# Alternatives Update
*2nd Quarter 2018*

There was a whole lot less sound and fury from the capital markets in the 2nd quarter of 2018 as compared to the 1st quarter of 2018. Volatility, as measured by the CBOE VIX Index (VIX), averaged 2 points less (15.33 vs 17.35) and had a significantly narrower range (11.98 points vs 28.17 points). However, that is not to say that the 2nd quarter was uneventful or without drama. There was a distinct escalation in trade war jargon, rocky Brexit negotiations, Elon Musk taunting short sellers, the vilification of Harley Davidson by the President, NATO bashing, immigration controversy in the U.S. and Europe, oil rallying on continued OPEC cooperation and emerging markets and Chinese equities showing decided weakness.

The wild ride in cryptocurrencies seemed to moderate, if one could call it a moderation. Bitcoin fell -13.91% in the quarter and experienced an annualized standard deviation of returns of 62% as compared to an annualized standard deviation of 103% in the 1st quarter of 2018 (see Figure 1). The cryptocurrency market continues to be hampered by high profile hacks at various cryptocurrency exchanges. The latest, Coinrail of South Korea, had 30% of its virtual currencies stolen in June amounting to nearly $40 million. This was not exactly what the sector needed following the largest virtual theft of $530 million from Japan's Coincheck in January 2018. If this market is to move forward and grow, the lack of security will have to be addressed for both investor confidence and regulatory approval.

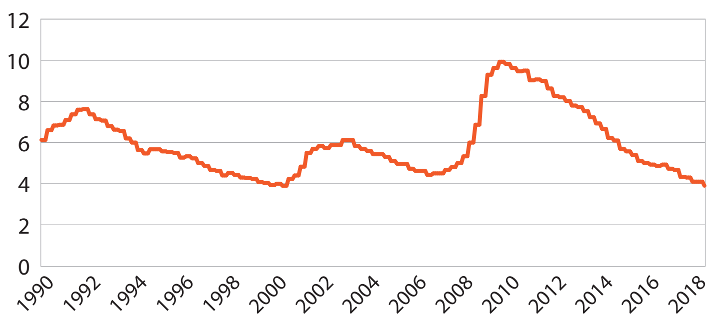
Figure 1: **Asset Class Returns**

| | 2Q18 | YTD 2018 |
|---|---|---|
| S&P 500 | 3.43% | 2.65% |
| MSCI EAFE | -1.24% | -2.75% |
| MSCI Emerging | -7.96% | -6.66% |
| US Treasury | 0.41% | -2.97% |
| Real Estate | 7.78% | 1.41% |
| Commodities | 0.40% | 0.00% |
| BB Barclays High Yield | 0.93% | -0.30% |
| BB Barclays Aggregate | -0.16% | -1.62% |
| Bitcoin | -13.91% | -52.12% |
| U.S. Dollar | 5.00% | 2.55% |

*Source: Bloomberg, 6/30/18.*

On the economic front, the news was quite positive. Despite worries about a more aggressive Federal Reserve ("Fed") under Jerome Powell, the Federal Open Market Committee (FOMC) raised rates only once in the quarter opting to bypass its first opportunity in May. Unemployment fell to a scant 3.9%, a level not seen since 2001 (see Figure 2). Consumer sentiment, as measured by the University of Michigan Consumer Sentiment survey, remained elevated at levels similar to the late 1990s and kept intact an upward trend that began in 2009 (see Figure 3). Another economic trend

