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**

Capital Markets Update: First Quarter 2016

From "Risk-off" to "Risk-on"

The capital markets have experienced wide swings in temperament since the Capital Markets Bureau's last *Capital Markets Update* was published in mid-November 2015. From last November through mid-February, most major global debt and equity markets sold off, then rebounded in the weeks that followed. Oil and commodities also sold off and partially recovered. Table 1 and Table 2 show representative total returns for select equity and fixed income benchmark indices for 2015 and early 2016. As the data show, January was a particularly difficult month for equity investors and for high yield (HY) and emerging markets (EM) fixed income, while investment grade (IG) bonds performed relatively well. Since markets reached a trough in mid-February, they have rallied substantially, with fixed income showing solid positive returns year to date.

Table 1: Selected Bond Index USD Total Returns (%), through March 30, 2016

Selected Bond Index Total Returns (%)					
Index	2015	Jan. 2016	Feb. 2016	Mar. 2016 MTD	2016 YTD
BAML US (IG) Corp & Gov Index	0.30	1.52	0.89	0.80	3.23
BAML US HY Master II Index	(4.64)	(1.58)	0.49	4.16	2.99
BAML US Muni Index	3.55	1.11	0.10	0.28	1.47
BAML Global Government Index	(2.61)	1.41	3.24	2.06	6.84
BAML Global HY&EM Sov	(3.39)	(1.52)	0.53	4.78	3.74

Source: Bloomberg LP

Table 2: Selected Equity Index USD Total Returns (%), through March 31, 2016

Selected Equity Index USD Total Returns (%)					
Index	2015	Jan. 2016	Feb. 2016	Mar. 2016 MTD	2016 YTD
S&P 500 (US)	1.4	(5.0)	(0.1)	6.8	1.3
S&P/TSX Composite (Canada)	(23.0)	3.0	4.2	5.3	4.5
STOXX Europe 600	(1.0)	(6.5)	(1.8)	1.5	(7.0)
FTSE 100 (U.K.)	(6.4)	(5.9)	(1.3)	1.8	0.2
DAX (Germany)	(1.7)	(9.4)	(2.8)	5.0	(7.2)
Nikkei 225 (Japan)	9.9	(8.2)	(1.9)	5.3	(11.2)
Hang Seng Index (HK)	(3.4)	(10.4)	(2.8)	9.2	(4.7)
Shanghai Composite (China)	6.4	(23.7)	(1.5)	11.8	(15.1)
ASX 200 (Australia)	(7.0)	(8.2)	(0.5)	4.9	(2.3)
MSCI Emerging Markets	(14.6)	(6.5)	(0.2)	12.8	5.3

Source: Bloomberg LP

The underlying themes driving the January through February turbulence are familiar by now:

- Global growth concerns driven by the slowing Chinese economy, skepticism regarding China's economic policies, the outlook for the yuan, and capital flight.
- Diverging economic trends and interest rate expectations, with the U.S. recovery gaining momentum and the Federal Reserve (Fed) in a gradual tightening mode, while much of Europe and Japan continue to grapple with deflation fears and sluggish growth by employing more monetary stimulus, driving short-term and long-term rates to ultra-low levels, well below zero in some cases.
- The continued strength of the U.S. dollar compared to most other currencies (especially emerging markets), and the ongoing price weakness of oil and most other commodities.
- Credit concerns arising from the effect of lower oil and materials prices on U.S. corporate credit spreads, particularly below investment grade.

Bonds: Low Yields, Flat Curves, Wider Credit Spreads and Volatility Challenge Investors

At its December 2015 meeting, the Federal Open Market Committee (FOMC) increased the federal funds target rate — for the first time since 2006 — to a 0.25%–0.50% range from a 0.00%–0.25% range. Markets were not surprised by the announcement, although the "dot plot"—a graphical representation, included in the Summary of Economic Projections accompanying the FOMC's policy statement, of each committee member's rate outlook—laid out a path for the fed funds rate that some perceived as too hawkish in view of the economic climate, projecting a series of eight 25-basis-point (bps) rate hikes over two years in 2016 and 2017, eventually rising to about 3.5% in the long term (post-2018). Markets interpreted the FOMC's Jan. 27 policy announcement as more accommodative in tone, rekindling global growth concerns and diminishing rate hike expectations to just one 25 bps increase in 2016.

