Fund Evaluation Group®
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RESEARCH REVIEW

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LESS THAN ZERO

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> *Okay, well I'm gonna go. There's this guy I owe a large sum of money to—yeah big surprise—but I'm gonna try and talk to him, I'm gonna try and do something right for once. I mean it. So I just want you to wish me luck, whether you believe me or not.*
>
> ~ Julian Wells, as played by Robert Downey, Jr. in the 1987 film *Less Than Zero*

Less Than Zero is a movie that highlighted the seedy and grotesque drug culture that existed among privileged youth in the 1980s. After facing extreme, life-altering challenges, Robert Downey Jr.'s character fell into a drug addiction from which he never recovered.

Central bankers around the world are neither "seedy," nor "grotesque," but are similarly faced with extreme challenges, the most notable being the stubborn lack of economic growth. Their "addiction" to monetary intervention has reached unhealthy and potentially dangerous levels, with sovereign debt in 13 countries now exhibiting yields that are "less than zero."

DEVELOPED MARKET SOVEREIGN BOND YIELDS (NOMINAL) 2 YEAR

COUNTRY	S&P	MOODY'S	YIELD
Switzerland	AAAu	NR	-1.05%
Germany	AAAu	Aaa	-0.64%
Sweden	AAAu	Aaa	-0.62%
Netherlands	AAAu	Aaa	-0.59%
Austria	AA+	Aa1	-0.59%
France	AAu	Aa2	-0.58%
Finland	AA+	Aa1	-0.58%
Denmark	AAA	Aaa	-0.57%
Belgium	AAu	Aa3	-0.56%
Ireland	A+	A3	-0.37%
Japan	A+u	NR	-0.26%
Spain	BBB+	Baa2	-0.14%
Italy	BBB-u	Baa2	-0.06%
Israel	A+	A1	0.09%
United Kingdom	AAu	Aa1	0.18%
Portugal	BB+u	Ba1	0.42%
Hong Kong	AAA	Aa1	0.46%
Canada	AAA	Aaa	0.59%
United States	AA+u	NR	0.78%
Singapore	AAAu	NR	0.81%

Data source: Bloomberg, L.P.; Data as of 9/13/2016

Monetary policies that result in negative interest rates (NIRP) represent a glaring act of desperation after the more-orthodox options have all been exhausted. Part of the idea behind NIRP is to give a nudge to banks in hopes of incentivizing lending. Lending would then be expected to boost growth and spark at least a modicum of inflation, but the results so far have seemed like pushing on a string.

Central banks are not engaged in NIRPs because they want to see 1970s-style inflation. Rather, bankers seek a buffer against a deflationary death spiral that could crater the world economy in Great Depression-like fashion, complete with cash hoarding and widespread bank runs. Central banks are fighting to keep such an event from happening, and what they are trying has never been attempted in quite this way, or on such a massive scale.

One can appreciate their rationale; despite the potential for unintended consequences from near zero or even negative interest rates, individuals guiding central banks likely feel they have no choice. They must accept that what will ultimately befall markets and economies as a result of their unconventional policies is unknown. These policies are deemed necessary because an unknown future is more acceptable than what is believed to be a more disastrous knowable present that would result in the absence of the unconventional policies.

Storehouse of Value

One criticism of the massive central bank interventions taking place all over the world is that they may not be producing the desired effect. To set the stage, we look to an intelligent article from Research Affiliates' CIO Chris Brightman called "The Death of the Risk Free Rate."[1] In it, Brightman describes three primary functions of money:

- a unit of account,
- a medium of exchange, and
- a store of value.

Brightman indicates that, in contrast to the past, today there are money substitutes beyond government currency, bank notes, or funds held in bank deposits that can fulfill the three functions above. Certainly we still must pay taxes in dollars, but virtual currencies using block chain technology now compete with government currency. We can pay for our morning coffee with a card tied to a brokerage account that holds ETFs. The mediums of exchange and storehouses of value have developed beyond simple currency and government bonds, and we should expect that change to continue.

Consequences

Net of the admittedly miniscule rates of inflation, a meaningful swath of real yield curves across the globe–including parts of the U.S. yield curve—is in the red. This represents a change to an established fundamental concept because a positive real rate of return on fixed assets and cash serves as a foundational basis for investing. That previously-unshakable concept has now been disrupted in dramatic fashion.

In the absence of a positive real rate of return, our view of the risk-free rate should change. One could argue that as investors substitute real capital assets for currency and government bonds, manipulating interest rates becomes a less-effective tool for central banks to manage the economic cycle. In other words, maybe the substitution by investors is a reason that the negative interest rate policies are not working as well as bankers had hoped.

But it gets worse. NIRP may not just be failing in the principal goal of boosting economic growth and sparking inflation; there is also reason to believe it may be having the opposite effect. PIMCO published an interesting piece that summarizes the idea nicely:

> *While there is no longer any doubt about the ability or willingness of many central banks to manufacture negative interest rates, their efficacy on growth or inflation is far from certain. In fact, policymakers may have significantly underestimated the economic risks.*[2]

Some of the potentially counterproductive consequences stemming from NIRP that PIMCO and many others point out include the following:

- **Market volatility** — markets do not respond well to uncertainty, but the monetary policy experiments to date are the economic equivalent of a few blindfolded children simultaneously spinning and swinging at a piñata;
- **Currency wars** — policies designed to suppress a currency's value for competitive gain diminish its store of value mentioned earlier and can incite protectionist policies, which constrains global growth;
- **Higher lending standards** — banks' margins are squeezed by negative rates, and their costs of capital are higher, so, all else being equal, they compensate by raising lending standards, which perversely results in fewer loans–and all else being equal, fewer loans typically hinders growth;
- **Portfolio decisions** — as yields are pushed into negative territory, holding such bonds to maturity represents a loss of purchasing power, as other high quality assets are removed from the financial system and replaced with riskier securities; some investors may take more risk to compensate, but others will be forced (for a variety of reasons such as risk appetite, policy mandates, etc.) to reduce risk–which does not help growth, and;
- **Punishment of savers** — negative interest rates hurt savers, who, when faced with lower rates, may be forced to increase their savings rate–which has the effect of constraining growth.

Inflation

That last point on punished savers harkens back to the Chris Brightman quote on the death of the risk-free rate mentioned earlier. In addition to talking about how central banks have engineered negative rates but have failed to achieve the desired outcome, Brightman states that the next potential step is direct monetary transfers to the private sector (a.k.a. helicopter money), which introduces a serious risk of runaway inflation over the long term. His conclusion is that today's fear of deflation has produced a "sale on inflation hedges such as commodities, bank loans, high yield bonds, REITs, and emerging market equities. Investors should diversify away from zero and negative returns for cash and government bonds into higher yielding inflation-sensitive asset categories."

Brightman makes some good points, but inflation is nowhere to be found. Until we actually see the helicopter overhead or an unexpected spike in economic growth, a strong-bull argument for commodities would be a flimsy one at best.

Let's return to the primary problem–central banks need some semblance of inflation to protect against deflationary risks but have not been able to produce it, given the worldwide vacuum of economic growth.

The New York Times published an article on economic growth (the lack thereof, actually) titled "We're in a Low-Growth World. How Did We Get Here?"[3] The author, Neil Irwin, points out that in the U.S., per-person GDP rose by an average of 2.2 percent per year from 1947 through 2000–but starting in 2001 has averaged only 0.9 percent. Even if you remove the 2008 financial crisis, economic growth has failed to meet expectations by a wide margin.