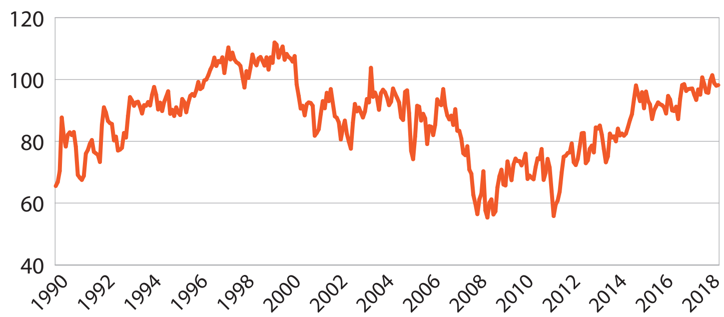
Figure 2: **U.S. Unemployment**




*Source: Bloomberg. Data from 12/31/90 - 6/30/18.*

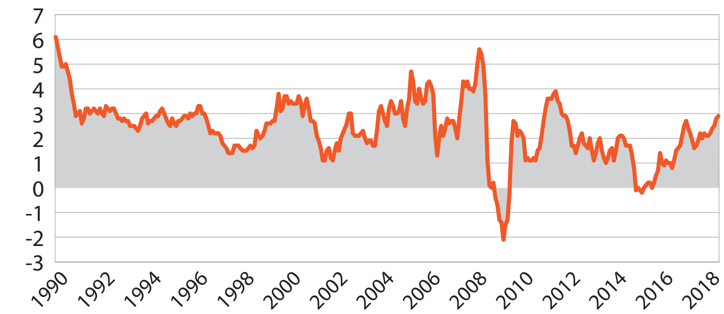
that continued higher was year-over-year ("YoY") Consumer Price Index (CPI), which clocked in at 2.9% at 6/30/18, the highest reading in over 6 years (see Figure 4).

Figure 3: **University of Michigan Consumer Sentiment Survey**




*Source: Bloomberg. Data from 12/31/90 - 6/30/18.*

Figure 4: **CPI YoY Urban Consumers**




*Source: Bloomberg. Data from 12/31/90 - 6/30/18, not seasonally adjusted.*

The S&P 500 Index (SPX) had a solid quarter, the MSCI EAFE Index was down, and the MSCI Emerging Markets Index experienced a serious pullback related to the strength of the U.S. dollar along with trade tensions fueling worries about the impact on global growth. Alternative Investment ("alternatives") returns were mostly positive for the quarter; 7 of the 10 alternatives categories had positive returns. Real Estate was the best performing category by far and managed futures was the worst (see Figure 5). There was no particular alignment between correlation with the SPX and the magnitude of returns (see Figure 6).

A noteworthy development is that the Managed Futures category and the Macro category have seen their correlations to the SPX rise significantly YoY (see Figure 7). Traditionally, these 2 sectors are viewed as having low correlations to equities because they are generally diversified across a variety of markets and often employ shorting as part of their approach. We believe the recent rise in correlations may reflect a positioning for global growth with a larger exposure to equity-related risk, increased adoption of short volatility strategies, or trend following strategies accelerating the switch to long equities and increasing position sizes as trend confirmation continues. Real assets (commodities, real estate, gold) once again had divergent returns as gold (-5.42%) and real estate (+7.78%) played yin to the others yang (see Figure 8). Commodities rallied strongly in the first half of the 2nd quarter despite a stronger dollar, only to give almost all the gains back in the second half of the quarter, ending with a small gain of 40 bps.

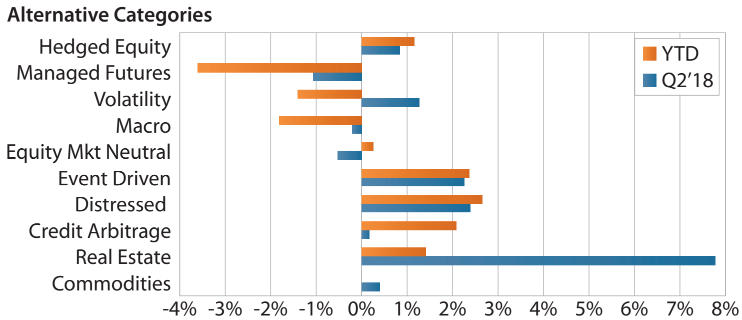
All three categories had returns that were reversed in sign from Q1 2018, showing a strong mean reversion/rebound behavior.

