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**

U.S. Insurer Invested Asset Other-Than-Temporary Impairments as of Year-End 2015

Historical Impairment Trends

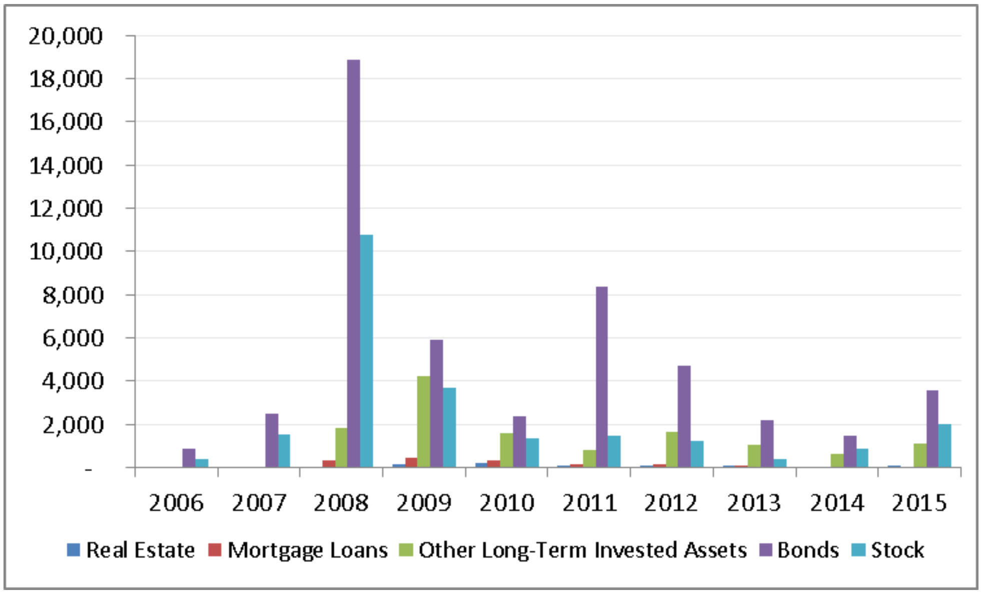
This NAIC Capital Markets Bureau Special Report analyzes the trends in U.S. insurer reported other-than-temporary impairments (OTTIs) from 2006 to 2015 across various invested asset classes, including bonds, stocks, real estate, mortgage loans and other long-term invested assets.

In accordance with INT 06-07: *Definition of the Phrase "Other Than Temporary,"* the decision for determining when an investment is considered impaired is dictated by the applicable Statement of Statutory Accounting Principles (SSAP) and the respective impairment indicators included in each of the SSAPs. If an impairment indictor is present, the determination of an impairment shall be assessed at the individual security or investment level as reported in the annual financial statement and supporting schedules. There are numerous factors to be considered when determining whether an impairment is other-than-temporary, and management should consider all available evidence to evaluate whether an other-than-temporary impairment (a realized loss) shall be recognized.

Collectively across all investment schedules, in 2008, U.S. insurers reported OTTIs of $31.9 billion, the highest for the time period from 2006 to 2015 (see Chart 1). In 2008, OTTIS were due mainly to residential mortgage-backed securities (RMBS), whose fair value declined due to the financial crisis. In the NAIC Capital Markets Bureau Special Report titled, "The Insurance Industry's Investments in Residential Mortgage-Backed Securities," published April 29, 2011, RMBS OTTIs and unrealized increases/decreases were about $15 billion in 2009 and about $15.5 billion in 2010. Total OTTIs for all invested assets decreased to $10.9 billion by year-end 2011. Since 2011, OTTIs declined steadily to 2014, but increased as of year-end 2015.

