2017 SEMI-ANNUAL UPDATE

SUMMARY

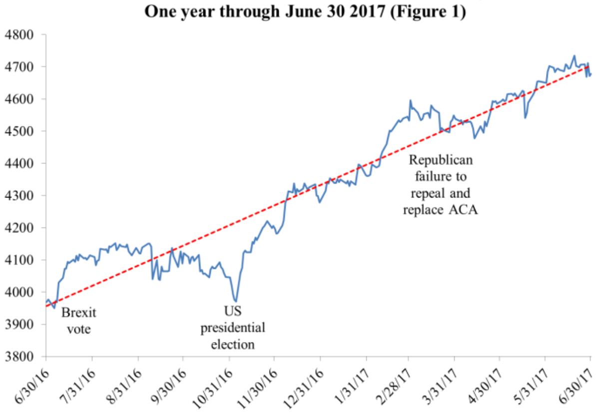
Global equities (MSCI ACWI +11.5%) rallied strongly in the first half of 2017 as economies worldwide continued to experience a cyclical recovery. In the US, a White House in disarray and the inability of Congress to implement reform sparked a rally in government bonds (US 10-year yield down by 0.15% to 2.30%) as investors discounted a more benign inflation outlook. Oil declined substantially (WTI down by $7.7 to $46.0) as rising US shale production in response to higher prices stoked fears of persistent oversupply.

REVIEW OF FIRST HALF 2017

Investors started the year with a bullish outlook for global stocks, anticipating major reforms and stimulus measures in the US, which would have the potential to boost growth while risking higher inflation. Many believed that the Republican sweep of Congress and the White House in the 2016 presidential election would herald the end of gridlock in Washington, and interest rates rose while the dollar rallied against foreign currencies.

Half way into the year, it has now become clear that a divided majority may not implement sweeping reforms as initially anticipated. However, this did not prevent stock prices from reaching new highs as earnings rose and a recovering Europe and stimulus in China provided support from abroad (figure 1).

S&P500 Total Return Index (Price+Dividends)
One year through June 30 2017 (Figure 1)

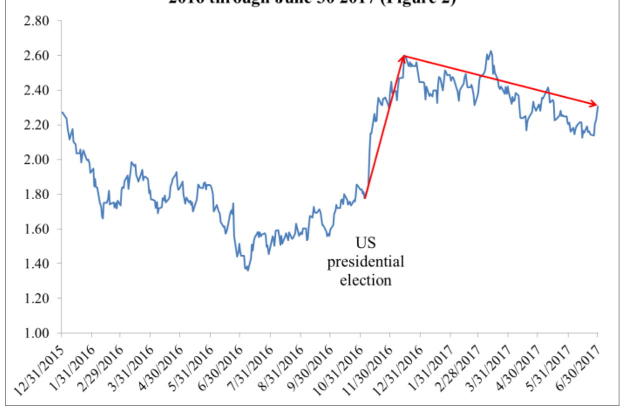


Source: Bloomberg

At the start of the year the consensus expectation was that interest rates and the US Dollar would continue to rise as pro-growth policies stoked inflation.

Instead, political gridlock and persistently low inflation have kept bonds well bid and long-term yields declined even though the Federal Reserve raised short term interest rates (figure 2).

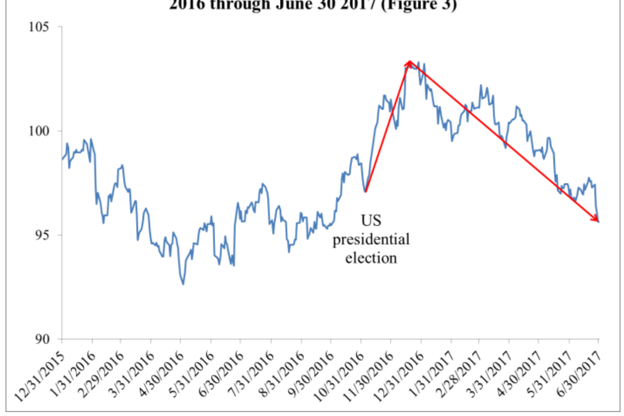
10-Year Treasury Yield
2016 through June 30 2017 (Figure 2)



Source: Bloomberg

At the same time, surprisingly strong growth in international markets led to a weakening of the US Dollar relative to foreign currencies (figure 3).

Dollar Index (DXY)
2016 through June 30 2017 (Figure 3)



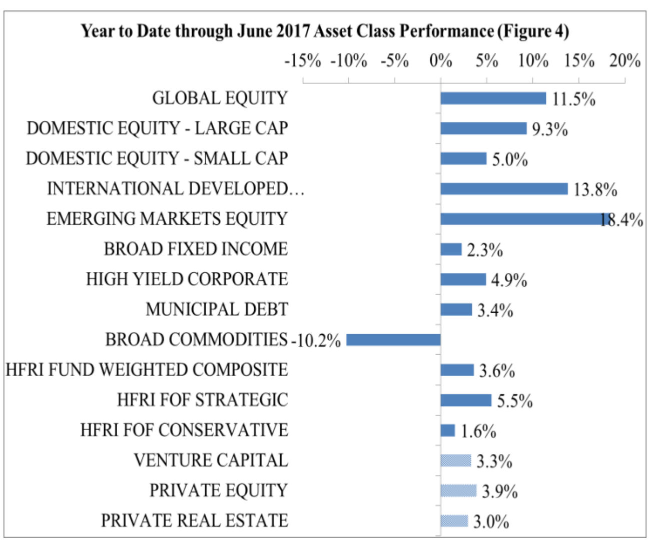
Source: Bloomberg

Lower long-term rates and a weaker US currency both contributed to supporting equity returns during the first half.