Managed Futures, Commodities, and Macro strategies have historically shown low correlation and beta to stocks and bonds over the course of a market cycle, thus they may serve as potentially strong portfolio diversifiers. As mentioned previously, correlations for the Managed Futures and Macro sectors have recently turned sharply positive and should bear monitoring. Strategies such as Credit Arbitrage, Event Driven, Hedged Equity, et al., which have historically had higher correlations with equities and bonds, provide attractive risk/return profiles through lower volatility. These characteristics may allow investors to broaden their investment choices and create more efficient portfolios.

U.S. equity volatility (as measured by closing values of the VIX Index) started the 2nd quarter in the low 20s but retreated as earnings and positive economic news drowned out any would be negative news. While it's clear that volatility remains at a significantly higher level than existed in almost all of 2017, the current level of VIX is still appreciably lower than the long-term average of approximately 19 (see Figures 9 and 10). Both lower rated yields and long duration U. S. Treasury yields moved higher on an absolute basis. Credit spreads, particularly Baa/BBB rated bonds over U.S. Treasuries, widened by just over 12 basis points (bps) (see Figure 11). While inflation data continues to drift upward, the long-end of the fixed income yield curve seems not to be reflecting much concern. Spreads are still rich and in the 35th percentile of historical rankings (see Figure 12). The spread between below investment grade corporate bonds (B/CA rated) and BBB rated corporate bonds continues to display a movement upward, widening nearly 10bps and now in the 64th percentile (see Figure 13).

The Jerome Powell era at the Fed continued to take shape. The new chairman sought to make it clear that while the median forecast of Fed officials was upped to 4 increases in 2018, the Federal Reserve would be gradual in its approach to managing both interest rates and balance sheet normalization. The economy is doing well and there was every indication that the Federal Reserve wants to keep things on a roll. U.S. Treasury 10-yr yields rose from 2.74% to 2.86% during the quarter. The long-end of the Treasury curve (30-yr maturity) rose 1.6 bps to a yield of 2.99%. The 30-yr

Figure 5: **Performance**




*Source: Bloomberg, 6/30/18.*

Figure 6: **Correlations (2-Year) & Returns**

| | S&P 500 | 2Q18 |
|---|---|---|
| Hedged Equity | 0.84 | 0.84% |
| Macro | 0.73 | -0.21% |
| Event Driven | 0.64 | 2.26% |
| Managed Futures | 0.58 | -1.06% |
| Equity Market Neutral | 0.57 | -0.53% |
| Volatility Arbitrage | 0.50 | 1.27% |
| Distressed | 0.38 | 2.39% |
| Real Estate | 0.35 | 7.78% |
| Credit Arbitrage | 0.22 | 0.17% |
| Commodities | 0.19 | 0.40% |

*Source: Bloomberg, 6/30/18.*

Figure 7: **Correlations with the S&P 500 Index**

| | 6/30/18 | 6/30/17 |
|---|---|---|
| Hedged Equity | 0.84 | 0.88 |
| Macro | 0.73 | 0.12 |
| Event Driven | 0.64 | 0.77 |
| Managed Futures | 0.58 | (0.15) |
| Equity Market Neutral | 0.57 | 0.50 |
| Volatility Arbitrage | 0.50 | 0.56 |
| Distressed | 0.38 | 0.59 |
| Real Estate | 0.35 | 0.73 |
| Credit Arbitrage | 0.22 | 0.57 |
| Commodities | 0.19 | 0.12 |

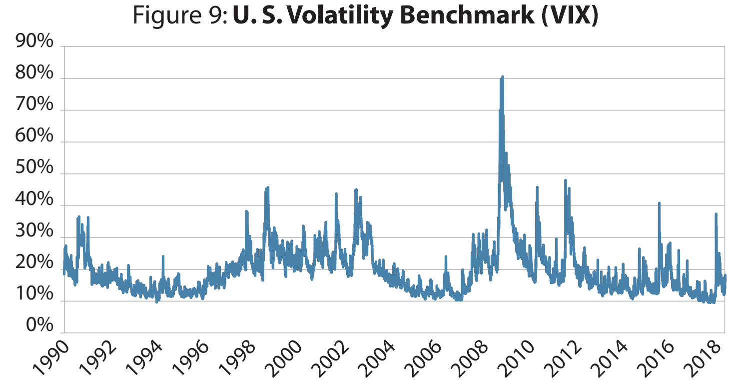
*Source: Bloomberg, 6/30/18. Monthly returns over 24 months.*

