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 U.S. insurance companies. A list of archived Capital Markets Bureau Special Reports is available via the index.

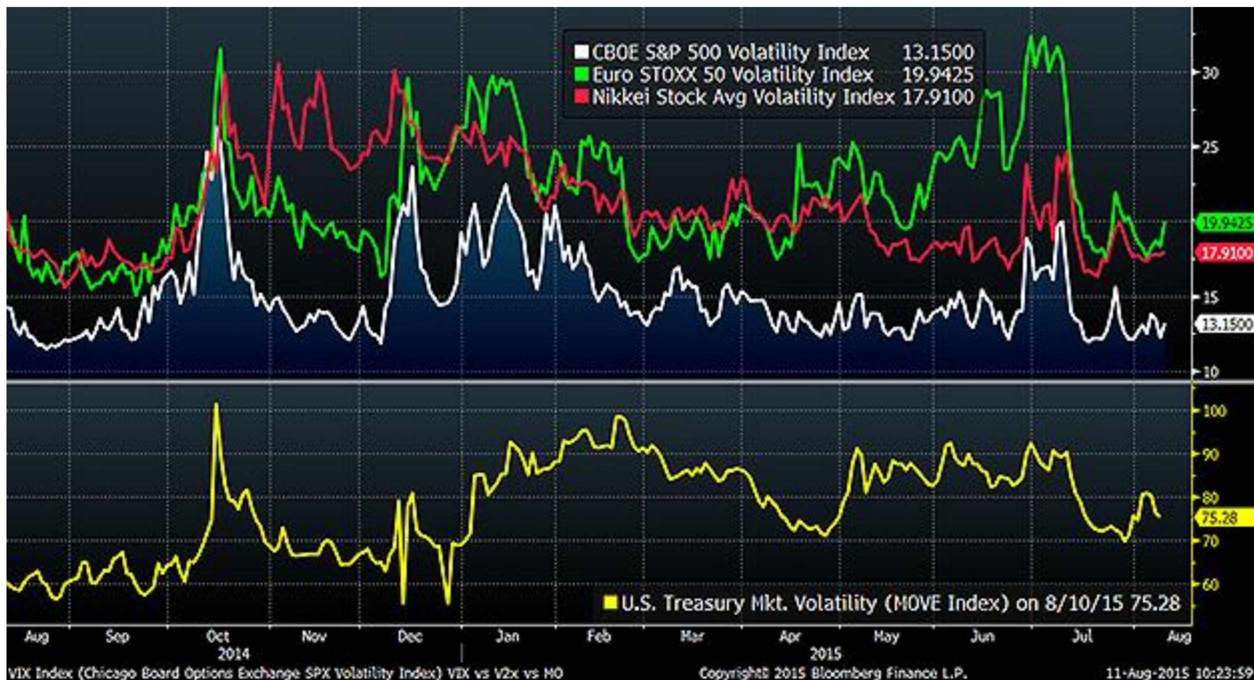
Capital Markets Update: Mid-2015

Key Points:

- **In the past four months, the most significant market driver has been the shift in economic and interest rate trends, particularly with respect to the U.S., where bond yields have been rising in anticipation of tighter monetary policy as the economy improves. U.S. yields have thus diverged to some extent from the EU and Japan, where economic recovery has been more fragile and near-zero interest rate policy regimes have persisted longer.**
- **The U.S. dollar remains strong relative to most currencies in the developed world and the emerging markets, and its strength has had a profound effect on oil prices, which once again are about 50% below their 2014 peak levels.**
- **From high-yield and emerging market bonds to global equities, Q2 2015 and the weeks since have been a rougher ride than the prior quarter for most risk assets because of a handful of headline-grabbing developments.**

Since late 2012, most major financial markets have been relatively calm—most of the time. Volatility was subdued in 2013 and the first nine months of 2014, as bond and stock markets in the U.S., Europe and Japan trended higher, driven by accommodative monetary policy in the form of historically low short-term interest rates and central bank securities purchases. As Chart 1 shows, however, these markets, represented by volatility indices for U.S., Japanese and European stocks (top panel) and U.S. Treasury securities (bottom panel), have experienced episodes of heightened volatility since the latter part of 2014, reflecting shifting macroeconomic trends and changing monetary policy expectations, evolving regulatory regimes and geopolitical flashpoints around the world. In this report, we discuss movements in the capital markets for bonds and stocks in key regions around the world through early August 2015, as well as currencies and commodities—particularly oil.

