



First Quarter 2017

## 'Hitch in Our Git-Along'?

### ECONOMY

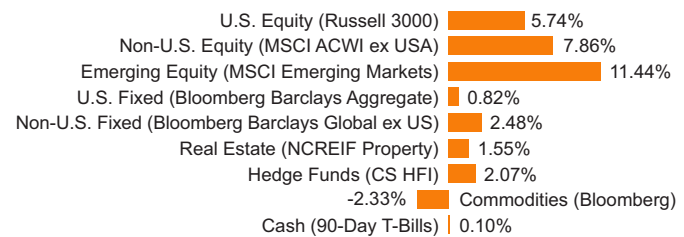
**2** GDP growth disappointed in the first quarter for the fourth straight year. But other measures such as consumer confidence held up during the quarter. The question is whether this is a hitch—or a problem with the GDP metric.

## No Homefield Advantage

### FUND SPONSOR

**4** Strong equity results helped boost institutional funds. The median return for all fund types was +4.31%; endowments and foundations did best, jumping 4.58%. Taft-Hartley plans had the lowest return at +3.93%. The key difference was exposure to non-U.S. equities.

## Broad Market Quarterly Returns



Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

## Steady as She Goes

### U.S. EQUITY

**6** The **S&P 500 Index** hit a high during the first quarter and ended with a 6.07% jump, continuing last year's gains. But in a reversal from the previous quarter, small cap stocks fell behind large cap and growth overtook value.

## Profits Trump Populism

### NON-U.S. EQUITY

**8** Despite political turmoil in Europe and choppy growth in Asia, non-U.S. markets advanced in the first quarter. The dollar's weakness bolstered returns for U.S. investors. Emerging markets outpaced their developed peers, and non-U.S. growth stocks bested their value counterparts.

## Up, Up, and Away

### U.S. FIXED INCOME

**10** Strong economic data and upbeat investors drove U.S. bond returns higher. High yield securities performed the best, but returns were up for all fixed income sectors. The Treasury yield curve flattened as short-term Treasuries rose while longer-term issues fell.

## Separation Anxiety

### NON-U.S. FIXED INCOME

**12** Sovereign debt performed strongly amid policy uncertainty in the European Union, and emerging market debt outperformed developed market debt for the third straight quarter. Returns were bolstered by the U.S. dollar's broad-based decline against most currencies.

## New Year, New Lows

### REAL ESTATE

**14** The **NCREIF Property Index** turned in its worst performance (+1.55%) since 2010, while the **NCREIF Open End Diversified Core Equity Index** also set a new seven-year low (+1.77%). U.S. REITs underperformed global REITs, but still managed to generate positive returns.

## On a Roll

### PRIVATE EQUITY

**16** Private equity stayed healthy in the first quarter. Buyout M&A exits dropped significantly, while venture capital-backed M&A exits were mixed. Both buyout and VC-backed IPOs raised more money than in the previous quarter.

## Dollops of Alpha with Beta

### HEDGE FUNDS

**17** Most hedge fund strategies reported positive returns in the first quarter, amid a broad rally in global markets. The **Credit Suisse Hedge Fund Index** advanced 2.07% and the median manager in the **Callan Hedge Fund-of-Funds Database** appreciated 2.29%.

## Eventful Year, but TDFs Still Rule

### DEFINED CONTRIBUTION

**18** The **Callan DC Index™** increased 7.99% during 2016, its best year since 2013. But it trailed the **Age 45 Target Date Fund**, which gained 8.59% in 2016. For the year, DC plan balances increased 8.31%, mostly attributable to market performance.

# ‘Hitch in Our Git-Along’?

ECONOMY | Jay Kloepfer

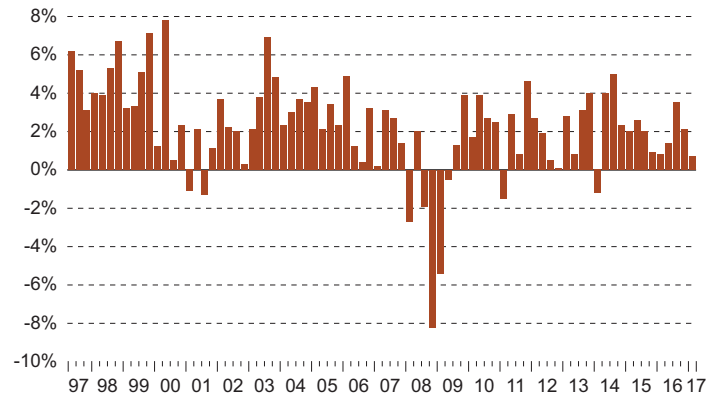
For the fourth year in a row, reported GDP growth disappointed in the first quarter, coming in at just 0.7%, down from a 2.1% rate in the fourth quarter. This paltry gain was the weakest in three years and was concentrated in consumer spending on autos and utilities (reflecting unseasonably warm weather in states with typically cold winters), a drop in defense spending, and a sharp slowdown in the accumulation of inventories. “Softer” measures of economic activity like consumer confidence and the ISM Report on Business, which records the forward-looking purchasing intentions of industry, held up through the first quarter, countering the weakening of GDP as the quarter unfolded. Business and consumer confidence rose after the U.S. presidential election, likely in anticipation of changes to policy and taxes, and without any reference to the strength of the underlying economy.

The question is whether we really have an annual “hitch in our git-along” each January, or is something else going on? Four years in a row with an unexpected drop in growth during the first quarter, which is then typically made up with an offsetting increase in the second quarter—although the GDP numbers are supposed to be seasonally adjusted—suggests perhaps a problem with this metric of evaluating the volume of our economic activity. GDP has come under increasing scrutiny as an outdated measure of the modern U.S. (and global) economy, predicated more on the flow of traditional goods and services, particularly agriculture and manufacturing. It may be very challenged to measure the output and economic impact of industries such as software, social media, and electronic commerce.