Figure 8: **Real Asset Returns**

| | 2Q18 | 1Q18 | 2017 |
|---|---|---|---|
| Real Estate | 7.78% | -5.91% | 9.84% |
| Commodities | 0.40% | -0.40% | 1.70% |
| Gold | -5.42% | 1.68% | 13.09% |
| ***Average*** | ***0.92%*** | ***-1.54%*** | ***8.21%*** |

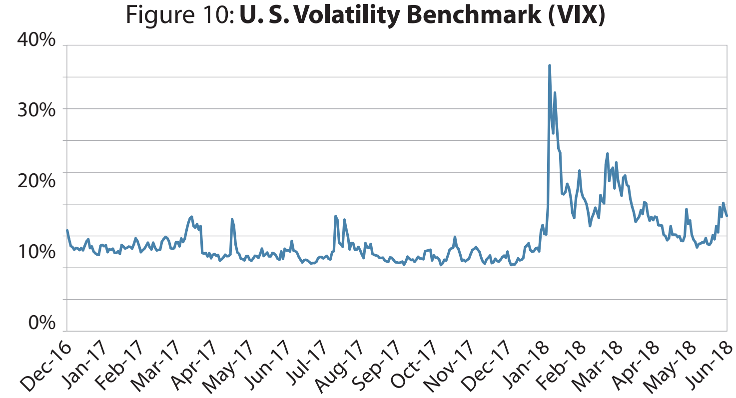
*Source: Bloomberg, 6/30/18.*

Figure 9: **U. S. Volatility Benchmark (VIX)**




*Source: Bloomberg. Data from 1/1/90-6/30/18.*

Figure 10: **U. S. Volatility Benchmark (VIX)**

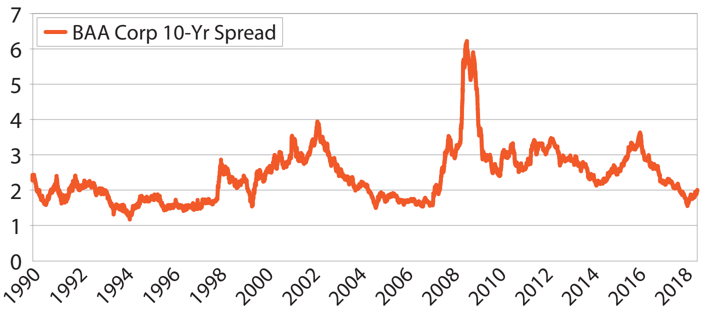



*Source: Bloomberg. Data from 12/30/16-6/30/18.*

to T-bills spread narrowed considerably (19.5 bps), reflecting a continued flattening. The 30-yr to 10-yr spread also narrowed (10 bps). Since December of 2016 the curve has flattened 149 bps (see Figure 14), 75bps of which occurred in the past year. Fears of an inverted curve such as that which occurred in 2007 and preceded the great recesssion continue to linger (See Figure 15). While the 30-yr rate has served as a remarkably stable pivot point the past several years, inflationary data suprises to the upside might provide the impetus for that to start showing some volatility and could serve as a warning sign of trouble, in our opinion.

