP book value and earnings for analysts and investors. By using their own estimates for losses, rather than a market-based measure as required by FAS 133 and FAS 157, without appropriate regulatory intervention, the bond insurers effectively can determine the amount of their statutory capital and policyholder surplus for the purpose of calculating amounts available for holding company dividends.

We are concerned by statements made by Ambac management on their Q4 call that it can take \$50 million of dividends each quarter from its insurer without regulatory approval. Ambac's (and MBIA's and other bond insurers') ability to extract a dividend from its insurance operating subsidiary is a function of the accuracy of management's estimates of probable and estimable losses. If Ambac has understated its losses (whether knowingly or otherwise), it has overstated its statutory surplus, thereby inflating the amount of dividends that can be distributed to the holding company without regulatory approval.

We note that, between the third and fourth quarter of last year, Ambac changed its methodology for estimating CDO losses. The change increased Ambac's reserves for losses by \$1.1 billion. Based on the conclusions of the Open Source Model, we believe the amount of Ambac's actual CDO losses is more than six times Ambac's management estimates and that these losses are both probable and estimable. Because a bond insurer's calculation of statutory capital is effectively a self-graded exam, one would expect management to estimate losses at a level which allows the insurance subsidiary to pay holding company dividends. Rarely is a man willing to sign his own death warrant. At a minimum, one has to question the credibility of management's estimates when 90 days prior, the Company stated that all mark-to-market losses would reverse to zero in future years. Now, Ambac management states that all but \$1.1 billion of its \$5.4 billion in mark-to-market losses will reverse to zero over time. MBIA management's recent statements admitting that now some of its mark-to-market losses are true economic losses when months earlier they said that all mark-to-market losses would reverse to zero tell an identical story.

### **It Is Hard To Fill A Bucket With A Hole At The Bottom**

As the principal regulators for the bond insurers, we understand that you are presently doing what you can to assist the bond insurers in raising additional capital to meet obligations to policyholders. We believe such an approach should begin with preserving whatever capital the bond insurers have today. Both MBIA and Ambac have stated publicly that they can and will continue to take ordinary dividends from their insurance subsidiaries in order to pay holding company expenses, fund dividends to shareholders, and pay interest on holding company debts.

MBIA has stated that it can take \$450 million of dividends beginning April 2008 and Ambac has said that it can take \$50 million per quarter beginning this month. If you continue to allow ordinary dividends to go to holding companies, you will be depriving the policyholders of capital that is needed to meet their obligations. In addition, we believe that by permitting regular dividends to the holding companies, you risk undermining your capital raising efforts. Stated simply: it is hard to fill a bucket with a hole at the bottom.

We encourage you to complete your own analysis of the bond insurers' RMBS and CDO exposures. In addition, it is essential that you evaluate the bond insurers' other exposures. While the media and analysts have focused on the bond insurers' RMBS and CDO exposures, we believe there are significant losses embedded in non-taxpayer supported municipal



obligations including hospitals and other healthcare exposures, project finance including tax-exempt housing, toll roads, and other infrastructure guarantees. These losses have been hidden because of the bond insurers' ability to "remediate" exposures through refinancings and mergers with other bond insurer guaranteed issuers, or due to otherwise inadequate disclosure.

The market's loss of confidence in the bond insurers' creditworthiness will make these loss postponement transactions more difficult (and likely impossible) in the future. Accordingly, we believe that historically low default rates for non-general obligation, muni-related bonds understate the level of losses that will be sustained on a going-forward basis. We expect, therefore, that non-taxpayer supported municipal finance will begin to generate material losses in the future.

If, as we expect, the results of your analysis show significant losses that will reduce and/or eliminate policyholders' surplus, you can place the insurers under supervision, or take other remedial efforts, so as to increase the probability that policyholders' obligations can be paid.