Slow growth leads to minimal inflation and the deflationary protection that inflation provides. But the inflation target the Fed seeks is only 2%. A question one may ask is that if they really want a buffer against deflation, why is the target just 2%? The answer can be found in a surprisingly obvious place—the FAQ page on the Federal Reserve's website:

> *The Federal Open Market Committee (FOMC) judges that inflation at the rate of 2 percent (as measured by the annual change in the price index for personal consumption expenditures, or PCE) is most consistent over the longer run with the Federal Reserve's mandate for price stability and maximum employment. Over time, a higher inflation rate would reduce the public's ability to make accurate longer-term economic and financial decisions. On the other hand, a lower inflation rate would be associated with an elevated probability of falling into deflation, which means prices and perhaps wages, on average, are falling—a phenomenon associated with very weak economic conditions. Having at least a small level of inflation makes it less likely that the economy will experience harmful deflation if economic conditions weaken.*[4]

The Fed's explanation seems logical. But a counter argument was featured in a *Wall Street Journal* piece[5] highlighting a point of view that the Fed's inflation target should be 4% or 5% rather than 2%.

Included in the article was mention of a 2012 paper by Oliver Blanchard, Paolo Mauro, and Giovanni Dell'Ariccia,[6] the historical case for low inflation "rested on the assumption that high inflation created damaging market distortions and more frequent recessions" (comparable to the explanation on the Fed's website). Low inflation or deflation was a trivial risk because central banks could easily drive inflation higher by promising to print more money.

In 2008, central banks around the world cut interest rates to nearly zero and embarked upon massive liquidity injections, but only lackluster growth followed. "Higher average inflation, and thus higher nominal interest rates to start with, would have made it possible to cut interest rates more," the authors wrote, which theoretically could have made the recession less deep.

Adding to this idea is a recent letter from San Francisco Fed president John Williams, who makes a similar case:

> *The critical implication of a lower natural rate of interest* (the rate that keeps the economy at full employment without stoking inflation) *is that conventional monetary policy has less room to stimulate the economy during an economic downturn, owing to a lower bound on how low interest rates can go. This will necessitate a greater reliance on unconventional tools like central bank balance sheets, forward guidance, and potentially even negative policy rates. In this new normal, recessions will tend to be longer and deeper, recoveries slower, and the risks of unacceptably low inflation and the ultimate loss of the nominal anchor will be higher* (parenthetical added).[7]

Mr. Williams sees ample evidence that deep-seated structural forces have dragged down the real natural interest rate from around 2.5% before the recession to 1% now. The root causes of drag seem unlikely to disappear: lower productivity growth and an aging population, both of which depress investment, while the increased global demand for safe assets elevates saving, also a drag on growth.

The Fed's FAQ describes a 2% rate as "most consistent" with their mandate, while a Fed governor suggests that with a target that low (with the assumption that rates would be correspondingly low), the Fed will struggle to successfully arrive at their mandates of maximizing employment, stabilizing prices, and moderating long-term interest rates. In concept at least, Federal Reserve chair Janet Yellen recognized this issue in her prepared remarks at the recent meeting of economists in Jackson Hole, Wyoming:

> *Finally, and most ambitiously, as a society we should explore ways to raise productivity growth. Stronger productivity growth would tend to raise the average level of interest rates and therefore would provide the Federal Reserve with greater scope to ease monetary policy in the event of a recession.*[8]

Notice that the paragraph begins with the word "finally," indicating that it is the last point made in her 18-page speech. The point was included in her comments, but was certainly not a focus. And the use of the phrase "most ambitiously," seems to hint at her skepticism that the goal will actually be reached.

Prior to those remarks in the same speech, however, she makes a point that could be described as one of her most noteworthy:

> *... future policymakers may wish to explore the possibility of purchasing a broader range of assets.*

The Fed—by mandate—can only purchase U.S. government obligations, certain types of private sector debt, state and local debt, and foreign government debt. This quote by Chair Yellen potentially implies that during the next recession, the Fed may look to Congress to expand the scope of the Fed's asset purchase options. The Bank of Japan, for example, can purchase ETFs, REITs, etc., whereas the Federal Reserve cannot.

So, rather than allow inflation and rates to ascend (in the absence of some miraculous jump in productivity), the Fed seems content to remain anchored to the explanation offered in their FAQ with the possible inclusion of a still wider range of assets in future versions of quantitative easing. All of this serves to suggest that neither inflation nor interest rates should be expected to rocket higher, at least in the very near future.

Julian Wells, in *Less Than Zero*, mentioned a "guy" to whom he owed a great deal of money, resulting from the unintended consequences of Julian's drug addiction. If interest rates were to rise, the U.S. government would owe a lot more money to future bond holders with future debt issued at higher rates, so we should recognize that as an incentive for keeping rates low.

Julian Wells also indicated a desire to "do something right for once." We believe that central bankers have a strong desire to do the right thing and, to some, that means raising rates to a healthy, "normalized" level, which would again allow the use of traditional tools in the execution of their mandate. But given the adversity they face, they seemingly have no choice but to keep rates low.

With the overhang of low growth, we believe a sustained rise in interest rates to historically normal levels appears highly unlikely for the foreseeable future. "Less than zero" interest rates may be here to stay, carrying with them potential unintended consequences that could affect economies and markets in the future in ways that are currently unknowable.

The movie character also asked that his friend wish him luck. One should not rely on luck as an investment strategy, and we doubt that relying on luck would prove effective in the long run as a guide for monetary policy either. That being said, we hope that with a little luck, the fate of the economy as guided by central bank policies, turns out more favorably than the fate of poor Julian Wells.

1 Christopher Brightman, "Death of the Risk Free Rate," Research Affiliates, June 2016.

2 Scott A. Mather, "Negative Interest Rate Policies May Be Part of the Problem," PIMCO Viewpoints, February 2016.

3 Neil Irwin, "We're in a Low-Growth World. How Did We Get Here?" The New York Times, TheUpshot/Economic Trends, August 6, 2016.

4 https://www.federalreserve.gov/faqs/economy_14400.htm

5 Greg Ip, "The Case for Raising the Fed's Inflation Target," The Wall Street Journal, Real Time Economics/Commentary, August 19, 2016.

6 Olivier Blanchard, Giovanni Dell'Ariccia, and Paolo Mauro, "Rethinking Macroeconomic Policy," International Monetary Fund, IMF Staff Position Note, February 12, 2012.

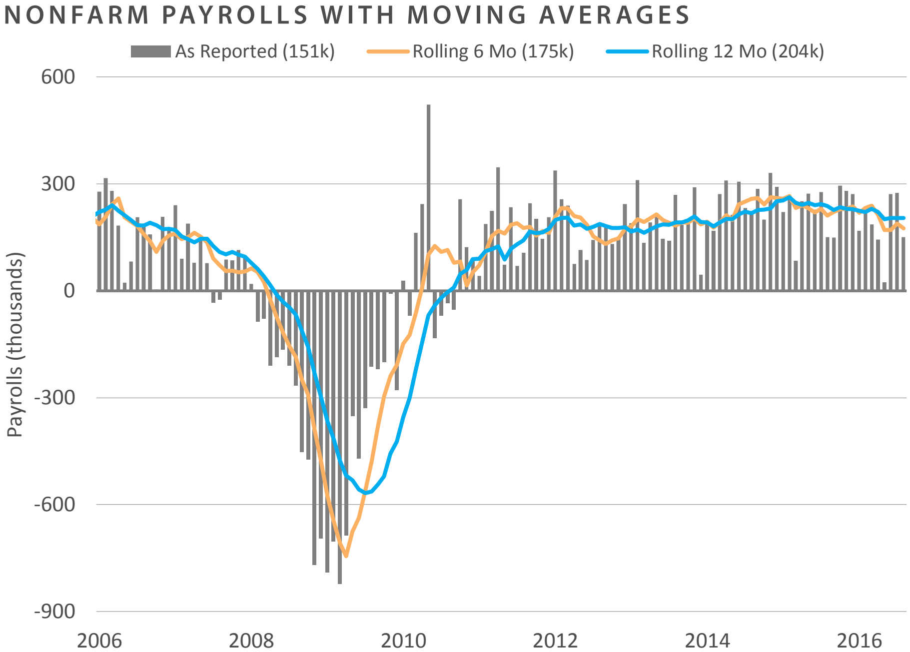
7 John C. Williams, "Monetary Policy in a Low R-Star World," Federal Reserve Bank of San Francisco, FRBSF Economic Letter, August 15, 2016.