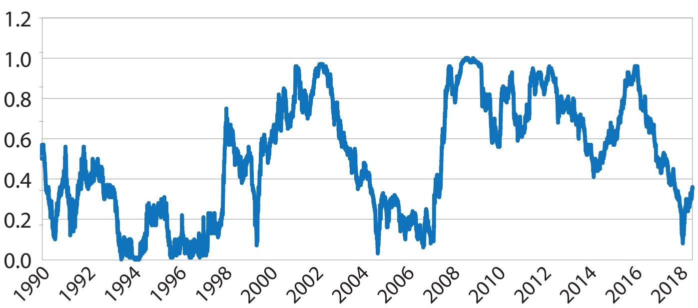
Returns for "Risk On" assets (-.81% average return) and for "Risk Off" assets (-3.24% average return) were dominated by currency movements due to a very strong rally in the U.S. Dollar (+5.00%) (see Figure 16). Focusing on non-currencies, it was more a "Risk-on" market as U.S. equities and high yield bonds outperformed gold and long-dated (20-yr +) U.S. Treasuries. Alternatives have historically provided significant diversification benefits when paired with a portfolio of traditional assets, in addition to both competitive absolute returns and attractive risk-adjusted returns.

Figure 11: **Credit Spread vs. 10-Year U.S. Treasury**



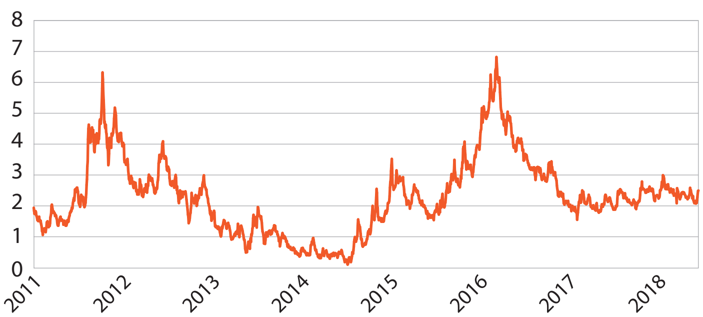

*Source: Bloomberg. Data from 12/31/90 - 6/29/18.*

Figure 12: **Credit Spread Percentile Rank**



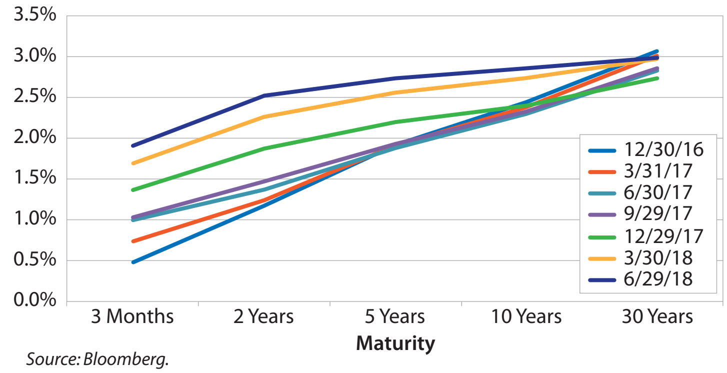

*Source: Bloomberg. Data from 12/31/90 - 6/29/18.*

Figure 13: **B/CA Spread over BBB (US Corp)**



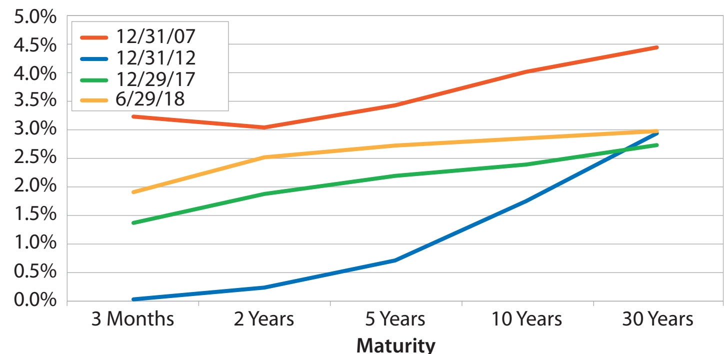

*Source: Bloomberg. Data from 1/3/11-6/29/18.*

Figure 14: **U.S. Treasury Yield Curve**



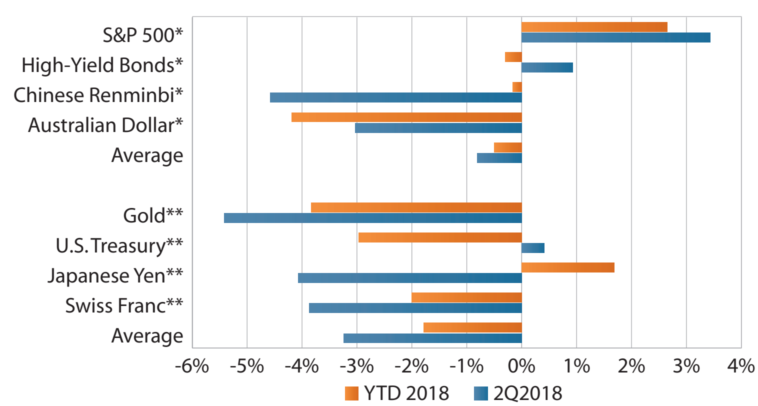

*Source: Bloomberg.*

Figure 15: **U.S. Treasury Yield Curve**




*Source: Bloomberg.*

Figure 16: **Risk Off vs. Risk On Asset Returns**




*Source: Bloomberg, 6/30/18.*
** Considered to be "Risk On" asset class. ** Considered to be "Risk Off" asset class.*

## Definitions

**10-Yr Treasury:** Yield of U.S. Treasury securities maturing in approximately 10 years.

**Aggregate Bonds:** The Bloomberg Barclays US Aggregate Bond Index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market.

**Australian Dollar:** The return from selling the short currency (USD) to buy the long currency (AUD) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Australian dollar vs. the U.S. dollar.

**BAA Corp:** Moody's Bond Indices Corporate BAA. Moody's Long-Term Corporate Bond Yield Averages are derived from pricing data on a regularly replenished population of corporate bonds in the U.S. market, each with current outstandings over $100 million. The bonds have maturities as close as possible to 30 years; they are dropped from the list if their remaining life falls below 20 years, if they are susceptible to redemption, or if their ratings change. All yields are yield-to- maturity calculated on a semi-annual basis.