Chinese authorities rattled markets in January by allowing the yuan to weaken over three days, sparking fresh concerns about the Chinese economic slowdown and the potential for more capital outflows. A sell-off in Chinese stocks was exacerbated by new but unhelpful circuit breakers, and by the expiration of a ban on insider stock sales. Policymakers backpedaled on both measures, piquing investor concerns. At its January meeting, the Bank of Japan (BoJ) surprised markets with a negative interest rate policy (a -0.1% rate on excess reserve deposits) on top of its long-running asset purchase program. The BoJ reasoned that slumping oil prices and the uncertain Chinese economic outlook were making it harder to spur economic growth and inflation. The announcement sparked a rally in Japanese Government Bonds (JGBs), causing the 10-year JGB yield to fall below zero. On Feb. 29, Japan issued bonds with a negative yield for the first time in history, auctioning 2.2 trillion yen ($19.4 billion) of benchmark 10-year JGBs with a yield to maturity of -0.024% if held to maturity, based on a coupon rate of 0.1% and an average issue price of 101.25. Investors also took European bond yields lower in anticipation of more monetary easing from the ECB at its March meeting. Oil prices, meanwhile, sank to their lowest levels since 2004 on renewed supply concerns, and U.S. Treasury securities rallied; the 10-year Treasury yield dropped about 75 bps from its year-end level in a flight to safety, reaching an intraday low of 1.53% on Feb. 11. before pulling back about 45 bps by the end of February.

Markets were underwhelmed by the monetary stimulus package announced by the ECB on March 10, which included a 5 bps cut in its main refinancing rate to 0.00% and a 10 bps reduction in the deposit rate to -0.40%; a 20 billion euros-per-month expansion in the ECB's asset purchase program to 80 billion euros; and a new Targeted Long-Term Refinancing Operations program, beginning in June 2016, that incentivizes banks to lend more by offering to lend them cash at interest rates as low as -0.40%. The Fed's March 16 policy announcement, while slightly more positive on the U.S. economy, maintained the accommodative tone, and was accompanied by a slight cut in the FOMC's gross domestic product (GDP) forecasts for 2016–17 as well as a weaker inflation outlook for 2016. The March "dot plot" was more dovish as well, calling for just two 25 bps increases in the fed funds rate in 2016 and four more in 2017, reaching 3.25% in the long run. Treasury yields moved lower as rate hike expecations once again waned, and Chair Yellen's speech on March 29 reinforced the dovish tone.

Yield Curve Flattening and Ultra-Low/Negative Interest Rates

Table 3 lists 24 countries around the globe (including 19 in the euro area), spanning six monetary authorities, that have adopted negative interest rate policies (NIRP). The rationale for NIRP, however unconventional, is relatively simple and follows the same logic as zero interest rate policy. In normal times, banks tend to minimize the excess reserves they hold at central banks, because they earn less on those deposits than typical money market interest rates. Since the global financial crisis, however, and with money market rates at such low levels, some banks have been holding greater excess reserve balances because of risk aversion, and because the opportunity cost of stockpiling reserves is considered minimal in view of the low available returns on assets and the sluggishness of economic activity. Large-scale asset purchases by central banks, also known as quantitative easing (QE), also have significantly increased banks' excess reserves in recent years. Negative deposit rates are a means of incentivizing banks to put more of that cash to work by extending loans or purchasing other assets, thereby driving asset prices higher and yields lower, and generally easing credit conditions.

Table 3: NIRP Countries as of March 31, 2016

Country	Main Policy Rate	10-year Government Bond Yield
Austria*	-0.40%	0.37%
Belgium*	-0.40%	0.53%
Cyprus*	-0.40%	NA
Denmark	-0.65%	0.45%
Estonia*	-0.40%	NA
Finland*	-0.40%	0.29%
France*	-0.40%	0.49%
Germany*	-0.40%	0.15%
Greece*	-0.40%	8.59%
Hungary	-0.05%	3.00%
Ireland*	-0.40%	0.74%
Italy*	-0.40%	1.22%
Japan	-0.10%	-0.03%
Latvia*	-0.40%	0.65%
Lithuania*	-0.40%	1.10%
Luxembourg*	-0.40%	NA
Malta*	-0.40%	NA

Netherlands*	-0.40%	0.36%
Portugal*	-0.40%	2.94%
Slovenia*	-0.40%	1.36%
Slovakia*	-0.40%	0.15%
Spain*	-0.40%	1.44%
Sweden	-0.50%	0.52%
Switzerland	-0.75%	-0.34%
*Euro area		

Sources: Trading Economics, European Central Bank, Riksbank, Danske Nationalbank, The Telegraph, the World Bank

Denmark's Nationalbank (DNB) first employed NIRP from July 2012 to April 2014, in order to stave off rising capital inflows, as investors fearing a break-up of the euro used the krone as a safe haven; the DNB's monetary policy centers on maintaining the krone's peg to the euro, hence it raises and lowers the deposit rate accordingly. The ECB lowered the rate on its deposit facility (the overnight interbank lending rate within the Eurosystem) to -0.10% in June 2014, and has cut it twice more since then, most recently to -0.40%. In February 2015, Sweden's Riksbank cut its benchmark repo rate to -0.10%, and has cut the rate three times since then, to -0.50%, in an effort to keep the Swedish economy from importing deflation from the eurozone and limiting the krona's appreciation. Switzerland imposed a negative rate on demand deposits in December 2014 to prevent appreciation in the franc—a safe-haven currency—in the wake of Russia's ruble collapse and plunging oil prices, and has since lowered the rate to -0.75%. (Switzerland had, in January 2015, abandoned its long-running effort to cap the franc's appreciation against the euro through foreign exchange intervention.) The DNB again adopted NIRP in September 2015; the deposit rate is now -0.65%. Most recently, on March 22, Hungary became the first emerging market nation to employ NIRP, dropping its overnight deposit rate by 15 bps to -0.05% to combat deflation and stem the appreciation of the forint. Other non-eurozone countries, most notably Norway, are lowering deposit rates to counter currency appreciation and may soon be in negative territory.

