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Insurance Industry's Derivatives Exposure at Year-End 2012

On Jan. 9, 2013, the NAIC Capital Markets Bureau published a report titled, "An Update of the Insurance Industry's Derivatives Exposure," which analyzed insurance companies' derivatives holdings at year-end 2011. Although the insurance industry's exposure to derivatives in terms of book/adjusted carrying value (BACV) as of year-end 2012 continues to be quite small (\$42.2 billion, or less than 1% of \$5.4 trillion in total cash and invested assets at the end of 2012), the notional amount of the derivatives holdings was almost \$1.7 trillion. In addition, insurers' primary use of derivatives for hedging purposes (94.4% of notional amount held) makes it an important investment strategy to monitor. This special report reviews U.S. insurers' derivatives holdings at year-end 2012, in comparison with the industry's exposure at year-end 2011, highlighting any trends or changes. It also briefly discusses impending regulatory developments (e.g., mandatory central clearing of certain swaps) that are expected to impact the derivatives market in the near future.

Derivatives holdings and activity are reported in Schedule DB of insurance companies' quarterly and annual financial statements. In 2010, Schedule DB was revised to be more streamlined and yet provide more detailed and useful information regarding an insurance company's derivatives exposure and activity. Further enhancements were adopted in August 2012 to be effective for 2013 reporting. Continuing changes to reporting requirements are likely to reflect changes in the marketplace and different regulatory needs.

In general, insurance companies use derivative instruments to manage and mitigate a variety of risks. As of year-end 2012, a total of 264 insurance companies participated in the derivatives market, a reduction from year-end 2011 when 274 insurance companies had derivatives holdings; this reduction occurred across all participating insurer types. Of the year-end 2012 participants, 147 were life insurance companies, 97 were property/casualty (P/C) insurance companies, 17 were health insurance companies and three were fraternal insurance companies. Title insurance companies had no derivatives exposure in either 2011 or 2012. Insurance companies with derivatives exposure were domiciled in 45 states, with New York, Connecticut, Michigan, Minnesota and Massachusetts holding the largest notional amounts. Furthermore, there were more than 65,000 individual derivatives positions across the insurance industry. At year-end 2012, the average position size was approximately \$25.4 million in notional value — an increase from the \$22.8 million average notional amount at year-end 2011 — and the largest single position was about \$4.9 billion in notional value. This large derivatives position was a Consumer Price Index (CPI)-linked hedge set up by a P/C insurance company to manage a macroeconomic risk of consumer prices falling in a downturn.

Insurance Industry's Derivatives Holdings

As of year-end 2012, the notional value of derivatives (i.e., options, caps, floors, collars, swaps and forwards reported in Part A of Schedule DB and futures reported in Part B of Schedule DB) held by the insurance industry totaled almost \$1.7 trillion. This was a substantial 20.5% increase compared to year-end 2011, when the insurance industry held almost \$1.4 trillion in notional

value of derivatives, which, in turn, was a 28% increase from year-end 2010. Options accounted for the largest share of this increase, as discussed in more detail below.

According to statistics compiled by the Bank for International Settlement (BIS), the total notional amount outstanding of all derivatives (both over the counter and exchange-traded) worldwide as of year-end 2012, was \$687 trillion, a 2.5% decrease from the \$704 trillion outstanding at year-end 2011. Despite the year-over-year increase, the insurance industry's derivatives holdings were merely a fraction (0.24%) of the overall derivatives market.

Within the insurance industry, life insurance companies are the primary users of derivative instruments, representing 95.4% of the total notional value outstanding (or \$1.58 trillion notional value in holdings) at the end of 2012 (Table 1). This represents a 19.9% increase from \$1.32 trillion in notional amount of derivatives held by the life industry at the end of 2011. Meanwhile, P/C insurance companies, which account for a 4.5% share of the notional amount held by the insurance industry, increased their derivatives holdings by 33.9% from \$56 billion to \$75 billion year-over-year. Health and fraternal insurers accounted for minute (0.06% and 0.02%, respectively) shares of the overall industry's derivatives holdings in both years; while health companies increased their total notional amount held by 19.5% year-over-year, fraternal companies significantly reduced their total notional amount held by 52.6% from year-end 2011. The type of derivative contract most widely used by insurance companies is swaps, which represented a notional value of \$903.1 billion (or 54.4% of the insurance industry's derivatives holdings) as of year-end 2012, a 13.3% increase from year-end 2011. Options represented the second-largest type of derivative held, accounting for a notional value of \$669.2 billion (or 40.3% of the derivatives holdings), a sizeable 36.7% increase from year-end 2011. Futures and forwards contributed \$52.5 billion (or 3.2%) and \$35.7 billion (or 2.1%), respectively. While all derivative contract types showed a year-over-year increase in absolute total notional amount held, options gained more share versus year-end 2011 (when they contributed 35.5% of the derivatives holdings) and other contract types lost some share. Based on our analysis, it appears insurers increased their use of options in 2012 predominantly to hedge against interest rate risk, in anticipation of rising interest rates from historically low levels.