**Beta:** A measure of price variability relative to the market.

**Bitcoin:** A digital currency using encryption techniques created for use in peer-to-peer online transactions Introduced in 2008 by a person or group using the name Satoshi Nakamoto.

**Bloomberg Barclays US Corp B-Ca Capped Index:** The Bloomberg Barclays index measures the performance of the taxable B1 – Ca rated range of the fixed-rate U.S. dollar-denominated corporate bond market. The index is market capitalization weighted and caps individual issuers at 3% of the total market value.

**Brexit:** Brexit is an abbreviation for "British exit," referring to the UK's decision in a June 23, 2016 referendum to leave the European Union (EU).

**Chinese Renminbi:** The S&P Chinese Renminbi Index is designed as a tradable index that replicates the performance of the Chinese Renminbi versus the U.S. Dollar.

**Commodities:** The Bloomberg Commodity Index is made up of exchange-traded futures on physical commodities and represents 20 commodities, which are weighted to account for economic significance and market liquidity.

**Correlation:** A statistical measure that quantifies the extent to which two or more data series fluctuate together. Values run from -1.0 to +1.0.

**Credit Arbitrage:** Hedge Fund Research HFRI Event-Driven Credit Arbitrage Index. Credit Arbitrage strategies employ an investment process designed to isolate attractive opportunities in corporate fixed-income securities; these include both senior and subordinated claims as well as bank debt and other outstanding obligations, structuring positions with little of no broad credit market exposure. These may also contain a limited exposure to government, sovereign, equity, convertible or other obligations but the focus of the strategy is primarily on fixed corporate obligations and other securities are held as component of positions within these structures.