Lastly on the subject of transparency, MBIA's fourth quarter conference call scheduled for tomorrow will be "listen only" and will not allow live questions from analysts and investors. The company will only answer questions it selects from those submitted by email in advance of the call. This is a further reduction in transparency to the markets from MBIA's typical earnings call where a select group of analysts and investors are screened and then permitted to ask questions. We intend to release the list of questions we email to MBIA to the public. We believe these questions will assist the markets in understanding the company. If the company thereafter chooses not to answer these questions, its silence will speak for itself.

We would like to meet with you and your advisers to discuss the Open Source Model and its conclusions in greater detail. We are available at your convenience.

Please note that Pershing manages funds that are in the business of trading – buying and selling – securities and credit default swaps. While Pershing currently maintains a net short position in MBIA Inc. and Ambac Financial Group and may have other positions in the industry, Pershing may change its position regarding the companies and possibly increase, decrease, dispose of, or change the form of its investment in the companies for any or no reason.

PERSHING SQUARE CAPITAL MANAGEMENT, L.P.

Respectfully submitted,



William A. Ackman

Encl.

January 30, 2008

Page 10 of 20

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January 30, 2008

Page 11 of 20

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January 30, 2008

Page 12 of 20

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**Exhibit 1: Conclusions, Methodology and Assumptions of Open Source Model****Ambac CDO Summary**

(\$ in millions)

Year Issued	CDO of ABS	Net Par	Ambac
		Insured	Loss
2004	Cheyne High Grade ABS CDO, Ltd.	\$780	-
2005	Duke Funding High Grade III Ltd.	1,524	-
2005	Palmer Square PLC	988	-
2005	Hereford Street ABS CDO I, Ltd.	986	-
2005	Pascal CDO, Ltd.	856	-
2005	Tremonia CDO 2005-1 PLC	815	-
2005	High Grade Structured Credit CDO 2005-1 Ltd	624	-
2005	Belle Haven ABS CDO 2005-1, Ltd.	588	62
2006	Diversey Harbor ABS CDO, Ltd.	1,875	264
2006	Belle Haven ABS CDO 2006-1, Ltd.	1,676	254
2006	Ridgeway Court Funding I, Ltd.	1,570	412
2006	Duke Funding High Grade IV, Ltd.	1,313	254
2006	Duke Funding High Grade V, Ltd.	1,250	287
2006	McKinley Funding III, Ltd.	1,187	464
2006	Millerton II High Grade ABS CDO, Ltd.	1,118	-
2006	Lancer Funding, Ltd.	950	-
2006	Cairn High Grade ABS CDO II Limited	820	173
2006	ESP Funding I, Ltd.	657	-
2006	Longshore CDO Funding 2006-1, Ltd.	614	-
2007	Kleros Preferred Funding VI, Ltd.	2,400	1,131
2007	Ridgeway Court Funding II, Ltd.	1,950	686
2007	Citation High Grade ABS CDO I, Ltd.	941	140
2007	Fiorente Funding Limited	723	189
2007	CDO of Mezzanine ABS (Adams Square II)	510	406
	Subtotal	\$26,715	\$4,723
	<b>CDO of CDO</b>		
2005	CDO of Mezzanine ABS (Class V Funding I)	\$81	-
2007	CDO of Mezzanine ABS (Class V Funding IV)	1,400	1,317
2007	CDO of Mezzanine ABS (888 Tactical Funding)	500	469
2007	CDO of Mezzanine ABS (Class V Funding III)	500	443
	Subtotal	\$2,481	\$2,230
	<b>Total</b>	<b>\$29,196</b>	<b>\$6,953</b>

## MBIA CDO Summary

(\$ in millions)