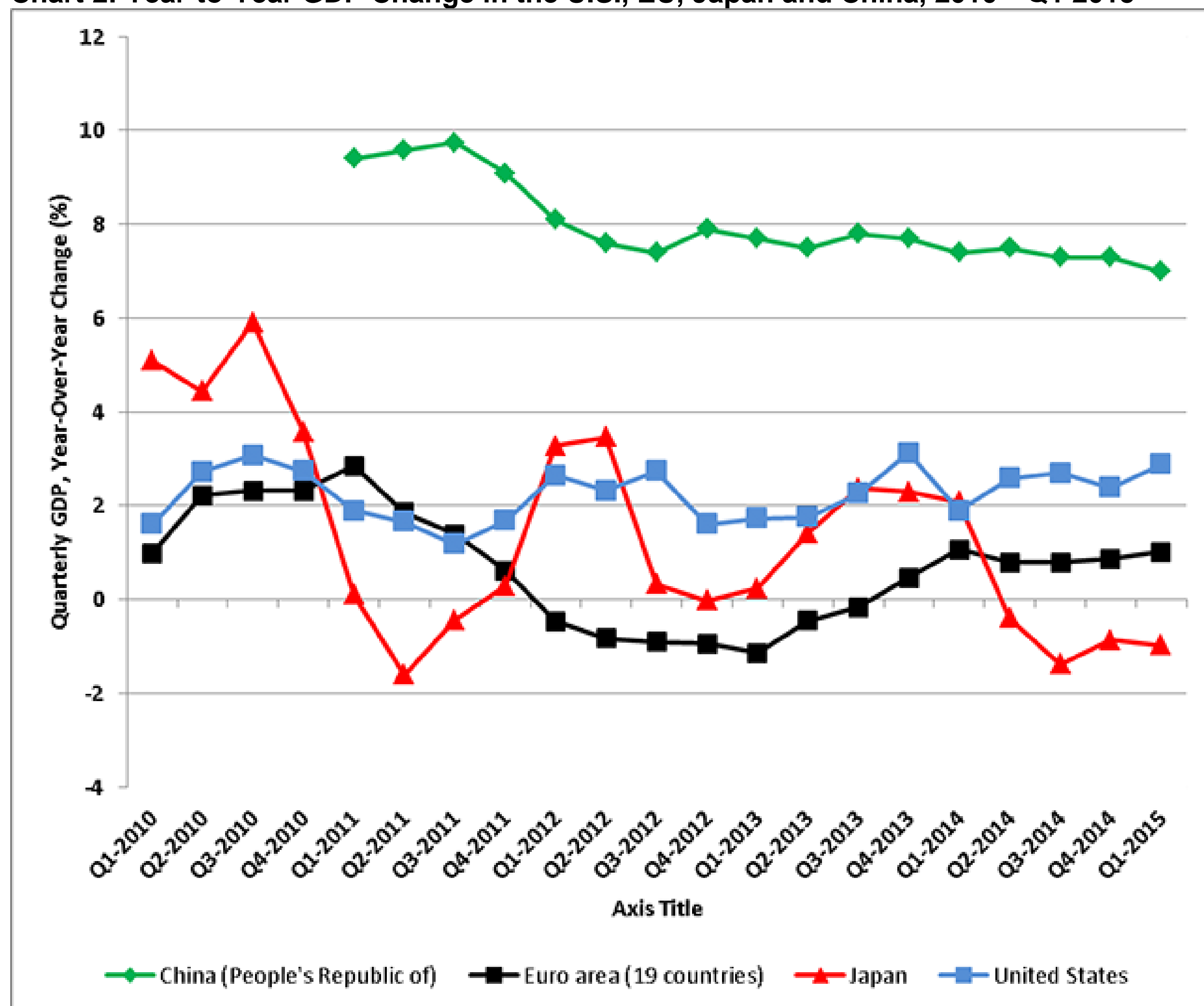
Chart 1: Select Volatility Indicators in the U.S., Japan and Europe, 12 Months Ended Aug. 11, 2015