8 Chair Janet L. Yellen, "Designing Resilient Monetary Policy Frameworks for the Future," a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 26, 2016.

Economic Update

U.S. Payroll Growth Loses Momentum in August

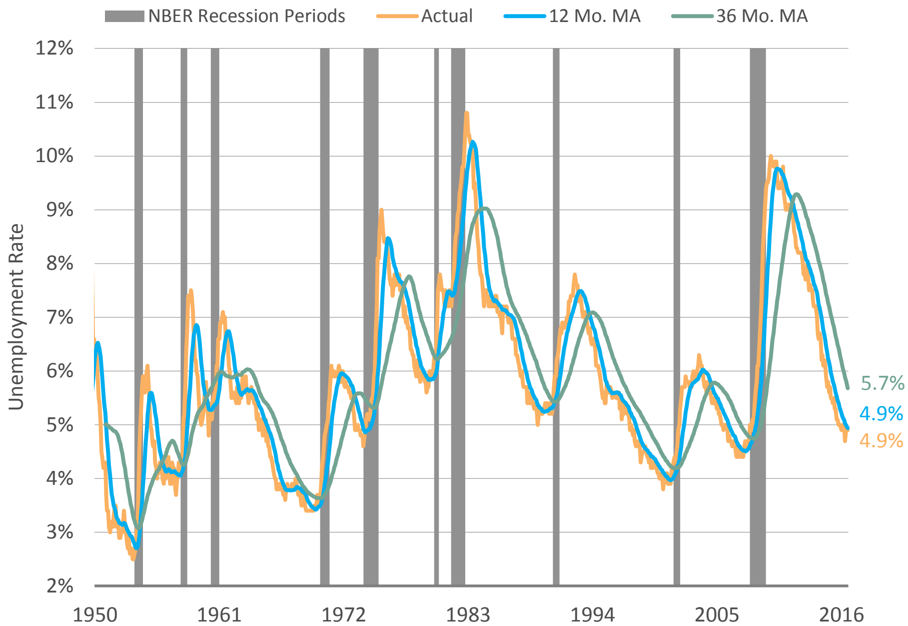
The August *Employment Situation* report, released by the Bureau of Labor Statistics (BLS) on Friday, September 2, showed that nonfarm payroll employment increased 151,000 jobs during the month, missing the Bloomberg consensus estimate of 180,000 and ending significantly below July's impressive increase of 275,000. Smoothed measures of payroll growth highlight a general slowdown in hiring activity since mid-2015, the trend of which may complicate the Fed's task of hiking interest rates.



Data sources: BLS, Bloomberg, L.P.; Data as of August 2016

The headline unemployment (U-3) rate held steady at 4.9% in August, driving the 12-month moving average lower to 4.9%, while the 36-month moving average was unchanged at 5.7%. The slowdown in the rate of improvement in the U-3, which has been at or slightly below 5.0% since October 2015, is likely indicative of a relatively tight labor market. While the current U-3 sits at its 12-month moving average, the rate remains 80 basis points below its 36-month moving average, potentially indicating a longer period until the current business cycle shifts from expansion to contraction.

U.S. UNEMPLOYMENT RATE AND BUSINESS CYCLE



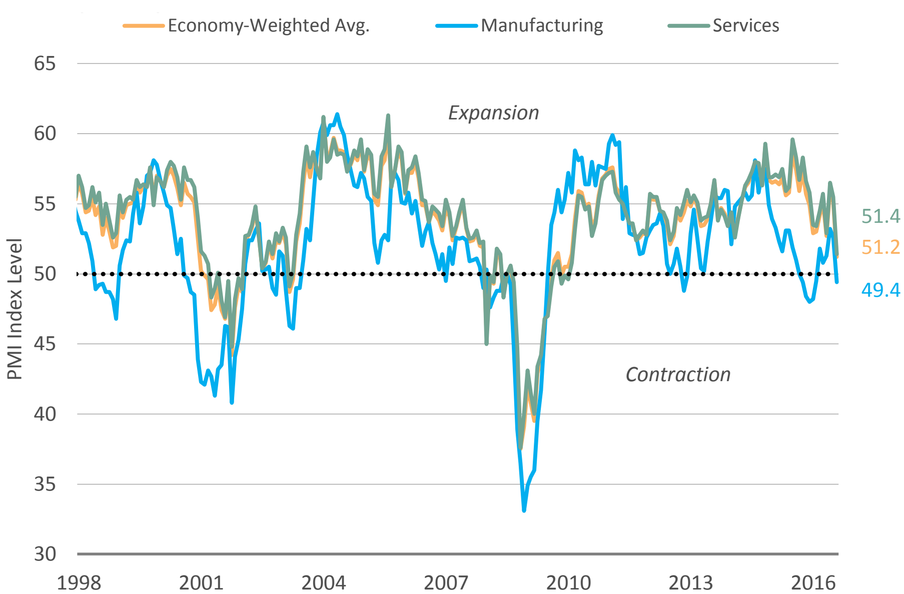
Data sources: NBER, Bloomberg, L.P.; Data as of August 2016

SERVICES SECTOR COOLS IN AUGUST

In August, the ISM Non-Manufacturing Index slumped to 51.2, missing economists' estimates by a wide margin and leaving the U.S. service sector a mere 1.2 index points above "contraction." With the manufacturing sector back in contraction territory as of August, and the service sector exhibiting marked weakness during the month, it stands to reason that a precarious combination of weakening economic data and the potential for a Federal Reserve rate hike by year-end may lead to elevated volatility in risky asset prices in the months ahead.

ALL EYES ON THE SEPTEMBER 20-21 FEDERAL OPEN MARKET COMMITTEE (FOMC) MEETING

ISM PURCHASING MANAGER INDICES

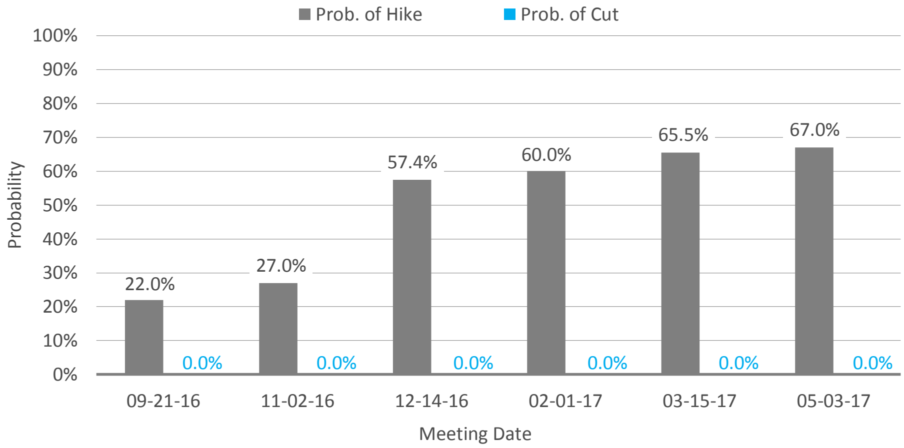


Data sources: ISM, Bloomberg, L.P.; Data as of August 2016

The Federal Open Market Committee (FOMC), the policy-setting group of the broader Federal Reserve Board, conducted a two-day FOMC meeting on September 20 and 21 and held rates steady. While recent sentiment emanating from various Fed official speeches has taken on a somewhat hawkish tone, participants in the federal funds futures market remained far less sanguine regarding the prospect for another interest rate hike by the Fed before the year comes to a close. Indeed, as of Friday, September 9, prior to the FOMC meeting, the implied probability for a rate hike during the Fed's September meeting, based on federal funds futures prices, stood at just 28%, with a 58% chance that the FOMC will hike the rate by year-end.

