Fund Evaluation Group®
investment advisors

RESEARCH REVIEW

APRIL 2016

INSIDE THIS ISSUE

It's Good to Have Friends

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One of the great benefits we enjoy at FEG is direct access to some of the best and brightest minds in the investment industry. I was reminded of this fact yet again while spending two days with Nobel laureates Harry Markowitz and Vernon Smith, in addition to Cam Harvey (finance professor from Duke University), John Mauldin (of Mauldin Economics), Rick Bookstaber, and the team at Research Affiliates, which included Rob Arnott and Jason Hsu, both of whom have spoken at past FEG Forums. The icing on the cake was the setting—the edge of the Pacific Ocean in Southern California.

The discussion was lively, dynamic, and continued well past the 8:00-5:00 workday. In fact, some of the most interesting conversations lasted long into the night. While the topics were too varied to cover in detail here, there were two subjects of particular interest to FEG and our clients: manager selection and public equity investing styles. We will start with manager selection.

Look for Losers

Manager selection is challenging, especially in public markets, where information is readily available and evenly distributed. To make matters worse, investors are human and subject to all of the behavioral biases and frailties associated with our species that lead to performance chasing (i.e. hiring managers with good short-term returns). That approach, however, is a proven losing strategy. So, what might be better? Hire the losers, of course.

This counter-intuitive idea was proffered by Jason Hsu and Brad Cornell, professor of finance at the California Institute of Technology. As you might expect from two PhDs, they had the data to support their view. An analysis of data on public equity mutual funds shows that funds with the best three-year trailing returns (winners) lag, by a large margin, behind funds with the worst three-year trailing returns (losers) over the subsequent three-year time period. The actual results are shown in figure 1.

FIGURE 1: SUBSEQUENT 3-YEAR REVIEWS OF WINNERS VS LOSERS

3-Year Review Horizon	Winner Strategy	Median Strategy	Loser Strategy
Raw Return	8.04%	9.77%	10.40%
Sharpe Ratio	0.29	0.48	0.51
CAPM Alpha	-2.87%	0.10%	0.89%
Carhart Four-Factor Model Alpha	-2.74%	-0.44%	0.16%

Data source: Research Affiliates

Although they hold PhDs, Jason and Brad do have some street smarts and recognize the challenges of selling a board or investment committee on a strategy of hiring losers and firing winners. So their advice, which seems sound to us, is as follows:

Deemphasize

- Performance measuring five years and under in the manager hiring/firing process
- Investment bank products/funds (due to conflicts of interest)

Emphasize

- Alignment of interest (performance based compensation, high level of fund manager ownership, board of director fund ownership, etc.)
- Manager culture

While this analysis focused on public equities, we believe the principles hold true for other public markets as well as hedge funds. When considering a strategy that seeks to take advantage of opportunities presented by "losers," however, additional factors should be considered. For example, is the investment firm still a sound business? Are the key personnel still in place? How are other investors in the fund reacting? For hedge funds, how is leverage and illiquidity impacting any change in assets under management (declines emanating from investment losses or redemptions)?

In conclusion, when reviewing manager performance and making investment decisions, investors should appreciate that styles of investing go in and out of favor (and become over- and undervalued, as we will see shortly).

Finding Friends in the Factor Zoo

Cam Harvey reviewed the literature and found nearly 300 factors or "anomalies" that are purported to deliver excess returns and beat the market. Ultimately, this "Factor Zoo" can fairly quickly be culled to 4-6 primary factors which seem to have merit and explain the vast majority of the nearly 300. These include value, size, momentum, profitability, low beta, and illiquidity. Each of these is defined in the appendix for those readers who do not spend their leisure time reading academic papers about equity factors.

While each of these factors is fairly well known, Research Affiliates contributed to the literature by looking at what drove the excess returns. They looked at how much of the excess return was a result of the markets rewarding stocks with a higher valuation, versus simply the individual stock's good performance. Once this is done, one can look at which sub-set of stocks are trading rich or cheap, versus the history of that factor or sub-set of stocks. Figure 2 shows results over the past 10 years, as well as longer-term results that go back to 1967.

FIGURE 2: 10-YEAR FACTOR RETURN CONTRIBUTION

10-Year (2005 Q3 - 2015 Q3)	Value	Momentum	Small Cap	Illiquidity	Low Beta	Gross Profitability
10-Yr. Return	-4.44%	0.37%	0.62%	2.73%*	2.67%	4.54%
10 Yr. Return from Changing Valuation	-4.78%	3.33%	-0.36%	2.85%	0.31%	4.15%
10 Yr. Performance, Net of Valuation Change	0.33%	-2.96%	0.99%	-0.12%	2.36%	0.39%
Full Sample (1967 - 2015 Q3)	**Value**	**Momentum**	**Small Cap**	**Illiquidity**	**Low Beta**	**Gross Profitability**
Long-Term Return	2.58%*	3.93%**	2.40%*	2.29%**	1.64%	0.75%
Return from Changing Valuation	-0.54%	0.11%	0.54%	0.40%	1.64%	0.70%
Performance, Net of Valuation Change	3.12%***	3.83%	1.86%	1.89%	0.00%	0.05%