Inventory buildup usually signals confidence in the prospects for the economy. For several years prior to 2016, inventory “decumulation” was a clear drag on growth, as firms were reluctant to maintain output in the face of soft demand. The U.S. economy shifted toward inventory accumulation in the third and fourth quarters of 2016, only to reverse in the first quarter. That reversal subtracted almost 1% from GDP growth. Total personal

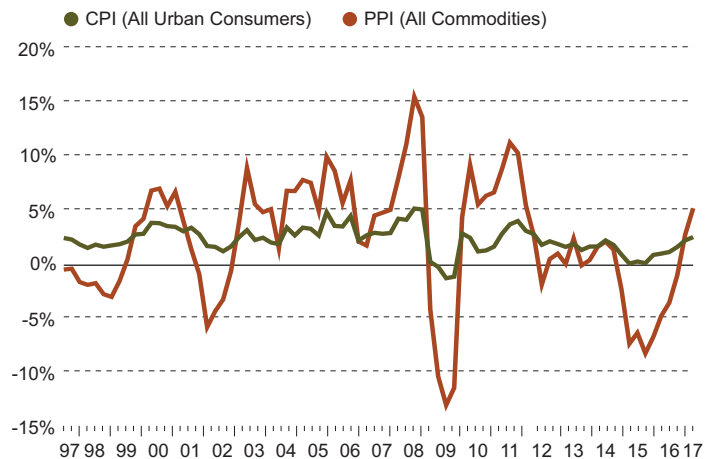
## Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

## Inflation Year-Over-Year



Source: Bureau of Labor Statistics

consumption expenditures led broad economic growth in 2016, averaging gains of well over 3% during each of the last three quarters of the year, only to drop to just 0.3% growth during the first quarter.

The U.S. job market enjoyed a robust 2016, adding 2.2 million new jobs. The economy entered 2017 with two strong months in January and February, adding more than 200,000 net new jobs each month, before the rate of job creation halved in March

to 98,000. Retail jobs took a serious hit in both February and March (seasonally adjusted), with the continuing advance of e-commerce challenging retail establishments, particularly shopping malls. Signs now point to further softness in the job market as the second quarter begins.

In spite of this potential softening, the unemployment rate dipped to 4.5% in March, the lowest in the current cycle, and many urban regions report very tight job markets, with unemployment rates as low as 2% to 3%. In response, the growth in average hourly earnings, which had been stuck in a narrow range below a 2% annual rate for five years following the Global Financial Crisis, rose above 2.5% annual growth during 2016 and continued at this rate through the first quarter.

The minutes of the past several Federal Reserve Open Market Committee meetings show a continuing split among members about whether or not an acceleration of inflation is a looming concern. The data suggest inflation remains low, and futures markets indicate expectations are still anchored at or below the Fed's long-term target of 2% for core inflation. While the Fed uses the consumption deflator in its targeting, the CPI is still a useful measure of price activity. The headline CPI All-Urban index rose 2.4% year-over-year through March, although the measure actually declined between February and March. The energy portion of the Index rose 10.9% over the last 12 months, even after a 3.2% drop in March, reflecting a return toward normal in energy prices after the sharp drop in 2015. The core measure of CPI—which excludes food and energy—rose 2.0% over the 12 months ended in March, the smallest 12-month increase since the end of 2015.

**The Long-Term View**

Index	2017 1st Qtr	Periods ended Dec. 31, 2016			
		Year	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	5.74	12.74	14.67	7.07	9.29
S&P 500	6.07	11.96	14.66	6.95	9.15
Russell 2000	2.47	21.31	14.46	7.07	9.69
<b>Non-U.S. Equity</b>					
MSCI EAFE	7.25	1.00	6.53	0.75	4.95
MSCI Emerging Markets	11.44	11.19	1.28	1.84	--
MSCI ACWI ex USA Small Cap	8.78	3.91	7.74	2.89	--
<b>Fixed Income</b>					
Bloomberg Barclays Agg	0.82	2.65	2.23	4.34	5.63
90-Day T-Bill	0.10	0.33	0.12	0.80	2.71
Bloomberg Barclays Long G/C	1.58	6.67	4.07	6.85	7.58
Bloomberg Barclays GI Agg ex US	2.48	1.49	-1.39	2.44	4.73
<b>Real Estate</b>					
NCREIF Property	1.55	7.97	10.91	6.93	8.63
FTSE NAREIT Equity	1.16	8.52	12.01	5.08	11.13
<b>Alternatives</b>					
CS Hedge Fund	2.07	1.25	4.34	3.75	--
Cambridge PE*	--	9.17	13.05	10.59	15.53
Bloomberg Commodity	-2.33	11.77	-8.95	-5.57	2.55
Gold Spot Price	8.64	8.63	-5.97	6.08	4.82
<b>Inflation – CPI-U</b>	0.98	2.07	1.36	1.81	2.26

\*Private equity returns show pooled horizon IRRs for periods ended September 30, 2016. Most recent quarterly data not available.  
Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

**Recent Quarterly Economic Indicators**

	1Q17	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15
Employment Cost–Total Compensation Growth	2.4%	2.2%	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%
Nonfarm Business–Productivity Growth	-0.6%*	1.3%	3.3%	-0.1%	-0.6%	-2.0%	1.8%	1.0%
GDP Growth	0.7%	2.1%	3.5%	1.4%	0.8%	0.9%	2.0%	2.6%
Manufacturing Capacity Utilization	75.4%	75.1%	74.9%	75.1%	75.4%	75.4%	75.7%	75.5%
Consumer Sentiment Index (1966=100)	97.2	93.2	90.3	92.4	91.5	91.3	90.8	94.2

\*Estimate.

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

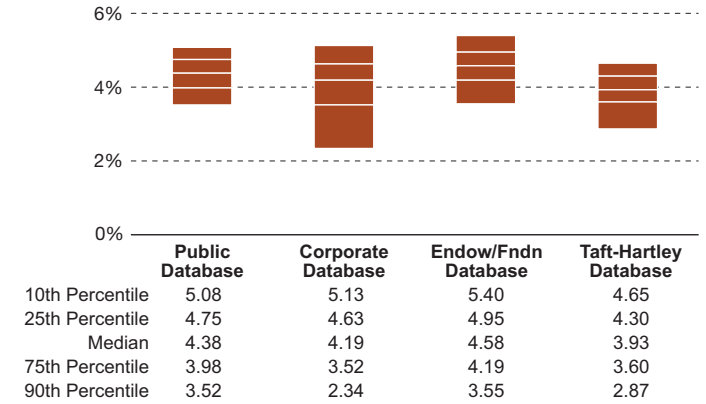
# No Homefield Advantage

FUND SPONSOR | Kitty Lin

A post-election rally, higher interest rates, and political uncertainty in Europe and Asia left global markets unfazed as stocks and bonds rallied. Both U.S. and non-U.S. stocks delivered stellar returns in the first three months of 2017. That put some juice into the performance of institutional funds tracked by Callan, which did far better than they had in the last quarter of 2016.