**Credit Spread:** The difference in yield between two fixed-income instruments with differing credit profiles.

**Distressed:** Hedge Fund Research HFRI Event-Driven Distressed/Restructuring Total Index. Distressed/ Restructuring strategies employ an investment process focused on corporate fixed-income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

**Equity Market Neutral:** Hedge Fund Research HFRI Equity Hedge Equity Market Neutral Index. Equity Market Neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

**Event Driven:** Hedge Fund Research HFRI Event-Driven (Total) Index. Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments.

**Gold:** The return of the gold spot price as quoted as U.S. dollars per Troy Ounce.

**Hedged Equity:** Hedge Fund Research HFRI Equity Hedge (Total) Index. Investment Managers who maintain positions both long (positions that are owned) and short (positions that are owed) in primarily equity and equity derivative securities. Hedged Equity managers would typically maintain at least 50%, and may in some cases be substantially entirely invested in equities, both long and short.

**High-Yield Bonds:** The Bloomberg Barclays US High Yield Very Liquid Index (VLI) is a component of the US Corp High Yield Index that is designed to track a more liquid component of the USD-denominated, high yield, fixed-rate corporate bond market. The US High Yield VLI uses the same eligibility criteria as the US Corp High Yield Index, but includes only the three largest bonds from each issuer that have a min amount outstanding of USD500mn and less than five years from issue date.

**Japanese Yen:** The return from selling the short currency (USD) to buy the long currency (JPY) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Japanese yen vs. the U.S. dollar.

**Long/Short:** "Long" and "short" are investment terms used to describe ownership of securities. To buy securities is to "go long." The opposite of going long is "selling short." Short selling is an advanced trading strategy that involves selling a borrowed security. Short sellers make a profit if the price of the security goes down and they are able to buy the security at a lower amount than the price at which they sold the security short.

**Macro:** Hedge Fund Research HFRI Macro (Total) Index. Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed-income, hard currency and commodity markets.

**Managed Futures:** BarclayHedge US Managed Futures Industry Top 50 (BTop 50) Index. The Index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure.

**MSCI EAFE:** The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is a free-float weighted equity index.

**MSCI Emerging Markets:** The MSCI Emerging Markets Index captures large and mid cap representation across Emerging Markets (EM) countries. The index covers 85% of the free float-adjusted market capitalization in each country.

**Real Estate:** The Dow Jones US Real Estate Index is designed to track the performance of real estate investment trusts (REITs) & other companies that invest directly or indirectly in real estate through development, management or ownership, including property agencies.

**S&P 500:** An unmanaged index of 500 stocks used to measure large-cap U.S. stock market performance.

**Swiss Franc:** The return from selling the short currency (USD) to buy the long currency (CHF) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Swiss franc vs. the U.S. dollar.

**U.S. 30-Yr Treasury Yield:** Yield of U.S. Treasury securities maturing in approximately 30 years.

**U.S. Dollar Index:** The U.S. Dollar Index (USDX) indicates the general international value of the U.S. dollar. The USDX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.

**U.S. Treasury:** The ICE U.S. Treasury 20+ Years Bond Index is part of a series of indices intended to assess U.S. Treasury issued debt. Only U.S. dollar denominated, fixed-rate securities with minimum term to maturity greater than twenty years are included.

**VIX:** Chicago Board Options Exchange (CBOE) SPX Volatility Index. The Chicago Board Options Exchange Volatility Index reflects a market estimate of future volatility, based on the weighted average of the implied volatilities for a wide range of strike prices.

**Volatility:** Hedge Fund Research HFRI Relative Value Volatility Index. Volatility strategies trade volatility as an asset class, employing arbitrage, directional, market neutral or a mix of types of strategies, and include exposures which can be long, short, neutral or variable to the direction of implied volatility, and can include both listed and unlisted instruments. Directional volatility strategies maintain exposure to the direction of implied volatility of a particular asset or, more generally, to the trend of implied volatility in broader asset classes. Arbitrage strategies employ an investment process designed to isolate opportunities between the price of multiple options or instruments. Volatility arbitrage positions typically maintain characteristic sensitivities to levels of implied and realized volatility, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities.