NAIC National Association of Insurance Commissioners & The Center for Insurance Policy and Research
Capital Markets Special Report

The NAIC's Capital Markets Bureau monitors developments in the capital markets globally and analyzes their potential impact on the investment portfolios of US insurance companies. A list of archived Capital Markets Bureau Special Reports is available via the index

Insurance Company CDO Exposure

As of year end 2009, insurance company exposure to collateralized debt obligations, or CDOs, was $30.7 billion on a par value basis and $23.8 billion on a book adjusted carrying basis. Life insurance companies were responsible for 90% of this exposure; property and casualty, 10%. CDOs only comprise a small portion of insurance company structured investments, as they were approximately 0.6% of insurance company cash and invested assets as of year end 2009, but they have shown to be a volatile asset class during the recent financial crisis. The credit risk of these investments is dependent on the asset type(s) within the underlying portfolio as well as structural features and investment management decisions.

What are CDOs?

CDOs are structured finance securities that are collateralized by a pool of bonds, bank loans and/or other debt instruments. Principal and interest income earned on the underlying pool is used to pay investors' interest (typically semi-annually or quarterly) and principal at maturity (on average, 10 years). CDOs may be broken down into three subsets: (1) those that are collateralized primarily by bank loans; that is, predominantly below investment grade broadly syndicated leveraged bank loans or (separately) middle market loans (that is, loans to companies with less than or equal to $500 million in gross revenues and less than or equal to $50 million in EBITDA) are referred to as collateralized loan obligations, or CLOs;(2) collateralized bond obligations, or CBOs, consist predominantly of high yield bonds or investment grade corporate bonds or emerging market corporate and/or sovereign bonds (also known as EM CDOs); and (3) CDOs, which are securitized by debt instruments such as trust preferred securities (TruPS); and structured finance CDOs which are securitized by asset backed securities (ABS), residential mortgage backed securities (RMBS); commercial mortgage backed securities (CMBS); or notes issued by other CDOs or CLOs (the latter are referred to as CDO-squared).

In general, there are three primary structures for CDOs, CBOs and CLOs. The most common for all three is cash flow, whereby principal and interest income generated by the underlying portfolio is used to pay debt service to the noteholders. Typically these transactions are not actively traded; they are eligible for limited trading activity in accordance with investment parameters as defined in the respective indentures during a reinvestment period in the first two to five years of the transaction's life. During this time, the asset manager may purchase or sell collateral to improve portfolio credit quality. Sales activity is classified by the asset manager as discretionary, credit risk (when a credit impaired asset is sold), credit improved (when an underlying asset is sold at a higher price than for which it was purchased) or defaulted. After the reinvestment period has ended, additional assets may be purchased with proceeds from loan prepayments or credit risk sale proceeds, which are also subject to the pre-set investment parameters. The second type of structure is market value. Most often the collateral pool of a market value structure consists of at least half in leveraged bank loans, with smaller allocations to a wide mix of asset types including high yield bonds, special situation investments, and equities. Unlike the cash flow structure, the market value structure is actively managed and

allows for unlimited trading in accordance with the portfolio's investment guidelines that are defined in the indenture. Therefore, income to pay noteholder principal and interest is generated from gains and losses through trading activity. Lastly, synthetic structures are more complex in that they reference a pool of underlying assets consisting of corporate bonds (high yield or investment grade), leveraged bank loans or other structured finance debt instruments, through credit default swap (CDS) confirmations with an approved swap counterparty, and in accordance with ISDA requirements. The "referenced assets" of synthetic CDOs or CLOs may be static portfolios (i.e. not tradeable) or they may be actively managed.

