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Market Briefing

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Date: December 3, 2019

Subject: Asset Valuations in a Volatile and Uncertain Market

Introduction: As the various investment markets head towards the end of the calendar year, one of the inevitable questions for US insurers is, and has always been, what will be appropriate valuations for their invested assets. While the majority of invested assets for US insurers are reported at amortized cost (or some version of that), some are at either fair value or the lower of cost or fair value. Also, even for those assets reported at amortized cost, fair value assessments are still an important aspect of regulatory reporting, as a significantly negative comparison may be considered an indication of impairment. Reminders of market volatility that was experienced in the last quarter of 2018 also point to at least the potential for significant changes in value.

U.S. Insurer Long Term Invested Assets as Percent of Total

	LIFE		P&C		Health		TOTAL	
LONG TERM INVESTMENTS	2017Y	2018Y	2017Y	2018Y	2017Y	2018Y	2017Y	2018Y
Corporate Bonds	47.8	47.3	21.1	22.0	27.9	28.3	39.5	39.4
Loans		1.0		0.7		1.0		0.9
Government Bonds (incl Municipals)	12.0	10.1	27.1	25.8	26.3	23.9	16.8	15.1
Agency CMBS	1.1	1.2	1.0	1.3	0.5	0.7	1.0	1.2
Agency RMBS	4.8	4.6	5.1	5.4	9.2	9.8	5.0	5.0
Agency ABS	0.5	0.4	0.5	0.4	0.2	0.2	0.5	0.4
Non-Agency CMBS	3.3	3.4	2.1	2.3	2.1	2.6	2.9	3.1
Non-Agency RMBS	2.1	2.0	1.1	1.2	0.6	0.7	1.8	1.7
Non-Agency ABS	6.3	7.0	3.1	3.8	4.3	5.8	5.3	6.0
Hybrids	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3
Bond ETFs	0.1	0.1	0.2	0.1	0.9	0.8	0.1	0.1
Subtotal Bonds	78.2	77.5	61.4	63.3	72.2	73.9	73.2	73.3
Preferred Stock	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Common Stock	0.8	0.7	19.0	17.9	5.3	4.4	6.2	5.8
Funds reported as Common Stock	0.2	0.2	1.5	1.3	7.5	6.9	0.8	0.7
Subtotal Equity	1.3	1.2	20.8	19.4	13.1	11.6	7.2	6.8
Commercial Mortgage Loans	11.4	12.2	1.0	1.1	0.1	0.1	8.0	8.6
Mezzanine Loans	0.3	0.3	0.0	0.0	-	0.0	0.2	0.2
Residential Mortgage Loans and Other	1.0	1.2	0.1	0.1	0.0	0.0	0.7	0.8
Problem Mortgages	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Non-Insurer Occupied Real Estate	0.5	0.4	0.2	0.3	0.2	0.1	0.4	0.3
Subtotal Real Estate Related	13.2	14.0	1.3	1.5	0.2	0.2	9.4	10.0
Other Long Term Assets	2.5	2.7	3.1	3.1	3.5	3.5	2.7	2.8
Subtotal Unaffiliated Long Term	95.1	95.4	86.6	87.4	89.0	89.2	92.5	92.9
Affiliated Investments (incl Insurer Occupied RE)	4.9	4.6	13.4	12.6	11.0	10.8	7.5	7.1
Total - Long Term Investments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

How are changes in market values reflected in US insurers' invested assets? Bonds which represent the largest percentage exposure are largely held at amortized cost. The exceptions are for bonds with an NAIC 6 Designation for Life companies and any bonds below an NAIC 2 Designation for Property & Casualty and Health companies. For these, the requirement is lower of cost or fair value. Fair values of all bonds though are reported so that companies and regulators can make an assessment if an Other Than Temporary Impairment (OTTI) is justified. Insurers can be faced with the need to recognize an OTTI especially if they cannot represent that they are able to hold an investment to maturity. Common stock investments are reported at fair value including mutual funds that are reported as common stock. The exception to the mutual fund valuation requirement is with specific Bond Exchange-Traded