The benign environment of sustained growth and low inflation, coupled with a weaker currency supporting exports, was supportive of risk assets in Information Technology and Health Care. With passive assets now representing 44% of mutual fund assets[1], and most passive funds flowing into large cap indices, we suspect that the largest companies tended to benefit disproportionately from this phenomenon.

In the first half of 2017, markets experienced a reversal of 2016 trends as Growth/Momentum factors regained market leadership. Value and Minimum Volatility factors lagged the overall markets.

All major asset classes were up in the first half of the year, with the exception of commodities (figure 4). Foreign equity, which benefitted from currency appreciation, recorded some of the strongest gains. Hedge funds as a group delivered muted gains in line with fixed income, although this belies significant dispersion as hedged equity strategies geared toward technology in particular recorded significant gains. On the other hand, commodities experienced a significant downturn, led by energy as bearish sentiment mounted. The returns for private assets are reported with a lag and shown here only through March.



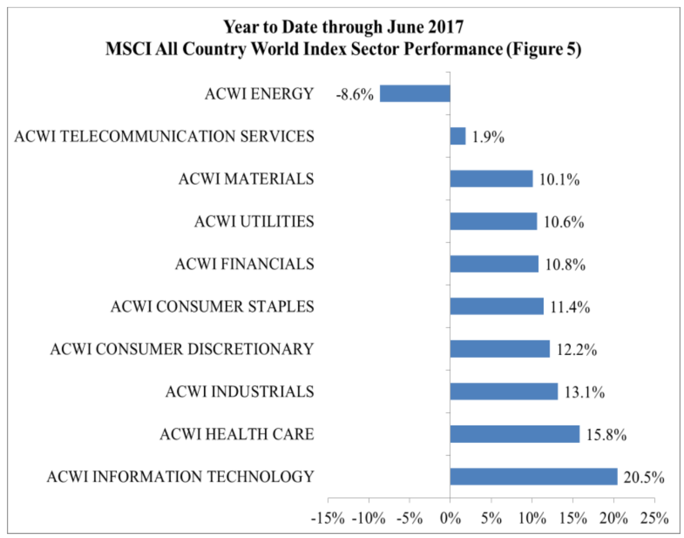
Source: Bloomberg. See index key in appendix.

SECTOR ANALYSIS – GROWTH ASSETS

Growth assets include investments that generally benefit from favorable economic conditions such as sustained growth and controlled inflation. Our definition includes equity and equity-like (credit) assets across public and private markets in long only, hedged or draw-down structures. The following discussion considers these various components in turn.

LONG ONLY EQUITIES

Global equities, as represented by the MSCI All Country World Index (ACWI), gained 11.5% in US currency terms in the first half of 2017. The best performing sectors included Information Technology (+20.5%) and Health Care (+15.8%). Energy (-8.6%) was the worst performing sector.



Source: Bloomberg, MSCI

Within regions, emerging market equities were the best performers, returning 18.4% (MSCI EM), compared to 13.8% for international developed markets (MSCI EAFE) and 9.3% for US equities (S&P500), in US dollar terms. The performance of foreign equities, both developed and emerging, was enhanced by currency effects as the US Dollar weakened against most foreign currencies.

Within the US, growth dominated value, and larger capitalizations outperformed small cap stocks.

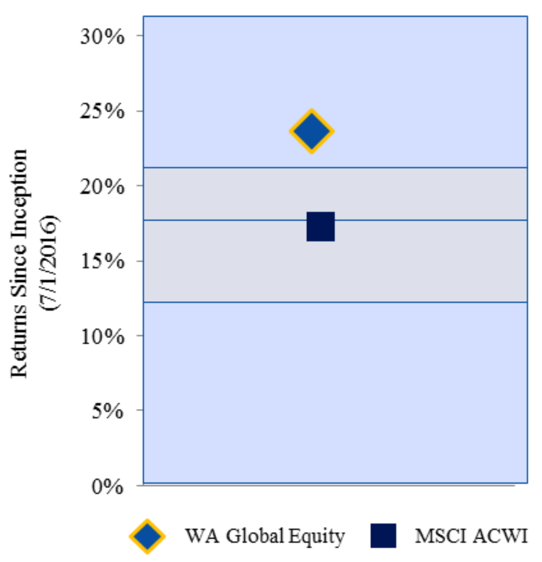
[1] EPFR Data, Jefferies Equity Strategy Notes, 7/16/17

YTD Return	USD	Local
S&P500	9.3%	
MSCI EAFE	13.8%	5.7%
MSCI EM	18.4%	13.7%
MSCI ACWI	11.5%	7.8%
YTD Return	**Growth**	**Value**
S&P500	13.3%	4.8%
Russell 2000	10.0%	0.5%

Source: MSCI, Russell, S&P, Bloomberg

On June 30th, Windrose Advisors celebrated the one-year anniversary of our equity and hedge fund investment sleeves. The WA Global Equity sleeve, which combines our long only equity allocations across global, domestic, international and emerging markets mandates returned 24.1% over the past twelve months (compared to 18.8% for the MSCI ACWI) and 13.0% year-to-date as of 6/30/17 (compared to 11.5% for the MSCI ACWI). This performance positioned the sleeve in the top quartile of global equity managers over the year (figure 6).