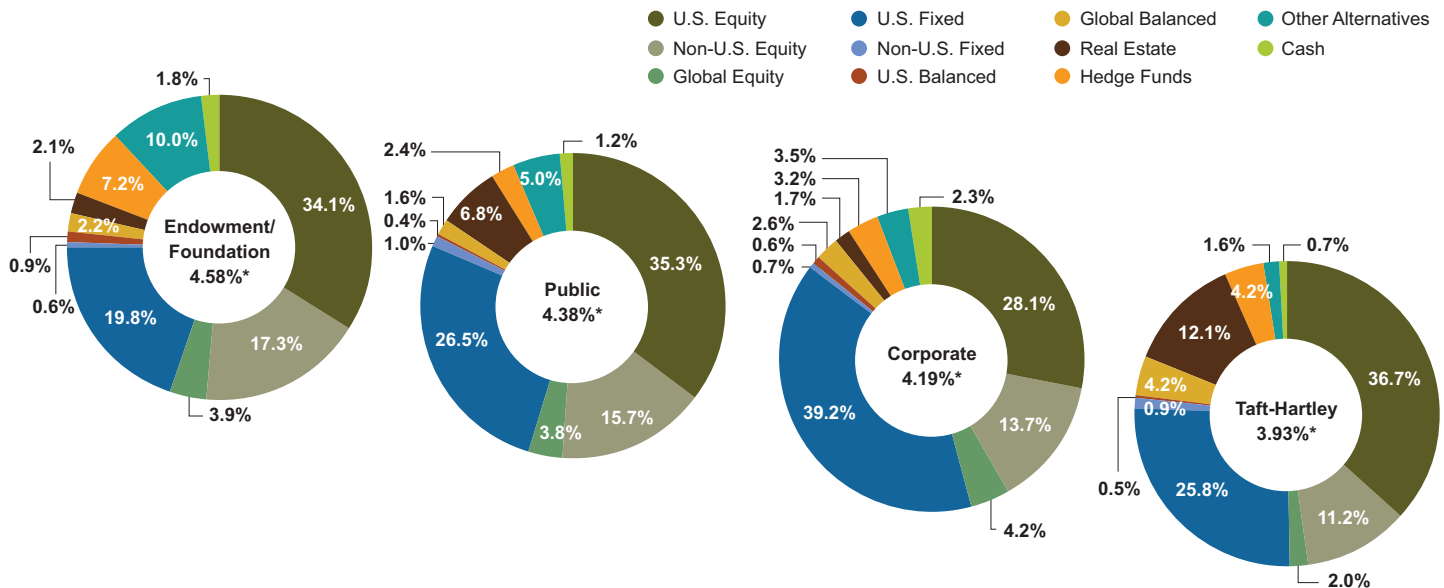
The median return for all fund types for the first quarter clocked in at +4.31%, compared to only +0.65% in the fourth quarter. Endowment and foundation funds bested all other fund types and jumped 4.58%, while Taft-Hartley plans slipped in the ranks and had the lowest median return, up only 3.93%.

## Callan Fund Sponsor Returns for the Quarter



Source: Callan

## Callan Fund Sponsor Average Asset Allocation



\*Latest median quarter return.  
 Note: charts may not sum to 100% due to rounding.  
 Source: Callan

How funds did depended in large part on where they had their money. Endowment and foundation plans have the highest exposure to non-U.S. equity, which performed quite well despite an ousted South Korean president and an unpredictable French election. The **MSCI ACWI ex USA Index** rose 7.86%, the **MSCI EAFE Index** gained 7.25%, and the **MSCI Emerging Markets Index** jumped 11.44%.

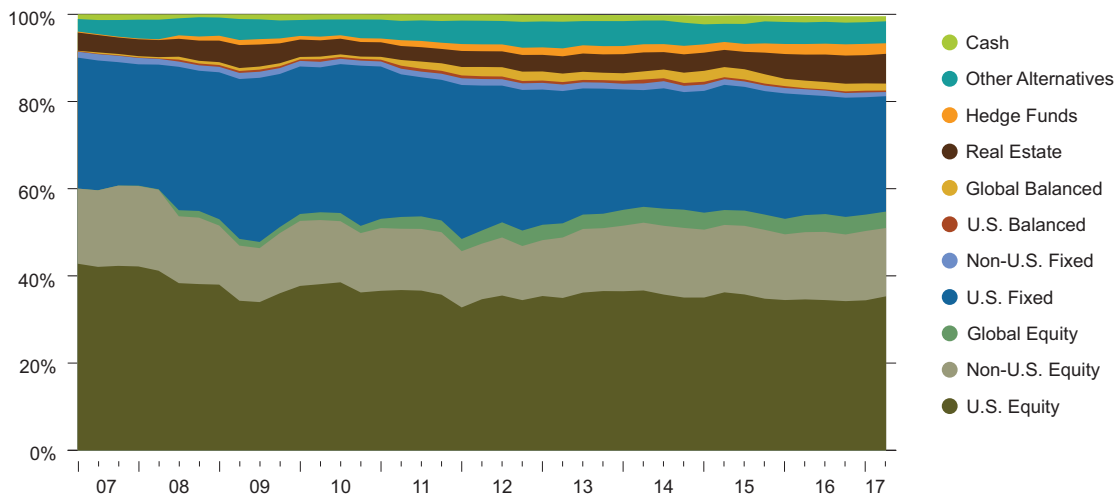
On the other end of the spectrum, Taft-Hartley plans had the most exposure to U.S. equity and the lowest to non-U.S. and global equity. While U.S. equities delivered strong returns, they

lagged their overseas counterparts; the **S&P 500 Index** surged 6.07% and the **Russell 1000 Index** rose 6.02%. Taft-Hartley plans had an average allocation of 11.2% to non-U.S. equity, which was the lowest of all fund types.

Although Taft-Hartley plans had the worst performance in the first quarter, they had the best returns over the last three (+5.99%) and five years (+8.22%) due to their home country bias in equities and the dominance of U.S. versus non-U.S. stocks. Endowment and foundation funds had the best performance in the first quarter (+4.58%) and last year (+11.32%).