Note that there is a difference between a CMBS or RMBS CDO and a traditional CMBS, RMBS, or Re-REMIC (resecuritized real estate mortgage investment conduit). CMBS are securitized by a static pool of commercial mortgage loans; RMBS are securitized by a static pool of residential mortgage loans; and Re-REMIC is the re-securitization of a static pool of previously issued RMBS (or CMBS) from the same RMBS (or CMBS) issuance or several different issuances. A Re-REMIC may be collateralized by one security (known as a Single-Class Re-REMIC), or it may be collateralized by several classes from several transactions. A CMBS CDO is collateralized by securities issued by CMBS transactions. A RMBS CDO is collateralized by a pool of securities issued by RMBS transactions.

CPDOs, or constant proportion debt obligations, were a variation of CDOs that first appeared in the market in 2006 and were a leveraged form of credit derivatives backed by investment in an index of debt securities. Noteholders receive returns based on the shortfall between the transaction's net asset value (NAV; i.e. sum of cash plus mark-to-market of the reference portfolio) and present value of future payments to be made by the special purpose vehicle (SPV). If the shortfall decreases to zero, or if the NAV falls below a certain threshold (typically 10% of the reference portfolio's notional amount), then the CPDO would be unwound. In 2008 CPDOs experienced rapid deterioration in NAV once volatility entered the market and credit spreads widened to unprecedented levels. The deterioration in NAV was so severe that the ability of the special purpose vehicle to make future principal and interest payments was doubtful. As a result, the majority of these transactions experienced downgrades by the NRSROs. Since then, some transactions have been unwound, and questions have arisen as to the validity of the NRSRO credit risk models for these transactions when they were initially rated. To our knowledge, as of year end 2009, no insurance companies had invested in CPDOs.

Insurance company exposure

As of year end 2009, insurance companies' largest CDO exposure was in CLOs, which comprised approximately half of all insurance company investments (on a par value basis). CMBS CDOs were the second largest exposure at almost 15%, followed by ABS/RMBS CDOs at 9%, TruPS CDOs at 8% and investment grade corporate synthetic CDOs at 7%.

	Total Par Value ($mil):	% of CDO/CLO Portfolio (Par Value)	Total BACV ($ mil):	% of Portfolio (BACV)
CLOs:	$15,183	49.50%	$13,765	57.90%
CMBS CDOs:	$4,582	14.90%	$3,264	0.60%
ABS/RMBS CDOs *:	$2,745	9.00%	$989	4.20%
TruPS CDOs:	$2,480	8.10%	$1,620	13.70%
Investment Grade (IG) Synthetic CDO:	$2,231	7.30%	$1,646	0.70%
CBOs:	$726	2.40%	$603	6.80%
Euro Synthetic IG CDO:	$321	1.00%	$186	0.20%
Project finance CDO:	$299	1.00%	$294	0.80%
CDO-squareds:	$281	0.90%	$150	4.20%
Market Value CDO/CLO:	$197	0.60%	$175	2.50%
Emerging Market CDO:	$107	0.40%	$105	1.20%
CDO of equity and hedge funds:	$97	0.30%	$97	6.90%
Euro CLO (includes synthetic):	$57	0.20%	$53	0.40%
Other CDO:	$1,367	4.50%	$821	0.40%
	$30,674	100.00%	$23,768	100.70%

**includes both cash flow and synthetic structures*

When year end 2010 data is available, it will be interesting to draw a comparison to year end 2009 exposure, both on an overall basis as well as relative to shifts in and out CDOs securitized by the different underlying asset types - especially given new CDO issuance significantly declined since early 2008, and many transactions (particularly ABS/RMBS CDOs) were liquidated.

NRSRO ratings history

In recent years, ABS/RMBS CDOs have undergone severe and multiple ratings downgrades by the three major NRSROs due to the negative impact of delinquent, defaulted and foreclosed residential mortgage loans held in the RMBS pools, especially those containing subprime and adjustable rate mortgages (ARMs). Many of these transactions continue to be on negative watch, and a large number of them have been liquidated. Consequently, a new issue market for these types of transactions for the most part does not exist, and valuations on the outstanding securities have dropped substantially.