With the implementation of NIRP, yield curves have flattened, and several countries' sovereign bond yields also have fallen below zero, extending out as far out as 10 years or more. Chart 1 shows the trend in 10-year government bond yields over the past 12 months for several of the world's major government bond markets. The chart shows bond yields trending gradually higher in the U.S., U.K., Canada and Australia, reflecting their relatively healthy prospects for economic growth and moderate inflation.

Chart 1: 10-Year Government Yields, Major Advanced Economies (Oct. 31, 2015 to March 31, 2016)

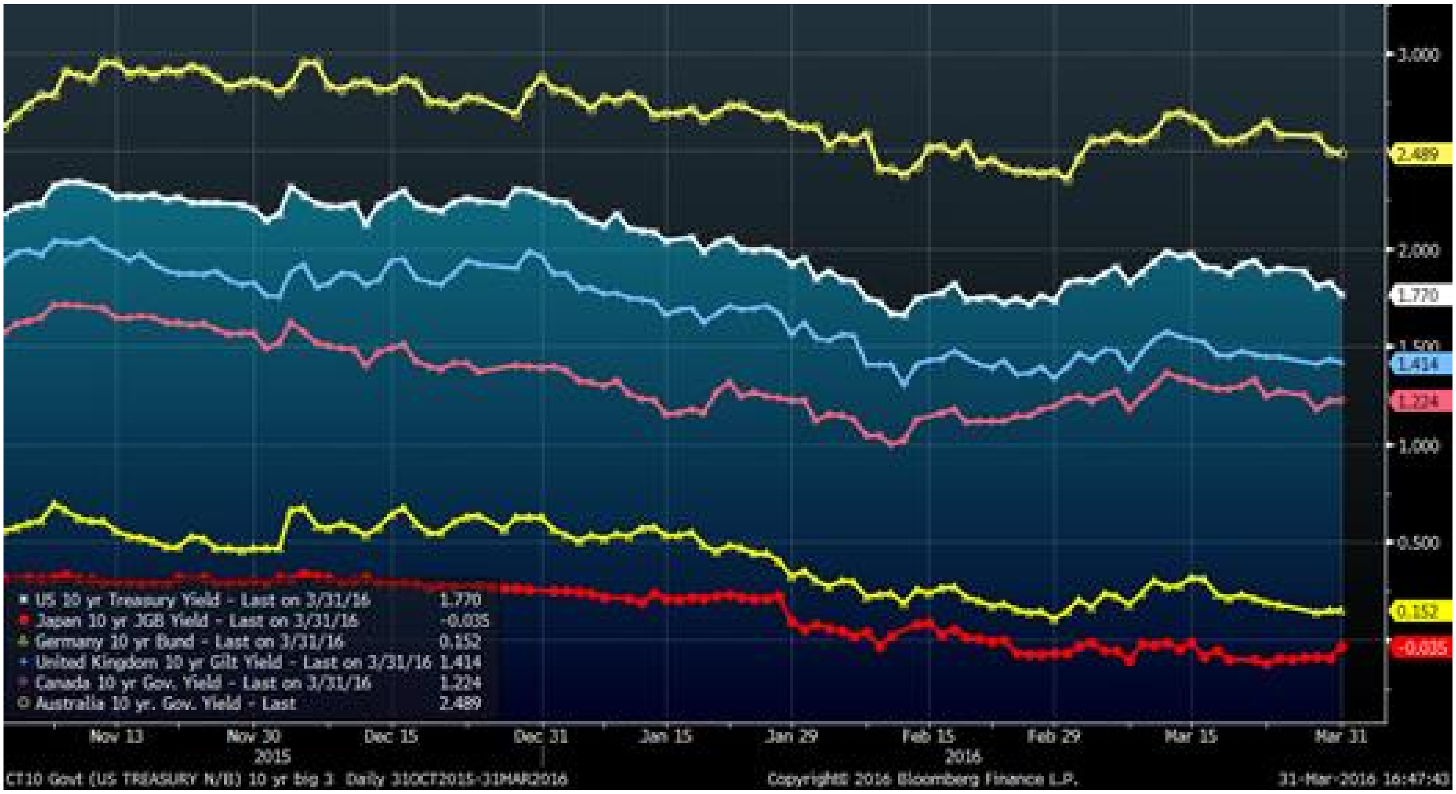
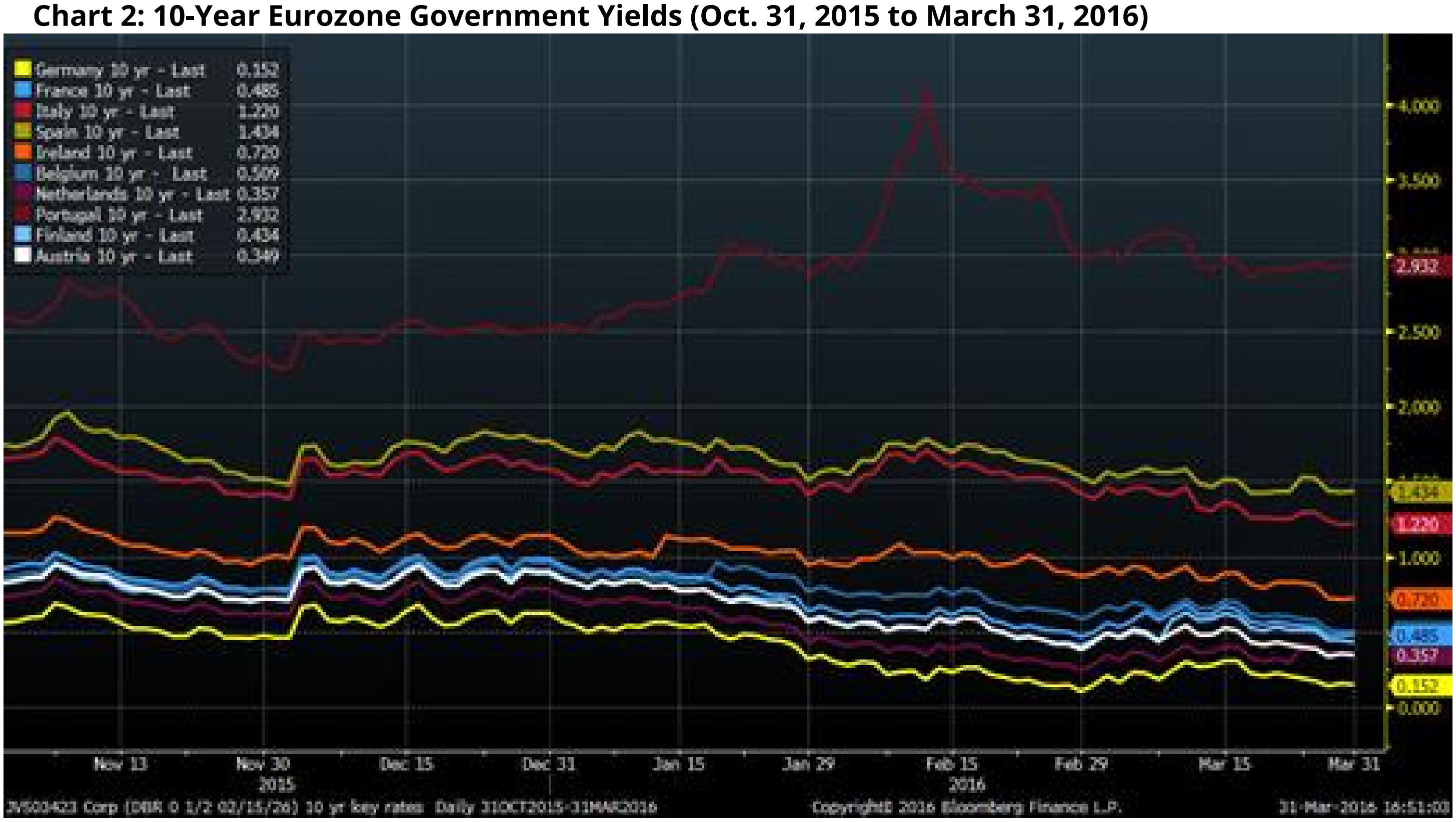