Year Issued	CDOs of High Grade U.S. ABS containing RMBS Collateral	Net Par	MBIA
		Insured	Loss
2004	TBD - no expected losses	\$656	TBD
2004	TBD - no expected losses	653	TBD
2005	TBD - no expected losses	600	TBD
2006	Broderick 2 CDO	1,118	351
2006	ART CDO 2006-1	828	210
2006	Wadsworth CDO	601	33
2006	Harp I CDO	723	3
2007	Jupiter V	1,190	677
2007	Broderick 3	1,203	758
2007	Newbury Street	1,684	389
2007	Highridge ABS CDO I	1,177	705
2007	Faxtor HG 2007-1	950	341
2007	Longshore 2007-III	896	378
2007	Bernoulli II	563	121
2007	Silver Marlin I	469	-
2007	Forge ABS High Grade CDO	450	106
2007	West Trade III	1,015	379
2007	Tazlina II	563	34
2007	Robeco High Grade I	413	123
2007	Biltmore 2007-1	375	15
	Subtotal	\$16,127	\$4,622
<b>CDOs of Mezzanine U.S. ABS containing RMBS Collateral</b>			
2004	TBD - no expected losses	\$198	TBD
2004	TBD - no expected losses	179	TBD
2004	TBD - no expected losses	218	TBD
2007	Sagittarius I	473	374
	Subtotal	\$1,068	\$374
<b>CDOs of Multi-Sector High Grade Collateral</b>			
2004	TBD - no expected losses	\$1,350	TBD
2005	TBD - no expected losses	1,430	TBD
2006	Logan II	1,115	181
2006	Menton III	1,077	373
2007	Logan III	990	188
2007	Menton IV - no expected losses	2,175	-
	Subtotal	\$8,137	\$742
	<b>Total</b>	<b>\$25,332</b>	<b>\$5,738</b>
Pre-2004	Multi-Sector CDOs insured prior to 2004	\$2,911	TBD
NA	Multi-Sector CDOs with European Mezzanine & Other Collateral	741	TBD
Pre-2004	Multi-Sector CDOs insured in the Secondary Market	1,623	TBD
	Subtotal	\$5,275	TBD
	<b>Grand Total</b>	<b>\$30,607</b>	<b>\$5,738</b>

Note: Due to insufficient detail surrounding \$5.3 billion of multi-sector CDOs insured prior to 2004, CDOs with European Mezzanine & Other Collateral, and CDOs insured in the Secondary Market, it was not possible to identify and analyze these exposures and losses have been conservatively estimated to be zero.

## **Deal Identification**

- Direct RMBS exposure was identified from the names disclosed by the companies themselves as well from recent credit watchlists from the rating agencies.
- MBIA described in general terms, but has not named, its CDO exposures, and Ambac has not named certain ABS CDOs and CDO-squareds.
- These unnamed transactions were identified by comparing statistics on the unnamed CDOs (AAA subordination, super senior subordination and relative size of collateral buckets) with those of CDOs of similar notional size and vintage to find a match.
- As a final check, the matched CDO's deal documents were reviewed (Offering Memorandum, Indenture, etc.) to confirm that the monoline was a party to the deal. There is no information on securities that the monolines have insured after issuance (so-called "secondary wraps") and are not disclosed.

## II. Loss Estimation of Underlying RMBS Collateral

Below is the loss table that was used in the estimation of the CDO losses to Ambac and MBIA. This table can be found in the Open Source Model and the loss assumptions can be changed by the user to generate losses under different scenarios.