To a lesser extent, an increase in defaults and deferrals on the underlying portfolios of U.S. bank-issued TruPS CDOs also resulted in downgrade activity for these transactions. Current statistics show that the amount of new deferrals has declined, and a small number have resumed timely payment due in part to merger and acquisition activity in the banking sector. However, the number of new defaults has not decreased, and because of continued stress in the banking sector, the underlying credit quality of U.S. bank-issued TruPS CDOs going forward remains uncertain.

On the other hand, CLOs; that is, those collateralized primarily by senior secured leveraged bank loans, have experienced a more positive ratings trend. While some CLOs had experienced negative ratings activity by the NRSROs due to deteriorating credit quality, since last year, many of these same transactions have since had rating upgrades due to improved credit quality and deal performance metrics, such as overcollateralization and interest coverage, and in some cases due to increased credit enhancement following the paydown of senior notes.

CLO manager consolidation

Beginning in 2004-2005, there was an influx of new CLO managers to the market. These represented asset managers that were new altogether to CLOs as well as newly created asset management shops derived from one or more seasoned investment professionals from longstanding CLO asset management firms deciding to venture on their own. As the financial crisis materialized in late 2007, a 'survival of the fittest' sentiment emerged. Since 2009, CLO management has undergone an increase in merger and acquisition activity. This includes both voluntary and involuntary manager replacements. In some cases, smaller managers chose to exit a failing business; that is, they were unable to obtain sufficient capital to continue their CLO business operations. In other cases parent companies chose to divest a business that no longer suited its overall business strategy. In some instances, and in accordance with respective indenture requirements, a majority of senior noteholders (the controlling class) could vote to have the CDO manager removed and replaced. According to an S&P survey, as of year end 2010 there were 128 CLO managers, down from 139 as of year end 2009. To a lesser degree, there has also been some replacement manager activity with ABS/RMBS CDO managers and CMBS CDO managers since 2007.

In addition to being investors, several insurance companies have asset management subsidiaries that are CDO, CBO and/or CLO asset managers. These include Babson Capital Management (subsidiary of MassMutual), New York Life Investment Management, Prudential Investment Management and Allstate Investment Management.

CDO, CBO and CLO asset managers typically receive a senior management fee as a percentage of the portfolio's par value, as well as a subordinate management fee, after the senior noteholders have been paid, of a lesser percentage of the total portfolio par value. This subordinate fee may also be viewed as an incentive fee for the managers to make prudent investment decisions for the benefit of investors throughout the whole capital structure.

CLOs – survivors of the financial crisis

CLOs are generally securitized by at least 90% below investment grade senior secured bank loans with smaller allocations allowable for other investments such as high yield bonds, second lien bank loans, and/or structured finance investments. While these transactions had experienced an increase in the amount of poor credit quality bank loans (specifically an increase in the amount of bank loans rated CCC and defaulted that peaked in the third quarter of 2009), overall they appear to have survived the recent market turmoil, due in part to a low default rate environment, sound structural features and prudent investment management decisions.

While new CLO issuance froze for a time (perhaps in part due to 'guilt by association' with ABS/RMBS CDOs), new pipeline has been revived given the low default rate environment of the leveraged loan market, and because investors are attracted to the newer vintage structures that include lower leverage, better loan covenants and generally a more conservative capital structure.

Positive momentum after a market crash

Multiple downgrades of ABS/RMBS CDOs by the NRSROs, along with a significant drop in valuation of these securities, had disastrous effects on investor portfolios. Consequently, for a while investors lost appetite for investing in CDOs - regardless of the underlying asset type - and new issue pipeline had all but ceased. This was particularly true for ABS/RMBS CDOs. While investors have been shy about returning to the market, new issue RMBS/ABS CDOs is for the most part non-existent.