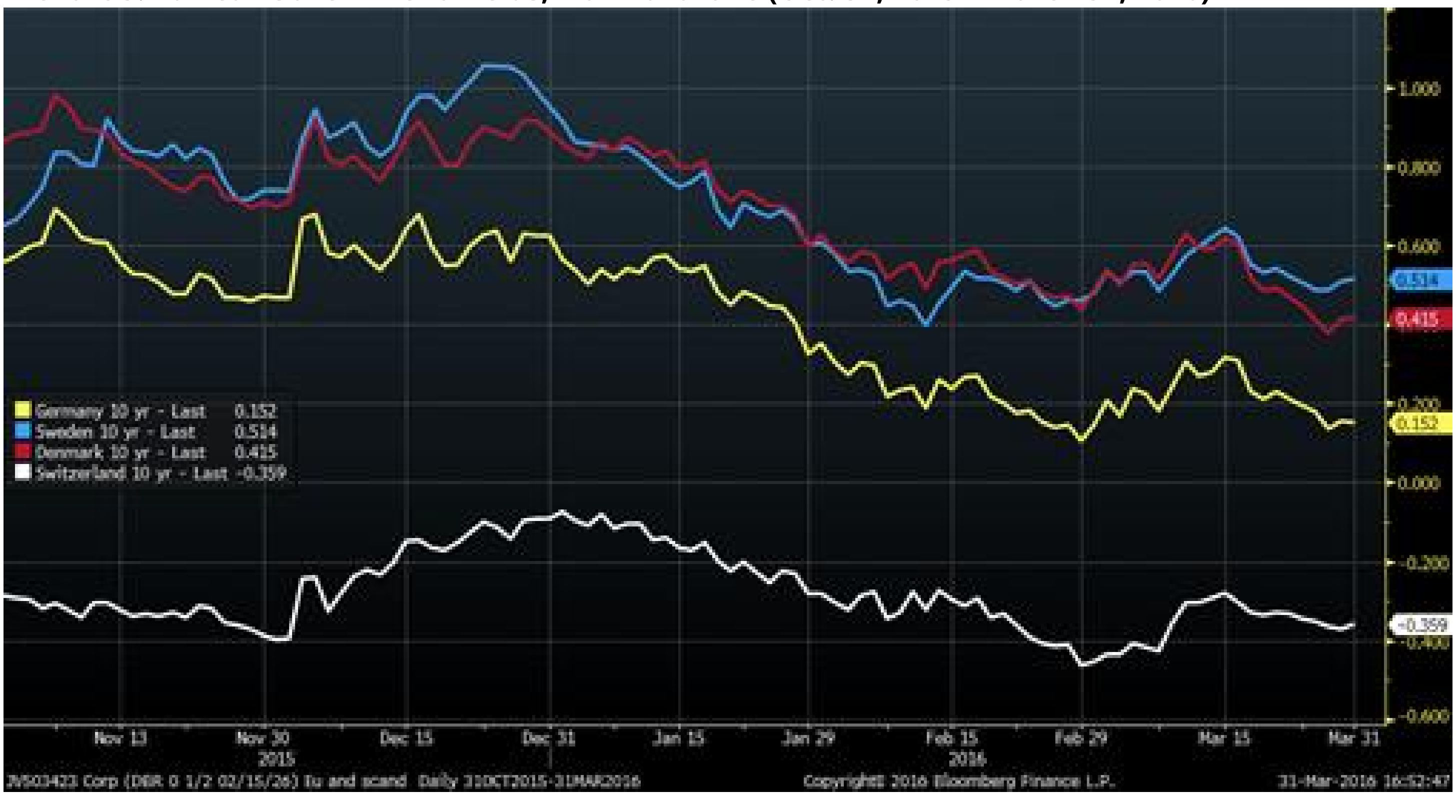
Chart 2 shows the trend in 10-year government yields for select euro area countries (excluding Greece and a few other small members). Bond yields are trending lower for most of these countries, and all are converging on 0% except for the peripheral nations of Italy, Spain and Portugal, which are in a somewhat weaker fiscal position and face greater labor market issues.

Chart 2: 10-Year Eurozone Government Yields (Oct. 31, 2015 to March 31, 2016)