Economic and Interest Rate Trends

The deep 2008–2009 recession forced global economic cycles—and most major capital markets—to converge, but the pace of recovery in different parts of the world since then has been affected by different policy responses and structural conditions in each regime. In the four months since the NAIC Capital Markets Bureau last reported on capital markets activity, the most significant market driver has been the shift in economic and interest rate trends, particularly with respect to the U.S., where bond yields have risen in anticipation of tighter monetary policy as the economy improves. U.S. yields have thus diverged to some extent from the EU and Japan, where economic recovery has been more fragile, and near-zero interest rate policy regimes persist. Chart 2 shows the difference in economic growth in the U.S., Japan and the EU since 2010; note, however, that there is a range of economic conditions across the Eurozone, which poses challenges for EU officials.

Chart 2: Year-to-Year GDP Change in the U.S., EU, Japan and China, 2010—Q1 2015



Source: Organisation for Economic Co-operation and Development (OECD)

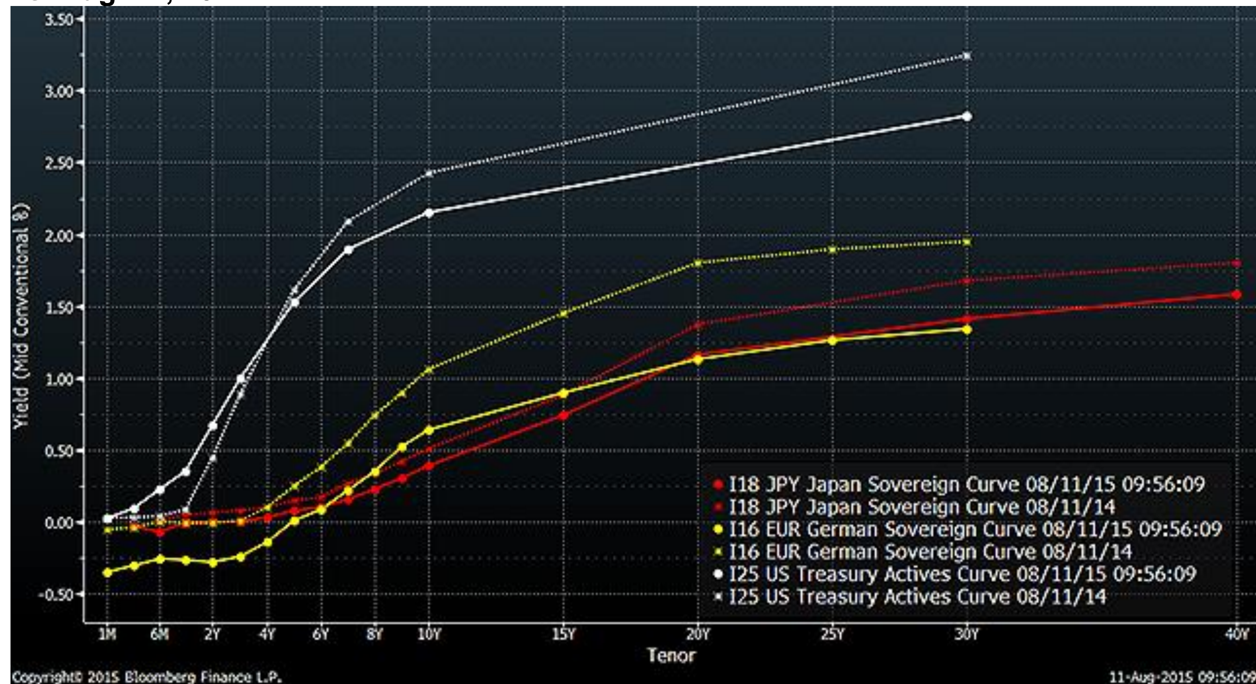
Yields of 2-year and 10-year government bonds have been trending gradually higher in the U.S. since October 2014 and February 2015, respectively, but have been marking time just above zero percent in Japan. The 2-year Bund yield continued to grind lower in Germany, bottoming near -0.30% in early April and then stabilizing in a tight range, while the 10-year Bund was more volatile. Two-year yields mostly reflect market expectations for central bank policy, hence, as of Aug. 11, 2015, the 2-year U.S. Treasury yield had increased by approximately 45 basis points (bps) from its April 2013 low of 0.21%, as expectations of the Fed's first tightening move in 11 years have solidified. Longer-term government bond yields reflect long-run expectations for inflation and other factors; from a Jan. 31 low of 1.64%, the U.S. 10-year yield reversed direction and increased about 85 bps through mid-June and remains about 50 bps above the low as of Aug. 11, 2015.