CURRENT FOMC RATE HIKE PROBABILITIES

Based on Fed Funds Futures



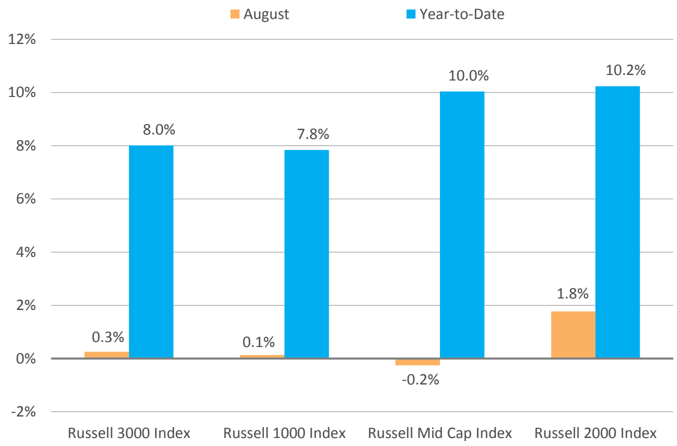
Data source: Bloomberg, L.P.; Data as of 9/12/2016 @ 12:14am ET

Global Equity

U.S. Equity

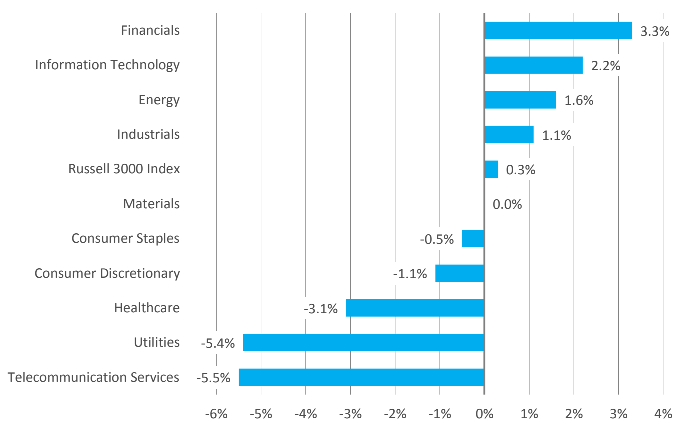
- The U.S. stock market, represented by the Russell 3000 Index, gained 0.3% in August. This modest change occurred as investors weighed encouraging earnings results against the renewed possibility of an interest rate increase in 2016. Macro news related to the impact of a potential rate increase drove much of the sector-relative performance while merger and acquisition activity played a big role in many stock specific moves.
- Small cap stocks (+1.8%) continued to rally, followed by large (+0.1%) and mid (-0.2%) stocks. Small cap stocks pulled ahead of mid cap stocks year-to-date (YTD) (+10.2% and +10.0% respectively), and large cap stocks (+7.8%) continue to trail smaller peers.
- Four of the ten sectors posted gains in August. Financials stocks led performance (+3.3%) based on increasing expectations of higher interest rates. Positive economic news and improving company-specific fundamentals helped drive more cyclical sectors, such as information technology (+2.2%), energy (+1.6%), and industrials (+1.1%), higher.
- Telecommunication services (-5.5%) and utilities (-5.4%) declined in a reversal of the YTD trend, on interest rate increase concerns. These sectors have benefitted from an appetite for defensive stocks and current income, and continue to be the best performers YTD, up 18.4% and 16.1%, respectively.
- Health care declined 3.1% as political rhetoric and weak clinical trial results created a less attractive outlook.
- All sectors continue to show positive YTD performance, even after a mixed month of performance.
- Value regained its broad leadership again in August after a reversal in July. Strong results from financials sector helped offset the weakness in utilities and telecommunications, and better performance on the value side from information technology and industrials also helped give value an edge over growth.
- Value has outperformed growth across all market capitalizations YTD with the gap continuing to be most pronounced in the small cap universe (14.6% vs. 6.0%).

RUSSELL INDICES PERFORMANCE



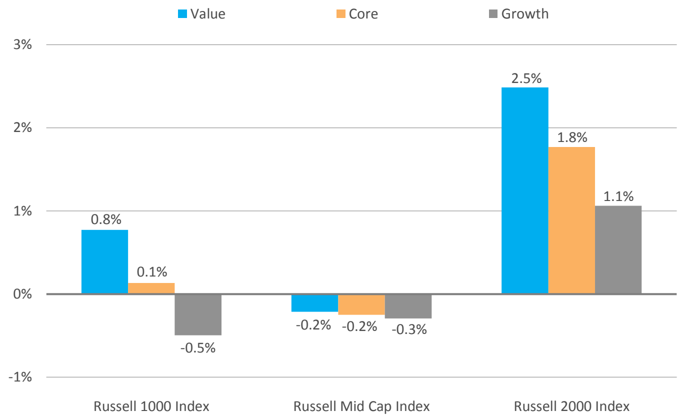
Data source: Russell

AUGUST RUSSELL 3000 SECTOR PERFORMANCE



Data source: Russell

AUGUST RUSSELL INDICES PERFORMANCE



Data source: Russell

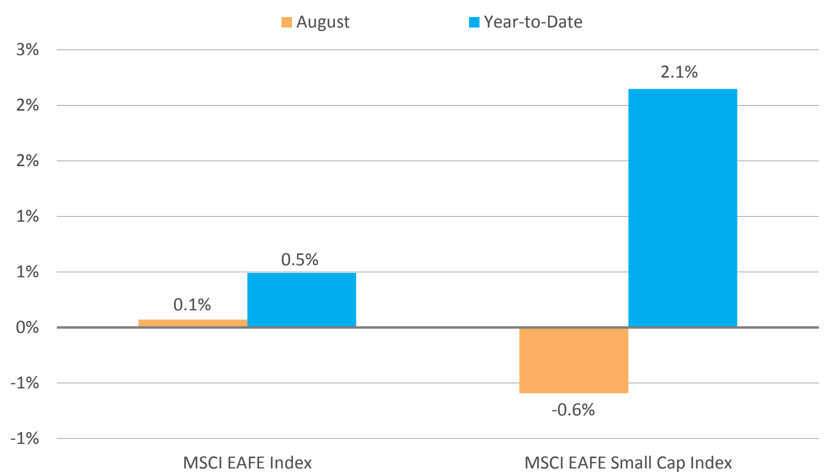
International Equity

All returns in local currency unless otherwise indicated.