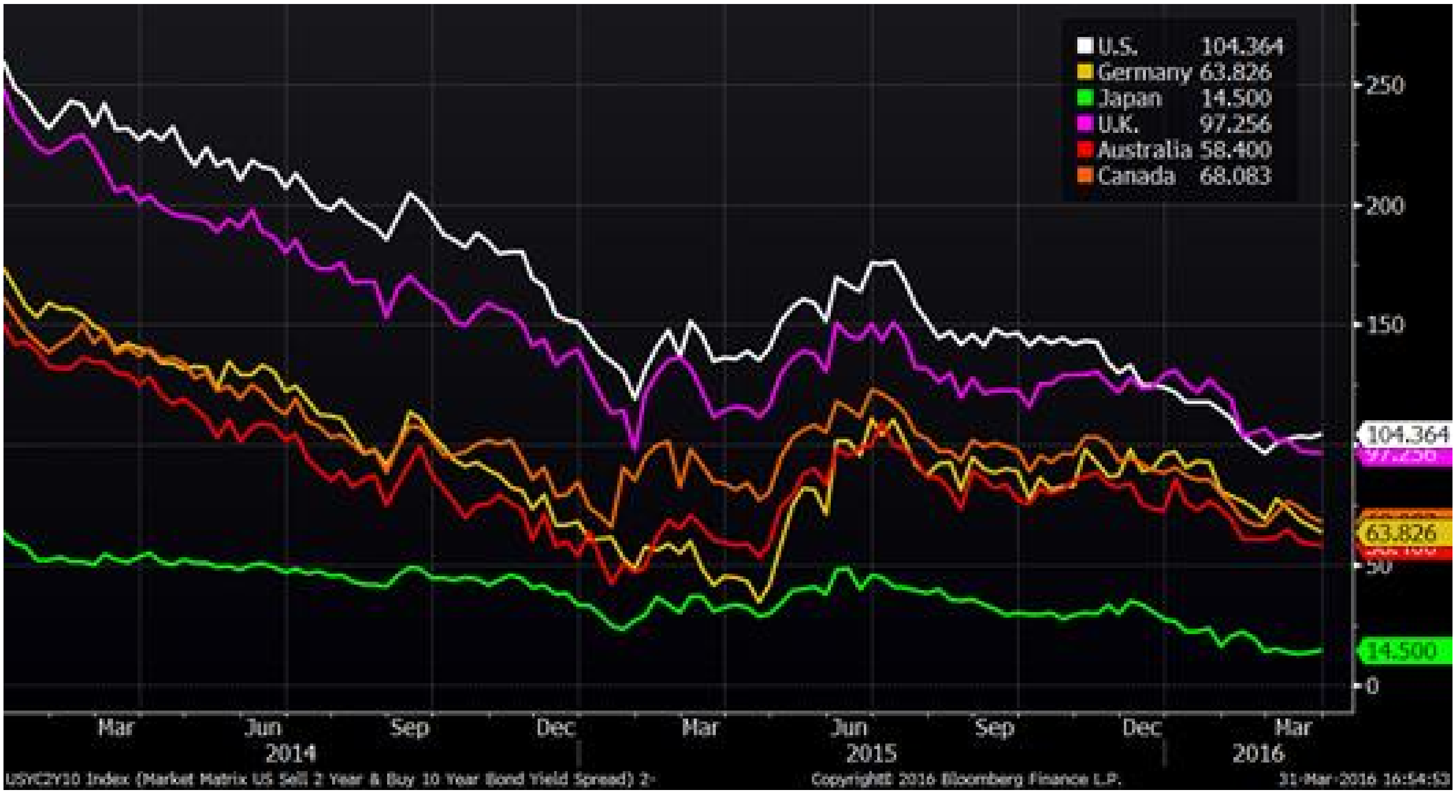
As chart 3 shows, 10-year government bond yields for the three main non-euro area European countries now implementing NIRP are all trending lower in stride with Germany. Switzerland stands out, as almost its entire yield curve is in negative territory.

Chart 3: 10-Year Government Yields, Non-Eurozone (Oct. 31, 2015 – March 31, 2016)



As Chart 4 shows, the flattening trend of yield curves in most major government bond markets over the past two years, as expressed by the difference, or spread, between two-year and 10-year yields, resumed last July at a more moderate pace than in 2014, and has continued ever since, although the U.S. yield curve has steepened slightly in recent weeks. Flattening yield curves and low yields are a negative for insurers, especially life companies that may offer products with guaranteed minimum benefits. Although there has been limited evidence of insurance companies reaching for yield in the past several years, a sustained period of extremely low rates could prompt more insurers to reach for yield either by extending maturities or taking on additional credit risk. Flattening yield curves also tend to adversely affect insurers (particularly life companies) because their liabilities tend to be longer-dated.