Quartiling: WA Global Equity Sleeve vs Manager Universe (Figure 6)



Source: eVestment

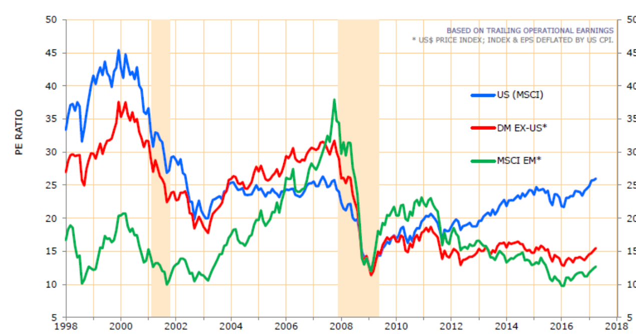
POSITIONING

We remain cautious on the US due to high valuations and have introduced a new defensive strategy in our domestic equity manager mix. The strategy is focused on long term absolute returns and will stay in cash if no attractive opportunities are available. We view this allocation as cheap insurance, affording the manager the ability to redeploy cash aggressively in case of a market correction.

While high cash might look like an expensive proposition in a low rate environment and a market concerned with "FOMO" (or the Fear Of Missing Out), we are happy to play defense in expensive areas of global equity markets while pursuing more attractively valued opportunities elsewhere.

As the following chart demonstrates, valuations remain attractive in foreign developed and emerging markets (red and green lines, figure 7). Our sleeve has been overweight emerging markets and we increased exposure to foreign developed markets in the first half of 2017, specifically Japan and European financials via dedicated strategies.

Cyclically Adjusted Price to Earnings (Shiller P/E) (Figure 7)



Source: GMO, Minack Advisors

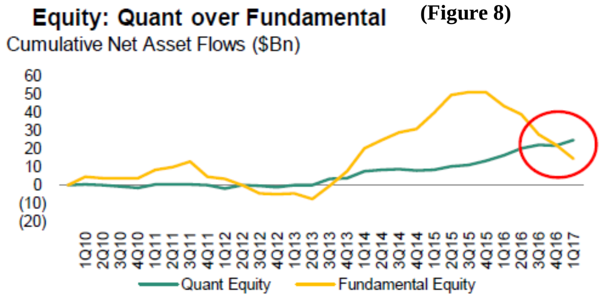
DIRECTIONAL HEDGE FUNDS

Directional hedge funds include strategies that typically show high correlation to equities, such as long short equity, event-driven and distressed credit.

Directional funds of hedge funds (HFRI Fund of Funds Strategic, +5.5%) offered positive returns but lagged equity markets overall. Within specific strategies, hedged equity strategies led performance for the year, primarily driven by concentrated long positions in technology. The environment for short investing has been difficult in an ebullient market but we see increasing opportunities for managers adept at shorting. Event-Driven and Distressed Credit strategies also delivered positive performance.

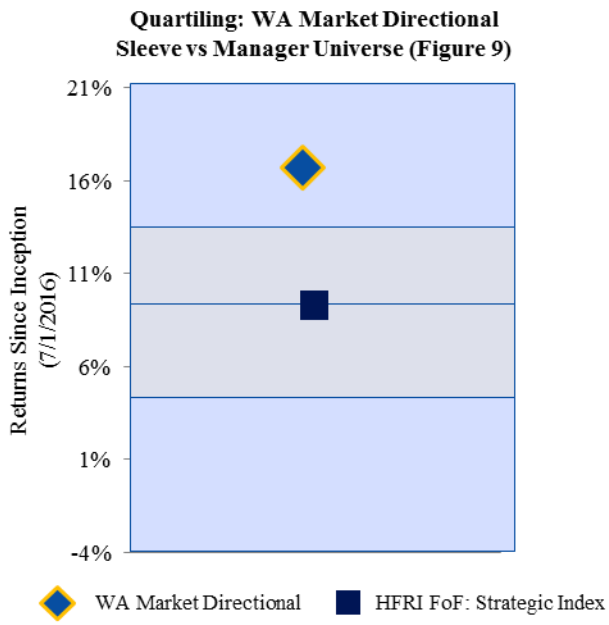
Over the first half of the year, hedge fund managers were emboldened by signs of improving growth in Europe and have built up exposure in that region. Another development in the market that has caught our attention is the enthusiasm of investors for quantitative over fundamental strategies, as depicted in the graph below.

(Figure 8)



Source: Morgan Stanley

While quantitative strategies have been successful of late, they tend to pursue similar factors, potentially resulting in low diversification and unintended risks. They may also compound the impact of passive flows on market returns.