INTERNATIONAL DEVELOPED MARKETS

- International developed equity markets rose in August (+0.9%). Currency fluctuations provided a headwind for U.S. investors in the month, as returns in U.S. dollars were 0.1% after adjusting for currency changes.
- International developed markets had mixed results YTD, returning -1.9% (+0.5% in U.S. dollars), trailing U.S. and emerging market indices. Currency movements continued to have a positive impact on U.S. investors YTD.
- Pacific markets rose 0.6% (+0.6% in U.S. dollars), as New Zealand (+1.5%), Japan (+1.3%), and Hong Kong (+1.0%) led the region. Japan benefitted from the announcement of additional stimulus. Australia (-1.5%) was the standout decliner in the region on softening economic data.
- European stocks gained 1.2% (0.3% in U.S. dollars), continuing to recouping some of the losses suffered in June after the Brexit vote. Most markets had positive returns in August, led by Ireland (+6.0%). Cyclical stocks drove performance amid declining economic concerns.
- Small cap stocks, as measured by the MSCI EAFE Small Cap Index, gained 0.2% (-0.6% in U.S. dollars) in August, underperforming large cap stocks, but maintaining the lead in performance YTD.

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars



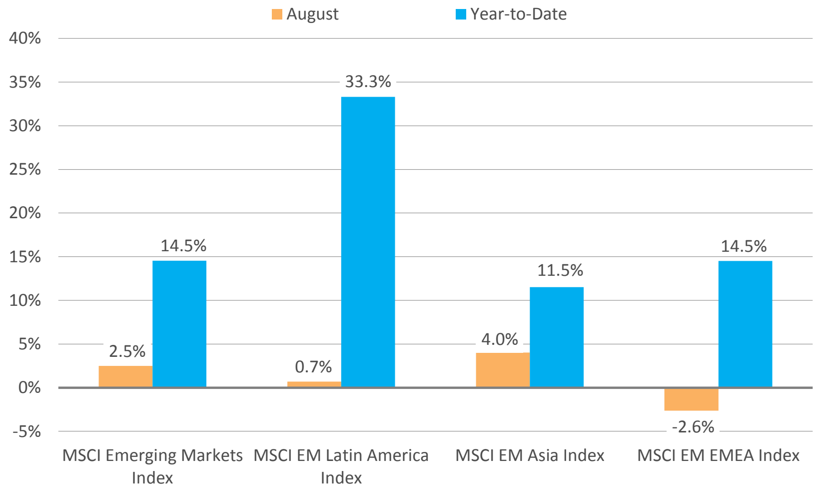
Data source: MSCI

EMERGING MARKETS

- Emerging markets, as measured by the MSCI Emerging Markets Index, outperformed developed international markets by gaining 2.8% in August (+2.5% in U.S. dollars). Emerging markets have gained 14.5% YTD (11.0% in U.S. dollars), outperforming international developed markets and U.S. stocks.
- The Latin American region gained (+1.1%) adding to strong YTD period (+23.1%). Year-to-Date leaders Peru (+51.2%) and Brazil (+32.7%) drove the softer performance down 4.4% and modestly gaining 0.9%, respectively. The political changes driving Brazilian markets finally occurred in August, with Dilma Rousseff's replacement named at the very end of the month.
- Asian emerging market stocks led performance (+3.8%), as Chinese stocks regained traction, gaining 7.3% after trailing regional peers YTD. South Korea (+2.7%) and Taiwan (+1.2%) also had a strong month. Technology stocks were strong across these markets on improving fundamentals and anticipated demand from upcoming product cycles.

- European emerging markets posted modest gains in August (+1.1%), with Hungary (+2.7%), Poland (2.3%), and Russia (+1.4%) leading the group. Russian stocks continued their rebound from the past year as investor sentiment continued to improve and oil prices increased. The Czech Republic was a standout detractor, down 10.0% after a strong July.

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars

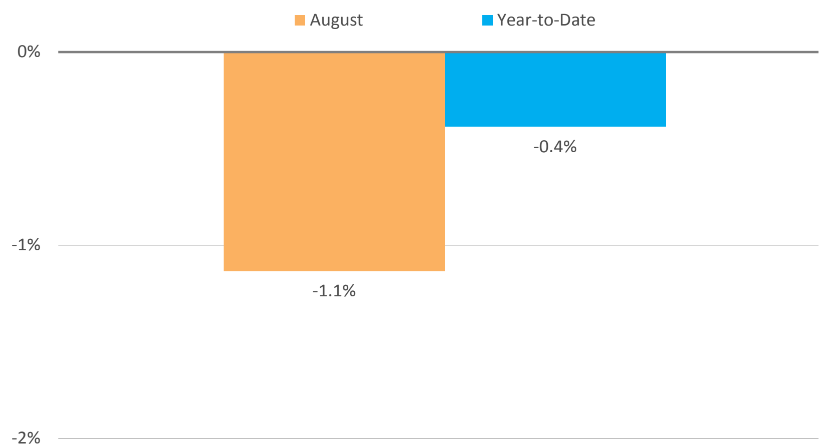


Data source: MSCI

FRONTIER MARKETS

- Frontier markets declined 1.1% in August (-1.1% in U.S. dollars), bringing the YTD performance to 3.9%. Currency fluctuations have impacted U.S. investors negatively in 2016, lessening the YTD gain in local currency to -0.4% in U.S. dollars.
- Central and Eastern Europe led performance (+1.2%), with Romania (+5.9%), the largest market in the region, offsetting broader declines. Asian returns (+0.2%) balanced gains in smaller markets, such as Sri Lanka (7.2%) and Vietnam (+0.6%), against modest declines in Pakistan (-0.8%) and Bangladesh (-1.0%). YTD, Pakistan (+19.0%) and the Ukraine (+19.0%) were standout performers.