, **, * - Two-tail significance at 90%, 95%, and 99% respectively*

Data source: Research Affiliates

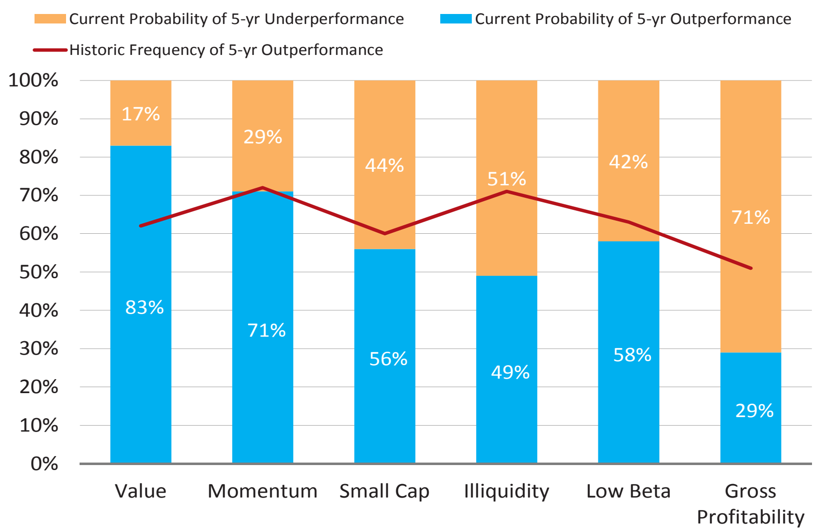
The large impact valuation change had on value and profitability over the past 10 years really stands out in the data. Value experienced an extraordinarily poor 10 years from 2005 to 2015, when valuation contraction took over 4% per annum away from returns. Conversely, profitability provided a wonderful 10-year run for investors, when valuation expansion contributed over 4% per annum to returns.

The benefit to allocators, of course, is knowing which sub-set of stocks are trading at extreme valuations. Major market timing calls are a fool's errand. Cliff Asness, co-founder of AQR Capital, has pointed this out in a forthcoming paper in the *Journal of Portfolio Management*. In contrast, making modest adjustments to tilt the odds in your favor is simply sound investing.

What does this exercise tell us? Value stocks are extra "value-y" today, placing the odds in value's favor. Alternatively, companies with large profit margins (called gross profitability in figures 2 and 3, and sometimes called a "quality" factor) have been rewarded by the market, trade at higher than normal valuations, and are likely posed to deliver lower returns in the future.

Taking all of this into consideration, if one assumes valuations revert to the mean, figure 3 calculates the probability of each factor delivering excess returns over the next five years. There are no guarantees in investing, but this shows that value has over 80% odds of delivering excess return. Profitability, on the other hand, has less than one in three odds of delivering excess return. The striking difference between these odds is about as good as it gets in investing, and we believe investors should take notice and adjust accordingly.

5-YEAR PERFORMANCE CONFIDENCE



Data source: Research Affiliates

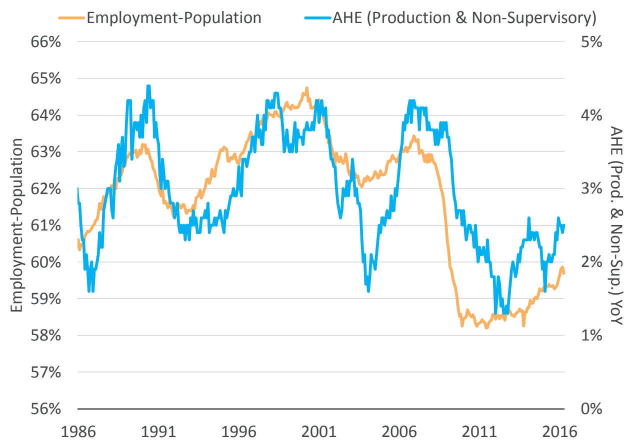
So there you have it. Investing can be cyclical; the last shall be first and the first shall be last.

Economic Update

April Employment Report Highlights Mixed Employment Picture

The April *Employment Situation* report, released by the Bureau of Labor Statistics on Friday, May 6, presented a number of mixed signals about the fundamental health of the U.S. labor market. Nonfarm payrolls, for example, were expected to have printed at 200,000 on the month, but declined to 160,000. The U-3 headline unemployment rate (UER) held steady at 5.0%, versus the consensus estimate calling for a decline to 4.9%, and the labor force participation rate declined 0.2 percentage points to 62.8%. The broader employment-population ratio, which has trended upwards since 2011, also declined 0.2 percentage points and ended April at 59.7%. Encouragingly, the increasing share of employed persons relative to the civilian noninstitutional population ("employment-population ratio") since 2011 has helped apply upward pressure to average hourly earnings (AHE) for the production and non-supervisory portion of the workforce.

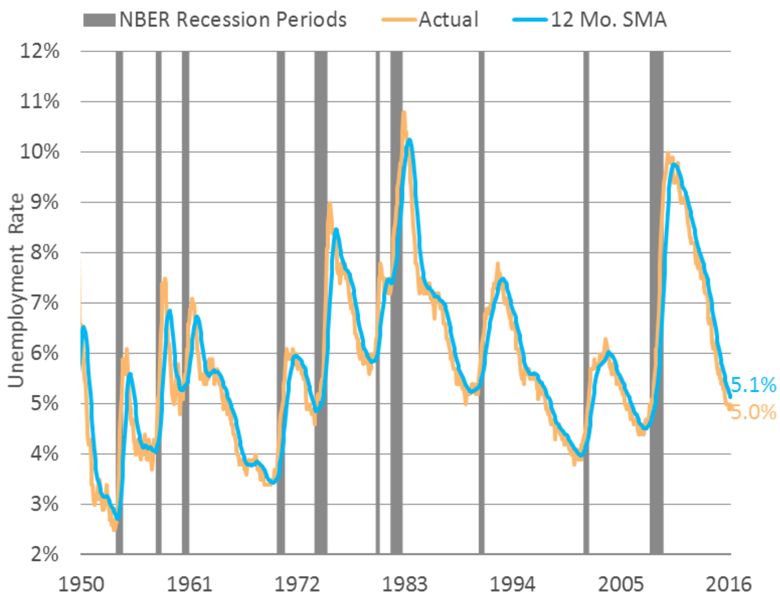
EMPLOYMENT-POPULATION & WAGE GROWTH



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

The UER, which remained at 5.0% in April, has historically served as a reliable leading indicator for turns in the U.S. business cycle. That is, once the UER reaches its cyclical bottom and begins to inch higher, a recession typically follows. The U.S. Unemployment Rate & Recessions chart depicts the marked improvement in the labor market since the 2007–2009 Global Financial Crisis.