During the analysis period for this report, 2006 to 2015, bonds comprised the largest percentage of total OTTIs. Bonds also comprised the largest percentage of total cash and invested assets during the same period. Bond OTTIs were $18.9 billion, or 59% of total OTTI, in 2008. Bond OTTIs as a percentage of total OTTIs has ranged between a low of 40% in 2010 and a high of 76% in 2011 (at least between the years 2006 and 2015). In 2015, bonds accounted for 52% of total OTTIs, followed by stocks' OTTIs at 29% and "Other Long-Term Invested Assets" OTTIs at 16%. OTTIs for real estate and mortgage loans were minimal.

Chart 1: U.S. Insurer Asset Class OTTIs, 2006–2015 ($ Mil. BACV)



Bonds

According to SSAP No. 26—Bonds, an OTTI shall be considered to have occurred if it is probable that the reporting entity will be unable to collect all amounts due according to the contractual terms of a debt security in effect at the date of acquisition. A decline in fair value that is an OTTI includes situations when a reporting entity has made a decision to sell a security prior to its maturity at an amount below its carrying value. *SSAP No. 43R—Loan-Backed and Structured Securities* provides guidance requiring OTTI assessments whenever the fair value of the loan-backed and structured security is less than the amortized cost basis (i.e., the security is "impaired"). Guidance is included in SSAP No. 43R identifying that an OTTI shall be recognized in the following situations: 1) entity intends to sell an impaired security; 2) although the entity does not intend to sell an impaired the security, the entity does not have the intent and ability to retain the investment for the time sufficient to recover the amortized cost basis; or 3) the reporting entity does not expect to recover the entire amortized cost basis of the security, even if the entity does not intend to sell the security, and has the intent and ability to hold.

In 2015, U.S. insurers reported total OTTIs for all bonds of about $3.8 billion versus $1.8 billion at year-end 2014 (see Table 1). For the time period analyzed (2006 through 2015), the largest OTTIs occurred with corporate bonds in all but 2009 through 2012, when private label RMBS accounted for the largest component of bond OTTIs. This trend is not surprising given the extent of defaults and delinquencies on the underlying mortgage loans of RMBS during those years following the financial crisis. While cash flows of corporate bonds are generally viewed as less variable than RMBS, their higher OTTIs in the remaining years reflects the U.S. insurance industry's much larger exposure to corporate bonds than RMBS. U.S. insurer exposure to private label RMBS was much smaller in 2015 ($107.7 billion) compared to 2009 (about $150 billion) because of prior year write-downs and the lack of new issuance.

Corporate bond OTTIs increased to $2.9 billion in 2015 from $1.0 billion in 2014; it had reached a high for the time period analyzed in 2008 at about $18 billion. RMBS OTTIs were $256 million and $408 million in 2015 and 2014, respectively, after reaching a high of almost $11 billion in 2009. In 2015, total OTTIs were less than 1% of the industry's total $3.9 trillion bond exposure in terms of book/adjusted carrying value (BACV), which is consistent with historical levels.

Table 1: U.S. Insurer Total Bond Impairments, 2006–2015 ($ Mil. BACV)

Bond Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ABS and Other Structured Securities	1	7	6	2	0	581	379	142	107	194
Agency-backed CMBS	40	28	83	68	18	0	0	2	1	2
Agency-backed RMBS	87	126	120	37	10	31	21	58	11	20
Corporate Bonds	784	2,334	18,199	3,804	1,718	1,641	896	628	1,010	2,919
Foreign Government	10	22	129	39	35	905	419	75	18	37
Hybrid Securities	-	-	-	1,764	470	918	195	107	21	20
Municipal Bonds	31	128	511	288	171	53	80	132	101	202
Private-label CMBS	36	541	1,128	580	303	1,112	978	441	147	124
Private-label RMBS	107	1,295	7,715	10,985	4,263	3,130	1,764	512	408	256
US Government	77	18	66	98	21	3	9	82	6	21
	1,173	**4,499**	**27,957**	**17,665**	**7,010**	**8,373**	**4,742**	**2,179**	**1,830**	**3,795**

Non-investment grade credit quality (those carrying NAIC 3 to NAIC 6 designations) accounted for about 84.7% of corporate bond OTTIs taken in 2015, or almost $2.5 billion, the highest of which (22%) included bonds designated NAIC 5 and NAIC 6 (see Table 2). The extreme movement in oil prices from $107.63 on July 23, 2014, to a low of $26.21 on Feb. 11, 2016, drained needed cash from companies in energy, basic materials and some industrials. Financial companies also suffered, as defaults in the aforementioned industries increased. Overall, the largest OTTIs within corporate bonds in terms of sectors were in energy, at $1.2 billion, followed by basic materials ($463 million) and industrials ($203 million). Financial sector assets only had OTTIs of $129 million.

Table 2: U.S. Insurer Corporate Bond OTTIs by NAIC Designation, Year-End 2015 ($ Mil. BACV)

Designation	Total	Pct of Total
1	108	4%
2	340	12%
3	621	21%
4	550	19%
5	652	22%
6	648	22%
Total	**2,919**	**100%**

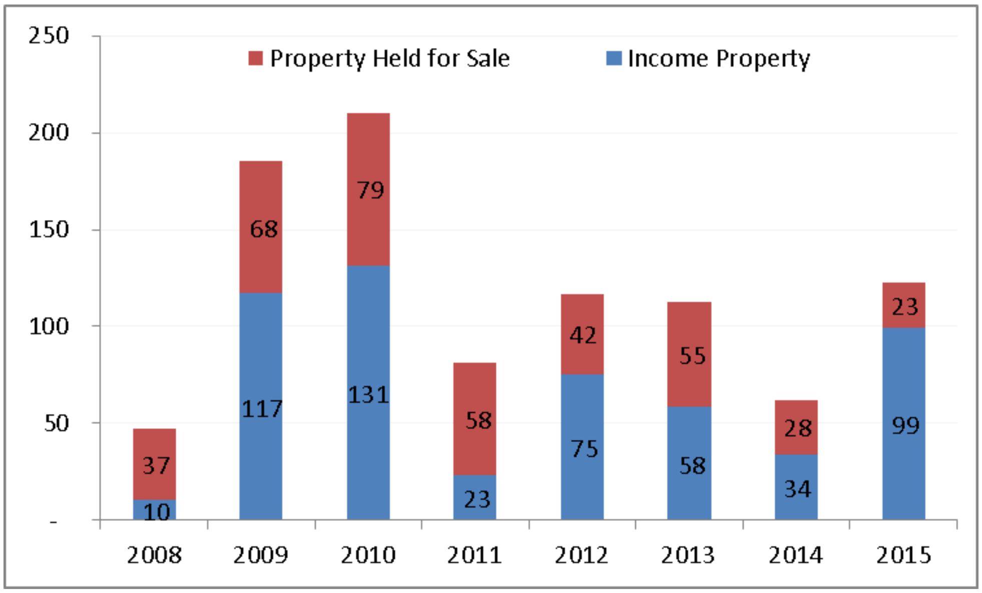
Between 2006 and year-end 2015, bonds that were deemed non-investment grade (based on their NAIC designation) comprised an average 79% of corporate bond OTTIs. Following the 2008 financial crisis, in 2009, about 14% of corporate bond OTTIs were accounted for by investment grade corporate bonds, decreasing to 6% in 2010, but spiking to 26% in 2011. This significant increase from 2010 to 2011 was due, in part, to the combination of the European sovereign debt crisis, increasing default expectations with high-yield bonds and an unwillingness of market makers to take on risk. During periods of increased volatility, decreased investor demand for non-investment grade/higher risk securities (a flight to quality) insulates investment grade bonds, causing non-investment grade bonds to suffer increased impairments.

Real Estate

For U.S. insurer real estate investments, *SSAP No. 90—Impairment or Disposal of Real Estate Investments* indicates, "an impairment loss shall be recognized only if the carrying amount of a long-lived asset is not recoverable and exceeds its fair value. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. That assessment shall be based on the carrying amount of the asset at the date it is tested for recoverability, whether in use or under development."

There were large swings in total real estate OTTIs between 2008 and 2015 (see Chart 2). Real estate OTTIs increased from $47 million in 2008 to $185 million in 2009, followed by another increase to $210 million in 2010 before decreasing to $81 million in 2011. In 2015, U.S. insurer real estate OTTIs comprised only $123 million (2%) of total OTTIs; note that U.S. exposure to real estate as a percentage of total cash and invested assets was less than 1%. Real estate OTTIs as a percentage of total OTTIs was twice the percentage of real estate as a percentage of total cash and invested assets in 2015. The majority of real estate OTTIs (81%) was in properties held for sale, with the remainder (19%) in income-producing properties. Increases in real estate OTTIs from 2008 to 2010 are likely due to the downturn in real estate following the 2008 financial crisis. The movement in the Moody's/Real Capital Analytics (RCA) Commercial Property Price Index reflects the pressure on real estate values from 2007 to 2010; swinging from a high reading of about 182 as of December 2007 down to 110 as of December 2009. By December 2010, the index reached 120, 34% below the 2007 high, but ended 2015 at about 210.

Chart 2: U.S. Insurer Real Estate OTTIs, 2008–2015 ($ Mil. BACV)



Note: Prior to year-end 2008, U.S. insurers did not report OTTIs for real estate.

Other Long-Term Invested Assets

OTTIs for select other long-term invested assets (which includes private equity funds and hedge funds) was about $1.1 billion in 2015. The highest reported OTTIs for Schedule BA were $4.2 billion in 2009 (during the time period analyzed from 2008 to 2015) (see Table 3).

Table 3: U.S. Insurer Other Long-Term Invested Assets OTTIs, 2008–2015 ($ Mil. BACV)

	2008	2009	2010	2011	2012	2013	2014	2015
Total	1,854	4,244	1,586	806	1,661	1,078	615	1,142

Note: Prior to year-end 2008, U.S. insurers did not report OTTIs for other long-term invested assets (Schedule BA).

Within other long-term invested assets, private equity funds (included as "Common Stock – JV" in Table 4) accounted for the largest portion (55%) of total OTTIs, followed by hedge funds (included as "Other – JV" in Table 4) at 19%. Property/casualty (P/C) companies with exposure to private equity funds focused on emerging markets and energy accounted for the majority (61%) of OTTIs in other long-term invested assets at year-end 2015.

Table 4: U.S. Insurer Other Long-Term Invested Assets OTTIs, Year-End 2015 ($ Mil. BACV)

Asset Type	Fraternal	Life	P/C	Health	Total	Pct of Total
Common Stock - JV	4.5	463.1	156.8	9.0	633.3	55%
Other - JV	-	77.1	139.0	5.8	221.9	19%
Any Other Class of Assets	-	51.9	41.3	1.3	94.5	8%
Oil and Gas Production	-	71.3	2.5	-	73.8	6%
Real Estate - JV	-	44.6	18.8	-	63.4	6%
Fixed Income - JV	-	8.4	4.5	18.2	31.2	3%
Transportation Equipment	-	16.0	-	-	16.0	1%
Other	-	3.3	4.6	-	7.9	1%
Total	**5**	**736**	**367**	**34**	**1,142**	**100%**
Pct of Total	0%	64%	32%	3%	100%	