Source: eVestment

The WA Market Directional investment sleeve, which combines our more aggressive return-seeking hedge fund strategies, returned 17.8% over the past twelve months (compared to 9.2% for the HFRI FoF Strategic Index), and 7.1% year-to-date as of 6/30/17 (compared to 5.4% for the HFRI FoF Strategic Index). This performance positioned the sleeve in the top quartile of the universe of comparable managers over the past twelve months (figure 9).

POSITIONING

In the first half, we made some significant rotations in the portfolio away from larger diversified managers toward smaller pinpointed strategies. In particular, we added exposure to biotech and Japan focused funds.

After a period of unsustainable performance, the overvalued biotech sector corrected in 2015, offering an entry point to participate in a market where the pace of scientific innovation continues to offer opportunities for discerning active managers (figure 10). The manager we added is adept at shorting stocks in this sector and taking advantage of the high dispersion of returns.

(Figure 10)

Source: Sofinnova, Bloomberg (XNBI: Nasdaq Biotechnology index)

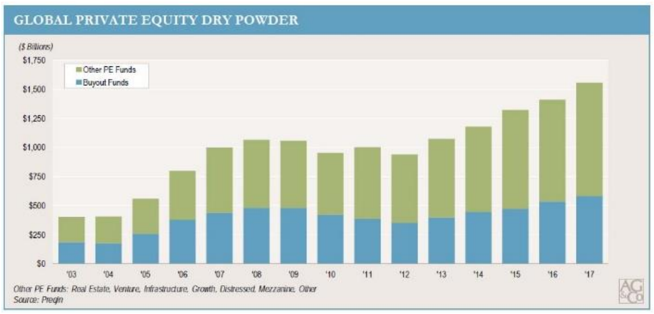
Japan is the opposite situation, a perennially undervalued market that has historically disappointed investors, but where we see a gathering trend toward government and corporate reforms that will increase economic efficiency and benefit shareholder returns in the long term. As a long-overlooked market, we think that great inefficiencies are present that can benefit active managers. We selected a long term deep value manager with a constructive activism approach that is well suited to this particular opportunity.

PRIVATE EQUITY

Private equity (Cambridge Associates US Private Equity +12.9%) and Venture Capital (Cambridge Associates US Venture +0.3%) offered lower returns than public markets over the past twelve months through December 2016. The continued rally in risk assets likely implies improving performance in private equity and venture.

While this is far from a new development, private equity continues to attract commitments from investors disappointed with recent lackluster returns in hedge funds. With over $1.5 trillion in undeployed capital, we fear that rising competition for assets will depress future returns, particularly for larger managers.

(Figure 11)



Source: Angelo Gordon, Preqin

Consequently, we strive to identify talent in smaller, sometimes niche opportunities where market inefficiencies and lower competition offer the promise of higher performance for the risks incurred.

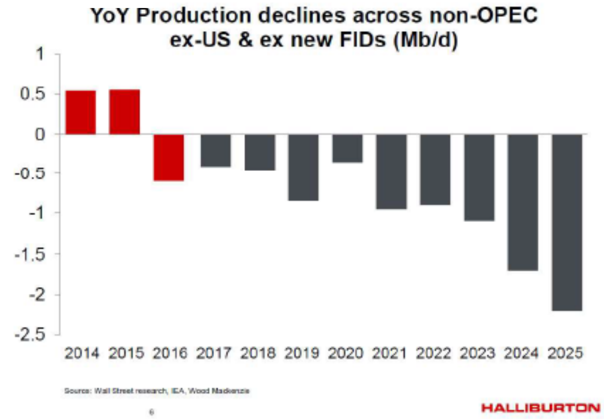
INFLATION PROTECTION

Commodity prices declined in the first half of the year, dragged down by losses in the energy sector.

Oil prices declined from around $54 a barrel at 2016 year-end to $46 by the end of June. Driving the declines were an unanticipated inventory build-up in the first quarter as well as increased supply out of US shale producers and Libya and Nigeria. While OPEC members, these two countries are not subject to the supply cuts agreed upon last November and have experienced volatile production due to unrest and civil war. Therefore, much of the market angst revolved around surging production of US shale producers. These companies were able to wring structural efficiencies in their cost structures over the past two years, drastically lowering their break-even production prices. As oil prices rose throughout 2016, they naturally responded by increasing production.

We disagree with the widespread perception of a permanent supply-glut, however. Non-OPEC, non-shale producers have curtailed investments and are projected to experience substantial production declines in coming years (figure 12).

(Figure 12)

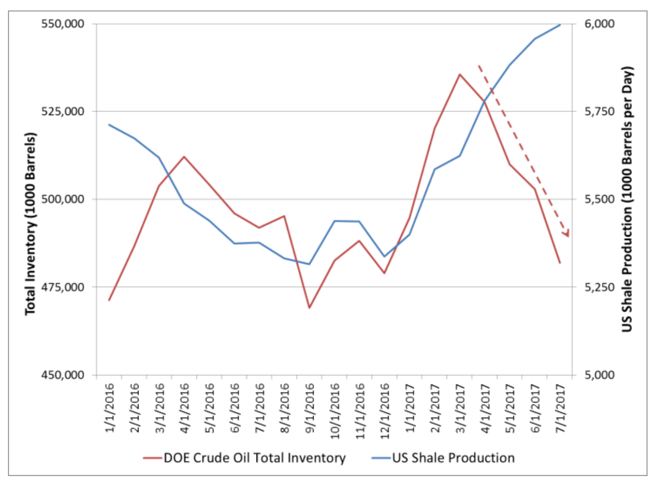


Sources: Halliburton, Goehring & Rozencwajg,

The task of offsetting this lost production and meeting rising demand from emerging markets in the future will fall on US shale and OPEC producers and implies a need for them to significantly increase production.