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

# Steady as She Goes

U.S. EQUITY | Lauren Mathias, CFA

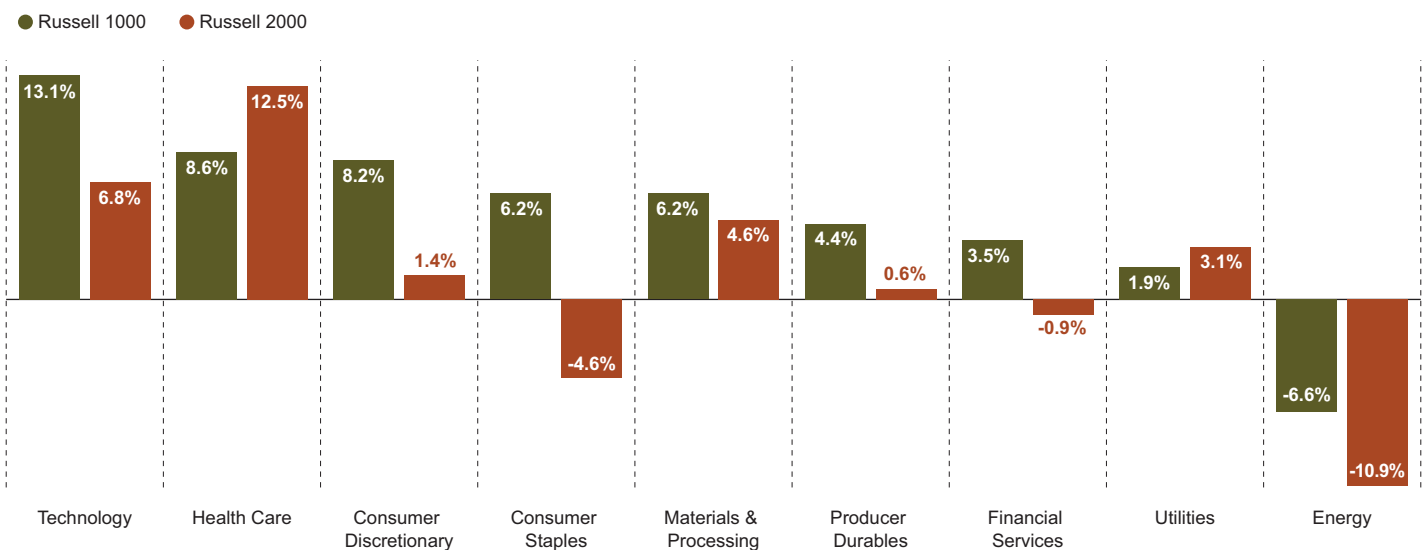
Despite concerns over the Trump administration’s ability to follow through on promises of lower taxes and decreased regulation, the market accelerated higher in the first quarter. The **S&P 500 Index** hit a peak (2,396) in March and notched a 6.07% gain over the full three-month period. But the quarter was marked by reversals from the previous one—small cap fell behind large cap (**Russell 2000 Index**: +2.47% vs. **Russell 1000 Index**: +6.03%) and growth overtook value (**Russell 1000 Growth Index**: +8.91% vs. **Russell 1000 Value Index**: +3.27%).

The broader U.S. economy reflected the market’s optimism, and to no one’s surprise the Fed raised rates a quarter-point in mid-March. Wages continued to grow, consumer confidence was up, inflation moved closer to the Fed’s 2% target, and unemployment fell to 4.7%. Yet some headwinds persisted in the U.S., with slowing GDP growth (the fourth quarter trailed the third, 2.1% vs. 3.5%), and significant issues abroad: elections

and Brexit in Europe, the Syrian war in the Middle East, and South Korea’s presidential impeachment in Asia. Valuations in the U.S. remain high by various measures, but investors appear unfazed—for now.

Technology shares were especially strong; the FANG stocks—Facebook, Amazon, Netflix, and Google—hit record highs during the quarter. (Technically it should be the FANA stocks because Google is officially Alphabet—but FANG sounds better!) Micro and small cap companies ran out of steam after a strong 2016, while mid and large cap stocks charged ahead (**Russell Microcap Index**: +0.38%, **Russell 2000 Index**: +2.47%, **Russell Midcap Index**: +5.15%, and **Russell 1000 Index**: +6.03%). Value lost its lead over growth in all capitalizations (**Russell 2000 Value Index**: -0.13% vs. **Russell 2000 Growth Index**: +5.35%). The dispersion in style returns was broad across market capitalizations.

## Economic Sector Quarterly Performance



Source: Russell Investment Group

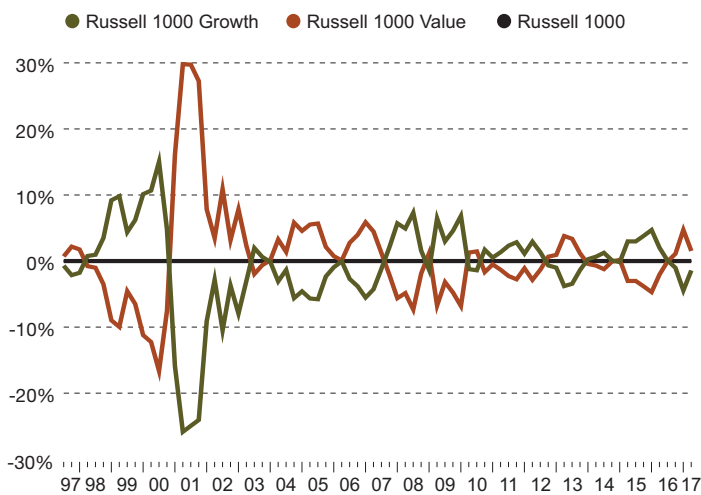
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing 11 sectors.

Reflecting the reversal in investor preference, the best-performing sectors in the S&P 500 Index during the quarter were growth-oriented; Technology (+12.57%) was No. 1, followed by Consumer Discretionary (+8.45%) and Health Care (+8.37%). After leading in the fourth quarter, Financials (+2.53%) and Energy (-6.68%) trailed the broad market in the first. Both Health Care and Financials traded on President Donald Trump's failure to amend the Affordable Care Act—Health Care stocks gained on the certainty of the status quo and Financials dropped on fear the administration may fall short on deregulation and tax reform as well. Energy was the worst-performing sector during the quarter as last year's agreement by the Organization of the

Petroleum Exporting Countries (OPEC) has not reduced fears of oversupply or meaningfully increased the price of oil.