Increasing signs of economic recovery also have emerged in the Eurozone, which expanded at a stronger-than-expected 0.3% in the fourth quarter of 2014 and grew 0.4% in Q1 2015. Note, however, that there is considerable disparity in economic health among the Euro-area countries; Q2 strength in France and Italy was offset by a hiccup in German GDP. Greece was a source of much market noise, especially in Europe.

Because shorter-term and longer-term government bond yields are driven by different investor expectations, it follows that the term structure of interest rates (the yield curve) changes with

shifting economic views and monetary policy expectations. Chart 3, which shows the 12-month change in the U.S., Japanese and German government yield curves, illustrates that because of the reversal in U.S. yield trends and the stability in Japanese rates in the past six months, government yield curves in the U.S. and Japan are nearly identical to how they appeared one year ago, while the Euro (German) curve clearly has moved lower, with negative short-term rates. The change in each of these curves reflects the divergence of economic prospects and policy responses.

Chart 3: U.S., German and Japanese Government Yield Curve Changes, Aug. 11, 2015, vs. Aug. 11, 2014



Curve flattening and monetary tightening have ramifications for institutional investors—in particular those (such as banks and some hedge funds) that borrow at a low short-term interest rate in U.S. dollars, or in the currency of a low interest rate country, in order to invest in an asset that is likely to provide a higher return. Near-zero interest rate policies in some of the world's main economic regimes have allowed these so-called carry trades to flourish, driving government bonds, stocks and corporate credits to ever-richer valuations, but there is concern that when conditions become less favorable, investors will unwind many of these trades, causing a scramble that could disrupt the financial markets. The unwinding of leveraged positions may have exacerbated the late 2014 sell-offs in high yield, emerging market credit and equity markets. While unsettling, these market disruptions usually are temporary and not of serious concern for long-term investors such as insurance companies.

Insurance Industry Impact

The majority of U.S. insurance industry investments are in bonds, with a book/adjusted carrying value (BACV) of $3.86 trillion as of year-end 2014. At $244 billion, U.S. government debt accounted for only 6.3% of total bond investments, but movements in government yield curves directly affect the market value of all fixed-coupon instruments and indirectly influence the value of most other asset classes.

Bond price movements due to interest rate changes can be significant. As an example, the 2.75% Treasury note maturing November 2023 traded as low as 97.63 cents on the dollar at the start of 2014, and as high as 109.56 cents on the dollar on Jan. 30, 2015, for a positive swing in market value of 12.2%. The 10-year Treasury is fairly representative of the interest rate sensitivity of life companies' bond portfolios; NAIC data show the average maturity of the bond

portfolios of U.S. life insurers was 12.9 years as of Dec. 31, 2013. Portfolios associated with other insurer types may have shorter average maturities, however, with bond prices that are less sensitive to interest rate changes; the 1.5% Treasury note maturing December 2018 traded as low as 98.75 cents on the dollar (on Jan. 8, 2014) and as high as 101.94 on Jan. 15, 2015, for a gain of just 3.2%. Note that life insurers, in particular, are traditionally "buy-and-hold" investors that attempt to match the duration of their assets and liabilities, thereby limiting their net interest rate exposure. Market risk may only be a concern if an insurer needs to sell bonds before maturity, in which case losses will be realized if bond yields have increased.

U.S. Dollar Strength and Commodity Price Weakness

As Chart 4 shows, the dollar (i.e., the exchange rate of the U.S. dollar to the euro and to the Japanese yen) began appreciating in earnest around the middle of 2014 as the Eurozone's recovery stalled and U.S. economic data grew more robust, raising the potential for tighter U.S. monetary policy while the European Central Bank (ECB) and the Bank of Japan (BoJ) appeared locked into monetary ease. U.S. Treasuries performed well, helped by benign inflation data and "flight to quality" and "carry trade" capital inflows.