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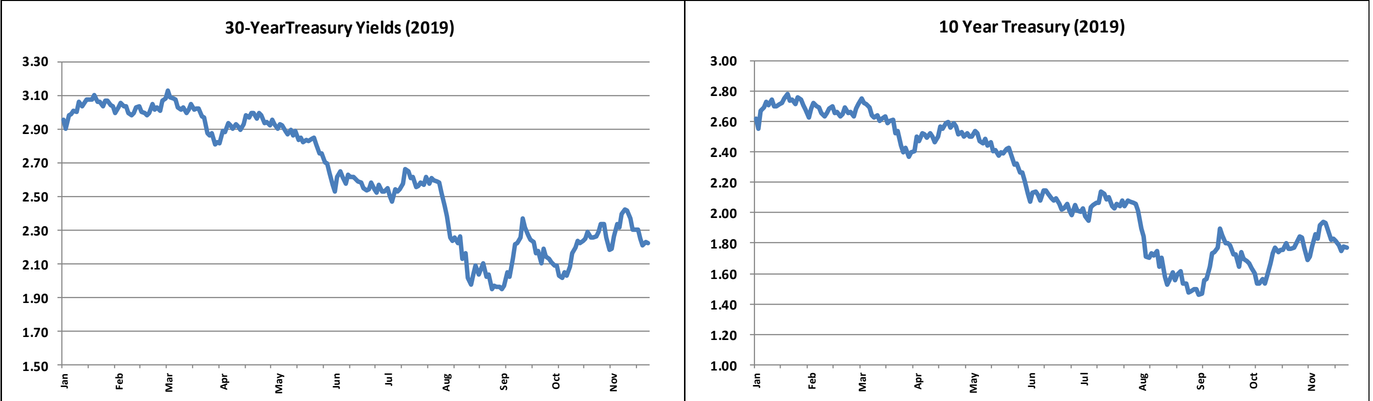
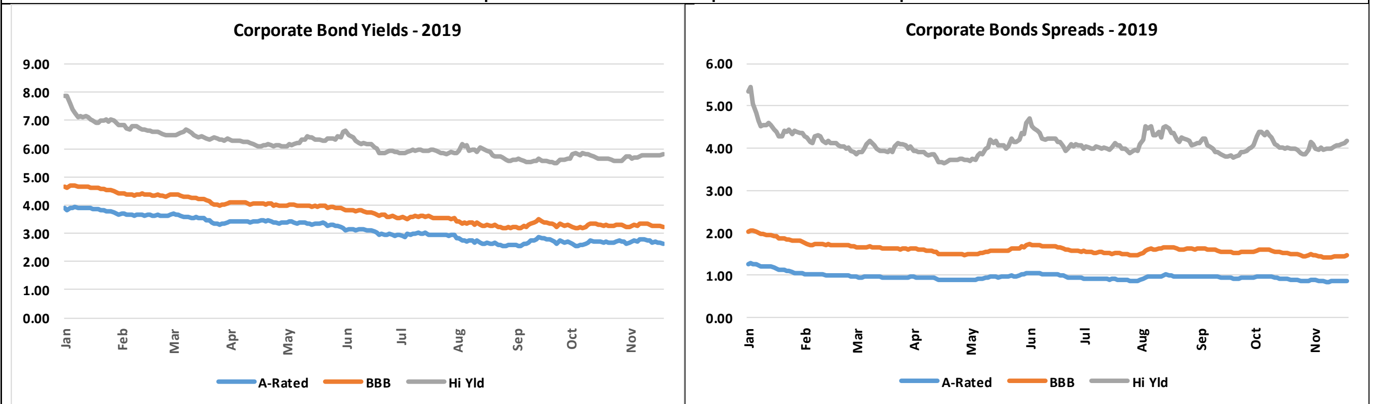
Funds (ETFs) that are listed as being eligible for treatment as bonds. These must meet specific guidelines promulgated by the NAIC's Valuation of Securities Task Force. While those are treated as bonds and can be reported based on a defined "systematic value", US insurers can also report at Net Asset Value. Some analysis done has shown that most insurers have chosen to report values at Net Asset Value. In either case, the fair value must also be reported. Swings in equity markets would also be expected to impact the value of many investments reported on Schedule BA. Private equity funds are an example of where markets should be expected to impact the values, and in periods of volatility, may have a more substantial effect. The values reported by insurers are generally provided by the fund managers. The weakness in the fourth quarter of 2018 should have been reflected in year-end 2018 values. However, in some cases, the recovery in markets in the first quarter of 2019 may also have led to some upward adjustments for the year-end values.