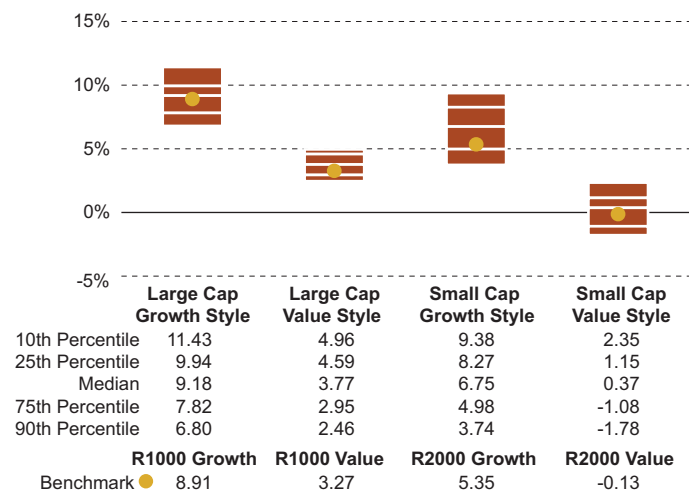
As the U.S. equity market powered on, valuations across indices traded at historically high levels—the S&P 500 Index NTM (next 12 months) P/E was 17.5x versus the 25-year average of 14x as of March 31, 2017. Correlation among stocks (measured by S&P 500 stocks) ended the quarter below average and at levels not seen in 10 years, a positive for active management. Volatility (as measured by the **CBOE Market Volatility Index**, or VIX) also tracked below its average, seemingly unfazed by geopolitical uncertainty.

**Rolling One-Year Relative Returns** (vs. Russell 1000)



Source: Russell Investment Group

**Callan Style Group Quarterly Returns**



Sources: Callan, Russell Investment Group

**U.S. Equity Index Characteristics as of March 31, 2017**

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	507	2,941	995	792	2,438	1,946
Wtd Avg Mkt Cap (\$bn)	151.6	127.6	137.9	13.7	4.6	2.2
Price/Book Ratio	2.9	2.8	2.9	2.6	2.3	2.1
Forward P/E Ratio	17.7	18.2	18	19.3	20.4	21.1
Dividend Yield	2.0%	1.9%	2.0%	1.7%	1.5%	1.4%
5-Yr Earnings (forecasted)	12.6%	12.5%	12.5%	11.8%	11.8%	12.4%

Sources: Russell Investment Group, Standard & Poor's.

# Profits Trump Populism

NON-U.S. EQUITY | Irina Sushch

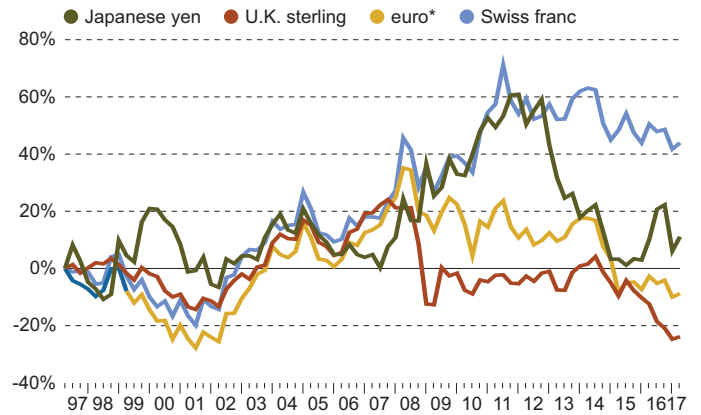
A flurry of political skirmishes and uneven growth in Asia failed to deter non-U.S. equity investors, and the “risk-on” theme of last year continued into 2017. The weak U.S. dollar also bolstered overseas returns for U.S. investors.

The **MSCI ACWI ex USA Index** jumped 7.86% during the quarter. All of its sectors were in the black, with the exception of Energy (-0.91%), which was hurt by falling oil prices. Economically sensitive sectors led the pack: Information Technology contributed 14.59% and Industrials added 9.48%. Defensive and cyclical sectors such as Telecommunications (+5.98%) and Real Estate (+6.72%) lagged.

Helped by a weaker dollar, emerging markets (**MSCI Emerging Markets Index**: +11.44%) outperformed their developed peers (**MSCI World ex USA Index**: +6.81% and **MSCI EAFE Index**: +7.25%). The **MSCI ACWI ex USA Growth Index** (+9.13%) resumed dominance over the **MSCI ACWI ex USA Value Index** (+6.68%). Small cap stocks also performed well (**MSCI ACWI ex USA Small Cap Index**: +8.78%).

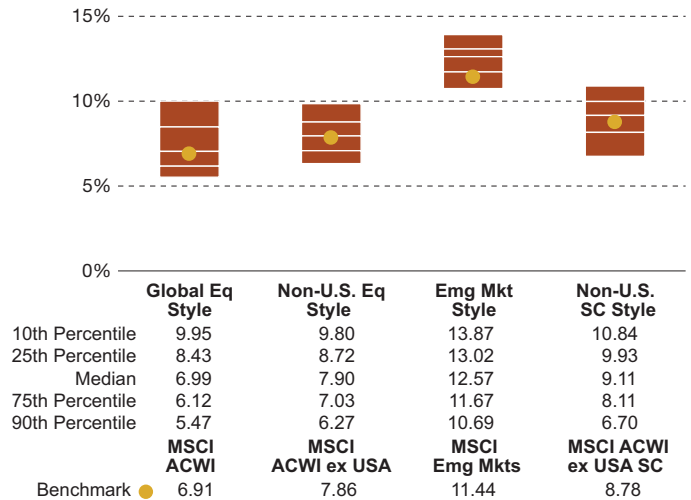
Politics continued to roil Europe. Most notably, British Prime Minister Theresa May triggered Article 50 of the Lisbon Treaty on March 29, giving the U.K. two years to negotiate an exit from the European Union. The negotiations are likely to be arduous, particularly concerning trade and immigration. And France’s presidential elections weighed on investors during the quarter. (A runoff is slated for May. Marine Le Pen, the far right contender and opponent of the EU, finished second in the first round of voting but is widely expected to lose to Emmanuel Macron, a more centrist leader and supporter of the EU.) On the other hand, the economic outlook brightened in the euro zone. Inflation hit a four-year high (2%) in February. Fourth quarter GDP was 1.7% (year-over-year) and positive in each country except Greece (-1.2%). The **MSCI Europe Index** jumped 7.44% in the first quarter; all of the countries posted positive returns. Spain (+14.76%) and the Netherlands (+11.33%) contributed most, while Ireland (+3.75%) and Norway (+1.43%) lagged.

## Major Currencies’ Cumulative Returns (vs. U.S. Dollar)



\* German mark returns before 1Q99  
Source: MSCI

## Callan Style Group Quarterly Returns



Sources: Callan, MSCI

Information Technology (+12.89%) and Industrials (+10.39%) rallied, while Energy stocks (-3.10%) brought up the rear.