In fact, despite the rebound in US shale production (blue line below) and contrary to seasonal patterns, US inventories (red line) have declined sharply since March, suggesting that global oil markets are in deficit and inventories are in the process of normalizing toward long term averages (figure 13).

(Figure 13)



Sources: Bloomberg, US Department of Energy

POSITIONING

Despite recent volatility, we continue to be bullish on oil prices in the medium to long term and believe that the recent market retrenchment offers a good entry point for exposure to oil exploration and production companies (E&P).

In addition to E&P companies, we see opportunities in the mid-stream sector as well. Mid-stream companies are active in the transportation and storage of gas and oil between producers and refiners. As such, their revenues are tied to volumes rather than commodity prices, and rising US production will support earnings. Yet the mid-stream sector has declined in sympathy with the more commodity sensitive E&P stocks. We view this disconnect as a valuation opportunity and expect our allocation to the sector to deliver less explosive but more stable upside.

A rebound in economic activity in emerging markets and renewed geopolitical uncertainty were supportive of both industrial and precious metals in the first half of the year. We think that exposure to supply-constrained copper and gold is attractive long term.

RECESSION PROTECTION

The yield on the benchmark 10-year Treasury fell from 2.45% at the end of December 2016 to 2.30% at the end of June 2017.

Gridlock in Congress and continued low inflation led investors to re-assess the path of future interest rates downward, supporting fixed income markets.

OPPORTUNISTIC CREDIT	YTD Return
BROAD FIXED INCOME	2.3%
US GOVERNMENT DEBT	1.7%
US INFLATION LINKED	0.9%
US CORPORATE DEBT	3.9%
US SECURITIZED DEBT	1.8%
MUNICIPAL DEBT	3.4%

Sources: Bloomberg, Barclays, Bank of America Merrill Lynch

Taxable Fixed Income markets, as represented by the Barclays Aggregate Index, posted positive returns for the year (+2.3%). Within the major components of the Aggregate, corporate debt (+3.9%) outperformed both government securities (+1.7%) and securitized debt (+1.8%). Municipal debt (+3.4%) benefited from solid demand as tax reform appeared more questionable. Inflation linked debt (+0.9%) underperformed nominal government debt as investors re-priced inflation risk given reduced stimulus expectations.

Investment grade corporate debt looks incrementally less appealing every quarter as credit spreads continue to compress. Despite a supportive economic backdrop, rising leverage and shareholder-friendly behavior increase risks just as future returns become limited.

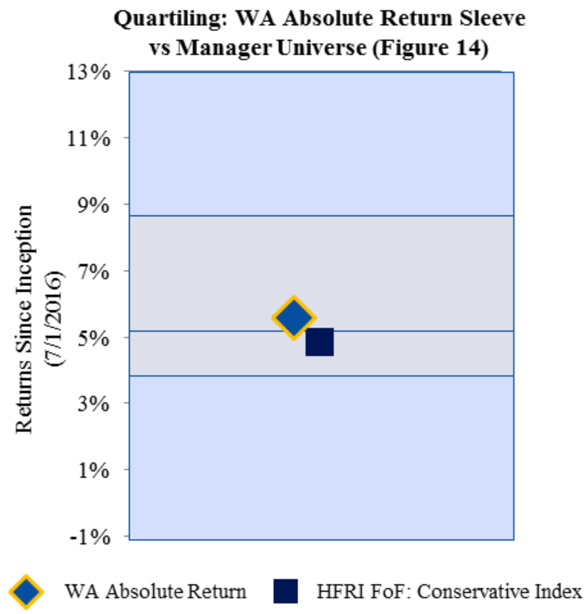
Demand for municipal debt securities strengthened throughout the first half as the prospect of significant tax reform appeared to wane. Combined with low starting valuations in January, the municipal sector easily outperformed taxable, even before accounting for any tax advantage. As of the end of June, the yield on the municipal debt index (Bank of America Merrill Lynch US Municipals, 2.22%) has declined below that of the taxable debt index (Barclays Aggregate, 2.55%). We anticipate continued support for municipal debt, but shorter maturity issues appear expensive relative to longer maturities.

ABSOLUTE RETURN HEDGE FUNDS

Absolute Return hedge funds include strategies that typically show low correlation to equities, such as low net long/short equity, global macro and multi-strategy.

Absolute Return funds of hedge funds (HFRI Fund of Funds Conservative, +1.6%) yielded small but positive performance for the year. Within specific strategies, Global Macro managers were clear laggards while Relative Value strategies outperformed. Generally, we would expect our Absolute Return portfolio to lag when the environment is very supportive of risk assets, as has been the case recently.