Chart 4: USD – Yen and USD – Euro (inverted), 12 Months Ending Aug. 11, 2015

The rising dollar had profound effects on commodity prices—oil in particular. The global price of crude oil fell sharply beginning in mid-June 2014; as Chart 5 shows, U.S. West Texas Intermediate (WTI) crude, appears—after a brief bounce—to be headed below $45 per barrel—more than 50% below its mid-June 2014 peak—and Brent (North Sea) crude is trading below $50 per barrel. Demand remains modest, as U.S. economic momentum has been offset by the sluggish Eurozone recovery and especially by slowing Chinese economic growth. Excess supply continues to weigh on the market. Similarly, other commodity prices have been falling; the S&P GSCI Index (formerly the Goldman Sachs Commodity Index) and Thomson CRB indices—both broad measures of commodity prices—have fallen more than 40% and 30%, respectively, in the past 12 months ended Aug. 6, 2015.

Chart 5: WTI and Brent Crude, $/bbl, Past Five Years

Insurance Industry Impact

As discussed in the NAIC Capital Markets Bureau's "Hot Spot" article published on Jan. 14, 2015, the industry's direct exposure to foreign currency risk remains modest. Based on statutory filing data compiled as of March 23, 2015, the U.S. insurance industry had total foreign currency exposure, translated to U.S. dollars, of $100.7 billion as of Dec. 31, 2014, of which the five largest exposures were $39.3 billion in Japanese yen, $26.1 billion in Canadian dollars, $17.9 billion in British pounds, $12.2 billion in euros, and $2.8 billion in Australian dollars.

As oil prices have remained weak, the effect on the global economy and financial markets has become more pervasive. Still, insurers' exposure to energy sector corporate bonds, as of Dec. 31, 2014, is modest at $207 billion (13.1% of total industry corporate bond holdings and 3.6% of total cash and invested assets) as of Dec. 31, 2014. The industry is also indirectly exposed through financial institutions that lend to oil producers, suppliers to the oil sector, municipalities dependent on the energy sector and real estate investments in oil-rich geographies. No one of these exposures is material by itself, and the industry's aggregate exposure to falling oil prices probably is manageable, albeit more significant.

Corporate Bonds: Credit Spreads Gradually Widening; Low Liquidity Could Raise Volatility

High-yield credit markets experienced heightened volatility in the second half of 2014, as mutual fund investors withdrew from the sector amid concerns about elevated valuations and talk of a "credit bubble." As shown in Chart 6, from a July 2014 credit spread tightest point of 291 bps, the Markit CDX High-Yield (HY) Index began to reverse shortly thereafter and reached its widest credit spread point of 407 bps on Dec. 16, 2014. Market conditions then improved, and spreads tightened through March, before again reversing direction and widening to the index's current level of 377 bps. Investment-grade corporate credit behaved similarly during this period, although the magnitudes of the shifts were far more subdued. The Markit CDX Investment Grade (IG) Index peaked at 76 bps on Dec. 16, 2014, and currently resides around 75 bps.