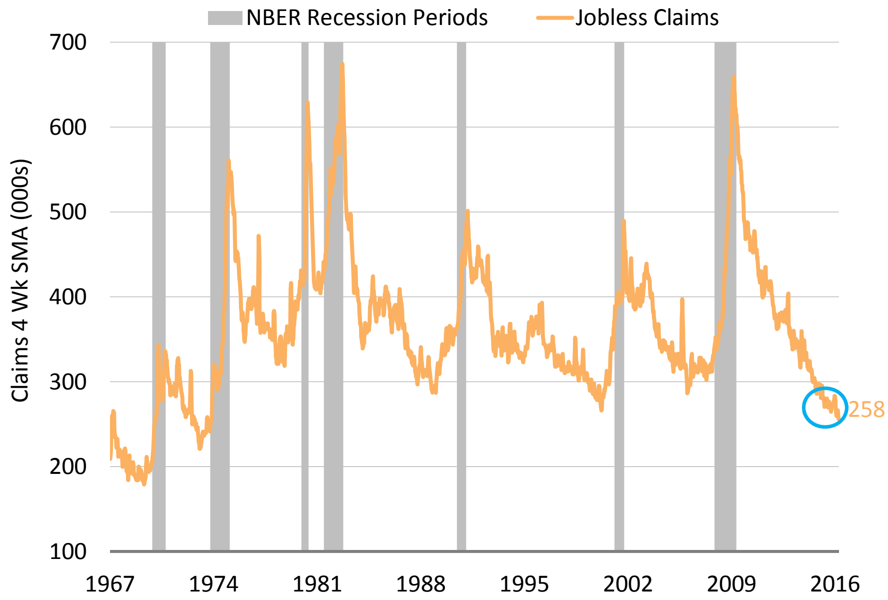
U.S. UNEMPLOYMENT RATE & RECESSIONS



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

Intuitively, the UER peaks during troughs in the business cycle and bottoms during peaks in the business cycle. While the chart indicates the UER can indeed improve to even lower levels than April's 5.0%, the current settling of the UER near 5.0% may be signaling that the ongoing improvement in the labor market is running out of steam. This dynamic is further substantiated by the current low level of first-time claims for unemployment benefits ("initial jobless claims"). Similar to the UER, initial jobless claims tend to bottom before the onset of a U.S. recession, and today, initial jobless claims sit at the lowest level since the mid-1970s.

U.S. INITIAL JOBLESS CLAIMS & RECESSIONS



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

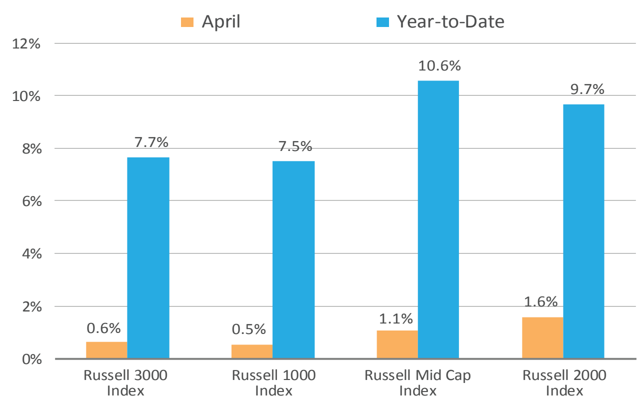
In short, the significant improvement in the labor market since the GFC has recently encountered resistance. While it most likely remains premature to draw any clear-cut recessionary conclusions, the above data and visual representations may indicate the pace of fundamental improvement in the U.S. labor market is set to slow over the cyclical horizon.

Global Equity

U.S. Equity

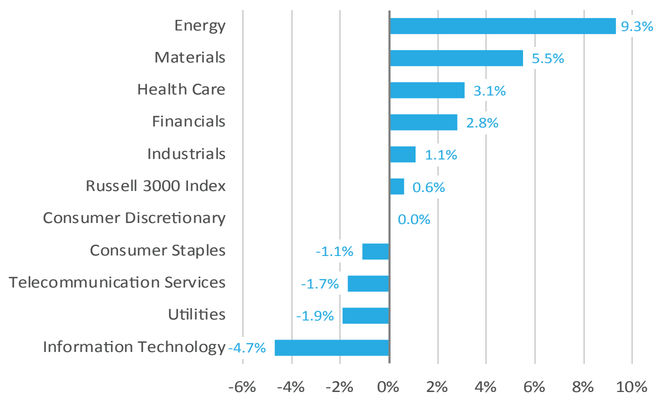
- The U.S. stock market, represented by the Russell 3000 Index, increased slightly in April (+0.6%). The market faced nearly offsetting signals of generally improving commodity prices and global growth, while earnings season was relatively weak.
- Small cap stocks (+1.6%) outperformed in April with mid cap (+1.1%) and large cap (+0.5%) appreciating less in a reversal of the recent larger cap leadership. Year-to-date, mid cap stocks' performance has been driven by energy stocks, lower beta stocks, higher dividend payers, and the smaller end of the capitalization range.
- Five of ten sectors posted gains, led by previously out-of-favor sectors such as energy and health care. Energy (+9.3%) and materials (+5.5%) outpaced all other sectors as rising commodities prices supported fundamentals.
- The information technology and the utilities sectors had negative returns (-4.7% and -1.9%, respectively). Earnings of sector leaders, such as Apple and Microsoft, disappointed investors and raised concerns over consumer demand. The utilities sector fell along with other defensive sectors as sentiment shifted away from first quarter leaders.
- Value outperformed growth across capitalizations with each capitalization value style index appreciating 2.1%. Large cap growth was the most challenged stylistic asset class (-0.9%). Year-to-date, value has outperformed across capitalizations with the widest spread in the small cap universe.

RUSSELL INDICES PERFORMANCE



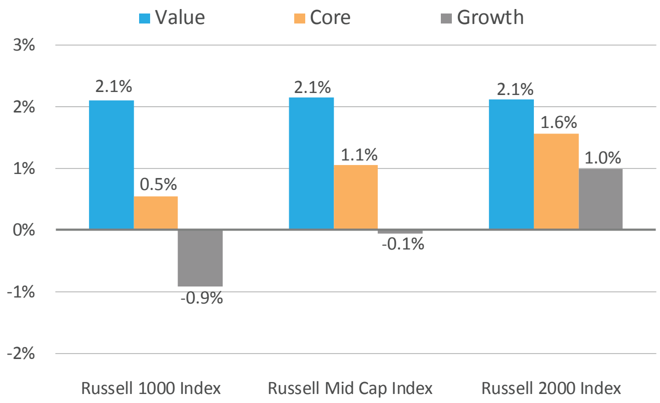
Data source: Russell

APRIL 2016 RUSSELL 3000 SECTOR PERFORMANCE



Data source: Russell

APRIL 2016 RUSSELL INDICES PERFORMANCE



Data source: Russell

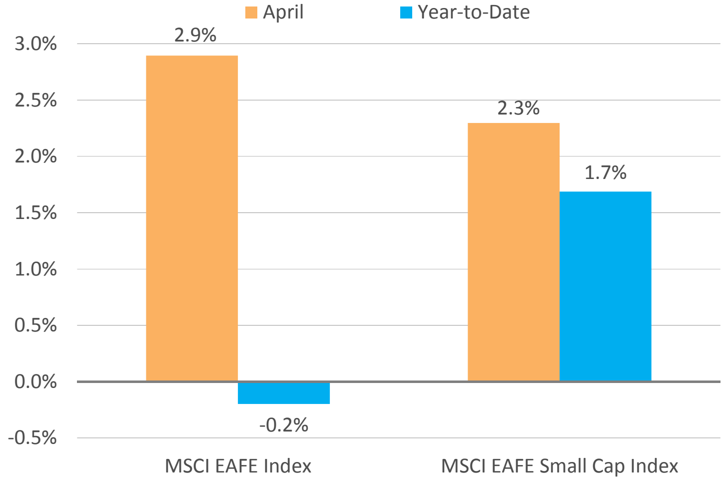
International Equity

All returns in local currency unless otherwise indicated.

INTERNATIONAL DEVELOPED MARKETS

- International developed equity markets gained 1.3% for the month, and U.S. investors were aided when adjusting for currency fluctuations (+2.9% in U.S. dollar terms).
- Pacific ex-Japan (+2.5%) led non-U.S. developed markets supported by strength in Australia (+3.7%). Japan underperformed during the quarter and weighed on the broad Pacific region results. Japan faced a number of headwinds including weak economic data, a rising yen harming exporters, and a central bank decision against further stimulus measures in April.
- European markets were mixed, but appreciated as a region (+1.5%) on encouraging economic data and more central bank stimulus. Norway (+4.7%) and Spain (+4.6%) were the top performing markets.
- Currency had a significant positive impact on U.S. investors due to U.S. dollar depreciation against most major developed market currencies, including the Japanese yen (-5.0%), the Canadian dollar (-3.2%), the Norwegian krone (-2.4%), and the British pound (-0.5%).
- Small cap stocks, as measured by the MSCI EAFE Small Cap Index, were approximately flat (+0.2%, +2.3% in U.S. dollars), trailing large cap stocks in the quarter. The Pacific region appreciated with the exception of Japan (-0.7%). European small cap stocks were in-line with the broader benchmark with Norway (+5.7%) and Portugal (-3.1%) bookending results.

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars



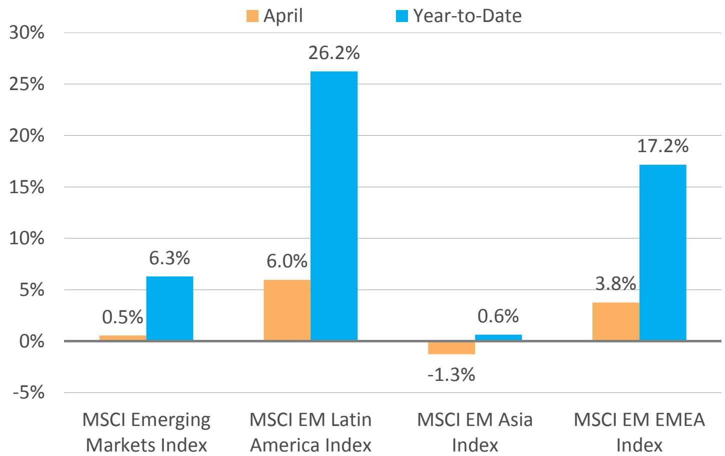
Data source: MSCI

EMERGING MARKETS

- Emerging markets, as measured by the MSCI Emerging Markets Index, were approximately flat in April (-0.1%, +0.5% in U.S. dollars), underperforming developed markets.
- Latin America continued their gains and posted strong positive returns (+4.2%, +6.0% in U.S. dollar terms), as Peru (+13.6%) and Brazil (+7.5%) drove performance. April continued year-to-date themes of Brazilian hopes for political change and recovery in commodity prices.

- Asian emerging markets declined (-1.3%) for the month. Most markets declined modestly with Taiwan standing out as an underperformer (-5.1%). China came in just under flat (-0.2%) as positive economic data was offset by a declining outlook from S&P. India stood out as a bright spot with a modest gain (+0.6%).
- The Eastern European region gained 2.1%. Russian (+4.9%) and Turkish (+3.5%) stock returns increased despite geopolitical turmoil, as those markets benefited from climbing Brent crude prices. Russian ADR/GDR returns fared even better (+9.5%).
- The impact of currency fluctuations was positive for U.S.-based investors. The U.S. dollar depreciated most notably against the Russian ruble (-3.7%) and Brazilian real (-3.1%).

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars

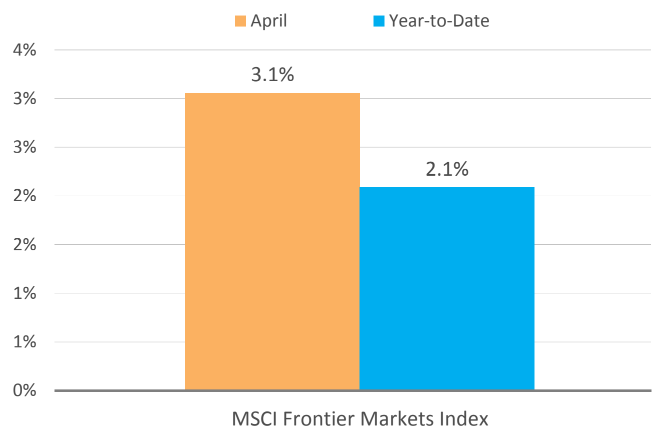


Data source: MSCI

FRONTIER MARKETS

- Frontier markets appreciated in April (+2.9%, +3.1% in U.S. dollars). Frontier markets led both developed and emerging markets for the month and gained ground in relative year-to-date performance. With April's move higher, frontier markets turned positive for the year.
- All major regions were positive, with Asia (+5.3%) being followed by Latin America (+4.0%) and EMEA (+2.1%). Vietnam (+7.7%) and Pakistan (+5.6%) drove performance in Asia.
- Other notable frontier markets, Nigeria (+2.8%) and Argentina (+4.0%), also appreciated. Argentina continues to benefit from political turnover, which allowed a large debt issuance during April as creditors warmed to the country after a prolonged battle over prior debt issues.
- Middle Eastern, oil-producing countries performed positively, with Saudi Arabia (+10.4%) and Oman (+9.6%) posting the largest gains.

MSCI INDICES PERFORMANCE
Returns in U.S. Dollars

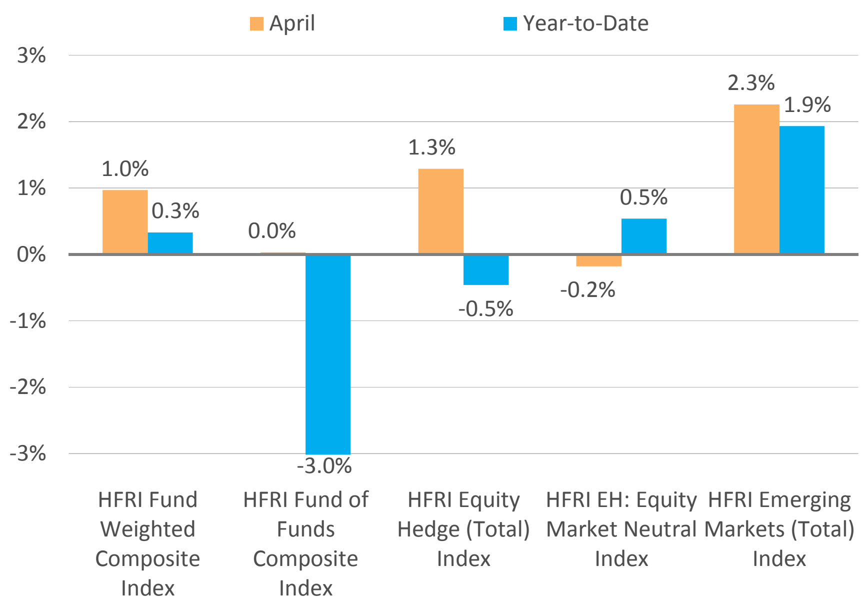


Data source: MSCI

Hedged Equity

- Hedged equity managers continued to rebound from a challenging start to 2016. The HFRI Equity Hedge (Total) Index returned 1.3%. The long-only S&P 500 Index and the MSCI ACWI Index returned 0.4% and 1.5%, respectively.
- Short-biased strategies delivered a strong month of alpha generation with the HFRI EH: Short Bias Index returning 1.5% despite positive equity market performance. Conversely, equity market neutral managers continued to struggle, illustrated by the -0.2% return of the HFRI EH: Equity Market Neutral Index.
- Fundamental-oriented strategies outperformed quantitatively-driven strategies after an extended period of underperformance. The HFRI EH: Fundamental Value Index and the HFRI EH: Fundamental Growth Index gained 1.4% and 1.0%, respectively, while the HFRI EH: Quantitative Directional Index returned -0.7%.
- Sector specialists generated strong performance, largely driven by a strong recovery in energy and materials. The HFRI EH: Sector – Energy/Basic Materials Index returned 5.2% and the HFRI EH: Sector – Technology/Healthcare Index returned 2.4%.
- The broad HFRI Emerging Markets (Total) Index returned 2.3%, as emerging markets continued to rally. The top-performing regional indices were the HFRI Emerging Markets: Russia/Eastern Europe Index and the HFRI Emerging Markets: Latin America Index, which gained 5.2% and 4.8%, respectively. The HFRI Western/Pan Europe Index was the only regional index to generate negative performance (-0.8%).

HFRI INDICES PERFORMANCE
Returns in U.S. Dollars



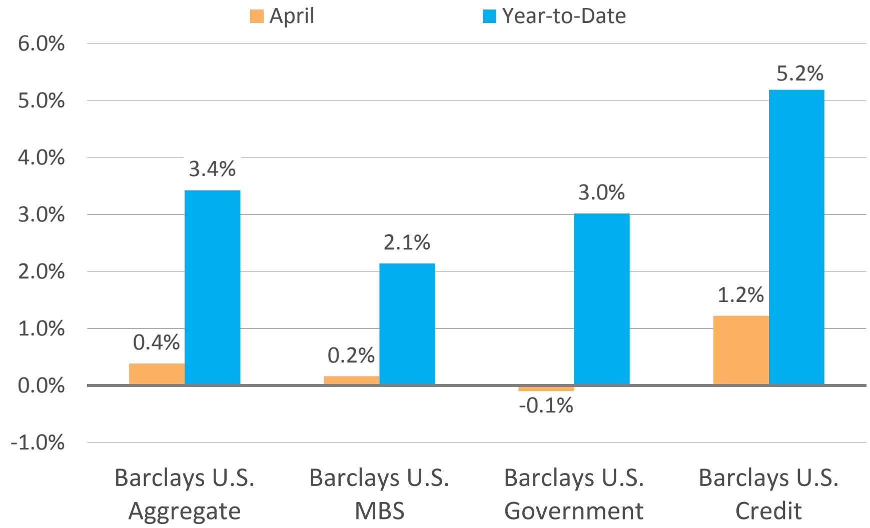
Data source: HedgeFund Research

Fixed Income

OVERVIEW

- The Barclays U.S. Aggregate Bond Index (BAGG) increased 0.4% in April. Returns were driven by investment grade credit's gain of 1.2%, offset by flat performance of agency mortgage-backed securities (+0.2%) and U.S. government securities (-0.1%).
- Investment-grade commercial mortgage-backed securities (CMBS), a smaller component of the BAGG, increased 0.4% during April.
- Emerging market debt (EMD) local currency posted a gain of 0.9% and dollar-denominated EMD returned 1.9%.

BARCLAYS BOND INDICES PERFORMANCE



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

RATES

- The 2-year note yield increased 6 basis points to 0.78%, the 10-year note yield increased 6 basis points to 1.83%, and the 30-year bond yield increased 7 basis points to 2.68%.
- Inflation expectations increased during the month. The 10-year break-even rate of inflation increased 8 basis points to 1.71% and concluded the month 29 bps below the Fed's 2.0% target. The yield on the benchmark 10-year Treasury Inflation Protected Securities (TIPS) moved 1 basis point lower to 0.12%, and the Barclays U.S. TIPS Index posted a gain of 0.4% during the month.

CREDIT

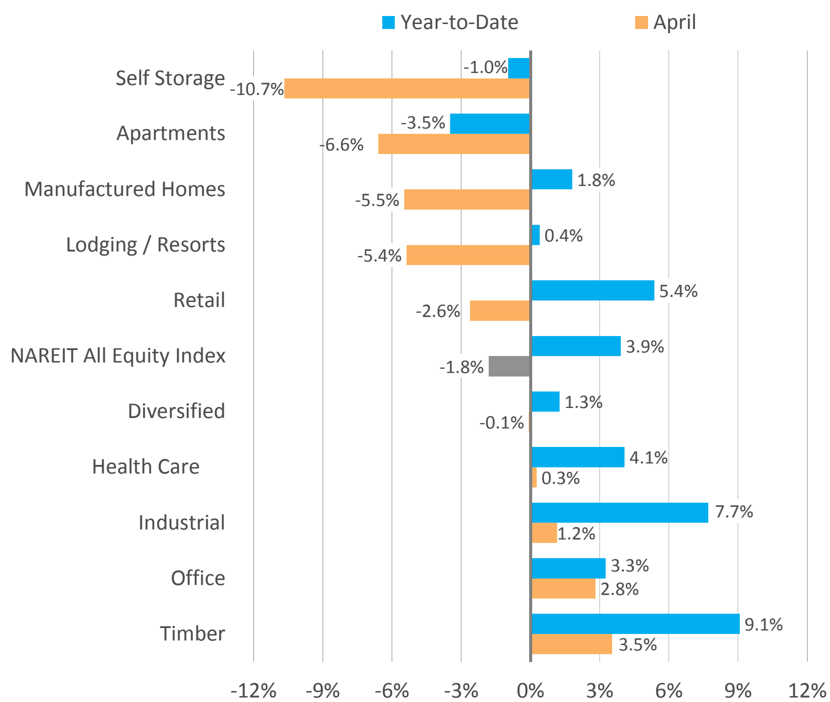
- Investment-grade corporate bonds increased 1.2%, with industrials being the best sector (+1.7%) and utilities (+1.0%) and financials (+0.9%) also increasing.
- Both fixed income risk sectors gained, with the Barclays U.S. Corporate High Yield Index returning 3.9% and bank loans returning 1.2%.

Real Assets

DOMESTIC REITs

- Real Estate Investment Trusts (REITs), as measured by the FTSE NAREIT All Equity Index, declined 1.8% in April. Strong real estate fundamentals boosted profitability, even as lofty asset prices have made acquisitions more difficult. Concerns over mixed first quarter earnings negatively affected the asset class.
- At the end of the April, REITs' dividend yield stood at 3.8%, versus a yield of 1.8% for the 10-year Treasury.[1]
- Timber REITs posted the strongest sector return, gaining 3.5%. Weyerhauser (WY), which now comprises 84% of the market capitalization of the timber sector following their merger with Plum Creek Timber, gained 3.7%, continuing the rebound off their February lows. U.S. housing starts jumped 20% in April to 1.14 million annualized starts, positively impacting the sector.
- Conversely, the self-storage sector faced a reversal of what had been a long trend of strong performance and declined 10.7%. Sovran Self Storage (SSS) (-6.2%) was primarily responsible for the underperformance. Self-storage fundamentals remain very strong, but investors could be concerned with Sovran's exposure to Texas (25% of NOI), and more specifically, Houston (11% of NOI), which may be impacted by lower oil prices as well as recent flooding.
- Looking at the REIT implied capitalization rate, the average spread to the 10-year Treasury over the past month was 215 bps, above the long-term average of 138 bps. While the spread remains attractive, recent spikes in corporate bond yields and the gradual normalization of interest rates could begin to negatively affect REITs. Also, the burgeoning nature of REITs' development pipelines could become a concern due to companies' increased focus on higher risk development to drive earnings.

FTSE NAREIT ALL EQUITY INDEX
Sector Returns—April 2016

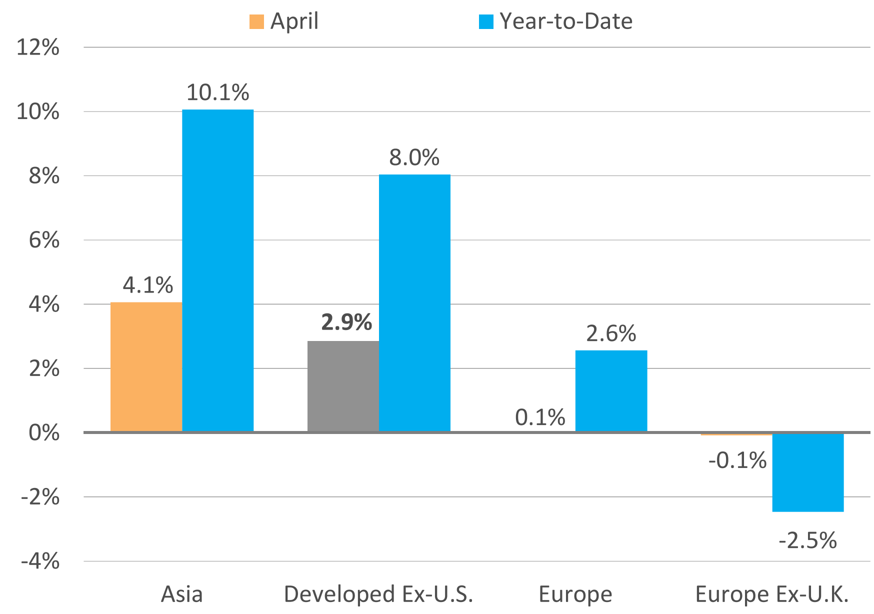


Data source: NAREIT

INTERNATIONAL REAL ESTATE SECURITIES

- International real estate securities, as measured by the FTSE EPRA/NAREIT Developed Ex-U.S. Total Return Index, returned 2.9% in U.S. dollar terms in April.[2]
- Asian property markets gained 4.1% for April and 10.1% year-to-date. Low, or negative, interest rates across the region have inflated property values and attracted a wealth of domestic capital to the real estate market. The BOJ failed to expand QE in April.
- European ex. U.K. property markets were essentially flat (-0.1%), but were down 2.5% year-to-date. U.K. property markets rallied following a rough first quarter, gaining 4.0% and outpacing the French (+2.4%) and German (-3.7%) property markets for the first time in 2016. Low interest rates and continued improvement in the labor market positively impacted European property markets.

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



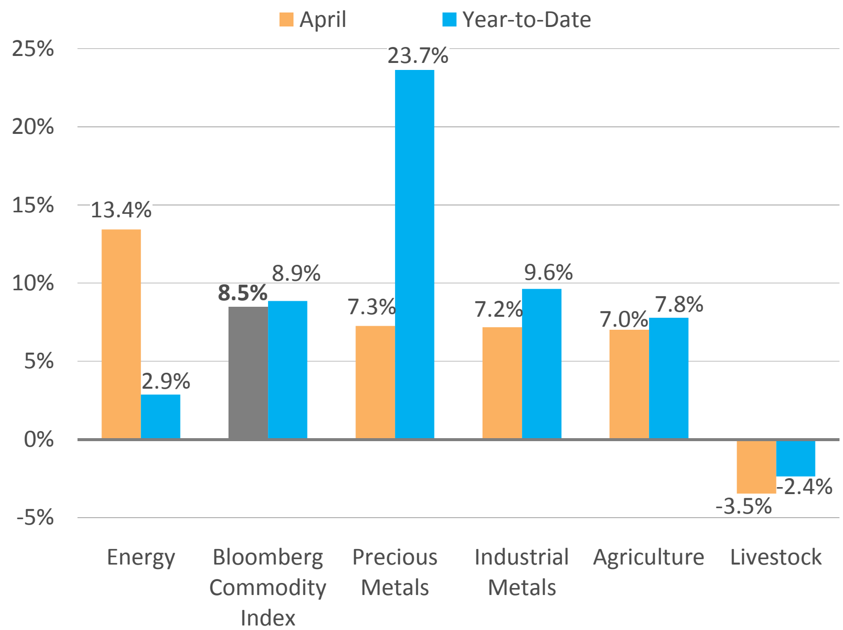
Data source: Bloomberg, L.P.

COMMODITIES

- Commodities, as measured by the Bloomberg Commodity Index (BCOM), increased 8.5% during April, representing the biggest monthly gain since December 2010. After five consecutive years of losses, commodity markets rebounded. A weaker U.S. dollar benefited the asset class.[3]
- The energy sector rallied 13.4%, driven by the 15.6% increase in the price of WTI Crude Oil futures. U.S. Crude output declined for the seventh straight week to the lowest point since October 2014, positively impacting futures. Also, the EIA announced expectations that global oil markets will move closer to equilibrium in the second half of 2016, as lower prices have finally begun to take a meaningful toll on non-OPEC production, particularly in North America.

- Conversely, the livestock sector declined 3.5%, the only sector to post a negative return within the index. Live cattle declined 7.3%, but began to show some strength towards the end of the month due to firming U.S. beef demand.[4]

BLOOMBERG COMMODITY INDEX
Sector Returns



Data source: Bloomberg, L.P.

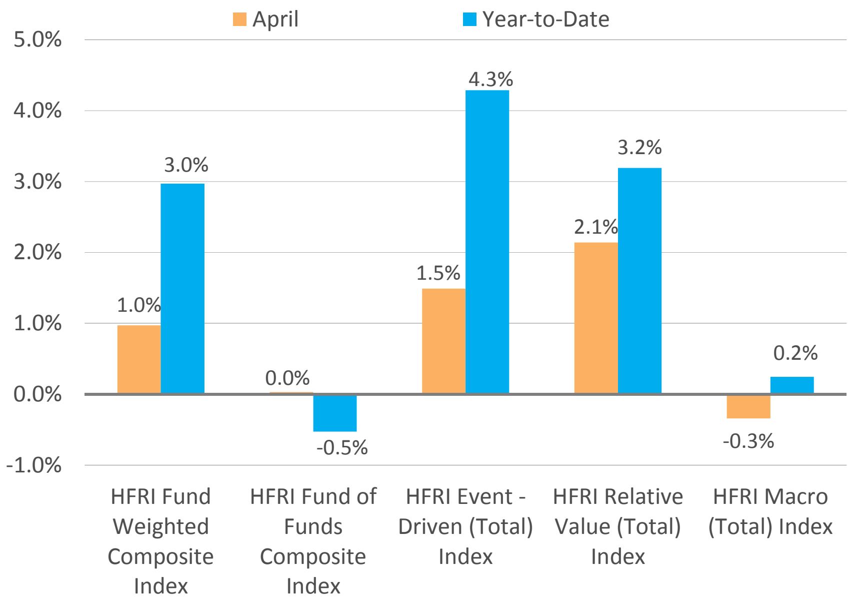
REAL ASSETS FOOTNOTES

1 All performance data from www.nareit.com. Accessed on 6 April 2016.
2 All performance data from FTSE EPRA/NAREIT Indexes, Bloomberg L.P. Accessed on 8 April 2016.
3 All performance data from Bloomberg L.P. Accessed on 6 April 2016.
4 Bloomberg Commodity Index (BCOM) Tables & Charts – April 2016.

Diversifying Strategies

- The HFRI Fund Weighted Composite Index returned 1.0%. Performance was mixed among strategy sub-indices with relative value and event-driven managers generating positive results and global macro strategies posting modest losses.
- The HFRI Event Driven (Total) Index returned 1.5%, bringing year-to-date performance to over 4.0%. Only one event-driven sub-index generated negative performance. The HFRI ED: Merger Arbitrage Index declined 0.8% due to large broken deals, such as Pfizer/Allergan and Halliburton/Baker Hughes. The top performing event-driven strategy was activism, as several widely held positions rebounded. The HFRI ED: Activist Index returned 3.2%. Credit and distressed securities also rebounded, providing tailwinds for the HFRI ED: Distressed/Restructuring Index (+3.0%) and the HFRI ED: Credit Arbitrage Index (+2.5%).
- The HFRI Relative Value (Total) Index returned 2.1%. Each relative value sub-strategy generated positive performance for the month, led by the 6.9% return of the HFRI RV: Yield Alternatives Index. The HFRI RV: Fixed Income–Corporate Index and the HFRI RV: Fixed Income–Convertible Arbitrage Index returned 2.0% and 1.6%, respectively.
- The HFRI Macro (Total) Index returned -0.3% and sub-index performance was generally negative. The HFRI Macro: Commodity Index returned 1.1%, driven by the recent commodity rally, notably natural gas and crude oil. Discretionary managers tended to outperform their systematic counterparts as longer-term trends continued to reverse. The HFRI Macro: Discretionary Thematic Index and the HFRI Macro: Systematic Diversified Index returned 0.9% and -0.8%, respectively.

HFRI INDICES PERFORMANCE
Returns in U.S. Dollars



Data source: HedgeFund Research

Appendix

SIGNAL DEFINITIONS

Factor	Signal	Definition
Value	Book-to-Price Ratio	Book/Market Cap
Momentum	-2 to -12 Month Return	Prior 12 month returns, skipping most recent month $mom_i = \prod_{t=-12}^{-2} (1 + r_{it})$
Small Cap	Market Cap	Market Cap
Illiquidity	Amihud Illiquidity	Annual average daily price impact of order flow $Illiq_i = \frac{1}{T}\sum_{t=1}^{T} \frac{\lvert r_{it} \rvert}{vol_{it}}$
Low Beta	Beta	Frazzini & Pedersen definition $\beta_i = \rho \frac{\sigma_i}{\sigma_m}$ where ρ is estimated with 5 years of daily returns and σ with 1 year of daily returns
Gross Profitability	Gross Profitability	(Revenue – COGS)/Assets

Source: Research Affiliates

DISCLOSURES

All data is as of April 30, 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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The CFA designation is a professional certification issued by the CFA Institute to qualified financial analysts who: (i) have a bachelor's degree and four years of professional experience involving investment decision making or four years of qualified work experience[full time, but not necessarily investment related]; (ii) complete a self-study program (250 hours of study for each of the three levels); (iii) successfully complete a series of three six-hour exams; and (iv) pledge to adhere to the CFA Institute Code of Ethics and Standards of Professional Conduct.

The Chartered Alternative Investment Analyst Association® is an independent, not-for-profit global organization committed to education and professionalism in the field of alternative investments. Founded in 2002, the CAIA Association is the sponsoring body for the CAIA designation. Recognized globally, the designation certifies one's mastery of the concepts, tools and practices essential for understanding alternative investments and promotes adherence to high standards of professional conduct.

Research Team as of date of publication.