

The <u>NAIC's Capital Markets Bureau</u> 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 <u>index</u>

## Variability of Market Index Returns and Insurer Portfolios

With the last financial recession now 10 years passed, the NAIC Capital Markets Bureau has reviewed the performance of several market indices, focusing on those asset types that represent the largest shares of U.S. insurers' total investment portfolios. As part of our analysis, we also identified key developments that precipitated the most dramatic moves within each of the respective markets over the past three years.

U.S. insurers' invested asset portfolio composition has remained relatively unchanged since the financial crisis, despite varying market conditions and a sustained low interest rate environment. Life companies continue to be, by far, the largest investor group among the major insurer types, holding 65% of the industry's total cash and invested assets as of year-end 2016. Bonds also remain the predominant investment vehicle for U.S. insurers, at 67% of total cash and invested assets in 2016.

The NAIC Capital Markets Bureau last published a special report on U.S. insurer investment strategies and returns on different invested assets in September 2014 (titled, "Investment Strategies and Return on Invested Assets"). This aforementioned special report explained the two most common investment strategies used by investors (buy-and-hold and total return), provided return statistics on certain investments, and discussed how U.S. insurers maximized their investment returns during the sustained low interest rate environment. This follow-up special report provides an update on the performance of several market indices to date, across different asset types that are held by insurers, as well as their relative exposures as of year-end 2016.

## **Returns on Specific Bond Types, Equities and Alternative Investments**

Investment performance and total return varies based on asset types, credit quality (for bonds) and tenor, as well as time periods, due to changing dynamics within each respective market. Table 1 shows comparative returns for aggregate investment grade bonds (i.e., different bond types), investment grade corporate bonds, high yield corporate bonds, municipal bonds and long-dated U.S. Treasuries (based on the selected indices) for the 10-year period ending June 30, 2017, as well as annual returns for 2014 through 2016, and year-to-date returns. Note that only in 2015 did any of the indices experience negative returns, and, other than in 2015, returns on equities—as measured by the Standard & Poor's 500 Index (S&P 500)—were the highest among the indices reviewed. More discussion about returns on the different bond types and equities follow in this report.

## Table 1: Bond and Equities Index Returns (%)

INDEX TOTAL RETURNS, %									
	10-Year Period		Year	Year-to-Date					
Bloomberg Barclays:	Ended 6/30/2017	2014	2015	2016	to 6/30/2017				
U.S. Aggregate Bond Index (Investment Grade)	55.0	6.0	0.5	2.6	2.3				
U.S. Corporate Index (Investment Grade)	75.5	7.5	-0.7	6.1	3.8				
U.S. Corporate High Yield Index	109.3	2.5	-4.5	17.1	4.9				
U.S. Municipal Index	56.8	9.1	3.3	0.2	3.6				
U.S. Long Treasury Index	103.0	25.1	-1.2	1.3	5.4				
S&P 500 Index	99.97	13.7	1.4	12.0	9.3				

## **Bond Returns**

Of the \$6.1 trillion in book/adjusted carrying value (BACV) of cash and invested assets that U.S. insurers reported at year-end 2016, approximately \$4.1 trillion was invested in various types of bonds, including corporate (54%), municipal (14%) and U.S. government (7%). Similar to years prior, more than 90% of those bonds were in higher credit quality (i.e., investment grade category). With the majority of U.S. insurers' invested assets held in bonds, the returns of representative bond indices for corporate, municipal and U.S. government-issued bonds were analyzed for various time periods, with the observations discussed below.

In the following sections, we refer to "return," "gain," "increase," etc., when referencing the performance of the Bloomberg Barclays benchmark indices. Return, or "total return," is defined by Bloomberg for its indices as "...the total return of a fixed income instrument, which includes capital appreciation and security price movements, interest payments and accruals, and principal repayments (scheduled or unscheduled) in the case of amortizing or sinkable bonds."

#### The U.S. Bond Market

The entire U.S. bond market, according to the Securities Industry and Financial Markets Association, grew by \$1.2 trillion from year-end 2015 to \$39.4 trillion in 2016. U.S. Treasury securities with varying maturities made up the largest segment of the market, at \$13.9 trillion. The remainder was comprised of \$8.9 trillion in mortgage-related bonds—which includes GNMA, FNMA and FHLMC mortgage-backed securities (MBS)—as well as private-label MBS which includes both pass-through securities and collateralized mortgage obligations (CMOs)— \$8.5 trillion in corporate debt, \$3.8 trillion in municipal debt, close to \$2 trillion in federal agency securities, \$1.3 trillion in asset-backed securities and \$885 billion in money markets. Bonds provide one way for investors to preserve capital and earn a less volatile return based on

bonds provide one way for investors to preserve capital and earn a less volatile return based on their streams of interest income. Investors generally view bonds as "less risky" and less volatile assets relative to stocks and alternative investments. Typically, investors move out of bonds in a strong economy and into more volatile assets, such as stocks, which offer the potential of higher returns, nominally and on a risk-adjusted basis.

The U.S. bond market, over the past 10 years, has generally been supported by an accommodative U.S. Federal Reserve policy, a combination of slow growth and low inflation, and strong investor demand. For the past two years, in particular, the market has been influenced by a variety of developments. In 2015, for example, turmoil in the European markets (resulting in part from the continuing economic problems in Greece), the possibility of an interest rate hike by the Federal Reserve Bank and an uncertain global growth outlook weighed on the market. In early 2016, oil price volatility, China's economic slowdown, and strong overseas demand for U.S. government bonds (with yields on some non-U.S. sovereign debt close to zero or negative) helped lift bond prices and improve total returns. Britain's decision to leave the European Union (commonly referred to as "Brexit") in June 2016, however, temporarily riled the market. After the election of President Donald Trump, the expectations of faster growth, higher inflation and corporate tax reform, along with an interest rate hike by the Federal Reserve (and signal for three more increases in 2017), led many investors to flee the bond market in favor of a better performing equity market. So far in 2017, the financial markets have generally benefitted

from not only favorable returns in the equity market, but also an increased demand for bonds, as investors grapple with the uncertainties arising from the political squabbling in Washington, DC, and fear that President Trump's promised tax cuts, looser regulation and infrastructure spending may not be quickly implemented, and would lead to slower economic growth than previously anticipated.

## U.S. Aggregate Bond Index Returns

One proxy of performance for the U.S. aggregate bond market is the Bloomberg Barclays U.S. Aggregate Bond Index (Barclays Aggregate Index), which is a broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The Barclays Aggregate Index includes U.S. Treasuries, government-related and corporate securities, as well as residential and commercial MBS, and asset-backed securities. This bond index, as shown in Chart 1, has largely been on an upward trajectory for the most recent 10-year period. From June 29, 2007, to June 30, 2017, the Barclays Aggregate Index returned a total of 55%. In each of the past three years, the index return was close to 6% in 2014, 0.5% in 2015 and 2.6% in 2016. The index returned 2.3% year-to-date (YTD) ending June 30, 2017. **Chart 1: Bloomberg Barclays U.S. Aggregate Bond Index: 10-Year Total Return, % (June 2007 – June 2017)** 



Source: Bloomberg.

# Corporate Bonds

Of the nearly \$4.1 trillion in BACV in bonds held by U.S. insurers at year-end 2016, \$2.2 trillion (or 54%) were invested in corporate bonds. Corporate bonds usually offer higher yields than comparable-maturity U.S. government bonds because of the market premium required to compensate for their relatively higher default risk. Because they are priced on their "yield spread" to U.S. Treasuries, movements in government bond yields have a direct impact on the yields of corporate issues. Investment grade corporate bonds—rated Baa3/BBB-/BBB- or higher by Moody's Investors Service (Moody's), S&P and Fitch Ratings (Fitch), respectively —as tracked by the Bloomberg Barclays U.S. Corporate Bond Index (Barclays Corporate Index), which measures the investment grade, fixed-rate, taxable corporate bond market, returned 75.5% for the 10-year period ended June 30, 2017. The index returned 7.5% in 2014 and -0.7% in 2015; it recovered in 2016 with a return of 6.1% and has returned 3.8% YTD ending June 30, 2017.

Bloomberg Barclays U.S. Corporate High Yield Bond Index (Barclays Corporate HY Index), which includes high-yield fixed-rate corporate bonds (or securities with ratings of Ba1/BB+/BB+ or below by Moody's, Fitch and S&P, respectively), recorded a total return of 109.3% over the 10-year period ending June 30, 2017. Returns were volatile for this index over the past three years, ranging from 2.5% in 2014 to -4.5% in 2015, and then to 17.1% in 2016.

Investment grade corporate bonds benefitted mostly from the rise in demand for "safe-haven" bonds in early 2015 amid growing turbulence in European markets precipitated by the ongoing Greek economic crisis. That, however, reversed later in the year as demand subsided after markets calmed (after Greece's bailout deal) and investors weighed the increasing possibility of an interest rate hike by the Federal Reserve, driving bond prices down. Barclays Corporate Index was down by -0.7% for that year.