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars

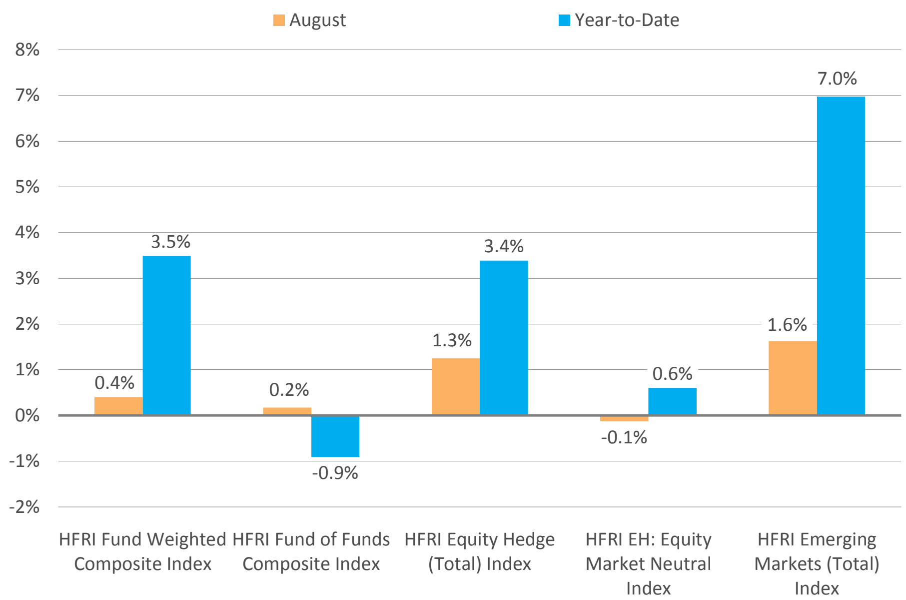


Data source: MSCI

Hedged Equity

- August was relatively uneventful for equity markets, as volatility remained near all-time lows throughout the month. Long-only equity indices were essentially flat, with the S&P 500 Index and the MSCI ACWI Index returning 0.1% and 0.3% respectively, bringing Year-to-Date (YTD) performance to 7.8% and 6.0% respectively. The HFRI Equity Hedge (Total) Index returned 1.3%.
- Hedged equity sub-indices were broadly positive with the exception of the HFRI EH: Short Bias Index and the HFRI EH: Equity Market Neutral Index, which returned -2.3% and -0.1% respectively.
- Fundamental equity strategies continue to gain ground on the performance of quantitative equity managers, partially driven by the reversal in the cyclical/defensive dynamic in the U.S. and, to a lesser extent, abroad. The HFRI EH: Fundamental Growth Index and the HFRI EH: Fundamental Value Index returned 1.3% and 1.7%, respectively. The HFRI EH: Quantitative Directional Index returned -0.3%.
- Sector specialists tended to outperform long-only indices. Energy and materials specialists benefitted from the rally in energy markets, particularly crude oil. The HFRI EH: Sector – Energy/Basic Materials Index was up 3.4%. The HFRI EH: Sector – Technology/Healthcare Index returned 0.7%.
- The broad HFRI Emerging Markets (Total) Index returned 1.6%. Regional specialists produced positive returns, with the exception of certain Japan- and Middle East-focused managers. The HFRI Japan Index and the HFRI Emerging Markets: MENA Index returned -0.7% and -0.4%, respectively. The top performing regional indices were the HFRI Emerging Markets: China Index (+3.5%), the HFRI Emerging Markets Asia ex-Japan Index (+2.9%), and the HFRI Emerging Markets: India Index (+2.3%).

HFRI INDICES PERFORMANCE
Returns in U.S. Dollars



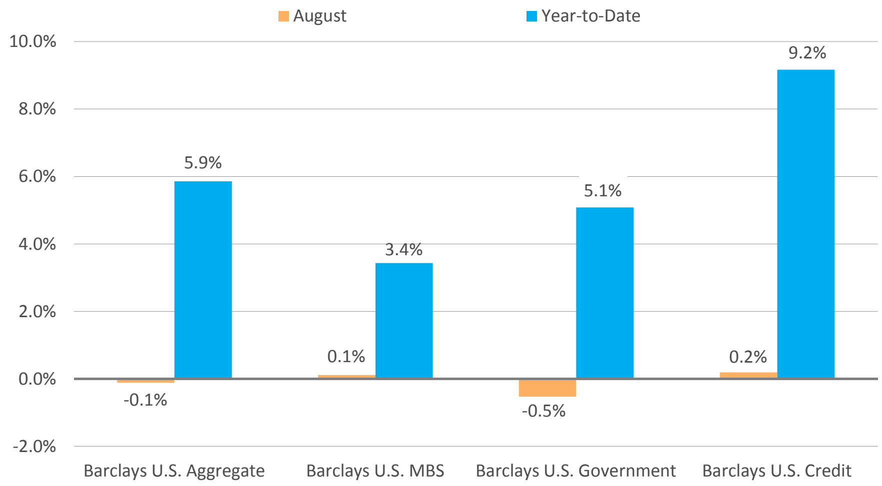
Data source: HedgeFund Research

Fixed Income

OVERVIEW

- The Barclays U.S. Aggregate Bond Index (BAGG) decreased 0.1% during the month. Agency mortgage-backed securities returned 0.1%. Investment-grade credit returned 0.2%, and U.S. government securities returned -0.5%.
- Investment-grade commercial mortgage-backed securities (CMBS), a smaller component of the BAGG, decreased 0.1% during the month.
- Emerging market debt (EMD) local currency posted a gain of 0.2%, and dollar-denominated EMD increased 1.8%.

BARCLAYS BOND INDICES PERFORMANCE



Data sources: Bloomberg Finance, L.P., Barclays

RATES

- The 2-year note yield increased 15 basis points to 0.81%, the 10-year note yield increased 13 basis points to 1.58%, and the 30-year bond yield increased 5 basis points to 2.23%.
- Inflation expectations slightly increased during the quarter. The 10-year break-even rate of inflation remained the same at 1.5% and concluded the month 50 bps below the Fed's 2.0% target. The yield on the benchmark 10-year Treasury Inflation-Protected Securities (TIPS) moved 15 basis points higher to 0.11%, and the Barclays U.S. TIPS Index posted a loss of 0.5% during the quarter.

CREDIT

- Investment-grade corporate bonds increased 0.2%. Industrials were the best sector, up 0.3%, financials were up 0.2%, and utilities were down 0.2%.
- Both fixed income risk sectors were up, with a 2.1% gain for the Barclays U.S. Corporate High Yield Index and a 0.6% gain for leveraged loans.

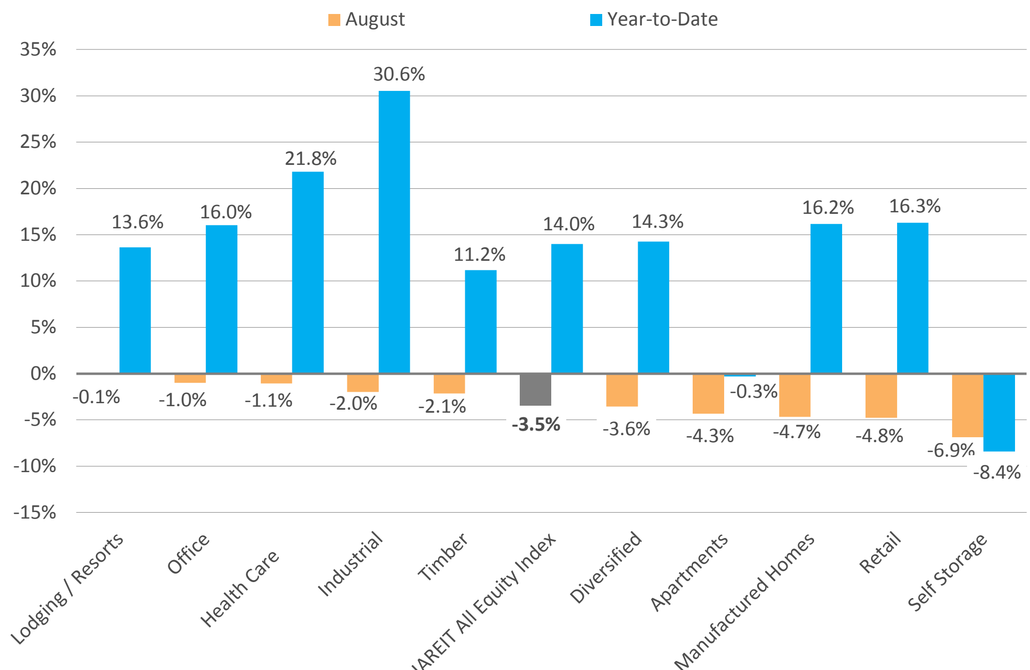
Real Assets

DOMESTIC REITs

- Real estate investment trusts (REITs), as measured by the FTSE NAREIT All Equity Index, declined 3.5% in August. REITs fell amid concerns that the macroeconomic backdrop has strengthened the Fed's case to raise interest rates. The prospect of rising rates, coupled with growing concerns that the sector's fundamentals are near a plateau, negatively affected the sector's performance.
- At the end of the August, REITs' dividend yield stood at 3.6%, versus a yield of 1.5% for the 10-year Treasury.[1]
- While all REIT sectors posted negative returns for August, the lodging and resorts sector exhibited the strongest relative returns, declining only 0.1%. According to Smith Travel Research, lodging performance improved during August, with revenue-per-available-room gaining 3.6%. While hotel demand was outpaced by new supply during July, demand is still near record high levels.[2]
- Elsewhere, the self-storage sector declined 6.9%, and has fallen more than any other property type in 2016. While new construction is still low by historical measures, Public Storage (PSA), the largest self-storage REIT by market cap, stated during its earnings call that an influx of new supply is challenging revenue growth in some of its markets. PSA's stock price subsequently fell 4.8% after the announcement, and has declined 12.4% since the news in July.
- Cap rates in the U.S., already at or below historic lows, were largely unchanged, driven by investors' continued demand for yield amid low interest rates. Property prices, as measured by the Moody's/Real Capital Analytics Commercial Property Price Indexes (RCA CPPI) national aggregate, were mixed, with secondary markets declining for the first time since 2010, but primary markets rising 1.5%. This is a reversal of the trend witnessed so far in 2016 and will likely be on the forefront of real estate investors' minds in the coming months.