Since the bulk of US insurers investments are in bonds, or other longer dated fixed income investments, what has happened to longer term interest rates between year-end 2018 and year-end 2019 would impact those fair values. Longer term interest rates, as reflected by the 30-year and 10-year Treasury yields, have declined. The 30-year Treasury yield began the year at 2.95%, and was 2.22% as of November 22nd, a decline of 73 basis points. With the longer duration, the decline in yield should translate into an increase on price of about 12 points. The 10-year Treasury yield, a somewhat more common benchmark maturity, declined from 2.62% to 1.77%, or 85 basis points. Given the shorter duration, one would expect an increase in price of about 7 points.



Bond prices are impacted not just by changes in Treasury yields, but also credit spreads. For 2019, these also declined from the beginning of the year through November 22nd. The bulk of US insurer bond investments are in single-A and triple-B quality markets, with a not insignificant exposure to below investment grade bonds. Generic market yields and spreads for single-A bonds declined 125 basis points and 39 basis points, respectively. For triple-B quality market, those same measures were declines of 145 basis points and 57 basis points. High yield levels are somewhat more difficult to pinpoint since the markets are less liquid and actual trading is more "by appointment". However, at least indications are below investment grade bond yields decreased by over 200 basis points and spreads by 110 basis points. These levels are all for Corporate Bonds. The market for Structured Securities are also more difficult to pinpoint. There have been significant anecdotal reports that yields and spreads on the lower

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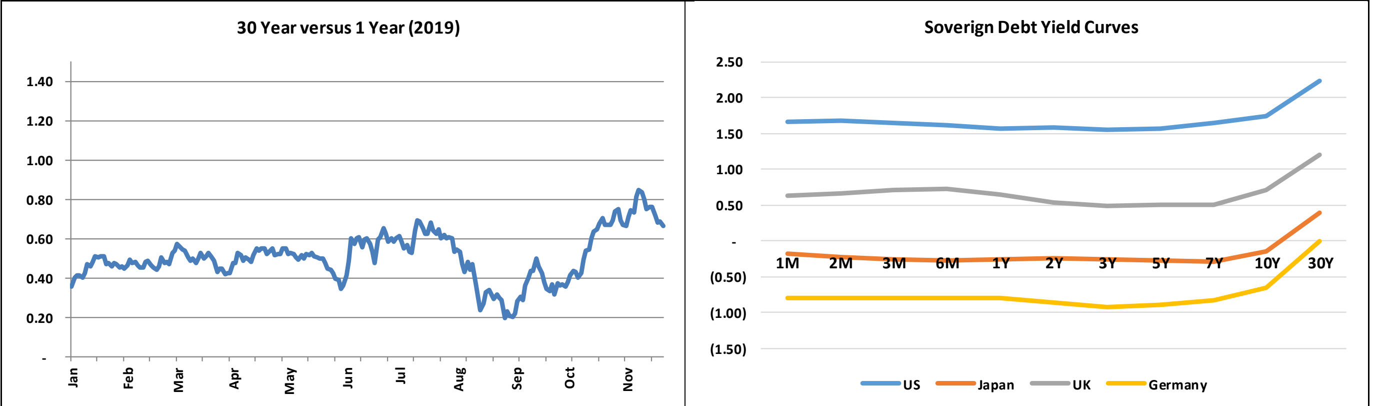
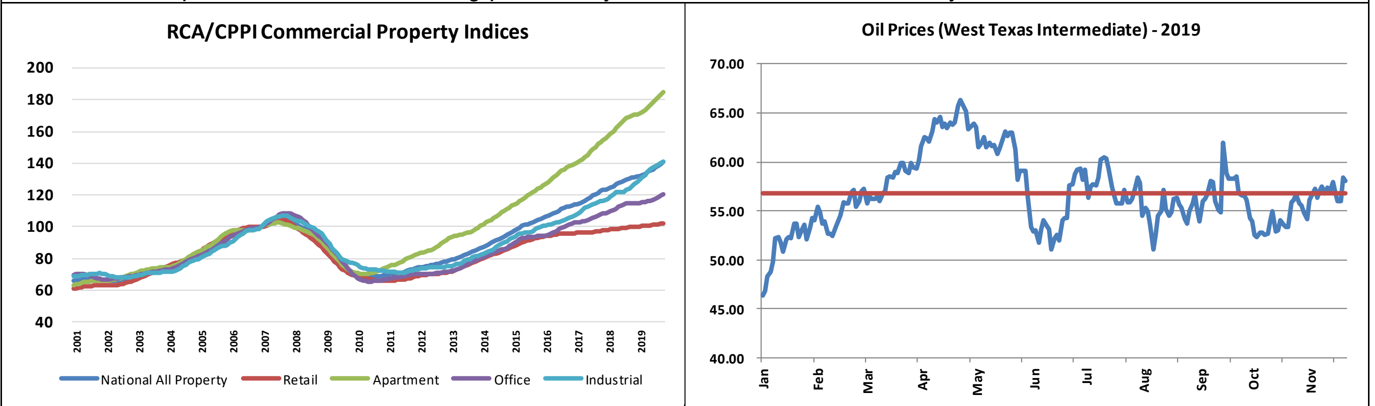
tranches of CLOs have significantly increased in recent weeks, as there have been some concerns about increasing defaults in the near future. The result is a significant decline in prices. This is more market perception driven, as opposed to actual realized defaults, and yet the market impact is the same.