In Southeast Asia and the Pacific, Japan’s economy grew at a meager (yet notably positive) annualized 1.2% in the fourth quarter. Industrial output and inflation rose and unemployment fell. But the stronger yen (+5%) dampened exporters’ returns, and Japan ended the quarter up just 4.49%; only New Zealand



## NON-U.S. EQUITY (Continued)

posted worse returns (+1.95%) in the region, owing to a faltering Materials sector (-19.33%). Singapore (+13.46%) and Hong Kong (+13.41%) fared best, thanks to thriving real estate markets. Australia advanced 10.98%, propped up by currency strength. The **MSCI Pacific Index** was up 6.92% and the **MSCI Pacific ex Japan Index** jumped 11.76%.

Emerging market returns were boosted by a weaker U.S. dollar, economic growth in China, and rising industrial metal prices. Poland (+17.75%) and India (+17.12%) were the top performers. The party of India's prime minister, Narendra Modi, won a key regional election despite an abrupt currency recall last year, and the central bank predicted strong economic growth for the next 12 months. Gains in IT stocks bolstered Korean returns. China, which makes up more than a quarter of the MSCI Emerging Markets Index, also experienced growth in its IT sector, as well as in Manufacturing and Real Estate. Its fourth

quarter GDP came in at 6.8%, and China ended the quarter up 12.93%. Mexico was among the top performers (+16.03%) as the peso rebounded 9%. Russia (-4.61%) and Greece (-3.49%) were the region's poorest performers. Russia was hurt by falling oil prices, and Greece by negative GDP growth.

### Quarterly Returns for Non-U.S. Developed Countries

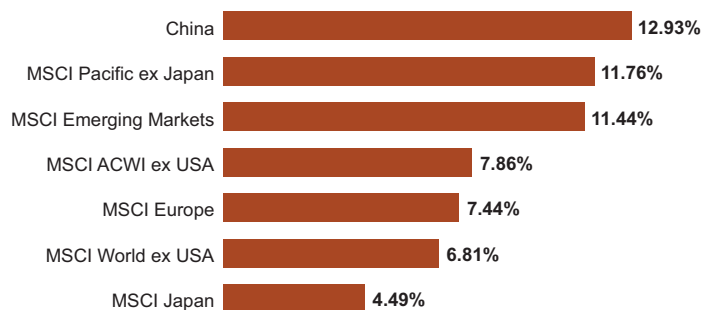
Country	Equity Index		Currency Return	Weight*
	(US\$)	(Local Currency)		
Australia	10.98%	5.34%	5.35%	5.30%
Austria	8.96%	7.45%	1.40%	0.14%
Belgium	5.13%	3.68%	1.40%	0.81%
Canada	2.51%	1.94%	0.55%	6.85%
Denmark	6.11%	4.65%	1.39%	1.14%
Finland	7.31%	5.83%	1.40%	0.67%
France	7.28%	5.80%	1.40%	7.10%
Germany	8.36%	6.87%	1.40%	6.62%
Hong Kong	13.41%	13.65%	-0.24%	2.44%
Ireland	3.75%	2.32%	1.40%	0.32%
Israel	5.53%	3.28%	6.01%	0.47%
Italy	6.17%	4.70%	1.40%	1.51%
Japan	4.49%	-0.17%	4.67%	16.29%
Netherlands	11.33%	9.92%	1.40%	2.41%
New Zealand	1.95%	1.69%	0.25%	0.12%
Norway	1.43%	1.21%	0.22%	0.44%
Portugal	8.25%	6.75%	1.40%	0.11%
Singapore	13.46%	9.79%	3.39%	0.92%
Spain	14.76%	13.18%	1.40%	2.34%
Sweden	9.46%	7.58%	1.75%	2.01%
Switzerland	8.34%	6.70%	1.54%	6.08%
U.K.	5.04%	3.80%	1.20%	12.44%

\*Weight in the MSCI ACWI ex USA Index

Sources: MSCI, Russell Investment Group, Standard & Poor's.

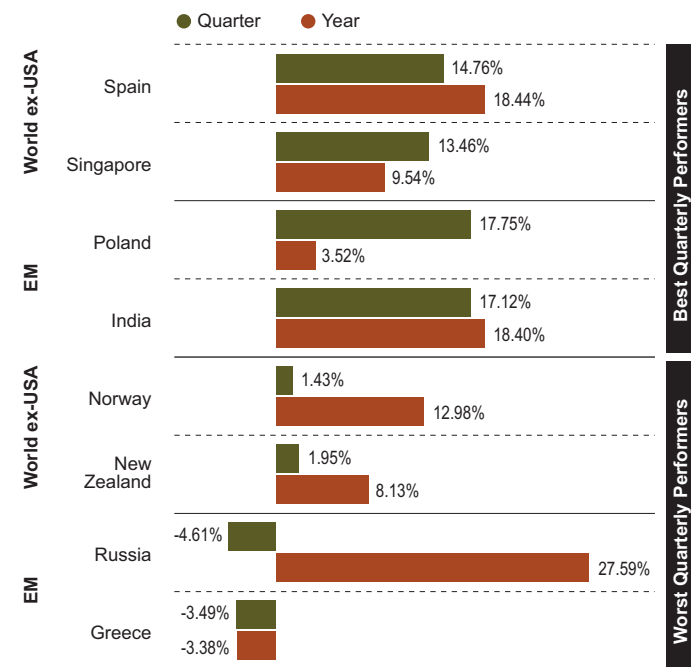
### Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

### Quarterly and Annual Country Performance Snapshot



Source: MSCI

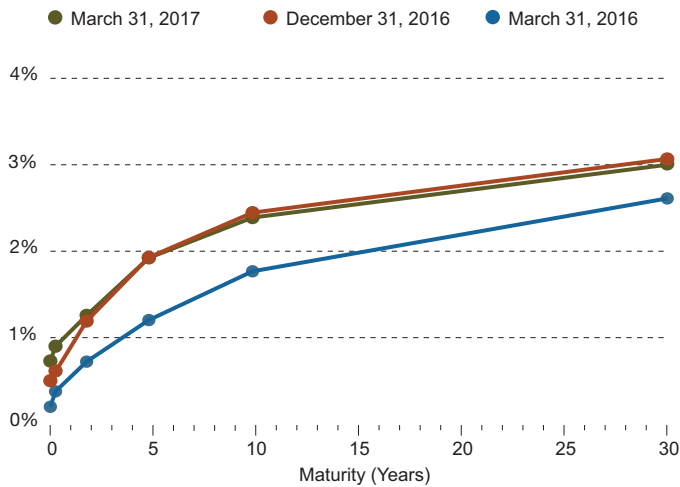
# Up, Up, and Away

U.S. FIXED INCOME | Rufash Lama

During the first quarter, the U.S. bond market generated positive returns across the board due in part to strong economic data and upbeat investors compressing spreads. U.S. fourth quarter GDP grew at an annualized rate of 2.1%, consumer spending rose 3.5%, and the unemployment rate fell to 4.7%. High yield bonds performed best; the **Bloomberg Barclays High Yield Index** climbed 2.70% for the quarter.