Table 1: 2012 Insurance Industry Derivatives Holdings by Derivative Type

<i>Notional Value (\$)</i>	<i>Swaps</i>	<i>Options</i>	<i>Futures</i>	<i>Forwards</i>	<i>Total</i>	<i>% of Total</i>
Life	881,842,089,160	618,036,070,896	50,562,712,569	33,805,833,560	1,584,246,706,185	95.4%
Property/Casualty	20,523,247,226	50,996,429,557	1,798,978,175	1,635,731,482	74,954,386,440	4.5%
Health	657,800,000	564,000	170,337,000	211,175,000	1,039,876,000	0.06%
Fraternal	118,305,383	157,480,000	592,750	-	276,378,133	0.02%
TOTAL	903,141,441,769	669,190,544,453	52,532,620,494	35,652,740,042	1,660,517,346,758	100.0%
% of Total	54.4%	40.3%	3.2%	2.1%	100.0%	

Although the market typically refers to notional values when referring to derivatives, it does not indicate the true economic exposure that an insurance company might face. For example, in the case of interest rate swaps, the notional value is used only to calculate the exchange of periodic cash flows. The notional value is never exchanged and would be a substantial overstatement of exposure. The NAIC also focuses on potential exposure that is a "statistically derived measure of the potential increase in derivative instrument credit risk exposure...resulting from future fluctuations in the underlying interest upon which derivative instruments are based." For example, for collars, swaps (other than credit default swaps) and forwards, the potential exposure is calculated using the following formula:

$$0.5\% \times \text{notional amount} \times \text{square root of remaining years to maturity}$$

For a credit default swap that is sold or written, the potential exposure is the larger of the notional amount or the maximum potential payment. For a credit default swap that is purchased, the potential exposure is zero.

Insurance Industry's Use of Derivatives for Hedging

Insurance companies use derivatives to implement various investment and portfolio strategies, such as hedging, replicating assets and generating income. As illustrated in Table 2, the primary use of derivatives in the insurance industry is hedging, with 94.4% of derivatives holdings at year-end 2012 used for hedging risk. The “other” use/purpose category accounted for 3.3% at year-end 2012, followed by replication (i.e., synthetic creation of an otherwise permissible investment) at 1.8% and income generation at 0.5%. Derivatives transactions in the “other” category might also have been used for hedging purposes, but might not have fit within the strict definition of hedging under the statutory accounting framework.

While all use/purpose categories except replication increased their absolute total notional amounts year-over-year, the income generation category witnessed the sharpest increase from \$218 million to \$8.8 billion (although it still remains a small overall contributor to derivatives holdings). This increase might be due in part to insurers’ efforts to generate additional income using derivatives in the continuing low interest-rate environment.

According to the *Statement of Statutory Accounting Principles No. 86—Accounting for Derivative Instruments and Hedging, Income Generation, and Replication (Synthetic Asset Transactions)* (SSAP No. 86), income generation transactions are defined as derivatives written or sold to generate additional income or return to the reporting entity. They include covered options, caps and floors (e.g., a reporting entity writes an equity call option on stock that it already owns). Because these transactions require writing derivatives, they expose the reporting entity to potential future liabilities for which the reporting entity receives a premium up front. As a result of this risk, dollar limitations and additional constraints are imposed requiring that the transactions be “covered” (i.e. asset(s) to fulfill potential obligations must already be held in the investment portfolio).

Table 2: 2012 Insurance Industry Derivatives Holdings by Purpose/Strategy

Notional Value (\$)	Hedging	Replication	Income Generation	Other	Total	% of Total
Life	1,520,827,889,547	27,542,095,741	1,618,043,247	34,258,677,650	1,584,246,706,185	95.4%
Property/Casualty	45,868,031,263	1,710,765,831	7,142,113,872	20,233,475,474	74,954,386,440	4.5%
Health	740,776,000	-	-	299,100,000	1,039,876,000	0.06%
Fraternal	276,378,133	-	-	-	276,378,133	0.02%
TOTAL	1,567,713,074,943	29,252,861,572	8,760,157,119	54,791,253,124	1,660,517,346,758	100.0%
% of Total	94.4%	1.8%	0.5%	3.3%	100.0%	

As with overall derivatives holdings, swaps and purchased options are the primary derivative instruments utilized by insurers to hedge various risks (Table 3).