On the other hand, in 2010 there was approximately $4 billion in new issuance in the CLO market compared to practically none in 2009. New CLO issuance for 2011 is expected to be around $10-$15 billion. Current market sentiment for CLOs suggests that investors are 'cautiously optimistic', as some have shown interest in adding to their current exposures in 2011 either through the primary or secondary market. Spreads on new issue AAAs are expected to be in the 100-125 bps range (over LIBOR) in 2011, as demand for CLO paper will likely result in spread tightening – spreads generally ranged between 150-190 bps for new issue AAA CLO

paper in 2010. CMBS CDO activity also persists since liquidity has returned to that market. An uptick in delinquencies in the underlying portfolios of commercial mortgage loans have, for the most part, been offset by loan modifications (particularly maturity extensions) and liquidation of small loan balances by special servicers.

In the following three sections, we refer to 'CDOs' collectively to include CDOs, CBOs and CLOs.

Dodd-Frank potential impact

The Dodd-Frank Wall Street Reform and Consumer Protection (Dodd-Frank) is expected to have an impact on the level of structured finance issuance given the credit risk retention requirement for securitizations. With respect to CDOs, it is still unclear as to whether the CDO manager or the CDO underwriter would be responsible for retaining the risk (i.e. which one would be designated as the 'securitizer'), and the consequences would be very different for each. In the near term, Dodd-Frank will not have any impact on issuance as details of the plan are still being worked out, and the regulatory change is not expected to be implemented until after 2011.

Understanding CDO investments

Insurance companies should follow a disciplined analytical process, which includes not only completing credit analysis, but also on-site meetings with the CDO asset managers, to fully understand the risk of these investments. Similarly, a thorough analytical process should also be conducted relative to considering new CDO investments.

In terms of monitoring CDO investments, insurance companies should obtain mark to market values on a regular basis to have a sense of what their investment is worth if the CDO's portfolio were to be liquidated at any given moment. Some CDO asset managers post daily, weekly or monthly mark-to-market pricing information on the underlying portfolio, along with other pertinent portfolio information on password-protected websites for their investors. Insurers should maintain open lines of communication with the asset managers to direct any questions about the underlying collateral and trading activity; discuss investment philosophy and strategy and trading limitations; to derive comfort with the experience of the investment professionals and any key man provisions; and to field structural questions - i.e. understanding the priority of payments in the waterfall and how/what would prevent interest and/or principal payment to any particular tranche. Dialogue with rating agency analysts with respect to initial ratings, may assist in understanding portfolio investment parameters, structure and modeling assumptions; and with respect to surveillance, in understanding reasoning for downgrade/upgrade activity or credit watch (positive/negative) status. It is also important to follow industry news – not only on a CDO basis but also relative to the underlying asset type.

In addition, we recommend that regulators not only review CDO industry research, but also leverage the knowledge of NAIC's Capital Markets Bureau for assistance in understanding the nature and risks of these investments. While CDOs comprise a small percentage of structured securities owned by insurance companies, they are a volatile asset class, as evidenced by the substantial distress experienced during the recent financial crisis. New issuance pipeline exists for certain asset types in the CDO market for 2011, but it is not expected to see levels of activity as in the years prior to 2008.