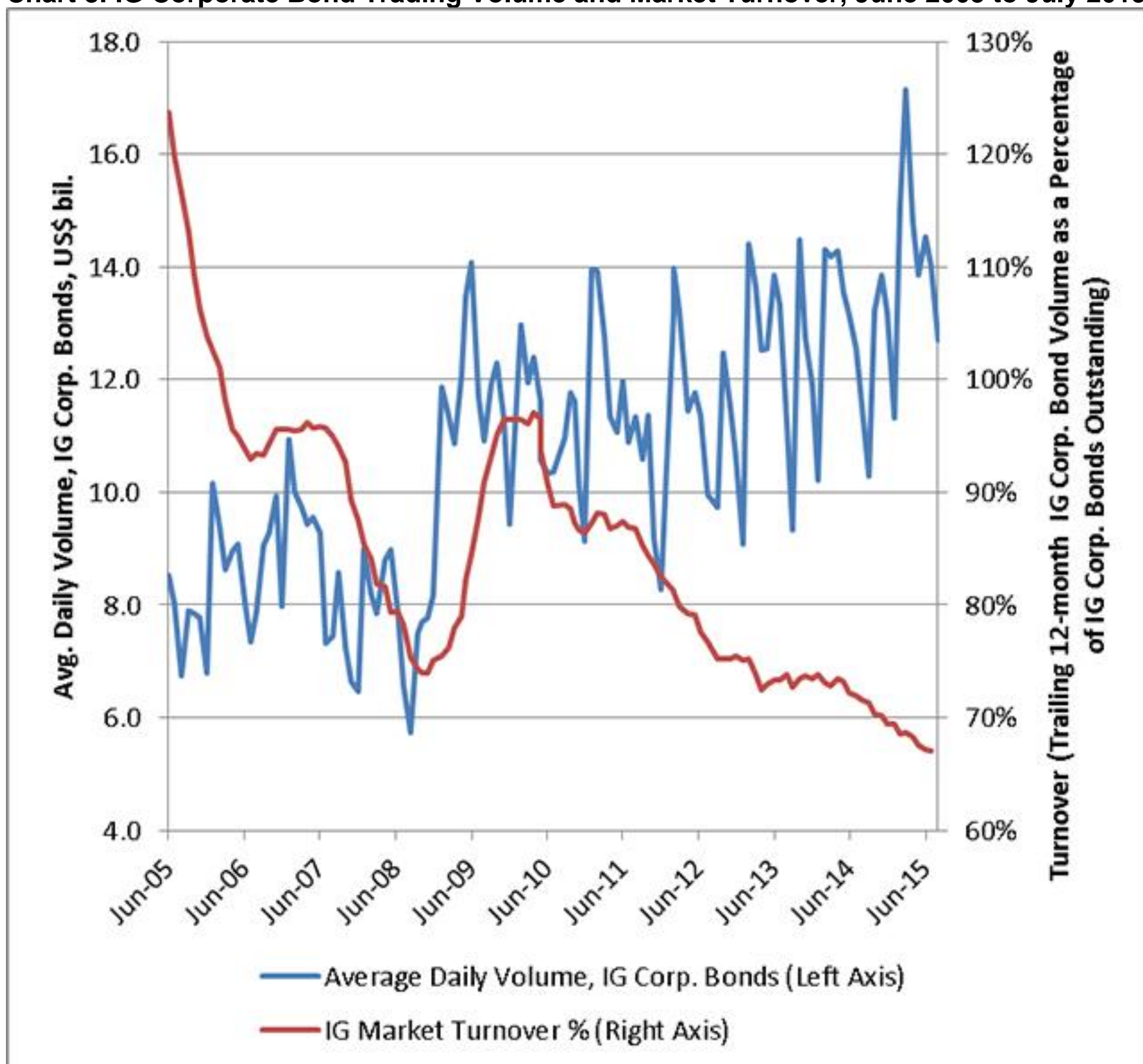
Chart 6: High-Yield and Investment-Grade CDS Spread Changes, 12 Months Ending Aug. 11, 2015

Chart 7: High Yield CDS Spreads – HY Index vs. Energy Sector, 12 Months Ending Aug. 11, 2015

Many causes were cited for the weakness in credit markets, including potential Federal Reserve rate hikes, emerging market headwinds, global growth concerns and stock-market volatility. More specific to the HY market was the strengthening of the U.S. dollar and attendant fall in oil prices, which raised investor concern about the credit quality of energy companies, which have been heavy debt issuers. Chart 7 shows the magnitude of the widening in energy sector HY credit spreads in the last 12 months.

The high volume of overall HY issuance—exceeding $300 billion for the third consecutive year in 2014, according to Securities Industry and Financial Markets Association (SIFMA) data also raised concern among some investors that a “credit bubble” was forming, not unlike 2007. Outflows from mutual funds were cited as a driver of the weakness in corporate bond markets, along with declining market liquidity. Total non-government bond inventories at primary dealers—including commercial mortgage-backed securities (CMBS), residential mortgage-backed securities (RMBS) and commercial paper—have dropped to about $55 billion from about $250 billion pre-2008 crisis, according to the Federal Reserve Bank of New York. Inventory of corporate bonds accounted for only $15.7 billion as of July 15, 2015, down 9% from a year earlier. Corporate bond trading statistics, shown in Chart 8, also raise liquidity concerns: Despite steady volume growth, including a 9.5% year-over-year increase in average daily volume year to date (through July 31, as compiled by SIFMA), trading volume relative to the total amount of corporate debt outstanding has been falling steadily, suggesting that it may take bond holders longer to exit positions.