Table 3: 2012 Insurance Industry Derivatives Holdings by Derivative Type and Purpose/Strategy

Notional Value (\$)	Hedging	Replication	Income Generation	Other	Total	% of Total
Swaps	864,743,417,454	28,941,546,572	97,560,922	9,358,916,821	903,141,441,769	54.4%
Purchased Options	520,714,722,878	311,315,000	8,458,759,639	40,789,384,188	570,274,181,705	34.3%
Written Options	97,863,969,174	-	1,770,400	1,050,623,174	98,916,362,748	6.0%
Futures	49,486,021,591	-	109,196,525	2,937,402,378	52,532,620,494	3.2%
Forwards	34,904,943,846	-	92,869,633	654,926,563	35,652,740,042	2.1%
TOTAL	1,567,713,074,943	29,252,861,572	8,760,157,119	54,791,253,124	1,660,517,346,758	100.0%

Table 4 provides a breakdown of the insurance industry’s exposure to swap derivatives by type of contract and type of insurer. Although fraternal insurance companies did not participate in the swaps/derivatives market in 2010, they did get involved in 2011 and remained in 2012, albeit to a small extent and only in foreign exchange swaps. Interest rate swaps are the most commonly used swap derivative (80.9% of all swaps held by insurance companies), followed by foreign exchange swaps (8.6%) and credit default swaps (4.4%). Similar to overall derivatives holdings, *life* insurance companies dominated the holdings of swaps, with a 97.6% share at

year-end 2012. Year-over-year, life and P/C insurance companies increased their use of swaps, while health and fraternal scaled back slightly their already small swaps holdings.

Additionally, while interest rate, foreign exchange and total return swaps witnessed an increase both in terms of their total notional amount and their share of the swaps holdings, credit default and other swaps declined year-over-year. Although interest rate swaps increased year-over-year based on notional amount and share of swaps holdings, they declined slightly as a percentage of total derivatives holdings (44.0% at year-end 2012 vs. 45.9% at year-end 2011).

Table 4: 2012 Insurance Industry Swaps Holdings by Type of Contract

<i>Notional Value (\$)</i>	<i>Life</i>	<i>Property/Casualty</i>	<i>Health</i>	<i>Fraternal</i>	<i>Total</i>	<i>% of Total Swaps</i>	<i>% of Total Derivatives</i>
Interest Rate	723,232,293,335	6,726,816,670	557,800,000	-	730,516,910,005	80.9%	44.0%
Foreign Exchange	75,770,917,921	2,014,518,023	-	118,305,383	77,903,741,327	8.6%	4.7%
Credit Default	34,499,760,180	5,313,911,406	-	-	39,813,671,586	4.4%	2.4%
Total return	29,144,995,484	6,468,001,127	-	-	35,612,996,611	3.9%	2.1%
Other	19,194,122,240	-	100,000,000	-	19,294,122,240	2.1%	1.2%
TOTAL	881,842,089,160	20,523,247,226	657,800,000	118,305,383	903,141,441,769	100.0%	54.4%
% of Total	97.6%	2.3%	0.07%	0.013%	100.0%		

As Table 5 illustrates, hedging strategy accounted for 95.7% of all swaps derivatives holdings at year-end 2012 and was the primary use for interest rate swaps, currency swaps and total return swaps; for credit default swaps (CDS), replication was the primary use, with hedging as a not-too-distant secondary use. In 2012, insurers entered into \$6.4 billion in interest rate swaps for replication, a 23% increase from 2011; however, they reduced their notional amount in credit default swaps held for replication from \$25.1 billion to \$21.6 billion, echoing an overall year-over-year decrease in the use of credit default swaps. In 2012, insurers employed \$97.5 million in total return swaps for income generation, while no swaps of any type were reported to be used for that purpose in 2010 or 2011.

Table 5: 2012 Insurance Industry Swaps Holdings by Type of Contract and Purpose/Strategy

<i>Notional Value (\$)</i>	<i>Hedging</i>	<i>Replication</i>	<i>Income Generation</i>	<i>Other</i>	<i>Total</i>	<i>% of Total</i>
Interest Rate	718,657,385,801	6,429,000,000	-	5,430,524,204	730,516,910,005	80.9%
Foreign Exchange	75,937,603,759	-	-	1,966,137,568	77,903,741,327	8.6%
Credit Default	18,168,985,946	21,577,885,640	-	66,800,000	39,813,671,586	4.4%
Total return	32,782,089,708	924,660,932	97,560,922	1,808,685,049	35,612,996,611	3.9%
Other	19,197,352,240	10,000,000	-	86,770,000	19,294,122,240	2.1%
TOTAL	864,743,417,454	28,941,546,572	97,560,922	9,358,916,821	903,141,441,769	100.0%
% of Total	95.7%	3.2%	0.011%	1.0%	100.0%	

CDS Exposure

As of year-end 2012, the notional value of CDS held by the insurance industry totaled \$39.8 billion. This was an 11.8% decrease from \$45.1 billion in notional value of CDS at year-end 2011 and is consistent with the overall CDS market contraction. According to a market survey conducted by the International Swaps and Derivatives Association (ISDA), the total notional amount outstanding of CDS as of year-end 2012 was \$22.6 trillion, a 12.7% decrease from year-end 2011's \$25.9 trillion — which also witnessed a 6.5% decrease from \$27.7 trillion in notional amount outstanding at year-end 2010. However, according to an October 2013 ISDA research note, this decrease in notional outstanding is attributable to portfolio compression, which is a widely used tool designed to eliminate offsetting transactions and rationalize counterparty exposure.