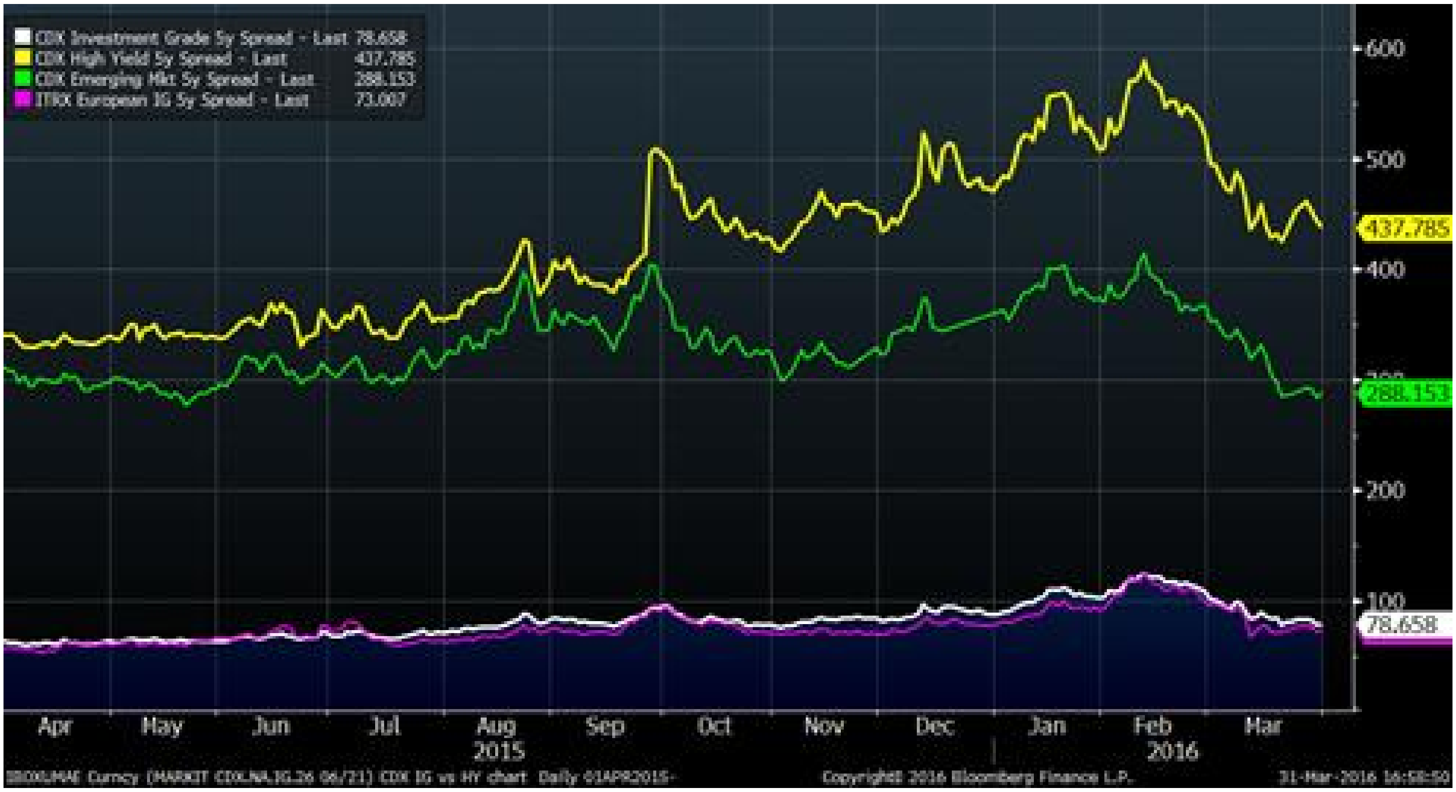
Chart 4: Flattening Yield Curves: Declining Two-Yearto-10-year Spreads Since 2014



Heightened Credit Risk Concerns Push Spreads Wider

Chart 5 shows the change in credit spreads over the past 12 months for U.S. IG and HY corporate bonds, as represented by their respective benchmark credit default swap (CDS) indices. Credit spreads continued their widening trend into mid-February as volatility increased; IG, HY and EM spreads all exceeded their previous wides set at the end of September 2015. IG corporate spread widening was more than offset by the decline in yields on Treasury securities, which means that yields and prices on IG bonds stayed relatively stable. Prices dropped and yields rose on HY bonds, however, as HY spreads neared 600 bps—almost 100 bps wider than the previous peak—reflecting global growth concerns and a further downdraft in oil prices that took West Texas Intermediate (WTI) to a low of $26.02 per barrel, weighing heavily on energy and commodity credits. Similarly, EM spreads surpassed their previous wide of about 400 bps. Since mid-February, credit spreads have tightened substantially as oil, commodities and equities have rallied. According to Bank of America Merrill Lynch, HY fund inflows set a record in the last week of February, and HY bond prices increased in all but two of the last 11 trading days of the month. With little new HY issuance, tight dealer inventories and rising investor interest, technical conditions favor further price improvement, but long-term credit fundamentals remain a concern, as recent default studies by the major rating agencies point to rising default rates in energy and other resource-based credits, and a higher proportion of issuers have been placed on watch for downgrade. Thus far, there is little evidence of contagion in the broader market, and although energy and metals and mining credits account for 15%–20% of the HY bond market, U.S. insurers' exposure to these sectors is relatively small, and most is in IG issues.

Chart 5: CDS Index Spreads, 12 Months Ending March 31, 2016



Insurance Industry Impact

The majority of U.S. insurance industry investments are in bonds, with a book/adjusted carrying value (BACV) of $3.90 trillion based on preliminary year-end 2015 data. U.S. government debt accounted for only 6.4% of total bond investments, but movements in government yield curves directly affect the market value of nearly all fixed-coupon instruments (including IG corporates, residential and commercial mortgages, and structured securities) and indirectly influence the value of most other asset classes (including real estate, HY debt, and equities). Foreign government bonds accounted for just 2.5% of total bond investments.