February 18, 2011
Major Insurer Share Prices

		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
Life	Aflac	$59.08	3.3	4.7	4.7	$57.22	$56.43	$56.43
	Ameriprise	64.73	1.3	12.5	12.5	63.87	57.55	57.55
	Genworth	13.99	2.9	6.5	6.5	13.59	13.14	13.14
	Lincoln	32.06	1.0	15.3	15.3	31.75	27.81	27.81
	MetLife	47.65	(1.2)	7.2	7.2	48.23	44.44	44.44
	Principal	34.69	6.6	6.5	6.5	32.53	32.56	32.56
	Protective	28.92	(0.4)	8.6	8.6	29.03	26.64	26.64
	Prudential	67.02	2.9	14.2	14.2	65.14	58.71	58.71
	UNUM	26.87	1.2	10.9	10.9	26.56	24.22	24.22
PC	ACE	$65.74	3.6	5.6	5.6	$63.44	$62.25	$62.25
	Axis Capital	37.81	1.2	5.4	5.4	37.36	35.88	35.88
	Allstate	32.11	2.3	0.7	0.7	31.39	31.88	31.88
	Arch Capital	90.12	(2.3)	2.4	2.4	92.26	88.05	88.05
	Cincinnati	34.18	1.8	7.9	7.9	33.58	31.69	31.69
	Chubb	61.31	3.6	2.8	2.8	59.17	59.64	59.64
	Everest Re	90.58	2.2	6.8	6.8	88.60	84.82	84.82
	Progressive	20.40	1.2	2.7	2.7	20.15	19.87	19.87
	Travelers	60.92	3.3	9.4	9.4	58.99	55.71	55.71
	WR Berkley	30.37	4.3	10.9	10.9	29.12	27.38	27.38
	XL	24.65	6.1	13.0	13.0	23.24	21.82	21.82
Other	AON	$52.93	6.1	15.0	15.0	$49.89	$46.01	$46.01
	AIG	41.51	(0.3)	(14.0)	(14.0)	41.63	48.27	48.27
	Assurant	41.71	4.3	8.3	8.3	40.00	38.52	38.52
	Fidelity National	14.26	1.6	4.2	4.2	14.04	13.68	13.68
	Hartford	30.80	3.5	16.3	16.3	29.75	26.49	26.49
	Marsh	30.78	6.9	12.6	12.6	28.80	27.34	27.34
Health	Aetna	$38.29	1.7	25.5	25.5	$37.65	$30.51	$30.51
	Cigna	43.13	0.5	17.6	17.6	42.92	36.66	36.66
	Humana	61.44	5.4	12.2	12.2	58.31	54.74	54.74
	United	42.84	1.1	18.6	18.6	42.38	36.11	36.11
	WellPoint	67.40	3.3	18.5	18.5	65.25	56.86	56.86
Monoline	Assured	$16.35	8.4	(7.6)	(7.6)	$15.08	$17.70	$17.70
	MBIA	12.05	6.8	0.5	0.5	11.28	11.99	11.99
	MGIC	9.33	(7.2)	(8.4)	(8.4)	10.05	10.19	10.19
	PMI	3.11	(6.9)	(5.8)	(5.8)	3.34	3.30	3.30
	Radian	7.38	(8.1)	(8.6)	(8.6)	8.03	8.07	8.07
	XL Capital	24.65	6.1	13.0	13.0	23.24	21.82	21.82

February 18, 2011
Major Market Variables

		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
Dow Jones Ind		12,391.25	1.0	7.0	7.0	12,273.26	11,577.51	11,577.51
S&P 500		1,343.01	1.0	6.8	6.8	1,329.15	1,257.64	1,257.64
S&P Financial		231.16	0.5	7.6	7.6	229.90	214.77	214.77
S&P Insurance		202.18	1.9	7.4	7.4	198.40	188.22	188.22
US Dollar $			Change %			Prior		
	/ Euro	$1.37	1.1	2.4	2.4	$1.36	$1.34	$1.34
	/ Crude Oil bbl	86.00	0.5	(6.7)	(6.7)	85.58	92.22	92.22
	/ Gold oz	1,388.20	2.1	(2.3)	(2.3)	1,359.90	1,420.78	1,420.78
Treasury Ylds %		%	Change			%	%	%
	1 Year	0.27	(0.03)	(0.01)	(0.01)	0.29	0.27	0.27
	10 Year	3.58	(0.05)	0.29	0.29	3.63	3.30	3.30
	30 Year	4.69	(0.00)	0.35	0.35	4.69	4.34	4.34
Corp Credit Spreads -bp			Change %			Prior		
	CDX.IG	79.35	(1.0)	(6.7)	(6.7)	80.12	85.00	85.00
	CDX.XO	156.5	4.3	(18.3)	(18.3)	150	191.67	191.67

Questions and comments are always welcome. Please contact the Capital Markets Bureau at **CapitalMarkets@naic.org**.

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