According to BIS, portfolio compression “is a process that enables early termination of economically redundant derivatives trades without changing the net position of each participant.” It does so by terminating existing trades (including on single-name reference entities and on indices in the CDS market) and replacing them with a smaller number of new

trades with substantially smaller notional amounts that carry the same risk profile and cash flows as the initial portfolio. In so doing, portfolio compression reduces the overall notional size and number of outstanding contracts in derivatives portfolios, thereby improving derivatives risk management. Meanwhile, CDS market risk transaction activity, as measured by notional amount *traded*, increased 15% in the 2013 period vs. the 2012 period after dipping slightly in the 2012 period vs. the 2011 period.

The insurance industry's exposure to CDS is merely a fraction (0.18%) of the overall CDS market. Life and P/C insurance companies were the only participants in the CDS market in 2012; health insurance companies did not participate in 2010, had small holdings (only \$30 million) at year-end 2011 and exited again in 2012, while fraternal and title insurance companies did not participate in any year.

In the CDS market, buying protection refers to reducing credit risk, and selling (or writing) protection refers to assuming credit risk. Table 6 illustrates that, for year-end 2012, \$27.2 billion (or 68.4%) of the \$39.8 billion in insurance industry CDS holdings was to sell protection (or assume credit risk). The remaining balance was to buy credit risk protection. Credit risk is typically hedged by buying protection on a specific entity or on a specified index. The industry's bought/sold proportions are similar to the previous year's numbers, and so is the higher portion of CDS holdings used for replication rather than hedging (Table 5). In a replication transaction that involves CDS, credit risk is often assumed.

Table 6: 2012 Insurance Industry CDS Holdings

Notional Value (\$)	Buy Protection	Sell Protection	Total
Life	10,246,914,446	24,252,845,734	34,499,760,180
Property/Casualty	2,340,969,036	2,972,942,370	5,313,911,406
TOTAL	12,587,883,482	27,225,788,104	39,813,671,586
% of Total	31.6%	68.4%	100.0%

Hedge Effectiveness

With the changes to Schedule DB that were implemented in 2010, hedges are classified as either "hedging effective" or "hedging other." According to SSAP No. 86, a hedge generally is considered highly effective when "the change in fair value of the derivative hedging instrument is within 80% to 125% of the opposite change in fair value of the hedged item attributable to the hedged risk." A hedge can also be designated as effective "when an R-squared of .80 or higher is achieved when using a regression analysis technique." Hedge effectiveness must be calculated and documented at the inception of the hedge and then monitored on a quarterly basis. It is typically expressed as a percentage. Insurance companies report hedge effectiveness at these two points in time on Schedule DB for each derivative position that is considered an effective hedge. In instances where hedge effectiveness cannot be specifically calculated, insurance companies will disclose the financial or economic impact of the hedge in the footnotes of Schedule DB.

Given the strict criteria and the extensive documentation required, many hedges might not be deemed effective for accounting purposes but still provide strategic value. If a derivative instrument is entered into for hedging purposes, but the transaction does not qualify as an effective hedge as defined above, the hedge would be reported as "hedging other" in Schedule DB. Derivatives in the "hedging other" category still have the intended effect of managing and reducing risk, but simply do not meet the accounting and documentation requirements. Particularly, according to SSAP No. 86, derivative instruments used in hedging transactions that meet the criteria of a highly effective hedge are valued and reported in a manner that is consistent with the hedged asset or liability (referred to as hedge accounting). For instance, if the transaction qualifies as an effective hedge and a financial instrument being hedged is valued and reported at amortized cost on a statutory basis, then the hedging instrument would also be

valued and reported at amortized cost. Derivative instruments used in hedging transactions that do not meet or no longer meet the criteria of an effective hedge are accounted for at fair value and the changes in the fair value are recorded as unrealized gains or unrealized losses (referred to as fair value accounting). Therefore, hedge accounting might avoid certain volatility in financial reporting that might be present in fair value accounting.

As of year-end 2012, 94.4% (or \$1.6 trillion in notional value) of the insurance industry's total derivatives holdings was used for hedging purposes (Table 7), in line with year-end 2011 numbers. The vast majority (or 92%) of these holdings was categorized as "hedging other" and the remaining balance was classified as "hedging effective." Year-over-year, there was a decrease in the "hedging effective" category in terms of both the total notional amount and as a percentage of derivatives held for hedging purposes (8% vs. 11.5% at year-end 2011). The overwhelming amount of hedges categorized as "hedging other," as opposed to "hedging effective," is likely a function of the corresponding reporting and monitoring requirements. Swaps represented \$865 billion (or 55.2%) of the insurance industry's derivatives held for hedging purposes as of year-end 2012, and purchased options represented \$521 billion (or 33.2%). All contract types except futures witnessed an increase in the total notional amount of derivatives held for hedging purposes, with written options more than doubling from \$37.7 billion at year-end 2011 to \$97.9 billion at year-end 2012 and increasing their share from 2.9% to 6.2%.