The Fed increased rates by 25 basis points in March, to a range of 0.75% – 1.00%, as U.S. economic indicators continued to signal growth; two additional hikes are expected over the rest of the year. The Treasury yield curve flattened during the quarter as short-term Treasury yields rose while longer-term Treasury yields fell. Despite hitting an intra-quarter high of 2.62%, the benchmark 10-year Treasury note ended the quarter at 2.39%, 5 bps lower than the yield at the end of 2016. For the quarter, U.S. Treasuries returned 0.67%; long Treasuries (+1.40%) outperformed intermediate ones (+0.54%). TIPS were up 1.26% as expectations for future inflation rose. At the end of the quarter, the 10-year breakeven inflation rate, a market-based gauge of investors' expectations for future inflation, stood at 1.97%.

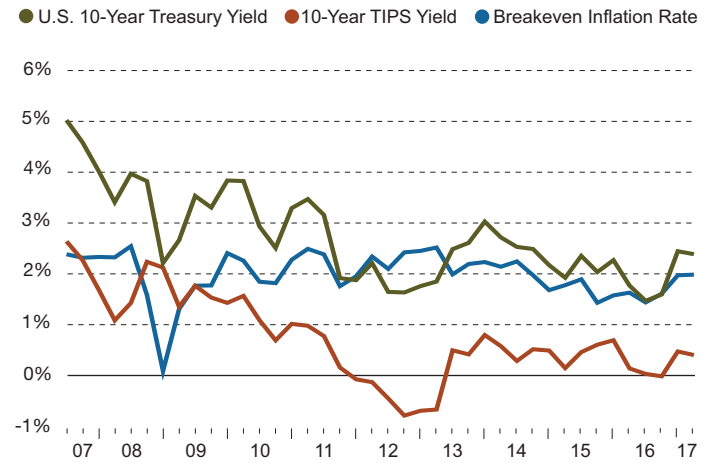
## U.S. Treasury Yield Curves



Source: Bloomberg

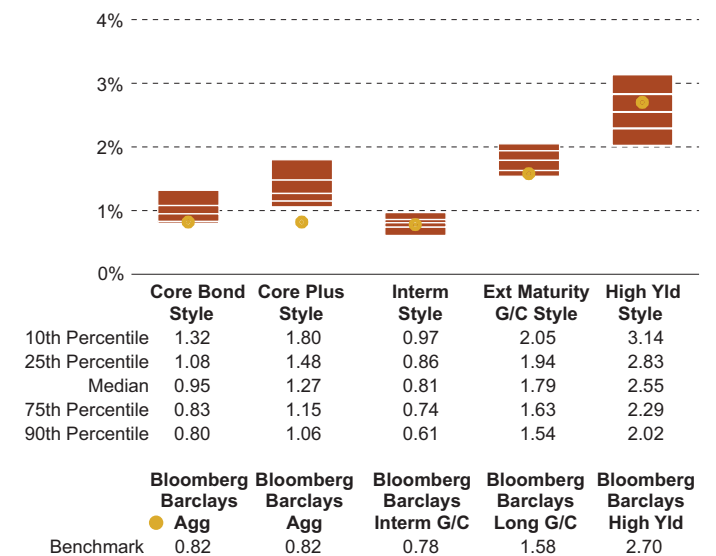
All fixed income sectors reported returns in the black as both the corporate credit market and the structured-debt market benefited from strong investor demand; the **Bloomberg Barclays U.S. Aggregate Bond Index** rose 0.82%. Issuance in the investment-grade primary market totaled \$390 billion, easily surpassing the prior record of \$357 billion in the second quarter

## Historical 10-Year Yields



Source: Bloomberg

## Callan Style Group Quarterly Returns



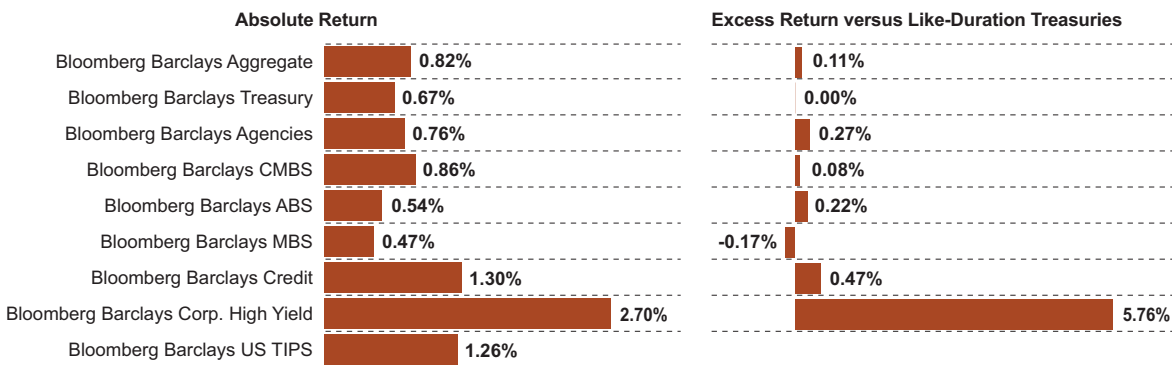
Source: Bloomberg Barclays, Callan

of 2015. Overall, spreads tightened and investor appetite for bonds remained strong despite the headwind of higher rates. High yield spreads over comparable Treasuries tightened by 26 bps and delivered the strongest return. Lower-rated bonds outperformed higher-rated issues; BBB-rated securities generated an excess return of 85 bps and outperformed AAA securities by 70 bps. ABS and investment-grade corporate spreads tightened by 5 bps and rose 1.22% and 0.54%, respectively.

Mortgage-backed securities (MBS) (+0.47%) underperformed duration-matched Treasuries by 17 bps. Commercial mortgage-backed securities (CMBS) rose 0.86% for the quarter and benefited from strong demand.