FTSE NAREIT ALL EQUITY INDEX

Sector Returns – August 2016

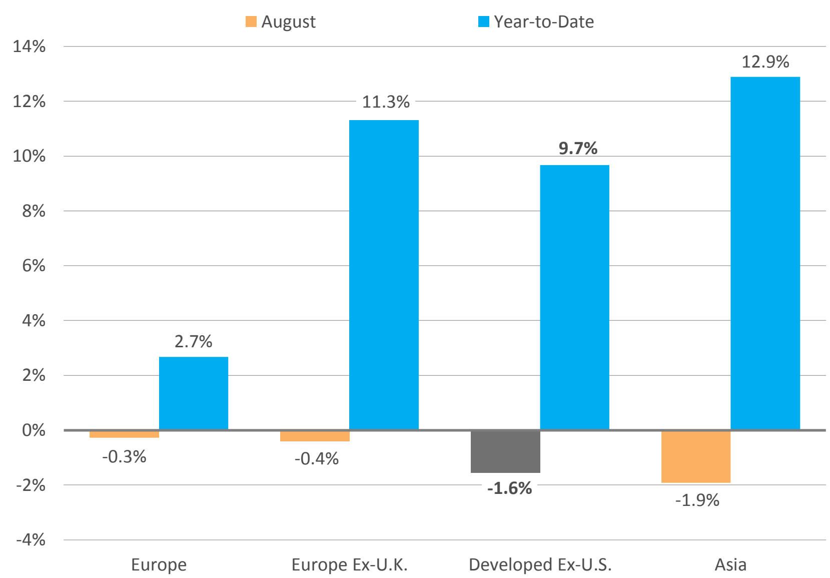


Data source: NAREIT

INTERNATIONAL REAL ESTATE SECURITIES

- International real estate securities, as measured by the FTSE EPRA/NAREIT Developed Ex-U.S. Total Return Index, declined 1.6% in U.S. dollars in August.[3]
- While all global regional property markets declined, European property markets were the relative outperformer, declining 0.3%. Broader European markets have underperformed in 2016, with the index gaining only 2.7% YTD, compared to the Europe Ex-U.K. Index (+11.3%). The Brexit vote has negatively affected British property markets this year.
- Asian property markets also declined 1.9%, but are up 12.9% in 2016. Low or negative interest rates throughout the region, and specifically in Japan, have benefited Asian property markets this year. Investors' thirst for yield drove a significant Asian domestic capital flow into the real estate market, positively impacting asset values across the Asia-Pacific region.

FTSE EPRA / NAREIT DEVELOPED MARKET INDICES
Regional Returns (U.S. dollars) – August 2016



Data source: Bloomberg, L.P.

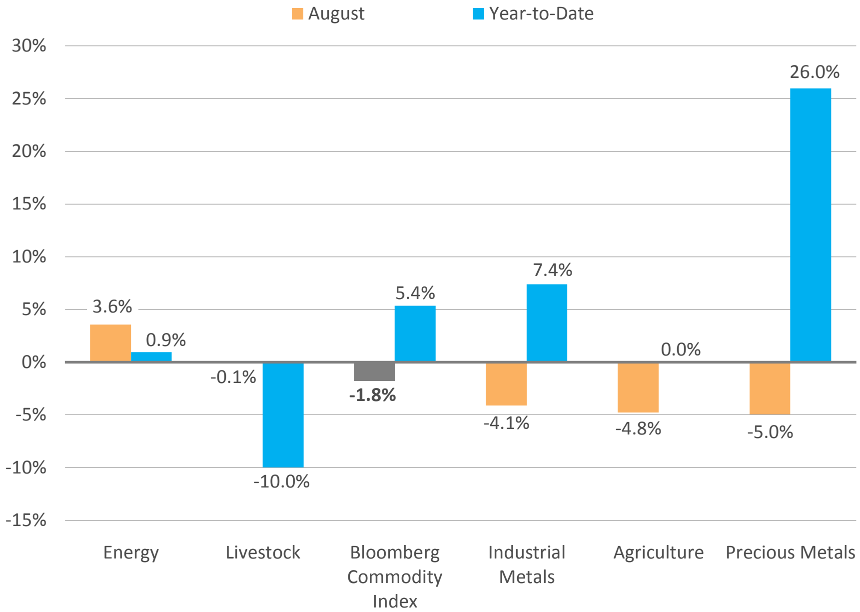
COMMODITIES

- Commodities, as measured by the Bloomberg Commodity Index (BCOM), declined 1.8% during August but have increased 5.4% YTD. A recovery in energy prices was insufficient to offset weakness in corn, soybeans, wheat, and precious metals.[4]
- The energy sector posted the strongest return, gaining 3.6% to move back into positive territory for 2016, as WTI crude oil closed at $44.70/barrel after beginning the month near $40/barrel. Crude oil production has been adjusting to lower prices following the substantial decline of the past two years, and demand is responding accordingly, helping form a bottom in August.

- Conversely, the precious metals sector declined 5%, but remains the best-performing sector this year, up 26% YTD. Profit-taking in silver and gold followed increased expectations that the Fed will raise interest rates in 2016, pushing spot prices lower.
- Lastly, the agriculture sector declined 4.8% and is now flat for the year. Improved growing efficiencies coupled with favorable weather has set up 2016 to be the fourth straight year with record production of corn and soybeans in the U.S. The growing glut of supply has negatively affected the Bloomberg Grain Index, with it falling an additional 7.7% in August following a near 10% decline in July.[5]

BLOOMBERG COMMODITY INDEX

Sector Returns – August 2016



Data source: Bloomberg, L.P.