Table 7: 2012 Insurance Industry Derivatives Holdings for Hedging Purposes by Derivative Type

<i>Notional Value (\$)</i>	<i>Hedging Effective</i>	<i>Hedging Other</i>	<i>Total</i>	<i>% of Total</i>
Swaps	107,057,043,530	757,686,373,924	864,743,417,454	55.2%
Purchased Options	8,337,580,914	512,377,141,964	520,714,722,878	33.2%
Written Options	5,376,000	97,858,593,174	97,863,969,174	6.2%
Futures	87,221,125	49,398,800,466	49,486,021,591	3.2%
Forwards	9,225,506,620	25,679,437,226	34,904,943,846	2.2%
TOTAL	124,712,728,189	1,443,000,346,754	1,567,713,074,943	100.0%
% of Total	8.0%	92.0%	100.0%	

The insurance industry uses derivatives to hedge various risks. Some examples of risks that are hedged include interest rate risk, credit risk, currency risk and equity-related risk. Table 8 illustrates that the most common risk hedged by the insurance industry is interest rate risk; 68.4% of the total notional value of derivatives held for hedging purposes were used in mitigating risks resulting from volatility in interest rates at year-end 2012. Insurance companies' invested assets portfolios are exposed to interest rate risk, as they are large buyers of fixed-income instruments which are highly sensitive to movements in interest rates. Notably, some insurers increased their interest rate hedging activity in recent years to protect their reinvestment rates in a low interest-rate environment following the 2008 financial crisis, and to prepare for an anticipated rise in interest rates in the future. Additionally, some interest rate risk hedging might be due to insurance companies' swapping floating rate payments of instruments into fixed-rate payments to match their fixed-rate liabilities.

Equity risk is the second-most common risk that the insurance industry hedges with derivatives (18.4% of total notional amount hedged). Insurance companies face equity risk as a result of the sale of certain products, such as variable annuities that offer guaranteed minimum withdrawal or income benefits. Other risks that are hedged with derivative instruments include foreign currency risk and credit risk.

Table 8: 2012 Insurance Industry Derivatives Holdings for Hedging Purposes by Risk Type

<i>Notional Value (\$)</i>	<i>Hedging Effective</i>	<i>Hedging Other</i>	<i>Total</i>	<i>% of Total</i>
Interest Rate Risk	77,091,422,674	995,881,998,931	1,072,973,421,605	68.4%
Equity Risk	7,692,106,089	280,928,437,848	288,620,543,937	18.4%
Foreign Currency Risk	36,402,181,288	81,867,264,226	118,269,445,514	7.5%
Credit Risk	30,000,000	23,373,701,960	23,403,701,960	1.5%
Other	3,497,018,138	60,948,943,789	64,445,961,927	4.1%
TOTAL	124,712,728,189	1,443,000,346,754	1,567,713,074,943	100.0%

Insurance Industry's Counterparty Exposure

In a derivatives contract, there are generally two parties involved. Counterparty risk is the risk faced by one party that the other party will not satisfy the obligations of a derivatives contract. Insurance companies face counterparty risk primarily when entering into derivatives contracts that are traded over the counter (OTC), such as options, swaps and forwards. Although futures are traded through exchanges and cleared through a central clearinghouse, counterparty risk still exists but is considered to be minimal.

Large financial institutions are typically the most common counterparties in the derivatives market. According to a report published by the Office of the Comptroller of the Currency based on data for the fourth quarter of 2012, "Derivatives activity in the U.S. banking system continues to be dominated by a small group of large financial institutions. Four large commercial banks represent 93% of the total banking industry notional amounts and 81% of industry net current credit exposure." U.S.-based financial institutions that actively participate in the derivatives market are J.P. Morgan, Citigroup, Bank of America Merrill Lynch, Goldman Sachs and Morgan Stanley. Non-U.S. financial institutions — such as HSBC, Deutsche Bank, Credit Suisse, Barclays, BNP Paribas and RBS — also are active participants in the derivatives market. Table 9 summarizes exposure in notional value to the 10 counterparties mentioned above. Similar to the derivatives market in general, counterparty exposure in the insurance industry is concentrated in a small number of financial institutions. The 10 counterparties listed in Table 9 represent 74.1% of the notional value outstanding in the insurance industry as of year-end 2012. As noted earlier, notional value does not necessarily indicate the true counterparty exposure that an insurance company might face.

Similar to 2011, Deutsche Bank was the largest counterparty to the insurance industry, representing 11.3% of the industry's total notional value outstanding as of year-end 2012. Citigroup and Credit Suisse were the second- and third-largest counterparties, with 9.0% and 8.7%, respectively, of the notional value outstanding; in 2011, Credit Suisse and Goldman Sachs were the second- and third-largest counterparties, respectively. Notably, we would expect the counterparty risk to change going forward when certain OTC derivatives begin to settle through central clearinghouses, a requirement of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) discussed in the next section.