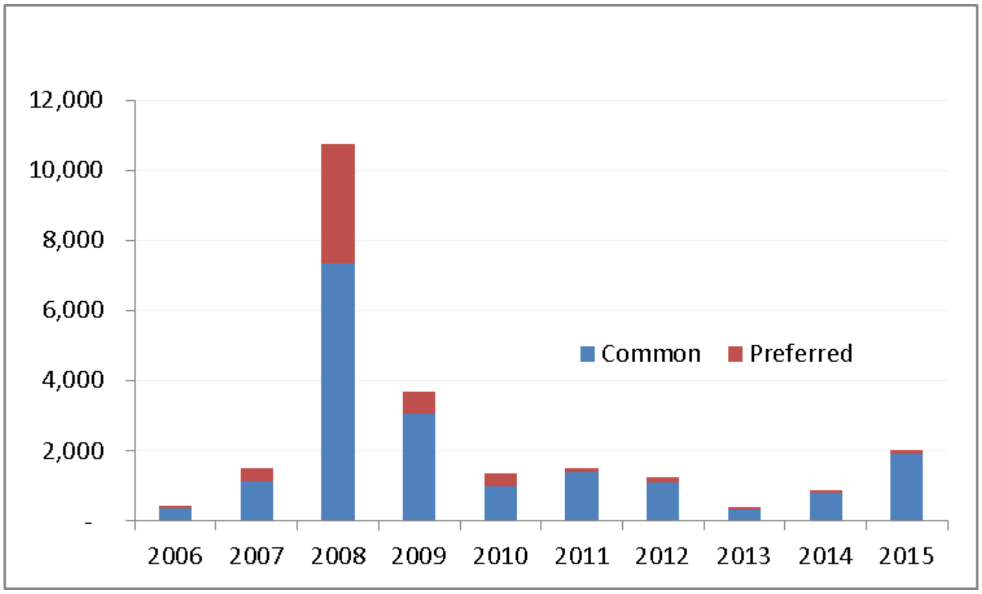
Stock

Unaffiliated common and preferred stock OTTIs have an inverse relationship to stock market performance. That is, in the years where the Standard & Poor's 500 Index (S&P 500) increased over its prior-year performance, reported OTTIs decreased. For example, in 2008, the S&P 500 return was -38.49 (the lowest annual return between 2006 and 2015), following a return of 3.53 in 2007. Under *SSAP No. 30—Unaffiliated Common Stock*, at acquisition, common stock is carried at cost and at fair value thereafter. Any decrease in the fair value of common stock that is considered to be other-than temporary results in a write-down of the carrying value of the stock; the amount of write-down is reported as a realized loss.

Under *SSAP No. 32—Preferred Stock*, for redeemable preferred stock, "an other-than-temporary (INT 06-07) impairment shall be considered to have occurred if it is probable that the reporting entity will be unable to collect all amounts due according to the contractual terms of the security in effect at the date of acquisition. A decline in fair value which is other-than temporary includes situations where the reporting entity has made a decision to sell a security prior to its maturity at an amount below its carrying value (i.e., amortized cost)." Whereas, for perpetual preferred stock, "if it is determined that a decline in the fair value of a perpetual preferred stock is other-than temporary (INT 06-07), an impairment loss shall be recognized as a realized loss equal to the entire difference between the perpetual preferred stock's carrying value and its fair value at the balance sheet date of the reporting period for which the assessment is made. The measurement of the impairment loss shall not include partial recoveries of fair value subsequent to the balance sheet date."

Unaffiliated common and preferred stock achieved their highest level of OTTIs in 2008 ($10.8 billion) and the second-highest in 2009 ($3.7 billion) during the 2006 to 2015 time period analyzed. Unaffiliated common and preferred stock OTTIs remained below $2.0 billion from 2010 until 2014, before reaching $2.0 billion at year-end 2015 (see Chart 3).

Chart 3: U.S. Insurer Stock OTTIs, 2006–2015 ($ Mil. BACV)

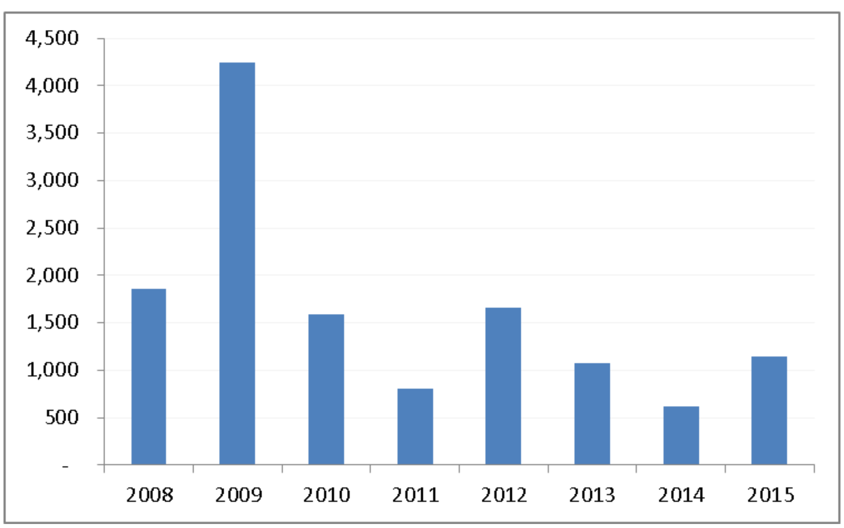


As of year-end 2015 P/C companies accounted for $1.5 billion of the $2.0 billion of reported unaffiliated common and preferred stock OTTIs by U.S. insurers. Life companies accounted for $407 million of total unaffiliated common and preferred stock OTTIs. This trend aligns with P/C companies holding a larger proportion of cash and invested assets in common stock (both in absolute and percentage terms) versus the other major insurer types. Four sectors accounted for 75% of year-end 2015 OTTIs within common stock: energy (40%); financial (20%); basic material (9%); and industrial (6%).

Mortgage Loans

For the time period analyzed, mortgage loan OTTIs peaked in 2009, at $460 million, up from $312 million in 2008. Mortgage loan OTTIs reached a low of $3 million in 2014, but then rebounded in 2015 (see Chart 4) to $57 million. Not surprisingly, the majority of mortgage loan OTTIs (88%) was in loans that were more than 90 days delinquent, in the process of foreclosure or restructured. As a percentage of total mortgages outstanding, OTTIs were less than 1% in 2015. Commercial mortgage loans accounted for more than 70% of OTTIs in 2015, but accounted for 90% of total mortgage loans outstanding in terms of BACV.

Chart 4: U.S. Insurer Mortgage Loan OTTIs, 2008–2015 ($ Mil. BACV)



Note: Prior to year-end 2008, U.S. insurers did not report OTTIs for mortgage loans.

By delinquency status, restructured commercial mortgage loans had the highest OTTIs, at $18 million, or 32% of total mortgage loan OTTIs. Mortgage loans in good standing had total OTTIs of $7 million, with commercial mortgage loans in good standing accounting for $6.5 million of this amount (see Table 5).

Table 5: U.S. Insurer Mortgage Loan Impairments, Year-End 2015 ($ Mil. BACV)

Loan Type	Fraternal	Life	Total	Pct of Total
Commercial mortgages-all other (in process of foreclosure)	0.0	15.6	15.6	27%
Commercial mortgages-all other (overdue interest over 90 days not in foreclosure)	-	0.7	0.7	1%
Commercial mortgages-all other (restructured)	0.3	17.8	18.1	32%
Commerical mortgages-all other (good standing)	-	6.5	6.5	11%
Residential mortgages-all other (in process of foreclosure)	-	0.1	0.1	0%
Residential mortgages-all other (overdue interest over 90 days not in foreclosure)	-	0.7	0.7	1%
Residential mortgages-all other (restructured)	-	15.3	15.3	27%
Residential Mtg-all other (good standing)	-	0.4	0.4	1%
Total	**0.3**	**57.1**	**57.4**	**100%**
	0.5%	99.4%	100.0%	

Life companies, as the largest investors of mortgage loans within the U.S. insurance industry, accounted for 99% of all reported mortgage loan OTTIs. In 2015, total mortgage loan OTTIs represented less than 1% of the total BACV of mortgage loans outstanding. According to various mortgage industry sources and the Federal Reserve Board, delinquency rates on mortgage loans owned by U.S. insurers historically has been significantly lower than delinquency rates on mortgage loans owned by other types of investors.

Summary

OTTIs for U.S. insurer investments spiked to $31.9 billion in 2008 (from $1.3 billion in 2006), driven largely by the financial crisis. By 2010, OTTIs decreased to $5.9 billion; in 2011, the combination of the European sovereign debt crisis (mainly concentrated in Greece, Italy, Spain, Ireland and Portugal), increasing default expectations with high-yield bonds, and, in part, an unwillingness of market makers to take on risk at the then-prevailing rates, were among the drivers pushing bond OTTIs to $10.9 billion. Since then, OTTIs on insurer investments have remained well below $10 billion, which is less than 1% of total cash and invested assets.

The largest amount of OTTIs for the U.S. insurance industry at year-end 2015 was in bonds (52% of total OTTIs), followed by unaffiliated stocks (29%) and other long-term invested assets (16%). Year-end 2015, U.S. insurer OTTIs were mainly concentrated in corporate bonds within the energy sector, with residual impact on the financial, basic material and industrial sectors. The NAIC Capital Markets Bureau will continue to monitor the insurance industry's OTTIs and provide updates as deemed appropriate.

January 13, 2017 Major Insurer Share Prices		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
Life	Aflac	$69.64	(0.8)	0.1	0.1	$70.19	$69.60	$69.60
	Ameriprise	115.27	(0.3)	3.9	3.9	115.66	110.94	110.94
	Genworth	3.88	(1.5)	1.8	1.8	3.94	3.81	3.81
	Lincoln	67.21	(0.2)	1.4	1.4	67.35	66.27	66.27
	MetLife	54.31	0.2	0.8	0.8	54.18	53.89	53.89
	Principal	59.03	0.3	2.0	2.0	58.86	57.86	57.86
	Prudential	105.23	0.1	1.1	1.1	105.15	104.06	104.06
	UNUM	44.79	(0.2)	2.0	2.0	44.88	43.93	43.93
PC	Axis Capital	65.29	(1.0)	0.0	0.0	65.95	65.27	65.27
	Allstate	73.89	(0.4)	(0.3)	(0.3)	74.15	74.12	74.12
	Arch Capital	87.02	0.6	0.8	0.8	86.47	86.29	86.29
	Cincinnati	70.06	(7.5)	(7.5)	(7.5)	75.78	75.75	75.75
	Chubb	130.25	(0.8)	(1.4)	(1.4)	131.33	132.12	132.12
	Everest Re	219.25	0.2	1.3	1.3	218.82	216.40	216.40
	Progressive	36.25	0.6	2.1	2.1	36.03	35.50	35.50
	Travelers	117.05	(1.0)	(4.4)	(4.4)	118.27	122.42	122.42
	WR Berkley	67.12	0.1	0.9	0.9	67.07	66.51	66.51
	XL	37.26	(0.3)	0.0	0.0	37.39	37.26	37.26
Other	AON	$113.29	(0.9)	1.6	1.6	$114.35	$111.53	$111.53
	AIG	66.35	(0.7)	1.6	1.6	66.81	65.31	65.31
	Assurant	94.83	(1.2)	2.1	2.1	95.98	92.86	92.86
	Fidelity National	33.65	(2.3)	(0.9)	(0.9)	34.44	33.96	33.96
	Hartford	48.33	(0.2)	1.4	1.4	48.45	47.65	47.65
	Marsh	67.73	(1.4)	0.2	0.2	68.68	67.59	67.59
Health	Aetna	$122.31	(1.6)	(1.4)	(1.4)	$124.26	$124.01	$124.01
	Cigna	146.31	3.2	9.7	9.7	141.81	133.39	133.39
	Humana	202.92	0.6	(0.5)	(0.5)	201.73	204.03	204.03
	United	161.80	(0.4)	1.1	1.1	162.41	160.04	160.04
Monoline	Assured	$39.20	1.2	3.8	3.8	$38.73	$37.77	$37.77
	MBIA	11.20	3.0	4.7	4.7	10.87	10.70	10.70
	MGIC	10.10	(3.6)	(0.9)	(0.9)	10.48	10.19	10.19
	Radian	17.93	(1.5)	(0.3)	(0.3)	18.20	17.98	17.98
	XL Capital	37.26	(0.3)	0.0	0.0	37.39	37.26	37.26

January 13, 2017 Major Market Variables		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
DowJones Ind		19,885.73	(0.4)	0.6	0.6	19,963.80	19,762.60	19,762.60
S&P 500		2,274.64	(0.1)	1.6	1.6	2,276.98	2,238.83	2,238.83
S&P Financial		390.63	(0.1)	1.1	1.1	391.15	386.53	386.53
S&P Insurance		353.92	(0.7)	0.2	0.2	356.34	353.26	353.26
US Dollar $			Change %			Prior		
	/ Euro	$1.06	1.0	1.2	1.2	$1.05	$1.05	$1.05
	/ Crude Oil bbl	52.51	(2.1)	(2.4)	(2.4)	53.65	53.81	53.81
	/ Gold oz	1,197.90	2.2	4.1	4.1	1,172.50	1,150.90	1,150.90
Treasury Ylds %		%	Change bp			%	%	%
	1 Year	0.80	(0.04)	(0.01)	(0.01)	0.84	0.82	0.82
	10 Year	2.40	(0.02)	(0.05)	(0.05)	2.42	2.45	2.45
	30 Year	2.99	(0.02)	(0.08)	(0.08)	3.01	3.07	3.07
Corp Credit Spreads -bp			Change %			Prior		
	CDX.IG	65.82	2.1	(2.6)	(2.6)	64.46	67.59	67.59

January 13, 2017 Major Insurer Bond Yields					Weekly Change					YTD
					Price			Spread over UST		Spread
	Company		Coupon	Maturity	Current	Change	Yield	B.P.	Change	Change
Life	Ameriprise	AMP	3.700%	10/15/2024	$103.03	$0.44	3.25%	98	(2)	(5)
	Lincoln National	LNC	3.350%	3/9/2025	$99.11	($0.23)	3.48%	116	7	5
	MassMutual	MASSMU	3.600%	4/9/2024	$102.59	($0.06)	3.19%	94	3	1
	MetLife	MET	4.050%	3/1/2045	$97.15	($0.46)	4.22%	126	3	(1)
	New York Life	NYL	2.350%	7/14/2026	$93.53	$0.22	3.14%	75	(1)	1
	Pacific Life	PACLIF	5.125%	1/30/2043	$106.74	$0.63	4.67%	172	(6)	(18)
	Principal	PFG	6.050%	10/15/2036	$121.81	$1.26	4.39%	163	(2)	(6)
	Prudential	PRU	4.600%	5/15/2044	$105.24	$0.07	4.27%	133	0	0
	Allstate	ALL	4.500%	6/15/2043	$107.37	($0.71)	4.04%	114	7	(6)
	Berkshire Hathaway	BRK	4.300%	5/15/2043	$104.85	$0.06	4.00%	109	2	(1)
	Travelers	TRV	4.600%	8/1/2043	$108.93	$0.18	4.05%	113	1	8
	XL Group	XL	6.250%	5/15/2027	$117.38	($0.10)	4.16%	168	3	(1)
Other	AON	AON	4.250%	12/12/2042	$94.51	$0.22	4.62%	170	0	(4)
	AIG	AIG	6.820%	11/15/2037	$127.09	$0.23	4.76%	198	(1)	(12)
	Hartford	HIG	4.300%	4/15/2043	$93.14	$0.10	4.76%	183	1	(1)
	Nationwide	NATMUT	5.300%	11/18/2044	$105.51	$0.91	4.93%	196	(4)	(4)
Health	Aetna	AET	6.750%	12/15/2037	$131.75	$0.32	4.41%	164	0	1
	CIGNA	CI	6.150%	11/15/2036	$117.75	$1.12	4.76%	200	(8)	(8)
	United Healthcare	UNH	4.750%	7/15/2045	$110.89	($0.53)	4.10%	113	6	0

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

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