Chart 8: IG Corporate Bond Trading Volume and Market Turnover, June 2005 to July 2015



Source: SIFMA, TRACE via Market Axxess

Q2 2015 has been a rougher ride for emerging markets because of a handful of headline-grabbing developments, particularly the abrupt reversal of Chinese stocks into a bear market, the battle between Greece and its creditors, and the escalating debt problem in the commonwealth of Puerto Rico, which defaulted on its debt for the first time in its history on Aug. 4, 2015. Off the front page, perhaps, but still worrying emerging markets investors are: the ongoing Petrobras corruption investigation, which threatens to destabilize the current government; the upcoming fall presidential election in Argentina, which may result in a continuation of that nation's disdain for international creditors; and potential political instability in Turkey.

Insurance Industry Impact

As of year-end 2014, the U.S. insurance industry held $2.06 trillion in BACV of corporate bonds, which accounted for 53.4% of total bond investments. Only 6% of bond investments were designated NAIC 3 or lower (below investment grade), a slight increase from 5% at year-end 2013. This suggests that insurers in aggregate are not taking on significant additional credit risk to reach for yield, as many other investors appear to have done based on the robust demand for speculative-grade paper. Life insurers typically have significantly more exposure to corporates (61% of year-end 2014 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 4.4% for P/C insurers; both figures are little changed from the prior year. It is interesting to note, however, that since year-end 2009, below investment grade 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, adverse developments in HY credit should only have the potential to affect insurers' investment returns at the margin, unless those developments spill over into the broader corporate market. In any case, the HY market can provide insight into investors' risk appetite, particularly for credit risk.