Table 9: 2012 Insurance Industry Exposure to Top 10 Counterparties

<i>Notional Value (\$)</i>	<i>Life</i>	<i>Property/Casualty</i>	<i>Health</i>	<i>Fraternal</i>	<i>Total</i>	<i>% of Total</i>
Deutsche Bank	175,700,823,851	11,433,096,738	85,200,000	-	187,219,120,589	11.3%
Citigroup	107,899,779,635	41,640,666,438	75,000,000	22,129,626	149,637,575,699	9.0%
Credit Suisse	141,981,830,359	1,739,384,768	6,500,000	-	143,727,715,127	8.7%
Barclays	127,973,887,174	1,459,612,859	24,500,000	-	129,458,000,033	7.8%
Goldman Sachs	118,693,051,337	2,292,584,250	200,000	-	120,985,835,587	7.3%
JP Morgan	108,864,659,020	6,324,865,164	2,400,000	59,837,507	115,251,761,691	6.9%
Bank of America Merrill	110,781,462,124	1,987,247,173	-	48,334,750	112,817,044,047	6.8%
Morgan Stanley	103,528,900,806	761,199,428	-	-	104,290,100,234	6.3%
BNP Paribas	101,593,888,393	385,000,000	-	-	101,978,888,393	6.1%
HSBC	64,600,341,717	845,364,422	-	-	65,445,706,139	3.9%
TOTAL	1,161,618,624,416	68,869,021,240	193,800,000	130,301,883	1,230,811,747,539	74.1%

Regulatory Backdrop for Derivatives Trading: Mandatory Central Clearing for Swaps

In response to concerns about systemic risks in the OTC derivatives markets, the G20 Finance Ministers and Central Bank Governors agreed in 2009 to a comprehensive reform agenda to improve transparency in these markets, mitigate systemic risk, and protect against market abuse globally. The need for reforms in this area had been building even prior to the financial crisis of 2007–2008. Large volumes of outstanding bilateral transactions had created a complex and deeply interdependent network of exposures that ultimately contributed to a build-up of systemic risk. To achieve these objectives, the G20 agreed that by year end-2012 (Note: although this original deadline was missed and extended several times, significant progress has been made to date):

- All OTC derivatives contracts should be reported to trade repositories (TRs);
- All standardized contracts should be traded on exchanges or electronic trading platforms, where appropriate, and if not traded on an exchange, cleared through central counterparties (CCPs); and
- Non-centrally cleared contracts should be subject to higher capital requirements and minimum margining requirements should be developed.

In conjunction with this agreement, on July 21, 2010, President Barack Obama signed the Dodd-Frank Act into law.

Swaps vs. Other Derivatives Types

Title VII of the Dodd-Frank Act establishes a regulatory regime applicable to the OTC derivatives markets by providing the U.S. Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) with authority to oversee these formerly largely unregulated markets. Following the historical jurisdictional divisions between the CFTC and the SEC, the Dodd-Frank Act categorizes the derivatives transactions within its scope as either “swaps” (subject to primary regulation by the CFTC), “security-based swaps” (subject to primary regulation by the SEC) or “mixed swaps” (subject to joint regulation by the CFTC and SEC).

The Dodd-Frank Act addresses, among other things, credit default swaps, interest rate swaps and total return swaps on a broad range of asset categories. Options on equities and other securities, certain forward contracts and futures contracts (such as some physically settled contracts) are excluded from the definition of “swap” and their current regulatory status is generally not affected by the Dodd-Frank Act.

Mandatory Central Clearing and Trading; Margin Requirements

Mandatory clearing through regulated CCPs and mandatory trading through either regulated exchanges or swap execution facilities (SEF), in each case, subject to certain key exceptions, is one of the most significant aspects of the derivatives section of the Dodd-Frank Act. The Dodd-Frank Act requires the central clearing of all swaps that the CFTC or SEC has determined should be cleared, based on their determination that certain derivatives are “standard.” It is widely believed that the use of CCPs will reduce counterparty risk among OTC derivatives market participants. The Dodd-Frank Act also requires that all swaps subject to the clearing requirement be traded on a board of trade designated as a contract market, or a securities exchange, or through a swap execution facility, unless no such entity accepts the swap for trading. Both cleared and uncleared swaps must be reported to a registered swap data repository.

While CCPs generally have capital and collateral (i.e., initial and variation margin) requirements for centrally cleared swaps, the Dodd-Frank Act requires additional capital and collateral for swaps that are not centrally cleared. These requirements 1) were put in place to help ensure the safety and soundness of the market participants; and 2) must be appropriate for the risk associated with the entity’s swaps. As a result, derivatives market participants will likely incur

added costs in the form of an increase in posted collateral, as well as an increase in capital requirements. CCPs will be required to follow set standards for acceptable collateral and will not have the flexibility to accept any and all types of collateral, as was largely the case with bilateral agreements (if collateral was even required).