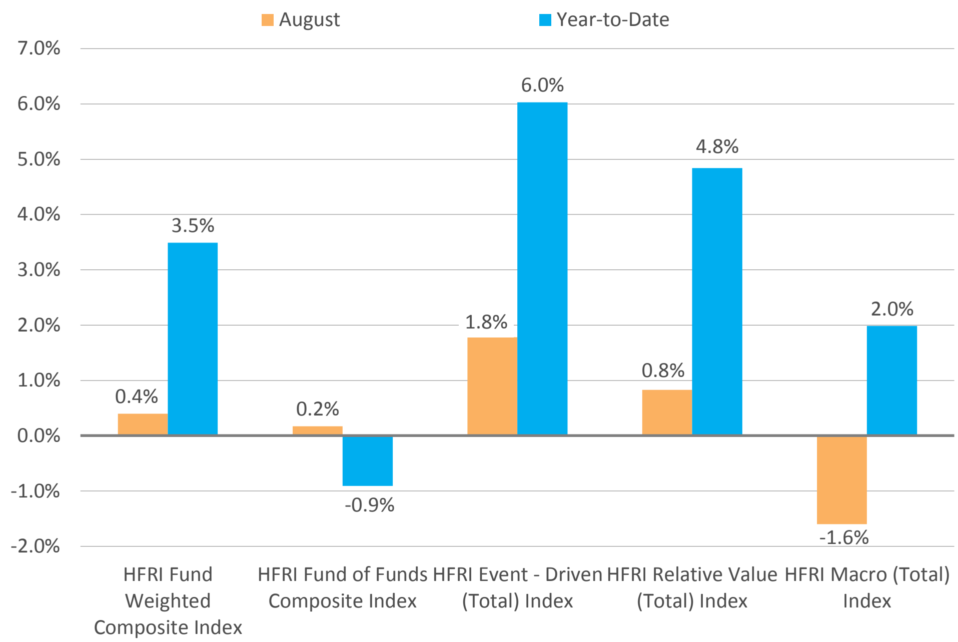
REAL ASSETS FOOTNOTES

1 All performance data from www.nareit.com. Accessed on 8 September 2016.
2 http://www.hotelnewsnow.com/articles/73146/STR-US-hotel-performance-for-August-2016.
3 All performance data from FTSE EPRA/NAREIT Indexes, Bloomberg L.P. Accessed on 8 September 2016.
4 All performance data from Bloomberg L.P. Accessed on 8 September 2016.
5 Bloomberg Commodity Index (BCOM) Tables and Charts – August 2016.

Diversifying Strategies

- The HFRI Fund Weighted Composite Index returned 0.4%. Performance was generally positive amongst strategy sub-indices, with the exception of global macro managers.
- The HFRI Event-Driven (Total) Index returned 1.8%. Each event-driven sub-index generated positive returns for the second consecutive month. Activists continued to recover from a challenging beginning to the year. The HFRI ED: Activist Index returned 3.7%, bringing YTD performance to +5.6%. Distressed and special situations managers generated strong performance as risky assets generally rallied. The HFRI ED: Distressed/Restructuring Index and the HFRI ED: Special Situations Index returned 2.1% and 1.5% respectively.
- The HFRI Relative Value (Total) Index returned 0.8%. The HFRI RF: Fixed Income – Sovereign Index was the only relative value sub-index to produce negative returns, down 0.2%. Top performers included the HFRI RF: Fixed Income – Corporate Index (+1.4%), the HFRI RF: Fixed Income – Convertible Arbitrage Index (+1.3%), and the HFRI RF: Yield Alternatives Index (+1.2%). Strength in risky assets and tightening spreads created headwinds for fixed income-focused managers, while investors' continued desire for yield in today's low-rate environment aided yield alternatives managers.
- The HFRI Macro (Total) Index returned -1.6%. Negative performance was driven by systematic trading strategies that suffered from trend reversals in fixed income/rates and commodities markets. The HFRI Macro: Systematic Diversified Index returned -2.8%, largely due to long positioning in fixed income/rates and precious metals and short exposure to energy. Discretionary strategies were the only macro sub-indices with positive returns, as the HFRI Macro: Discretionary Thematic Index returned 0.4%. Discretionary macro managers benefitted from a variety of factors, including the rally in crude oil markets and continued weakness in Asian currencies.

HFRI INDICES PERFORMANCE
Returns in U.S. Dollars



Data source: HedgeFund Research

DISCLOSURES

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Past performance is not indicative of future results.

Investments in private funds are speculative, involve a high degree of risk, and are designed for sophisticated investors.

All data is as of August 31, 2016 unless otherwise noted.

INDICES

The Alerian MLP Index is a composite of the 50 most prominent energy Master Limited Partnerships that provides investors with an unbiased, comprehensive benchmark for this emerging asset class.

Barclays Capital Fixed Income Indices is an index family comprised of the Barclays Capital Aggregate Index, Government/Corporate Bond Index, Mortgage-Backed Securities Index, and Asset-Backed Securities Index, Municipal Index, High-Yield Index, and others designed to represent the broad fixed income markets and sectors within constraints of maturity and minimum outstanding par value. See https://ecommerce.barcap.com/indices/index.dxml for more information.

The CBOE Volatility Index (VIX) is an up-to-the-minute market estimate of expected volatility that is calculated by using real-time S&P 500 Index option bid/ask quotes. The Index uses nearby and second nearby options with at least 8 days left to expiration and then weights them to yield a constant, 30-day measure of the expected volatility of the S&P 500 Index. FTSE Real Estate Indices (NAREIT Index and EPRA/NAREIT Index) includes only those companies that meet minimum size, liquidity and free float criteria as set forth by FTSE and is meant as a broad representation of publicly traded real estate securities. Relevant real estate activities are defined as the ownership, disposure, and development of income-producing real estate. See www.ftse.com/Indices for more information.

HFRI Monthly Indices (HFRI) are equally weighted performance indexes, compiled by Hedge Fund Research Inc. (HFX), and are used by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 37 different categories by strategy, including the HFRI Fund Weighted Composite, which accounts for over 2000 funds listed on the internal HFR Database. The HFRI Fund of Funds Composite Index is an equal weighted, net of fee, index composed of approximately 800 fund- of- funds which report to HFR. See www.hedgefundresearch.com for more information on index construction.

J.P. Morgan's Global Index Research group produces proprietary index products that track emerging markets, government debt, and corporate debt asset classes. Some of these indices include the JPMorgan Emerging Market Bond Plus Index, JPMorgan Emerging Market Local Plus Index, JPMorgan Global Bond Non-US Index and JPMorgan Global Bond Non-US Index. See www.jpmorgan.com for more information.

Merrill Lynch high yield indices measure the performance of securities that pay interest in cash and have a credit rating of below investment grade. Merrill Lynch uses a composite of Fitch Ratings, Moody's and Standard and Poor's credit ratings in selecting bonds for these indices. These ratings measure the risk that the bond issuer will fail to pay interest or to repay principal in full. See www.ml.com for more information.

Morgan Stanley Capital International – MSCI is a series of indices constructed by Morgan Stanley to help institutional investors benchmark their returns. There are a wide range of indices created by Morgan Stanley covering a multitude of developed and emerging economies and economic sectors. See www.morganstanley.com for more information.

Russell Investments rank U.S. common stocks from largest to smallest market capitalization at each annual reconstitution period (May 31). The primary Russell Indices are defined as follows: 1) the top 3,000 stocks become the Russell 3000 Index, 2) the largest 1,000 stocks become the Russell 1000 Index, 3) the smallest 800 stocks in the Russell 1000 Index become the Russell Midcap index, 4) the next 2,000 stocks become the Russell 2000 Index, 5) the smallest 1,000 in the Russell 2000 Index plus the next smallest 1,000 comprise the Russell Microcap Index. See www.russell.com for more information.

S&P 500 Index consists of 500 stocks chosen for market size, liquidity and industry group representation, among other factors by the S&P Index Committee, which is a team of analysts and economists at Standard and Poor's. The S&P 500 is a market-value weighted index, which means each stock's weight in the index is proportionate to its market value and is designed to be a leading indicator of U.S. equities, and meant to reflect the risk/return characteristics of the large cap universe. See www.standardandpoors.com for more information.

Information on any indices mentioned can be obtained either through your consultant or by written request to information@feg.com.

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Research and Investments Team as of date of publication.