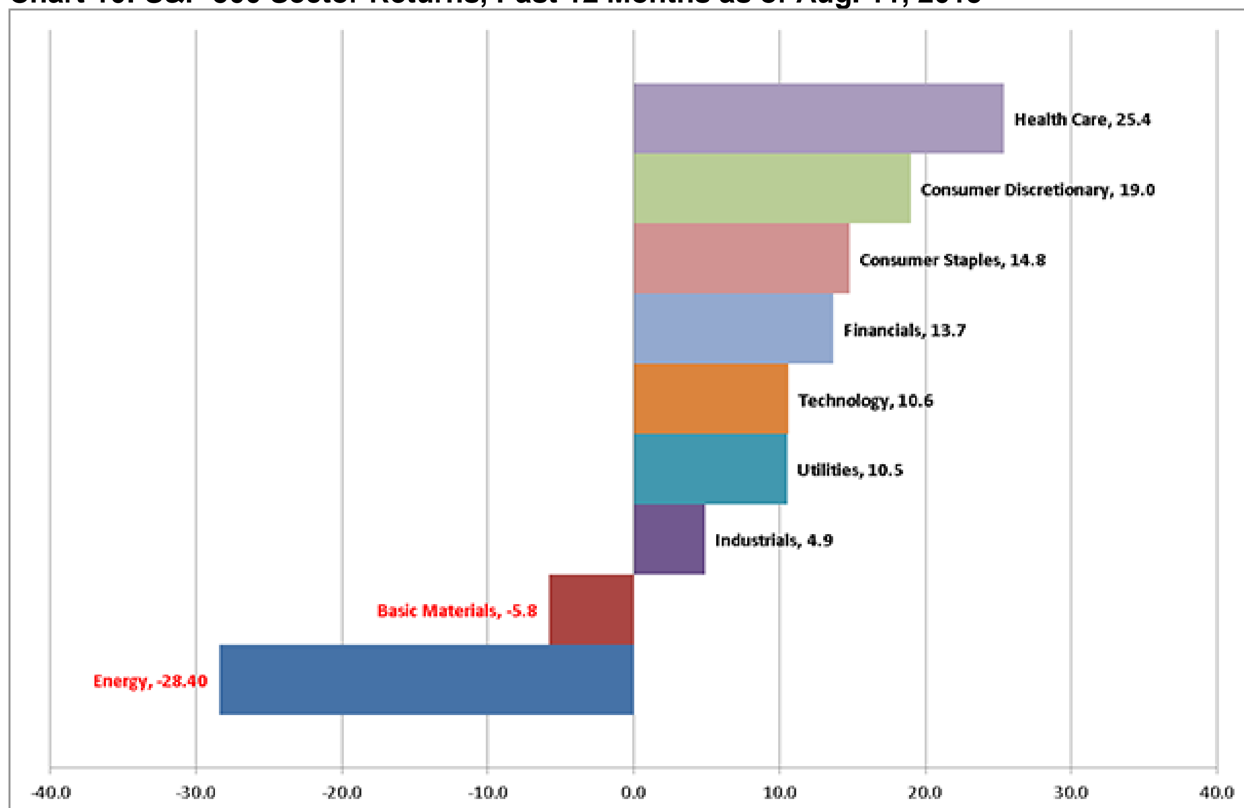
Equity Market Headwinds Intensified

As Chart 9 shows, after a comparatively bumpy ride from October 2014 through February 2015, the world's major stock markets trended higher and were less volatile into April and May. However, the major global stock indices' advances all faltered at one point or another in Q2, and volatility returned to the equity markets in June and July. Q1 earnings season in the U.S. revealed slowing corporate earnings growth. European equities were driven mostly by the Greek debt drama in Q2 and by Eurozone macroeconomic factors. In Japan, stocks rallied in April and May as the yen weakened against the dollar and economic indicators continued to improve, wavered in June and early July, and then recovered, similarly to European equities.

Chart 9: U.S., Europe and Japan Stock Price and Volatility Indices, 12 Months Ending Aug. 11, 2015

Within the U.S. market, there has been some dispersion of returns by sector in the past 12 months ended Aug. 11 2015 (shown in Chart 10), with energy the standout loser, reflecting the drop in oil prices, and basic materials stocks also lagging, reflecting declining commodity prices and the strengthening U.S. dollar. For the past six months, the S&P 500 index has moved sideways in a tight range; many of the top performing stocks of the past year have corrected, while modest gains in the defensive sectors have been offset by the weakness in energy and cyclical stocks.

Chart 10: S&P 500 Sector Returns, Past 12 Months as of Aug. 11, 2015



Source: Bloomberg Finance L.P.

Emerging market equities typically are not a significant asset class for U.S. insurance companies, but the gyrations of the Chinese stock market in June and July of this year were sufficiently large that they began to affect global markets. Chinese stocks pulled back sharply in June and July on reports of weak property investment growth and tightened brokerage firm margin requirements for investors. The Shanghai composite fell nearly 30% in a matter of weeks, erasing more than $3 trillion in market value and triggering a flurry of government intervention actions to stem the decline.

While the idea of government intervention to stem a stock market slide is not new or unique to China, the scale of state intervention in the Chinese market is significant, as are the reasons behind it. Unlike most of the world's major stock markets, China's stock market is relatively insulated from the rest of the world, as only about 1.5% of Chinese shares are owned by foreigners, according to Capital Economics, an economic research firm. Further, individual retail investors, rather than institutional investors, dominate trading with about 85% of trading volume, according to Reuters. A recent survey by the China Securities Depository and Clearing Corp. (CSDC) found that many individuals are investing with borrowed money, based on faith in the central government.

Insurance Industry Impact:

As of Dec. 31, 2014, the U.S. insurance industry held common stock investments totaling $684 billion (11.9% of total invested assets, including affiliated holdings). However, P/C insurers' exposure to common stocks was $497 billion (28.5% of total invested assets), whereas life companies' exposure was only $149 billion (4%). The robust stock market of recent years—in which the S&P 500 returned 13% or more, including dividends, in five of the past six years ending with 2014—have 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 going forward, however, if volatility continues to trend higher and interest rates continue to rise.

Conclusion

In summary, in the past four months the financial markets have been reacting to divergent economic trends and policy shifts between the U.S., the Eurozone and Japan, along with a modest undercurrent of ongoing geopolitical tensions. The NAIC Capital Markets Bureau will continue to monitor market volatility and publish additional research as deemed appropriate.

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

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