Besides the absolute levels of interest rates and credit spreads, the fair values of different investments can also be impacted by expectations for near term changes in interest rates. This is partially reflected in the shape of the yield curve. The Treasury yield curve flattened during 2018 and was negatively sloped for significant segments for a period of time. This flattening was driven by strong expectations for a weakening economy and the potential for a recession. While those concerns have softened somewhat in recent months, they have not completely abated. As such the yield curve is generally not negatively sloped, but is still flat. Sovereign debt yields in a few other countries, most notably Japan and Germany, remain actually negative for significant maturities. Flat yield curves and negative rates are also a material issue for the Financial sector. Different kinds of financial institutions, which include insurance companies, are seen as being particularly vulnerable to market volatility in these market environments.



Values for Commercial Real Estate, and then also how that may reflect on Commercial Mortgage Loans, are much more difficult to pinpoint. The asset class remains more idiosyncratic, driven by property type, geographic location and specifics about the property itself. However, in terms of general national indices, values have continued to improve, with Apartments/Multifamily leading and Retail continuing to lag. Based on the last twelve months of available data, the national index was up 7.5%, while Apartment/Multifamily index value increased 8.7% and Retail increased 2.1%.

A commonly monitored economic benchmark is the level of oil prices. While these are often influenced by global political issues and other dynamics, they are also seen over time as a good measure of economic activity. Oil prices, while still substantially lower than their high points in 2014, also improved during 2019. This improvement has for the time being ameliorated some of the concerns about the Energy sector, but many of the companies remain weakened and subject to potential credit issues as debt maturities loom. The year began with the price of West Texas Intermediate oil at $46 per barrel. Currently the benchmark is at $58 per barrel. This is compared with a high of $106 in 2014 and a low of $26 in early 2016.

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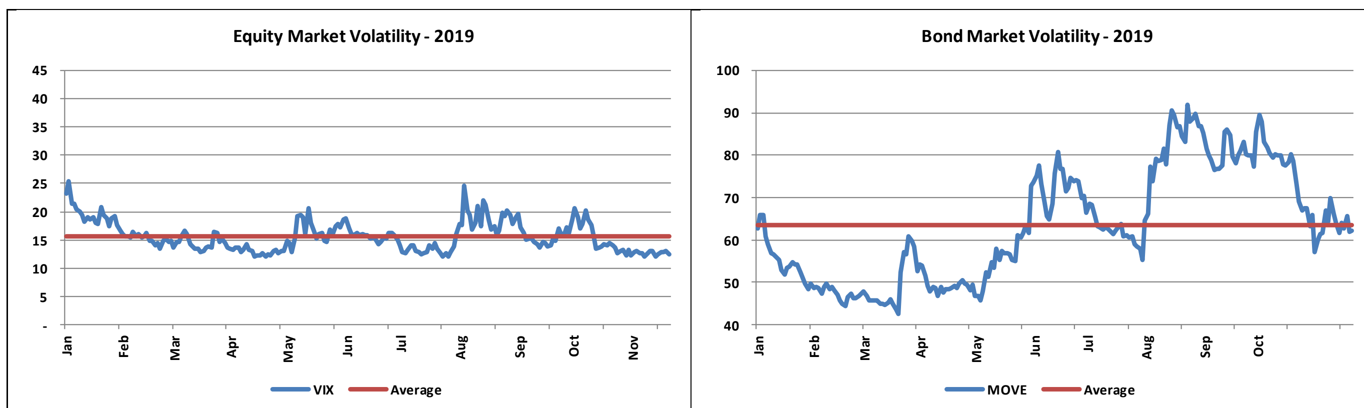
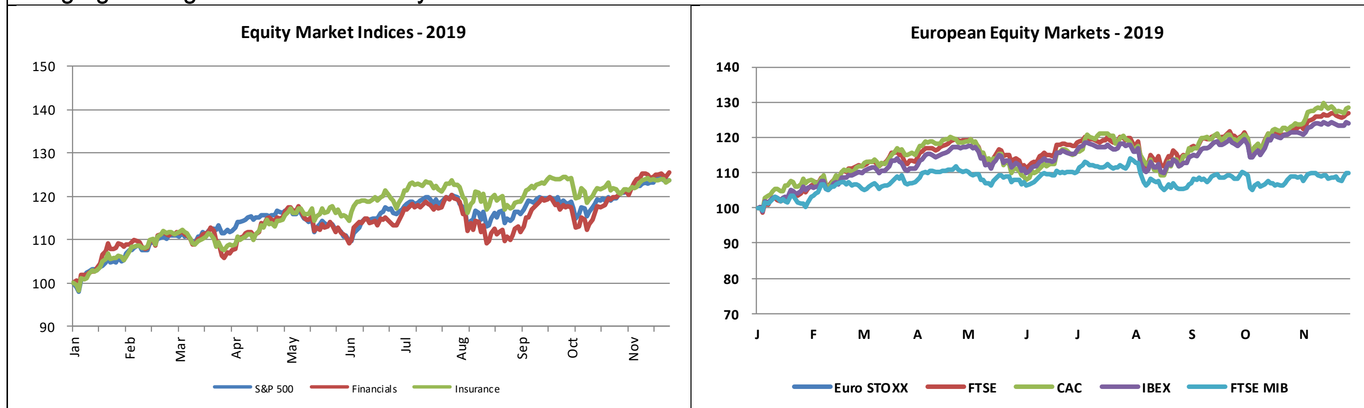