While the initial year-end 2012 deadline for this regulation has come and gone, having been postponed several times, substantial progress has been made in its partial enactment, and full or largely full implementation is closely approaching. From the perspective of participants in the derivatives market, the current constraints posed by counterparty credit concerns will be replaced by constraints stemming from a need for liquidity. Most counterparty credit risk will migrate from institutions to central counterparties, reducing the need to put in place sophisticated analytics at least for standard OTC derivatives products. However, higher capital and margin requirements will most likely offset any cost benefits of this regulation. Additionally, it remains to be seen what impact the Dodd-Frank Act will have on the derivatives market's size and liquidity, and whether some current market participants — such as insurance companies — will continue to find this market valuable in managing their investment risks despite the increased cost of participation.

Summary

Although the insurance industry's exposure to derivatives in terms of BACV is quite small, the notional amount of the derivatives holdings remains large and growing, making it an important investment strategy to watch. Among notable developments year-over-year were: 1) a substantial increase in total notional value of derivatives held by the insurance industry, despite an overall derivatives market contraction year-over-year; 2) a significant reduction in fraternal companies' derivatives holdings; 3) an increase in derivatives' use for income generation (albeit it remains small relative to overall notional holdings) in a potential effort by insurers to boost their returns in the continuing low-interest environment; and 4) a decrease in credit default swaps use both in absolute dollar terms and relative to other types of swaps, echoing the contraction of the overall CDS market in 2012.

The NAIC Capital Markets Bureau will continue to monitor trends surrounding the derivatives market and its impact on insurance industry investments. We will report on any developments as deemed appropriate.

Major Insurer Share Prices		October 18, 2013						
		Close	Change %			Prior		
			Week	QTD	YTD	Week	Quarter	Year
Life	Aflac	\$65.78	2.2	3.2	24.4	\$64.35	\$63.72	\$52.89
	Ameriprise	99.75	6.1	7.4	59.7	94.00	92.84	62.45
	Genworth	13.89	5.9	7.6	85.4	13.12	12.91	7.49
	Lincoln	45.46	4.1	5.5	76.4	43.69	43.08	25.77
	MetLife	49.45	1.7	3.8	50.9	48.62	47.66	32.76
	Principal	46.36	5.8	6.9	63.4	43.82	43.39	28.38
	Protective	46.63	4.6	6.6	63.8	44.59	43.76	28.47
	Prudential	82.53	3.6	5.3	55.5	79.67	78.39	53.09
	UNUM	31.92	3.8	3.9	54.0	30.76	30.72	20.73
PC	ACE	\$96.97	3.3	4.5	22.0	\$93.89	\$92.78	\$79.50
	Axis Capital	46.78	2.8	5.6	35.8	45.49	44.30	34.46
	Allstate	53.87	2.7	2.9	34.5	52.44	52.33	40.05
	Arch Capital	56.94	1.7	3.6	29.9	55.97	54.96	43.82
	Cincinnati	49.99	3.1	5.0	28.3	48.51	47.63	38.95
	Chubb	92.71	3.0	4.4	23.6	89.97	88.80	75.01
	Everest Re	152.96	3.4	3.5	39.5	148.00	147.73	109.67
	Progressive	27.14	1.7	(0.7)	29.2	26.69	27.33	21.01
	Travelers	86.58	2.5	2.3	21.0	84.50	84.66	71.53
	WR Berkley	44.40	2.7	4.4	18.1	43.24	42.54	37.59
	XL	32.08	2.7	3.0	28.6	31.25	31.14	24.94
Other	AON	\$75.39	3.0	3.6	36.1	\$73.20	\$72.76	\$55.41
	AIG	52.30	4.8	5.7	48.2	49.90	49.48	35.28
	Assurant	59.33	3.0	7.4	72.1	57.60	55.23	34.48
	Fidelity National	26.37	0.8	0.7	11.8	26.16	26.18	23.58
	Hartford	34.00	3.8	7.9	51.9	32.75	31.52	22.39
	Marsh	45.53	5.5	4.7	32.7	43.17	43.51	34.30
Health	Aetna	\$63.43	(3.0)	(4.5)	37.4	\$65.38	\$66.40	\$46.17
	Cigna	74.95	(5.7)	(5.4)	40.6	79.44	79.22	53.29
	Humana	91.23	(4.4)	(5.5)	33.3	95.42	96.52	68.43
	United	68.76	(7.2)	(5.8)	27.1	74.13	73.01	54.12
	WellPoint	86.38	(2.5)	(1.0)	42.2	88.56	87.24	60.73
Monoline	Assured	\$20.08	8.9	2.8	42.2	\$18.44	\$19.54	\$14.12
	MBIA	10.88	7.8	2.1	37.4	10.10	10.66	7.92
	MGIC	8.27	10.7	14.9	206.3	7.47	7.20	2.70
	Radian	14.39	5.4	3.0	134.0	13.65	13.98	6.15
	XL Capital	32.08	2.7	3.0	28.6	31.25	31.14	24.94

October 18, 2013							
Major Market Variables		Change %			Prior		
	Close	Week	QTD	YTD	Week	Quarter	Year
Dow Jones Ind	15,399.65	1.1	2.2	17.6	15,237.11	15,072.58	13,099.80
S&P 500	1,744.50	2.6	3.2	22.7	1,700.24	1,689.92	1,422.10
S&P Financial	281.92	3.0	4.3	27.5	273.73	270.26	221.17
S&P Insurance	275.62	3.1	4.3	38.0	267.28	264.30	199.67
US Dollar \$		Change %			Prior		
/ Euro	\$1.37	1.0	1.0	3.7	\$1.35	\$1.36	\$1.32
/ Crude Oil bbl	100.81	(1.1)	(2.7)	10.0	101.92	103.60	91.62
/ Gold oz	1,314.40	3.5	0.4	(21.5)	1,269.70	1,309.80	1,673.70
Treasury Ylds %		Change bp			%	%	%
1 Year	0.12	(0.01)	0.02	(0.02)	0.13	0.10	0.14
10 Year	2.58	(0.10)	(0.07)	0.82	2.68	2.65	1.76
30 Year	3.64	(0.10)	(0.08)	0.69	3.74	3.72	2.95
Corp Credit Spreads -bp		Change %			Prior		
CDX.IG	22.04	(17.2)	(12.0)	(61.4)	26.63	25.04	57.04

October 21, 2013 Major Insurer Bond Yields				Weekly Change				YTD	
Company	Coupon	Maturity	Price			Spread over UST		Spread	
			Current	Change	Yield	B.P.	Change	Change	
Life	Aflac	8.500%	5/15/2019	\$129.82	\$0.53	2.69%	110	(4)	(17)
	Ameriprise	5.300%	3/15/2020	\$114.23	\$0.38	2.85%	98	(2)	(20)
	Genworth	6.515%	5/15/2018	\$114.84	\$1.15	3.02%	174	(22)	(216)
	Lincoln National	8.750%	7/15/2019	\$129.63	\$0.38	3.04%	140	(1)	(43)
	MassMutual	8.875%	6/15/2039	\$145.60	\$1.42	5.53%	202	(2)	(47)
	MetLife	4.750%	2/15/2021	\$109.69	\$0.84	3.25%	115	(6)	6
	New York Life	6.750%	11/15/2039	\$124.92	\$1.47	5.02%	149	(3)	(14)
	Northwestern Mutual	6.063%	3/15/2040	\$116.20	\$1.43	4.96%	142	(2)	(3)
	Pacific Life	9.250%	6/15/2039	\$138.15	\$2.40	6.25%	273	(9)	(58)
	Principal	6.050%	10/15/2036	\$115.81	\$1.33	4.90%	150	(3)	(31)
	Prudential	4.500%	11/15/2020	\$108.33	\$0.62	3.17%	111	(3)	(30)
	TIAA	6.850%	12/15/2039	\$125.22	\$2.26	5.09%	156	(7)	(14)
P&C	ACE INA	5.900%	6/15/2019	\$118.50	\$0.40	2.38%	74	(5)	(3)
	Allstate	7.450%	5/15/2019	\$126.64	\$0.36	2.32%	69	(3)	(42)
	American Financial	9.875%	6/15/2019	\$130.30	\$0.51	3.85%	216	(4)	(96)
	Berkshire Hathaway	5.400%	5/15/2018	\$115.65	\$0.36	1.81%	57	(2)	(6)
	Travelers	3.900%	11/15/2020	\$107.45	\$0.57	2.73%	69	1	4
	XL Group	6.250%	5/15/2027	\$112.37	\$0.98	4.98%	200	(15)	(42)
Other	AON	5.000%	9/15/2020	\$110.74	\$0.64	3.26%	117	(6)	(15)
	AIG	5.850%	1/15/2018	\$114.62	\$0.62	2.21%	106	(11)	(14)
	Hartford	5.500%	3/15/2020	\$113.06	\$0.25	3.24%	138	1	(35)
	Marsh	9.250%	4/15/2019	\$131.14	\$1.52	3.03%	136	(24)	(61)
	Nationwide	9.375%	8/15/2039	\$139.75	\$1.98	6.25%	273	(5)	(48)
Health	Aetna	3.950%	9/15/2020	\$105.56	\$0.49	3.04%	104	(1)	(16)
	CIGNA	5.125%	6/15/2020	\$110.91	\$0.68	3.28%	132	(5)	(12)
	United Healthcare	3.875%	10/15/2020	\$105.72	\$0.50	2.96%	97	(3)	1
	Wellpoint	4.350%	8/15/2020	\$107.08	\$1.05	3.18%	122	(8)	(15)

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

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