The WA Absolute Return investment sleeve, which combines our more conservative or risk-diversifying strategies returned 5.7% over the past twelve months (compared to 5.3% for the HFRI Conservative Index), and 1.3% year-to-date through June (compared to 1.8% for the HFRI Conservative Index). This performance positioned the sleeve in the second quartile of the universe of comparable managers over the past twelve months (figure 14).



Source: eVestment

POSITIONING

While multi-strategy and long/short equity funds benefited from solid markets in risky assets, our global macro manager experienced headwinds in rate and currency markets. In the first half of the year, we added exposure to a trend following manager and raised our allocation to multi-strategy funds. We expect that both strategies are well positioned to respond to a potential market downturn.

OUTLOOK

Every week seems to bring a litany of worrisome headlines, from government policy uncertainty to geopolitical tensions and natural disasters. We empathize with clients wondering how to adjust their portfolio in this climate as each headline seems to portend dire consequences.

However, while we recognize the risks implied in these news developments, we think that economic growth and valuations provide more powerful signals to guide investors.

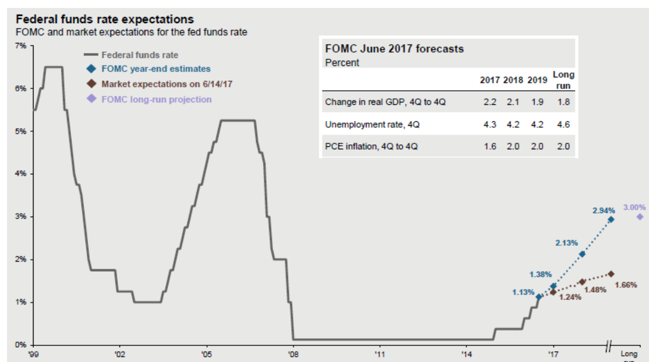
There seems to be a disconnect between the positive economic signals being recorded worldwide and the skittishness of investors. To us the real issue remains the expensive valuations of growth assets induced by unprecedented Central Bank policies in the wake of the great financial crisis of 2008.

While traditional signals of recession are absent (e.g. slowing manufacturing activity, surging credit spreads and an inverted yield curve), the removal of policy support is bound to affect asset prices eventually.

The US leads the world in this respect as the European Central Bank and the Bank of Japan continue their accommodative policies. US markets will be confronted by a difficult transition as improving growth and employment confirm the argument in favor of normalizing monetary policy.

Investors conditioned by years of slow recovery continue to doubt the Fed's resolve to raise rates and currently discount a much shallower path of future rate increases, anticipating long-run front-end rates around 2% vs. the Fed's indication of 3% (figure 15).

(Figure 15)

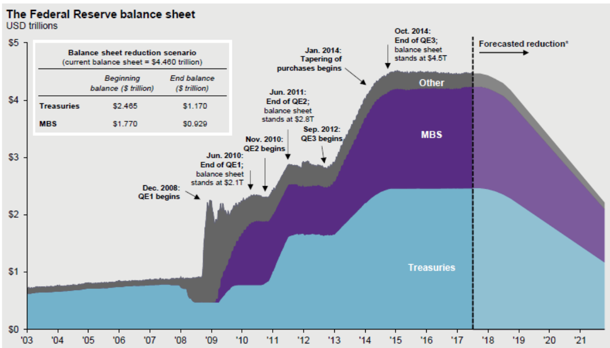


Source: JP Morgan

Artificially low rates had the benefit of preventing massive defaults and a deep recession at the heart of the crisis, but they came with costs, including distorting investor behavior, creating the potential for future credit-fueled bubbles, and crushing bank profits and their ability to lend. In addition to addressing these concerns, the Fed has an incentive to raise rates to a more normal level when conditions are improving, if only to provide a way to re-stimulate the economy should an unexpected recession occur.

In addition to lowering rates, the Fed provided further support to the economy by purchasing securities in the open market and significantly expanding its balance sheet (a policy referred to as quantitative easing). This balance sheet expansion is now expected to reverse, which will tighten financial conditions regardless of any action on rates. The chart below (figure 16) provides a sense of the scale of the support that was provided in recent years, particularly to the housing market via the purchase of mortgage-backed securities (MBS).

(Figure 16)

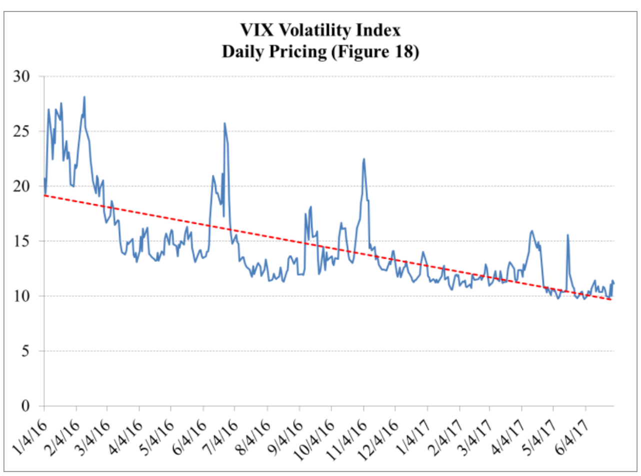


Source: JP Morgan

While these changes have been well telegraphed to investors and are planned to occur slowly, the removal of artificial support will allow markets to resume their normal function over time. This will result in better differentiation between attractive and sub-optimal investments and a higher level of market volatility.