In spite of notable market volatility in 2016—which was reactionary in part to both global and domestic monetary policies, Brexit and the U.S. presidential election—investment grade corporate debt (as measured by Barclays Corporate Index) returned 6.1%. Corporate high-yield bonds (Barclays Corporate HY Index) posted a return of 17.1%, with the rebound in oil prices and strong returns in the energy, metals and mining subsectors helping boost the overall index returns.

#### Chart 2: Bloomberg Barclays U.S. Corporate and U.S. Corporate High Yield Indices: 10-Year Total Return, % (June 2007 – June 2017)



Source: Bloomberg

## Municipal Bonds

Municipal bonds made up the second-largest bond investment category for U.S. insurers at year-end 2016, or close to 14% of their total bond holdings. Municipal bonds have returned close to 57% for the 10-year period ending June, 30, 2017, as measured by the Bloomberg Barclays U.S. Municipal Index (Barclays Municipal Index). This index covers the U.S. dollar-denominated long-term tax-exempt bond market and includes state and local general obligation bonds, revenue bonds, insured bonds and pre-refunded bonds. So far this year, as of June 30, the index has returned 3.6%. In each of the past three years (2014–2016), the Barclays Municipal Index (see Chart 3) returned 9%, 3% and 0.2%, respectively.

# Chart 3: Bloomberg Barclays Municipal Bond Index: 10-Year Total Return, % (June 2007 - June 2017)



#### Source: Bloomberg.

Municipal bonds outperformed other major bond categories in 2015, returning 3.2% for the year (as demonstrated by Barclays Municipal Index) and exceeded the 1.4% return by the S&P 500 in the same year. Low interest rates and positive municipal bond market supply/demand dynamics provided support for gains during the year. While many issuers in the municipal bond market have experienced stable or improving credit conditions (driven by rising state revenues and property taxes), in 2015 and much of 2016, longer term concerns have persisted. More recently, these concerns have once again begun to manifest themselves in weaker outlooks that could negatively impact returns. An increasing number of U.S. states are now experiencing a drop in revenues due in part to a reversal in tax collections and other economic issues. In particular, several states have enacted large tax cuts meant to be phased in over a period of years.

Municipal bonds continued to perform well into the first 10 months of 2016, and inflows into municipal bond mutual funds were robust. After the election of President Trump in November, however, the market experienced a severe sell-off, and municipal returns tumbled as investors were concerned that President Trump's promised tax reforms would lead to the elimination of the bonds' tax exemption benefits (thereby making them a less attractive investment option). The market ended the year with a lackluster return (per the Bloomberg Barclays Muni Index) of 0.25%. Investors returned to the market in early 2017, and, in the week ending April 12, inflows reached their third-largest weekly level on record (according to flows tracked by Emerging Portfolio Fund Research), as investors now expect tax reform to take longer than previously expected.

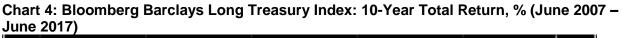
## U.S. Government Bonds

As U.S. Treasuries are considered the safest of all investments, having almost no credit risk, they generally have lower interest rates than other debt securities (such as corporate bonds). In addition, interest income from U.S. Treasury securities is exempt from state and local taxes. At year-end 2016, approximately 7% of the U.S. insurance industry's total cash and invested assets were in U.S. government bonds.

Over the 10-year period ending June 30, 2017, U.S. long Treasuries (10 or more years' maturity) have returned a total of 103%, as gauged by the Bloomberg Barclays U.S. Long Treasury Index (Chart 4), which measures the U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury and includes securities with 10 or more years to maturity. Following a strong return of 25.1% in 2014, the index returned -1.2% in 2015, 1.3% in 2016 and 5.4% YTD ending June 30, 2017.

Over the past two years, the U.S. Treasury market has been influenced by a number of major events that have driven movement in prices and returns. In 2015, investors' flight in and out of

safe-haven assets, such as U.S. Treasuries and other government debt, occurred on rising or receding worries about sluggish global economic growth, inflation concerns, sentiment regarding the possibility and pace of a Federal Reserve Bank interest rate hike, and U.S. economic data releases, among other market events. Higher yields on U.S. Treasuries relative to German, United Kingdom (UK), Japan and Switzerland's government bonds, increased demand and helped buoy prices in 2016. Brexit had a positive impact on Treasuries (with investors piling into the safety of U.S. government bonds), while the election of President Trump fostered the impact. Investors eventually shed bond holdings on the prospects of higher U.S. inflation, which reduces long-term bonds' fixed returns over time. Investor concerns about the possibility (and timing) of rising interest rates and stronger economic growth also led to reduced demand and returns in the last six months of the year. So far in 2017, U.S. Treasury prices have partially risen on reports of a brightening global economic outlook, receding geopolitical uncertainties and disappointing economic and inflation data out of the U.S., all of which has strengthened demand and buoyed prices.