Market volatility can also have a significant impact on valuations, especially on derivatives or investments that have derivative components. The latter would include investments like convertible bonds or certain kinds of Structured Notes, whose yields are based on non-interest rate, market-based factors. Hedge funds, which attempt to take advantage of market inefficiencies and volatility through the use of leverage and derivatives, would also be materially impacted by changes in volatility. After an extended period of underperformance, hedge funds have realized a period of recovery in the past year. The hedge fund industry tends to do better in periods of market volatility, but individual fund performance depends on the specific strategy employed.

For derivatives, market volatility is one of the major inputs into valuation, along with interest rates and time to maturity. In addition to having a significant impact on the fair values of the derivative positions, shifts in market volatility should also be expected to impact the effectiveness of hedging programs. One lesser known aspect of the financial crisis was a large divergence between derivatives pricing and the pricing for the underlying cash instruments of those derivatives. Increased volatility will impact the value of all derivatives, and to the extent that hedging strategies are not deemed to be effective for accounting purposes, the shifting market values of derivatives will need to be recognized. In addition, increases in costs of different derivatives may impact the economics of hedging strategies that are more dynamic.



Equity markets are higher relative to where they began the year. This is true for the broader indices, such as the S&P 500, as well as subindices that track the Financial sector and the more specific Insurance industry. Through the most recent date, the S&P 500 was up 25.0% for the year. Equities for the Financial sector and the Insurance industry have modestly underperformed, with values up 24.6% and 24.3% respectively.

Internationally, equity markets have also performed well generally, though the returns vary from market to market. One significant underperformer is the FTSE market in the United Kingdom. In comparison with the broader European indices, which were up more than 20% on the year, the FTSE was only up 10%. This reflects the ongoing confusion and concerns over the United Kingdom's exit from the European Union (commonly referred to as "Brexit").