As shown below, the level of volatility implied in option pricing on the S&P500 has been on a steady decline over the past two years, reflecting benign economic conditions and the assurance of Central Bank support worldwide (figure 17).

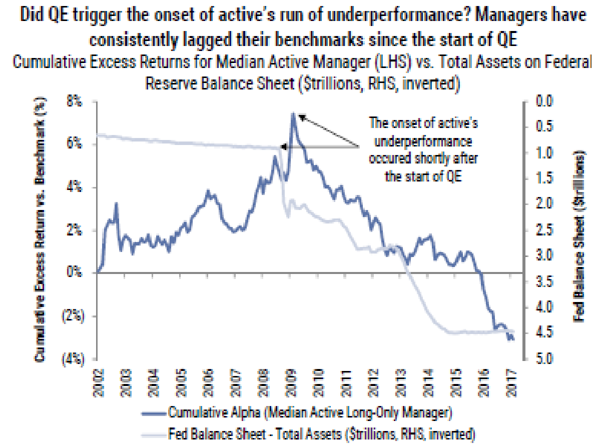
(Figure 17)



Source: Bloomberg

Concurrent with low market volatility and low dispersion in the performance of individual stocks, active managers as a group have been underperforming since the onset of quantitative easing (figure 18).

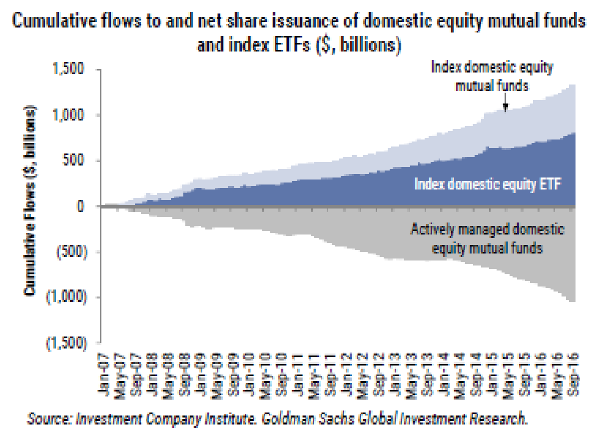
(Figure 18)



Source: Goldman Sachs

As a result, it is unsurprising that passive equity index funds and ETFs have been gathering assets at the expense of active strategies in recent years (figure 19).

(Figure 19)



Source: Goldman Sachs

By definition, passive investment strategies do not discriminate between strong or weak investments, and reward recent winners by increasing their exposure in the index (a form of momentum strategy).

Ironically, the current market setup increases the appeal of active strategies going forward. Active managers have a history of protecting against permanent losses of capital and riding out mark-to-market volatility to deliver steadier performance. While the past eight years of low rates and quantitative easing have been supportive of passive strategies, we think that the market is now at an inflection point that will increasingly reward active investors.

It is true that this long-term trend may not follow a smooth linear path and what we anticipate is a higher level of market volatility in coming years. Several developments including political surprises, natural disasters or geopolitical flare-ups may result in short-term market corrections, but these would also serve to correct valuation imbalances and offer more compelling investment opportunities.

This is an environment in which the option value of cash is increasing, providing the ability to reinvest in a downturn at attractive valuations. However, we do not pretend to be effective market timers, as we know the most difficult decision will be to step back into the markets at the darkest time. Instead we intend to rely on our active managers to make that decision on a bottom-up security selection basis.

On a portfolio level and throughout our growth-oriented strategies we favor the following:

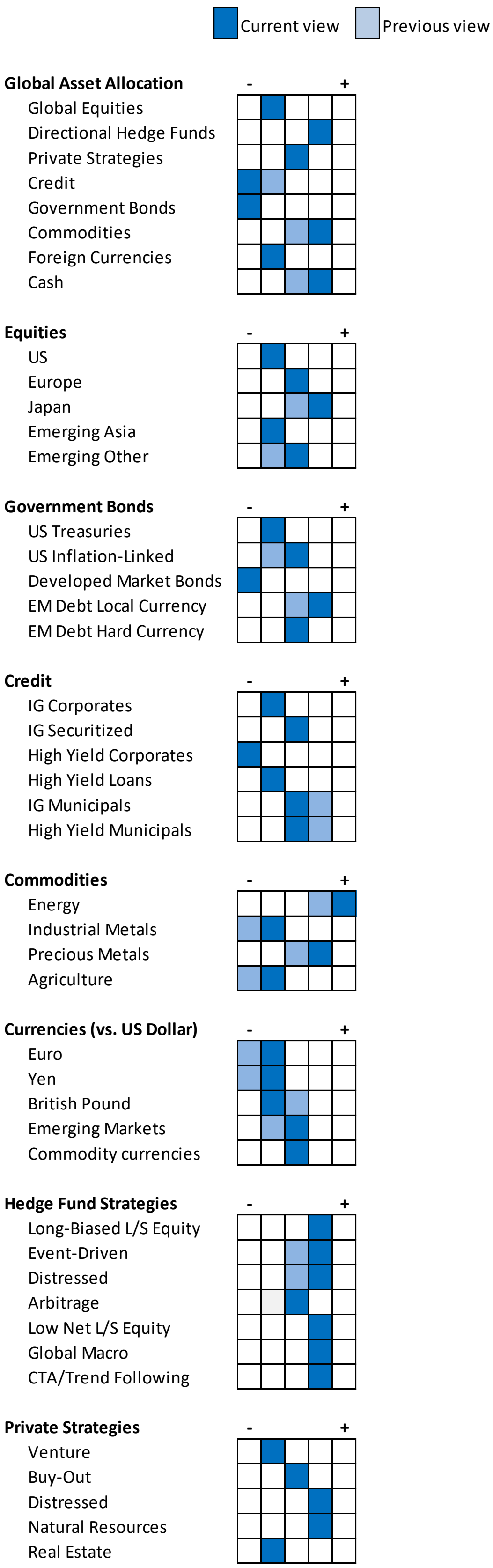
- Tilting portfolios toward better relative value opportunities (e.g. international and emerging relative to US).
- Relying on absolute value strategies that can hold substantial cash or minimize net exposure until valuations improve.
- Flexible capital that can opportunistically invest across the capital structure.
- Unconstrained hedge fund strategies that are adept at short investing or using option strategies to protect against market downside.