#### Source: Bloomberg. Return on Equities

Common stock investment

Common stock investments do not offer a contractual return of investment or income stream. Investment returns over the longer term are expected to exceed bonds, but are more volatile over the shorter term. Unaffiliated common stock holdings made up 5% of U.S. insurer's cash and invested assets at year-end 2016.

The S&P 500, which is a gauge of large-cap U.S. equities, has risen steadily since March 2, 2009, when it closed below 700 for the first time since October 1996. The S&P 500 was trading at around 2,258 at the beginning of 2017, and was trading near 2,400 as of June 30. The S&P 500 has recorded a positive total return in nine of the 10 years ending 2016. In 2008, and as a result of the financial and credit crisis, the index delivered the period's only annual loss when it fell by 37.0% (see Table 2), dropping from a peak of 1,498 on Jan. 3, 2008, to a trough of 752 on Nov. 29, 2008. The total return for the S&P 500 in 2015 was 1.38%, a dramatic decline from the 13.69% return in 2014. Its annualized 10-year return (through year-end 2016) was approximately 7.2%.

## Table 2: The Standard & Poor's 500 Index: Annual Total Return, 2007–2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Year-to-Date to 6/30/2017
Total Return	5.49%	-37.00%	<b>26.46</b> %	15.06%	2.11%	16.00%	32.39%	13.69%	1.38%	<b>11.95</b> %	9.34%

Source: S&P Dow Jones Indices.

A number of significant headwinds weighed on U.S. stock performance in 2015. Commodity prices continued to decline, the dollar strengthened further, China's economic growth softened and it devalued its currency during the year. The much anticipated Federal Reserve interest rate hike was also delayed throughout the year until December 2015, when the Fed raised its benchmark rate by 25 basis points.

The U.S. stock market fared much better in 2016. The key market drivers of the strong performance, included the Federal Reserve's decision to raise rates just once (rather than the anticipated four times), the improvement in investor sentiment on a rebound in gross domestic product (GDP) and corporate profitability, and the election of President Trump, whose policies were expected to boost the economy and corporate profitability. The market also experienced short-lived shocks from the unexpected decision by British voters to leave the European Union in June 2016 (Brexit), as well as the initial surprise at the outcome of the U.S. presidential election.

YTD ending June 30, 2017, the S&P 500 has returned 9.34%. Through June, the index, in fact, posted its strongest first half of a year since 2013, due to solid corporate earnings and investors' expectations of improving economic growth.

## Return on Alternative Investments: Private Equity, Hedge Funds and Real Estate

Alternative assets—such as private equity, hedge funds, and real estate related investments reported in Schedule BA—have provided investors the potential to earn higher returns over the recent sustained low interest rate environment. Since year-end 2007, total U.S. insurer unaffiliated investments in private equity, hedge funds and real estate-related investments (as reported in Schedule BA) have increased from \$60 billion to \$96 billion at year-end 2016. The largest exposure among the three investment types has consistently been in private equity, at approximately \$65 billion at year-end 2016, followed by \$18 billion in hedge funds and \$13 billion in real estate-related investments.

One measure of private equity performance is the Cambridge Associates LLC US Private Equity Index (Cambridge Private Equity Index), a benchmark based on data compiled from 1,370 U.S. private equity funds formed between 1986 and 2016. The Cambridge Private Equity Index has returned 10% annually for the 10-year period ending Dec. 31, 2016, and 12.9% for the one-year period ending Dec. 31, 2016 (return is a pooled horizon return, net of fees, expenses and carried interest). This compares to a 6.9% and close to 12% annual equivalent return (with dividends reinvested in the Index) for the S&P 500 for the same time periods.

The HFRI Fund of Funds Composite Index, an equal-weighted index of hedge funds, returned a total of 13.0% from March 31, 2007, through March 31, 2017, or approximately 1.2% in an annual equivalent. For the past five-year and three-year periods, the index returned 17.1% and 5.4%, respectively.

The Cambridge Real Estate Index, which is based on data from 911 real estate funds, returned 4.8% for the same 10-year period; 11.1% for the five-year period; and 8.1% for the 1-year. For 2016, preliminary calculations show the index return at 7.5%.

## **Conclusion**

A noticeable trend with the aforementioned indices is that they have experienced various levels of volatility over the time period analyzed. For bonds, and as measured by the Barclays Aggregate Bond Index, performance has been rather uneven since 2014, returning a total of 0.5% for 2015, as compared to nearly 6% in 2014 and 3% in 2016. Corporate bonds—both investment grade and high yield (per Barclays Corporate (investment grade) and Barclays Corporate HY indices)—returned a total of 6% and 17%, respectively, in 2016, after a loss for

both indexes in 2015. After achieving a total return of 3% for 2015, the Barclays Municipal Index returned just 0.2% for 2016. And long U.S. Treasuries, as gauged by the Barclays Treasury Index, returned a total of 25% in 2014, -1.2% in 2015 and 1.3% in 2016.

For equities, as reflected by the S&P 500, returns have also been volatile recently. The index, after a gain of about 14% in 2014, returned less than 2% the following year and almost 12% in 2016. As of June 23, 2017, its return was nearly 9%.

For the U.S. insurance industry, with 65% of total cash and invested assets held by life insurers at year-end 2016, and 67% of those assets in bonds, short-range bond market gyrations do not have the same impact given their buy-and-hold strategy (particularly for life companies) compared, perhaps, to other types of investors whose investment horizons are shorter and intended to be for short-term gains. And, although insurers have exposure to alternative investments, which can offer higher investment returns than bonds, particularly in a low interest rate environment, these instruments remain a small part of their overall portfolios and are not cause for concern given any relative index volatility.

Insurers, particularly life insurers, are generally buy-and-hold investors due to their long-term business model; therefore, the concept of total return is more meaningful to non-insurer investors, as it is not necessarily reflected in U.S. insurer valuations. Insurers, however, report gross investment yield for certain asset types within company financial profile reports. Gross investment yield is not the same as a return on an investment and does not include gains or losses from marking an asset to market. The NAIC Capital Markets Bureau will continue to monitor market trends that may influence returns on investments and index performance and report as deemed appropriate.

July 14, 20	017	_							
Major Insurer Share Prices			Change %			Prior			
		Close	Week	QTD	YTD	Week	Quarter	Year	
Life	Aflac	\$77.87	(0.1)	0.2	11.9	\$77.98	\$77.68	\$69.60	
	Ameriprise	134.74	2.6	5.9	21.5	131.31	127.29	110.94	
	Genworth	3.57	(2.2)	(5.3)	(6.3)	3.65	3.77	3.81	
	Lincoln	71.34	1.6	5.6	7.7	70.20	67.58	66.27	
	MetLife	55.34	(1.5)	0.7	2.7	56.17	54.94	53.89	
	Principal	66.10	2.3	3.2	14.2	64.61	64.07	57.86	
	Prudential	111.41	0.0	3.0	7.1	111.36	108.14	104.06	
	UNUM	47.66	0.3	2.2	8.5	47.54	46.63	43.93	
PC	Axis Capital	63.90	(0.4)	(1.2)	(2.1)	64.13	64.66	65.27	
	Allstate	89.05	(0.2)	0.7	20.1	89.19	88.44	74.12	
	ArchCapital	96.16	1.0	3.1	11.4	95.23	93.29	86.29	
	Cincinnati	72.69	0.0	0.3	(4.0)	72.66	72.45	75.75	
	Chubb	145.18	(0.9)	(0.1)	9.9	146.52	145.38	132.12	
	Everest Re	263.75	0.2	3.6	21.9	263.21	254.59	216.40	
	Progressive	45.58	1.3	3.4	28.4	44.99	44.09	35.50	
	Travelers	125.72	(1.1)	(0.6)	2.7	127.17	126.53	122.42	
	WRBerkley	69.89	0.7	1.0	5.1	69.43	69.17	66.51	
	XL -	45.17	0.5	3.1	21.2	44.95	43.80	37.26	
Other	AON	\$136.22	0.9	2.5	22.1	\$135.01	\$132.95	\$111.53	
	AIG	64.11	1.2	2.5	(1.8)	63.35	62.52	65.31	
	Assurant	104.63	(0.7)	0.9	12.7	105.32	103.69	92.86	
	Fidelity National	45.54	2.1	1.6	34.1	44.59	44.83	33.96	
	Hartford	53.36	1.2	1.5	12.0	52.73	52.57	47.65	
	Marsh	78.86	0.7	1.2	16.7	78.33	77.96	67.59	
Health	Aetna	\$155.27	0.9	2.3	25.2	\$153.88	\$151.83	\$124.01	
	Cigna	173.80	2.5	3.8	30.3	169.61	167.39	133.39	
	Humana	239.09	0.4	(0.6)	17.2	238.23	240.62	204.03	
	United	186.90	(0.6)	0.8	16.8	187.96	185.42	160.04	
Monoline	Assured	\$44.41	3.7	6.4	17.6	\$42.81	\$41.74	\$37.77	
	MBIA	10.33	6.6	9.5	(3.5)	9.69	9.43	10.70	
	MGIC	11.64	1.0	3.9	14.2	11.52	11.20	10.19	
	Radian	17.40	1.8	6.4	(3.2)	17.10	16.35	17.98	
	XL Capital	45.17	0.5	3.1	21.2	44.95	43.80	37.26	

-	4,2017									
Major Market Variables			Change				Prior			
		Close	W	eek (	QTD	YTD	Week	Quart	er	Year
DowJo	ones Ind	21,637	7.74	1.0	1.3	9.5	21,414.3	4 21,34	49.63	19,762.6
S&P 50	00	2,459		1.4	1.5	9.8	2,425.1	-	23.41	2,238.8
S&P Fi	nancial	412	2.90	(0.6)	0.8	6.8	415.6	0 40	09.59	386.5
S&P In	surance	387	7.11	0.1	1.5	9.6	386.7	5 38	81.48	353.2
US Dol	llar S			Chi	ange %			Prio	r	
	/ Euro	\$1	.15	0.6	0.4	9.0	\$1.14	4 5	\$1.14	\$1.0
	/ Crude Oil bbl	46	5.62	5.2	0.9	(13.4)	44.3	2 4	46.22	53.8
	/ Gold oz	1,228	3.40	1.4	(1.1)	6.7	1,211.8	0 1,24	41.80	1,150.9
Treasu	ry Ylds %	%		Ch	ange bp		%	%		%
	1 Year	1.	.20	(0.02)	(0.04)	0.38	1.21		1.23	0.82
	10 Year	2.	.33	(0.06)	0.03	(0.12)	2.39		2.30	2.45
	30 Year	2.	.92	(0.01)	0.08	(0.15)	2.93		2.83	3.07
Corp C	redit Spreads -bp			Cha	ange %			Prio	r	
•	CDX.IG	58	3.17	(5.6)	(3.9)	(13.9)	61.6	4 (	50.52	67.5
July 14,	2017		-							
	surer Bond Yields					W	eekly Chang	2		YTD
Major Insurer bond helds					Price				Spread over UST	
						Price		Spread ov	er UST	Spread
	Conpany		Coupon	Maturity	Current	Price Change	Yield	Spread ov B.P.	er UST Change	Spread Change
Life		AMP	-			Change		B.P.	Change	Change
Life	A neripise	A MP LNC	- 3.700%	10/15/2024	\$104.58	Change \$035	2 <b>99</b> %	<b>B.P.</b> 81	Change 1	Change (2
Life		AMP LNC MASSMU	-			Change		B.P.	Change	Change (23 (8
Life	A neripise Lincoln National	LNC	- 3.700% 3.350%	10/15/2024 3/9/2025	\$104.58 \$100.88	Change \$035 \$133	2 <i>9</i> 9% 3 <i>2</i> 2%	<b>B.P.</b> 81 103	Change 1 (10)	Change (23
Life	A neriprise Lincoln National MassMutual	lnc Massmu	3.700% 3350% 3.600%	10/15/2024 3/9/2025 4/9/2024	\$104.58 \$100.88 \$104.55	Change \$035 \$133 \$038	2 <i>9</i> 9% 3 <i>22</i> % 285%	<b>B.P.</b> 81 103 72	Change 1 (10) 3	Change (2 (2 (2
Life	A neriprise Lincoln National Mass Mutual MetLife	LNC MASSMU MET	3.700% 3.350% 3.600% 4.050%	10/15/2024 3/9/2025 4/9/2024 3/1/2045	\$104.58 \$100.88 \$104.55 \$100.62	Change \$035 \$133 \$038 \$095	2 <b>99%</b> 322% 285% 4.01%	<b>B.P.</b> 81 103 72 114	Change 1 (10) 3 (4)	Change (2 (2 (2 (2 (1)
Life	A meriprise Lincoln National Mass Mutual MetLife New York Life	LNC MASSMU MET NYL	3.700% 3.350% 3.600% 4.050% 2.350% 5.125%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80	Change \$035 \$133 \$038 \$095 \$0.78	299% 322% 285% 4.01% 288%	<b>B.P.</b> 81 103 72 114 61	Change 1 (10) 3 (4) (1)	Change (2 (2 (2 (1 2 (1 2 (1 4
Life	A meriprise Lincoln National Mass Mutual MetLife New York Life Pacific Life	LNC MASSMU MET NYL PACLIF	3.700% 3.350% 3.600% 4.050% 2.350% 5.125%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74	Change \$035 \$133 \$038 \$095 \$078 \$023	299% 322% 285% 401% 288% 436%	<b>B.P.</b> 81 103 72 114 61 156	Change 1 (10) 3 (4) (1) 1	Change (2 (2 (1 (1 (1 (1 (1 (1 (1)))))))))))))
Life	A neriprise Lincoln National Mass Mutual MetLife New York Life Pacific Life Principal	LNC MASSMU MET NYL PACLIF PFG	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16	Change \$035 \$133 \$038 \$095 \$0.78 \$023 \$028	299% 322% 285% 401% 288% 436%	<b>B.P.</b> 81 103 72 114 61 156 142	Change 1 (10) 3 (4) (1) 1 3	Change (2 (2 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1))))))))
Life	A neriprise Lincoln National Mass Mutual MetLife New York Life Pacific Life Principal Prudential	LNC MASSMU MET NYL PACLIF PFG PRU	3.700% 3.330% 3.600% 4.030% 2.350% 5.125% 6.050% 4.600%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2044	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27	Change \$035 \$133 \$038 \$095 \$0.78 \$023 \$023 \$028 \$093	299% 322% 285% 401% 288% 436% 4.07% 4.03%	<ul> <li><b>B.P.</b></li> <li>81</li> <li>103</li> <li>72</li> <li>114</li> <li>61</li> <li>156</li> <li>142</li> <li>118</li> </ul>	Change 1 (10) 3 (4) (1) 1 3 (4)	Change (2) (2) (1) (14) (2) (2) (2) (1)
Life	A neriprise Lincoln National Mass Mutual MetLife New York Life Pacific Life Principal Prudential Allstate	LNC MASSMU MET NYL PACLIF PFG PRU ALL	3.700% 3.300% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2044	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68	Change \$035 \$133 \$038 \$095 \$023 \$023 \$023 \$023 \$023	299% 322% 285% 401% 288% 436% 436% 407% 403%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111	Change 1 (10) 3 (4) (1) 1 3 (4) (4) (1)	Change (2 (2 (1) (14 (2) (2) (14) (2) (14) (14) (14) (14) (14) (14) (14) (14
Life	A meriprise Lincoln National Mass Mutual MetLifè New York Lifé Pacific Lifé Principal Prudential A Istate Berks hire Hathaway	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.500% 4.300%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2043 5/15/2043 5/15/2043	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68	Change \$035 \$133 \$028 \$025 \$028 \$028 \$028 \$028 \$029 \$028	299% 322% 285% 4.01% 288% 4.36% 4.07% 4.03% 3.95% 3.89%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (1) (4)	Change (2 (2 (1) (2 (2 (2) (2) (2) (2) (2) (2) (2) (2)
	A meriprise Lincoln National Mass Mutual MetLifè New York Lifè Pacific Lifè Principal Prudential A Istate Berks hire Hathaway Travelers	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.500% 4.300% 4.600% 6.250%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2044 6/15/2043 5/15/2043 8/1/2043	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68 \$111.42	Change \$035 \$133 \$028 \$025 \$028 \$028 \$028 \$028 \$028 \$028 \$028 \$028	299% 322% 285% 4.01% 288% 4.36% 4.07% 4.03% 3.95% 3.89% 3.90%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2)	Change (2 (2 (13 (14 (34 (2 (2 (15) (15) (15) (15) (15) (15) (15) (15)
Life Other	A meriprise Lincoln National Mass Mutual MetLifè New York Lifè Pacific Lifè Principal Prudential A Istate Berks hire Hathaway Travelers XL Group	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV XL	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.600% 4.600% 6.250%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2043 5/15/2043 8/1/2043 5/15/2027	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68 \$111.42 \$119.51	Change \$035 \$133 \$028 \$025 \$028 \$028 \$028 \$028 \$029 \$028 \$028 \$028 \$028 \$028 \$028	299% 322% 285% 4.01% 288% 4.36% 4.07% 4.03% 3.95% 3.89% 3.89% 3.85%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108 148	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2) (1)	Change (2 (2 (1) (14 (2) (2) (15 (1) (15) (1) (15) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
	A meriprise Lincoln National Mass Mutual MetLifê New York Lifê Pacific Lifê Principal Prudential A Istate Berks hire Hathaway Travelers XL Group A ON	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV XL	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.600% 4.600% 6.250% 4.250%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2043 8/1/2043 5/15/2043 5/15/2027 12/12/2042	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$106.68 \$111.42 \$119.51 \$97.78	Change \$035 \$133 \$095 \$023 \$023 \$028 \$028 \$028 \$028 \$028 \$028 \$028 \$028	2,99% 3,22% 4,01% 2,88% 4,36% 4,07% 4,07% 4,03% 3,95% 3,89% 3,89% 3,80% 3,85%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108 148 148	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2) (1) (5)	Change (2 (2 (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2)
	A meriprise Lincoln National Mass Mutual MetLifé New York Lifé Pacific Lifé Principal Prudential Alls tate Berks hise Hathaway Travelers XL Group A ON A IG	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV XL AON AIG	3.700% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.600% 4.600% 4.600% 6.250% 4.250% 6.820% 4.300%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2043 5/15/2043 8/1/2043 5/15/2027 12/12/2042 11/15/2037	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68 \$111.42 \$119.51 \$97.78 \$130.36	Change \$035 \$133 \$095 \$095 \$023 \$023 \$028 \$028 \$028 \$028 \$028 \$028 \$028 \$028	2,99% 3,22% 2,83% 4,01% 2,88% 4,36% 4,07% 4,03% 3,89% 3,89% 3,89% 3,89% 3,85% 4,40% 4,52%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108 148 148 155 186	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2) (1) (2) (1) (2) (3) 0	Change (2 (2 (1) (1) (2 (1) (1) (2 (1) (2 (1) (2 (1) (2 (1) (2 (1) (1) (2 (1) (1) (2 (1) (1) (2 (1) (1) (2 (1) (1) (2) (2) (1) (2) (2) (1) (2) (2) (2) (2) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2
	A meriprise Lincoln National Mass Mutual MetLifé New York Lifé Pacific Lifé Principal Prudential A lls tate Berks hire Hathaway Travelers XL Group A ON A IG Hartford Nationwide	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV XL AON AIG HIG NATMUT	3.700% 3.350% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.600% 4.600% 6.250% 4.250% 4.250% 4.250% 5.300%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2043 8/1/2043 5/15/2043 5/15/2027 12/12/2042 11/15/2037 4/15/2043 11/18/2044	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68 \$111.42 \$119.51 \$97.78 \$130.36 \$101.41 \$114.12	Change \$035 \$133 \$038 \$095 \$078 \$023 \$028 \$028 \$028 \$028 \$028 \$030 \$070 \$124 \$086 \$136	299% 322% 283% 4.01% 288% 4.36% 4.07% 4.03% 389% 389% 389% 389% 385% 4.40% 4.52% 4.21% 4.41%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108 148 148 155 186 140 153	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2) (1) (2) (2) (2) (2) (3) (3) (4) (4) (1) (1) (1) (1) (1) (1) (1) (1	Change (2 (2 (1) (1) (2) (2) (1) (2) (2) (2) (2) (2) (2) (2) (2) (4) (4) (4) (4)
Other	A meriprise Lincoln National Mass Mutual MetLife New York Life Pacific Life Principal Prudential Alls tate Berks hire Hathaway Travelers XL Group A ON A IG Hartford	LNC MASSMU MET NYL PACLIF PFG PRU ALL BRK TRV XL AON AIG HIG	3.700% 3.600% 4.050% 2.350% 5.125% 6.050% 4.600% 4.600% 4.300% 4.600% 6.250% 4.250% 4.250% 5.300% 6.750%	10/15/2024 3/9/2025 4/9/2024 3/1/2045 7/14/2026 1/30/2043 10/15/2036 5/15/2043 5/15/2043 5/15/2043 5/15/2043 12/12/2042 11/15/2037 4/15/2043	\$104.58 \$100.88 \$104.55 \$100.62 \$95.80 \$111.74 \$126.16 \$109.27 \$108.89 \$106.68 \$111.42 \$119.51 \$97.78 \$130.36 \$101.41	Change \$0.35 \$1.33 \$0.38 \$0.95 \$0.78 \$0.23 \$0.23 \$0.23 \$0.26 \$0.93 \$0.70 \$0.70 \$1.24 \$0.86	299% 322% 285% 401% 288% 436% 403% 395% 389% 389% 389% 389% 385% 4.40% 4.52% 4.21%	<b>B.P.</b> 81 103 72 114 61 156 142 118 111 107 108 148 155 186 140	Change 1 (10) 3 (4) (1) 1 3 (4) (1) (4) (2) (1) (2) (2) (2)	Change (2 (2 (1) (1) (2) (1) (2) (1) (2) (1) (2) (1) (2) (2) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2

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