Bucket	Tranche Writedown (%)									
	AltA - Fixed	AltA - ARM	Prime	Midprime	Subprime	CES	HELOC	CLO	CMBS	Other ABS
2005H1 AAA	0.53%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005H1 AA	31.29%	31.85%	0.00%	4.54%	4.54%	0.00%	0.00%	0.00%	0.00%	0.00%
2005H1 A	50.27%	61.81%	0.00%	3.93%	3.93%	0.00%	9.98%	0.00%	0.00%	0.00%
2005H1 BBB	47.55%	75.29%	0.00%	31.98%	31.98%	0.00%	27.74%	0.00%	0.00%	0.00%
2005H1 BB	75.19%	85.85%	0.00%	100.00%	100.00%	0.00%	51.17%	0.00%	0.00%	0.00%
2005H1 B	98.64%	85.85%	0.00%	100.00%	100.00%	0.00%	51.17%	0.00%	0.00%	0.00%
2005H2 AAA	8.86%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005H2 AA	60.13%	51.26%	0.00%	1.00%	1.00%	30.71%	25.75%	0.00%	0.00%	0.00%
2005H2 A	55.80%	85.28%	0.00%	10.85%	10.85%	53.00%	100.00%	0.00%	0.00%	0.00%
2005H2 BBB	61.16%	98.99%	0.00%	85.63%	85.63%	100.00%	100.00%	0.00%	0.00%	0.00%
2005H2 BB	67.28%	99.70%	0.00%	100.00%	100.00%	80.00%	70.80%	0.00%	0.00%	0.00%
2005H2 B	67.28%	99.70%	0.00%	100.00%	100.00%	100.00%	70.80%	0.00%	0.00%	0.00%
2006H1 AAA	19.81%	21.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2006H1 AA	81.20%	83.84%	0.00%	19.77%	19.77%	52.40%	100.00%	0.00%	0.00%	0.00%
2006H1 A	72.64%	96.50%	0.00%	53.50%	53.50%	87.08%	100.00%	0.00%	0.00%	0.00%
2006H1 BBB	72.72%	99.93%	0.00%	97.50%	97.50%	90.00%	87.50%	0.00%	0.00%	0.00%
2006H1 BB	78.51%	99.90%	0.00%	100.00%	100.00%	100.00%	87.50%	0.00%	0.00%	0.00%
2006H1 B	78.51%	99.90%	0.00%	100.00%	100.00%	100.00%	87.50%	0.00%	0.00%	0.00%
2006H2 AAA	21.06%	35.76%	0.00%	0.00%	0.00%	0.93%	0.00%	0.00%	0.00%	0.00%
2006H2 AA	91.23%	96.39%	0.00%	60.40%	60.40%	100.00%	100.00%	0.00%	0.00%	0.00%
2006H2 A	99.28%	99.68%	0.00%	97.42%	97.42%	90.00%	100.00%	0.00%	0.00%	0.00%
2006H2 BBB	99.40%	99.90%	0.00%	100.00%	100.00%	50.00%	81.92%	0.00%	0.00%	0.00%
2006H2 BB	99.40%	99.54%	0.00%	100.00%	100.00%	50.00%	81.92%	0.00%	0.00%	0.00%
2006H2 B	99.40%	99.54%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H1 AAA	11.26%	40.15%	0.00%	0.00%	0.00%	13.20%	0.00%	0.00%	0.00%	0.00%
2007H1 AA	90.85%	96.38%	0.00%	52.26%	52.26%	100.00%	100.00%	0.00%	0.00%	0.00%
2007H1 A	99.36%	99.93%	0.00%	97.45%	97.45%	100.00%	100.00%	0.00%	0.00%	0.00%
2007H1 BBB	99.49%	99.75%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H1 BB	100.00%	100.00%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H1 B	100.00%	100.00%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H2 AAA	11.26%	1.15%	0.00%	0.00%	0.00%	13.20%	0.00%	0.00%	0.00%	0.00%
2007H2 AA	90.85%	64.90%	0.00%	19.14%	19.14%	100.00%	100.00%	0.00%	0.00%	0.00%
2007H2 A	99.36%	98.97%	0.00%	100.00%	100.00%	100.00%	100.00%	0.00%	0.00%	0.00%
2007H2 BBB	99.49%	98.97%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H2 BB	100.00%	98.97%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%
2007H2 B	100.00%	98.97%	0.00%	100.00%	100.00%	100.00%	81.92%	0.00%	0.00%	0.00%

Answers to common questions:

Q: If the Alt-A delinquencies and default rates are a fraction of the subprime delinquency rates, why are the losses on Alt-A mortgage tranches worse for most vintage/rating subgroups in the Alt-A space than in the subprime space?