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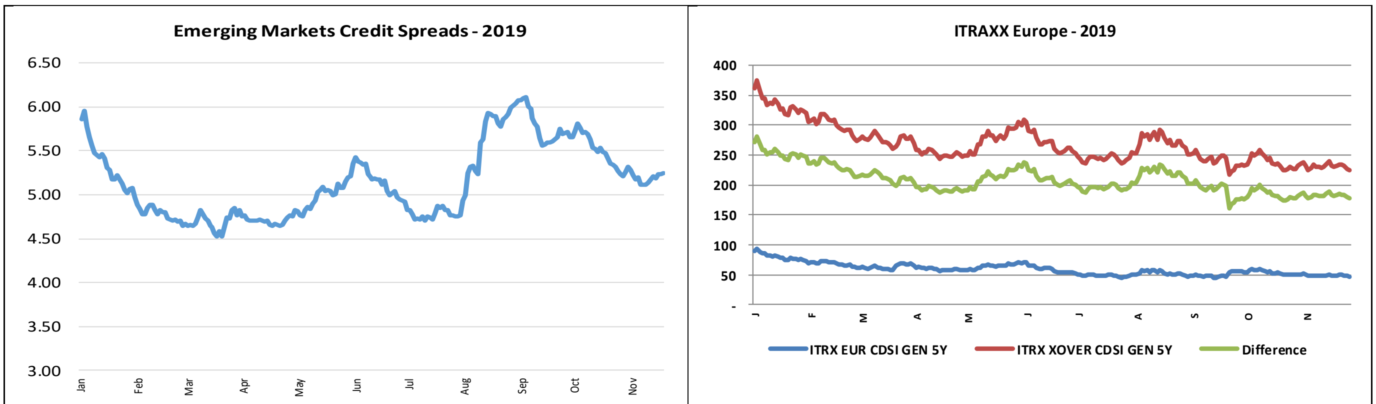
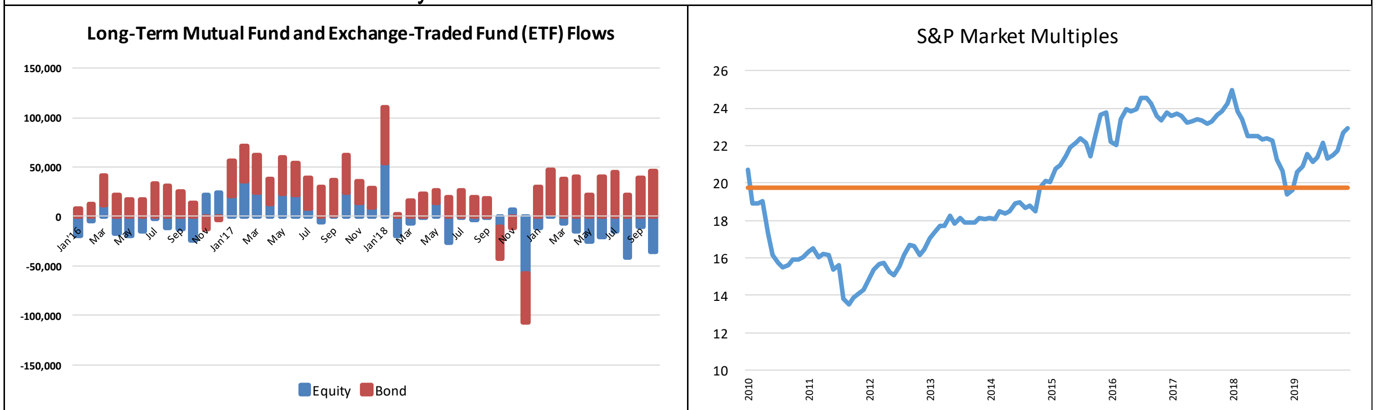


While the vast majority of investments of US insurers are in US issuers, there also has been a growing percentage in non-US issuers, primarily in Europe. Emerging market credit spreads have been particularly volatile, ranging from 450 basis points to over 600 basis points during the year. The broader ITRAXX indices, which are credit default swap indices covering Europe and Asia, have generally tracked US credit spreads. Sovereign debt interest rates in Europe have also declined in 2019 thus far. Yields on the 10-year bonds in the United Kingdom, Germany, and Italy, all declined by 103 basis points, 62 basis points and 158 basis points, respecitively.

MARKET UPDATE (data as of November 22, 2019)

As two additional measures of market sentiment that can play a part in current and near term valuations, mutual funds flows and equity market multiples are also very informative. While mutual funds flows, including ETFs, recovered from the negative period at the end of 2018, the upturn has largely been on the bond side and not on the equity side. Cash being invested in equity funds have largely been negative in 2019. Equity market multiples, as exemplified by the S&P 500 have also recovered though not quite returning to the peak in mid-2018. The apparent divergence between equity funds flows and estimates of the S&P 500 multiple appears to be driven by foreign investors that have invested directly into the US stock market.



The Final Word? With a few specific exceptions, markets in general have been strong in 2019. This suggests that valuations of US insurers invested assets were not broadly under any pressure. However, there are some pockets of concern. These include commercial real estate values, as well as companies in the Financial and Energy sectors. From a market perspective, the most significant focus has been on the loan market, including holdings referred to as Bank Loans and Collateralized Loan Obligations (CLOs). While there are not many expectations for major increases in defaults and the resulting realized losses, market concerns have led to significant increases in market value volatility. As noted earlier, this is especially the case for non-senior tranches of CLOs.

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