We continue to recommend that clients remain fully invested in growth assets at levels consistent with their risk tolerance and liquidity needs. Our changing mix of managers and portfolio tilts may detract from performance in a rising market but will mitigate downside risk while enhancing the prospect of long term returns.

Outside of growth assets, we find little appeal to recession protection assets in general but recognize their value as liquidity reserves. On the other hand, inflation protection assets appear underpriced and we recommend that investors rebalance toward target allocations. Finally, we remain confident that our absolute return hedge fund strategies will offer significant diversification as the markets turn.

ASSET ALLOCATION VIEWS

June 30, 2017



INDEX KEY

Global Equity (MSCI All Country World-USD), Domestic Equity Large Cap (S&P500), Domestic Equity Small Cap (Russell 2000), International Developed Equity (MSCI EAFE), Emerging Market Equity (MSCI EM), Energy Equity (MSCI ACWI Energy) Broad Fixed Income (Barclays Aggregate), US Government Debt (Bank of America Merrill Lynch US Government), US Inflation-linked (Bank of America Merrill Lynch US Inflation-linked), US Corporate Debt (Bank of America Merrill Lynch US Corporate), US Securitized Debt (Bank of America Merrill Lynch US ABS & CMBS), Emerging Debt US Dollar (JP Morgan Emerging Market Bond Index Global), Emerging Debt local currency (JP Morgan Global Bond Index Emerging Markets), High Yield Debt (Bank of America Merrill Lynch US High Yield), Municipal High Yield (Bank of America Merrill Lynch US Municipal High Yield), Municipal Debt (Bank of America Merrill Lynch US Municipal), Commodities (S&P/Goldman Sachs Commodity Index), Public Real Estate (MSCI US REIT), Global Hedge Funds (HFRI Fund Weighted Composite), Directional Hedge Funds (HFRI Fund of Funds Strategic), Absolute Return Hedge Funds (HFRI Fund of Funds Conservative), Venture Capital (Cambridge Associates Venture Capital Index), Private Equity (Cambridge Associates Private Equity Index), Private Real Estate (Cambridge Associates Private Real Estate).

RESEARCH/COMMENTARY DISCLAIMER

This material has been prepared by Windrose Advisors, LLC on the basis of publicly available information, internally developed data and other sources believed to be reliable. The information provided herein is for general informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities or commodities, or investment advice relating to securities or commodities, or a representation that any security or commodity is a suitable or appropriate investment for any person. All information herein is written and prepared for large and experienced institutional investors with the highest degree of financial sophistication and knowledge and the capacity to withstand and assess any financial losses. Opinions expressed herein are current opinions as of the date appearing in this material only and are subject to change without notice. In the event any of the assumptions used herein do not prove to be true, results could vary substantially. All investments entail risks. There is no guarantee that investment strategies will achieve the desired results under all market conditions. No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those discussed, if any. No part of this document may be reproduced in any manner, in whole or in part, without the prior written permission of Windrose Advisors, LLC. You may not rely on the statements contained herein. Windrose Advisors, LLC shall not have any liability for any damages of any kind whatsoever relating to this material. You should consult your advisors with respect to these areas. By accepting this material, you acknowledge, understand and accept the foregoing.

As with any investment strategy, there is potential for profit as well as the possibility of loss. Windrose Advisors does not guarantee any minimum level of investment performance or the success of any portfolio or investment strategy. All investments involve risk (the amount of which may vary significantly) and investment recommendations will not always be profitable. The investment return and principal value of an investment will fluctuate so that an investor's portfolio may be worth more or less than its original cost at any given time. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Performance is gross of Windrose Advisors' advisory fee. Performance reflects the reinvestment of dividends and other earnings. A client's return would be reduced by such fees and expenses, which are described in Form ADV Part 2 which is available upon request. Additional information, including management fees and expenses, is provided on Windrose Advisors Form ADV Part 2.