Preliminary year-end 2015 data show the U.S. insurance industry held $2.12 trillion in BACV of corporate bonds, which accounted for 54.2% of the industry's total bond investments. Only 5.7% of bond investments were designated NAIC 3 or lower (below-IG), a slight decrease from 5.8% at year-end 2014. This suggests that insurers in aggregate are not taking on significant additional credit risk to reach for yield by going down the credit quality spectrum. Life insurers typically have significantly more exposure to corporates (61% of preliminary year-end 2015 bond investments) than P/C companies (34%). Similarly, life insurers have a slightly larger exposure to below investment grade credits; 6.1% of life insurer bond investments were designated NAIC 3 through NAIC 6, versus only 4.6% for P/C insurers (both figures are little changed from the prior year). It is interesting to note that since year-end 2009, HY exposure for life companies has decreased from 7.7% of total bond investments, while, for P/C insurers, it has increased from just 2.5%. Because their exposures are limited, unless adverse credit developments spill over into the broader corporate market, deterioration in HY credit quality should only have the potential to affect insurers' investment returns at the margin. Non-asset valuation reserve (AVR) companies, including P/C insurers, would face greater near-term risk to surplus than those companies that maintain an AVR.

Common Stocks: From Sell-off to Recovery, as Volatility Subsides

From Chart 6, which shows normalized performance (where all indices are adjusted to a common scale, all starting from 100 one year earlier) for major world stock markets over the past 12 months, we garner two key observations. First, except for the mid-2015 Shanghai stock market bubble and subsequent collapse, most world stock markets have tended to move more or less together, rising and falling with changing perceptions of the global economic growth outlook, the extent of China's slowdown, and shifts in the dollar and commodity prices. Second, the chart shows that U.S. stocks have fared substantially better than non-U.S. equities, all of which remain about 10% or more below their year-ago levels.

Chart 6: Normalized Stock Index Performance, 12 Months Ending March 31, 2016

Within the U.S. stock market, there has been a considerable disparity in returns by sector, as shown in Table 4. Whereas the flattish performance in 2015 was characterized by strength in defensive sectors, offsetting the declines in commodity-based and interest sensitive groups, year-to-date performance in the S&P 500 index has been more broadly positive, with eight of 10 sectors in positive territory.

Table 4: S&P 500 Index Sector Returns, 2015 and YTD through March 31, 2016

Groups (10)	Q1'15	Q2'15	Q3'15	Q4'15	2015	2016 YTD
S&P 500 Index	0.95%	0.28%	-6.44%	7.03%	1.37%	0.77%
All Groups						
Telecom Services	1.54%	1.59%	-6.85%	7.61%	3.40%	15.10%
Utilities	-5.17%	-5.80%	5.40%	1.07%	-4.84%	14.51%
Industrials	-0.86%	-2.23%	-6.90%	7.97%	-2.56%	4.34%
Consumer Staples	0.99%	-1.74%	-0.20%	7.64%	6.60%	4.85%
Energy	-2.85%	-1.88%	-17.41%	0.20%	-21.12%	3.11%
Materials	0.99%	-0.48%	-16.90%	9.69%	-8.38%	2.99%
Info Tech	0.57%	0.19%	-3.70%	9.17%	5.92%	2.17%
Consumer Discretionary	4.80%	1.92%	-2.56%	5.79%	10.11%	1.19%
Financials	-2.05%	1.72%	-6.72%	5.92%	-1.56%	-5.60%
Healthcare	6.53%	2.84%	-10.67%	9.22%	6.89%	-5.93%

Faced with weak corporate earnings prospects and the prospect of multiple rate hikes, the S&P 500 fell sharply from late December 2015 through Feb. 11, the same day that oil and the 10-year U.S. Treasury yield bottomed. Since then, stocks have rallied, nudging the index into positive return territory for the first quarter of 2016.
Market volatility spiked in January and early February — the Chicago Board Options Exchange (CBOE) Volatility Index (VIX) ranged between 20 and 30 (the long-term average is around 20)—and subsequent to Feb. 11 returned to modest levels; the VIX is currently back under 15. Stocks around the world, U.S. Treasury yields, oil and the U.S. dollar generally followed some version of this pattern.

Insurance Industry Impact
Based on preliminary data as of Dec. 31, 2015, the U.S. insurance industry held common stock investments totaling $673 billion (11.6% of total cash and invested assets), of which $269 billion (5.2%) were unaffiliated common stock or mutual fund holdings and $373 billion (6.4%) were affiliated holdings. P/C insurers' common stock exposure totaled $491 billion (28.3% of total invested assets), of which $251 billion (14.5%) was unaffiliated and $240 billion (13.9%) was affiliated, whereas life companies' exposure was only $148 billion (3.9%), of which only $30 billion (0.8%) was unaffiliated and the remaining $118 billion (3.1%) was affiliated. The robust stock market of recent years—in which the S&P 500 returned 13% or more, including dividends, in five of the seven years ending with 2015—has been a benefit, particularly for P/C insurers, that has helped alleviate some of the pressure to generate investment income from fixed income holdings in the low interest rate environment. That calculus could change, however, if volatility remains elevated and interest rates continue to rise.

The NAIC Capital Markets Bureau will continue to monitor volatility and other capital market developments and their impact on the insurance industry, and publish additional research as deemed appropriate. The likely recurrence of periods of heightened volatility also highlights the need to remain attentive to changing market valuations, even for assets that insurers generally carry at some version of amortized cost.

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