A: The rating agencies projected much lower default rates on Alt-A versus subprime. Therefore, the typical Alt-A transaction has only 6% subordination to the AAA classes at origination whereas a subprime transaction has 20-25%. Although the cumulative losses are expected to be



lower on Alt-A loans, the lower levels of over-collateralization cause Alt-A securities to perform worse than subprime for comparable ratings at origination.

Q: Why would the writedowns within a single asset class's rating/vintage subgroup be worse for higher rated securities?

A: The cash flow diversion tests, which determine which classes of a REMIC are distributed a particular month's principal collections, vary transaction by transaction. Because interest and principal is paid out to the lower classes in the early periods of a transaction before triggers are tripped, the ultimate losses to lower classes can sometimes be lower as a percentage of total initial collateral than higher rated tranches.

### III. Loss Estimation for Subprime and Midprime Mortgages

- A random sample of over 1,267 subprime and midprime mortgage securities that are held as collateral, or referenced in, Ambac and MBIA CDOs were selected. Subprime RMBS representing borrowers with FICO scores below 625 accounted for 44% of the sample set. Midprime RMBS representing borrowers with FICO between 625-700 accounted for 56% of the sample set.
- The securities were analyzed individually in an econometric model that projects prepayment, default and loss severity rates for subprime and midprime mortgage collateral based on:
  - Interest rate, unemployment rate, and Home Price Appreciation (“HPA”) assumptions<sup>7</sup>
  - Cumulative losses on subprime collateral of 9.2%, 19.9% and 24.2% for 2005, 2006, and 2007, respectively.
  - When known, deal specific performance metrics such as delinquencies and foreclosures were incorporated.
- The 1,267 securities were then grouped by half year vintage of securitization and original rating.
- Using the output from the 1,267 security sample set, it was possible to calculate the average principal writedown for each rating/vintage subgroup.

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<sup>7</sup> The HPA was assumed to be -10% for each of the first two years, implying -19% peak-to-trough decline, and then flat for the following three years. (In December S&P used a -10% peak to trough decrease in home prices, corresponding to a 15.5% cumulative loss on 2006 vintage subprime mortgages. S&P recently increased their cumulative loss assumptions to 19.5% approximating the loss assumptions in the model.)

- These statistics were then conservatively assumed to be reflective of the general subprime and midprime RMBS asset classes in all of MBIA and Ambac’s CDOs and applied to all subprime and midprime RMBS asset classes across the entire universe of CDOs.<sup>8</sup>

**IV. Loss Estimation for Alt-A Mortgages**

- Losses on the Alt-A securities were projected by taking the ratio of the Alt-A 60+ day delinquency percentage for each rating/vintage subgroup to the corresponding subprime rating/vintage delinquency percentage.
- Losses were then calculated by scaling the Alt-A delinquency and default rates by this ratio while using the same prepayment and severity curves as the subprime model described above.<sup>9</sup>
- This analysis was done separately for fixed-rate Alt-A and ARM Alt-A because the groups perform differently. The delinquency ratios ranged from as low as 12.71% of same-vintage subprime delinquencies for fixed rate Alt-A securitized in the first half of 2005 to 58.00% for ARM Alt-A originated in the second half of 2005.

**60+ days Delinquency percentage**

<b>Vintage</b>	<b>Fixed Rate Alt-A</b>	<b>ARM Alt-A</b>	<b>Subprime</b>
2005H1	3.4%	8.9%	26.7%
2005H2	3.9%	15.4%	26.6%
2006H1	7.2%	14.8%	25.7%
2006H2	6.2%	12.7%	23.8%
2007H1	4.1%	9.0%	17.1%
2007H2	2.7%	2.8%	5.1%

**60+ Delinquency ratio: Alt-A to subprime delinquency percentages**

<b>Vintage</b>	<b>Fixed Alt-A Delinquency Ratio</b>	<b>ARM Alt-A Delinquency Ratio</b>
2005H1	12.7%	33.5%
2005H2	14.8%	58.0%
2006H1	28.1%	57.5%

<sup>8</sup> Ambac and MBIA maintain that they carefully screen the bonds within the CDOs they agree to wrap. This implies that the bonds contained in the deals they finally agreed to wrap should be of higher quality compared to the overall market. The sampling used in this analysis was generated only from the supposedly better quality subprime and midprime mortgages within the Ambac and MBIA wrapped ABS CDOs, creating a conservative bias in favor of the monolines (since the subprime and midprime RMBS securities in the non-wrapped “inner” CDOs would logically be worse on average but the model assumes performance based on the better monoline-selected sample).

<sup>9</sup> Although the borrower in the Alt-A space is typically of a higher quality as measured by FICO score, a delinquent Alt-A mortgage has a similar likelihood of ultimately being foreclosed, or conversely being cured of its delinquency.

2006H2	25.9%	53.3%
2007H1	23.7%	52.6%
2007H2	52.1%	55.4%

**V. Loss Estimation for Closed-End Second Lien Mortgages and HELOCs**

- Prepayment, default and severity rates were estimated for each deal by keeping the prepayment speed consistent with last three months and continuing the prior three months' trend of increasing default rates.
- The same cash flow projection and loss methodology from the Subprime and Alt-A analysis was applied to HELOC and Second Lien bonds contained within the universe of ABS CDOs. There were 72 HELOCs and 872 Second Lien mortgage securities across all of the ABS CDOs to which MBIA and Ambac are exposed.
- All HELOCs and 24.7% of the Closed End Seconds were analyzed and the loss performance was used as the overall assumption of losses per subgroup of vintage/rating.

**VI. Loss Estimation for Prime RMBS, CMBS, CLOs, Corporate Bonds and Other ABS (Student Loans, Auto Loans, Credit Cards, etc.)**

- The Open Source Model assumes ZERO losses for all of these securities

**VII. Loss Estimation for ABS CDO Tranches**

- The above loss assumptions on RMBS collateral were applied recursively down three levels to the mortgage securities in the inner CDOs of the Ambac- and MBIA-wrapped CDOs, as well as the inner CDOs within these inner CDOs.
- Each deal is assumed to have cash flow triggers to divert interest and mitigate principal loss. The model assumes that two years of interest cash flow is diverted from the junior CDO tranches and paid as principal. The junior tranche size was assumed to be 5% of the capital structure on High Grade CDOs and 15% on Mezzanine CDOs. The interest rate assumed on the collateral was LIBOR+0.75% for High Grade and LIBOR+2.5% for Mezzanine collateral.
- Including the impairment of “inner CDO” tranches as a result of RMBS collateral losses within the “inner CDO” increased losses in the “outer CDOs” by 30% over the losses generated solely from RMBS securities in the “outer CDOs.” Including losses on the RMBS assets of the inner CDOs held by the inner CDOs, increased final losses to the primary “outer CDOs” by an additional 2%, implying that losses converge fairly quickly, and looking at a fourth layer (i.e., the CDOs within the CDO within the CDO within the CDO) would not change the losses materially.

## VIII. Additional Statistics

- Data Universe
  - 534 ABS CDOs issued in 2005-2007 (some synthetic / private transactions may be excluded)
  - Total losses across 2005-2007 ABS CDOs universe of \$231 billion
  - Total losses to all supersenior tranches of \$92 billion
  
- MBIA
  - Direct exposure to 25 2005-2007 ABS CDOs
  - These ABS CDOs in turn hold at least 216 underlying ABS CDOs
  - Total exposure increases to at least 420 underlying ABS CDOs at the third layer – 79% of total CDO universe
  - Across all deals, exposed to at least 3,131 unique securities in total
  
- Ambac
  - Direct exposure to 28 2005-2007 ABS CDOs
  - These ABS CDOs in turn hold at least 245 underlying ABS CDOs
  - Total exposure increases to at least 389 underlying ABS CDOs – 73% of total CDO universe
  - Across all deals, exposed to at least 4,179 unique cusips