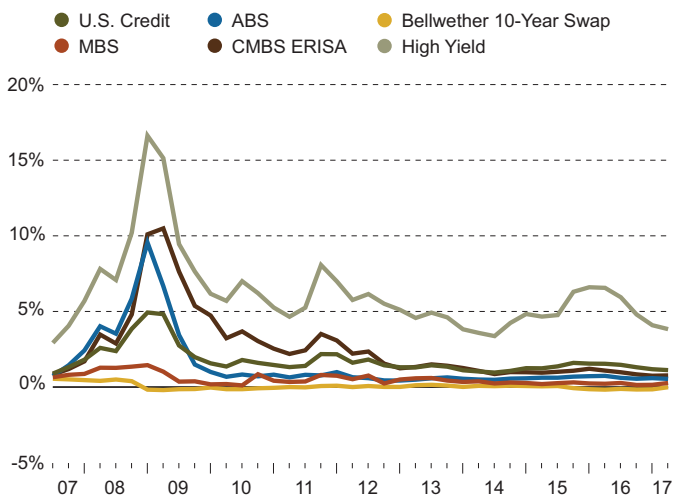
Municipal bonds also delivered a strong quarter as expectations for U.S. tax reform fell and new issuance remained light. The **Bloomberg Barclays Municipal Bond Index** jumped 1.58%.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of March 31, 2017

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	2.61	6.00	8.22
Bloomberg Barclays Universal	2.95	5.78	7.99
Bloomberg Barclays Gov/Credit	2.49	6.47	8.70
1-3 Year	1.50	1.94	2.00
Intermediate	2.10	4.06	4.41
Long-Term	3.88	15.15	24.19
Bloomberg Barclays Long Credit	4.51	13.71	23.76
Bloomberg Barclays Corp High Yield	5.84	4.03	6.24
Bloomberg Barclays TIPS	2.27	5.72	8.31
Bloomberg Barclays Municipal	2.46	6.40	12.85
1-5 Year	1.46	2.65	3.13
1-10 Year	1.86	4.03	5.77

Source: Bloomberg Barclays

# Separation Anxiety

NON-U.S. FIXED INCOME | Kyle Fekete

Sovereign debt performed well in the first quarter amid political uncertainty about the future of the European Union (EU). Emerging market debt outperformed developed market debt for the third straight quarter as the **JPM GBI-EM Global Diversified Index** advanced 6.50% versus the **Bloomberg Barclays Global Aggregate ex-US Index's** 2.48% gain. Returns were bolstered by the U.S. dollar's drop against most currencies.

European sovereign bond yields rose in the midst of critical elections and debate over the future of the EU. The safe-haven German 10-year bond yield climbed 12 basis points to

## Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt*	Country Debt**	Currency Return	Weight***
Australia	6.66%	1.24%	5.35%	2.64%
Austria	0.60%	-0.80%	1.40%	1.75%
Belgium	-0.31%	-1.69%	1.40%	2.99%
Canada	1.05%	0.50%	0.55%	2.54%
Denmark	0.79%	-0.59%	1.39%	0.71%
Finland	0.65%	-0.75%	1.40%	0.74%
France	-0.92%	-2.29%	1.40%	11.85%
Germany	0.64%	-0.75%	1.40%	8.62%
Ireland	0.05%	-1.34%	1.40%	0.96%
Italy	-0.60%	-1.98%	1.40%	11.24%
Japan	4.15%	-0.50%	4.67%	33.21%
Malaysia	2.94%	1.56%	1.37%	0.50%
Mexico	13.62%	3.88%	9.38%	1.11%
Netherlands	0.50%	-0.90%	1.40%	2.75%
Norway	1.44%	1.22%	0.22%	0.33%
Poland	7.16%	1.71%	5.36%	0.81%
Singapore	5.69%	2.22%	3.39%	0.50%
South Africa	4.42%	2.38%	1.99%	0.66%
Spain	0.60%	-0.79%	1.40%	6.70%
Sweden	1.31%	-0.43%	1.75%	0.55%
Switzerland	1.07%	-0.46%	1.54%	0.23%
U.K.	2.85%	1.63%	1.20%	8.63%

\*U.S. dollar-denominated.

\*\*Local currency-denominated.

\*\*\*Weight in the Citi Non-U.S. World Government Bond Index.

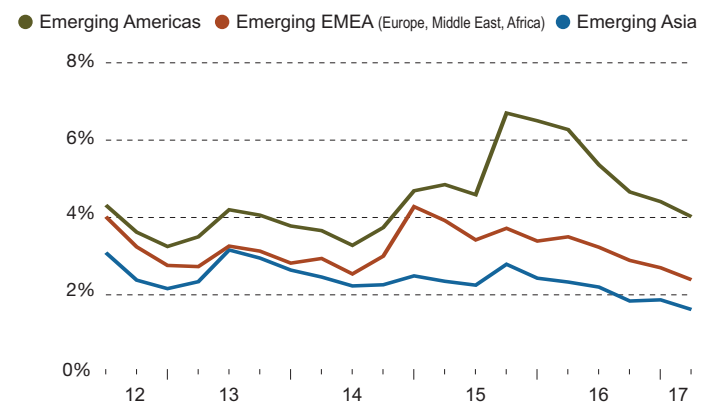
Source: Citigroup

0.33%, steepening the yield curve to its highest since 2014. France's 10-year bonds sold off in the middle of the quarter as the markets priced in the risk of a potential victory by presidential candidate Marine Le Pen, who wants the French to vote on whether to leave the EU. The Italian 10-year yield jumped 50 bps to 2.32% as an air of political risk also loomed over Europe's third-largest economy.

The European Central Bank continued its stimulus efforts, extending its bond-buying program until December 2017 and maintaining interest rates near record lows. Yet there was renewed confidence in the region's economic health as a result of solid manufacturing data, strength in the region's labor market, and encouraging inflation news. The euro strengthened against the U.S. dollar, providing some headwind to the hedged Bloomberg Barclays Global Aggregate ex-US Index, which increased only slightly (+0.06%).

In the Asia-Pacific region, Japan's 10-year yield edged up 2 bps to 0.07%, in line with the Bank of Japan's goal of maintaining its yield at approximately zero. The Reserve Bank of Australia left rates unchanged despite rapid growth in household debt. The Australian 10-year yield declined 6 bps to 2.70%. Both countries' currencies advanced roughly 5% against the U.S. dollar.

## Emerging Spreads Over Developed (By Region)



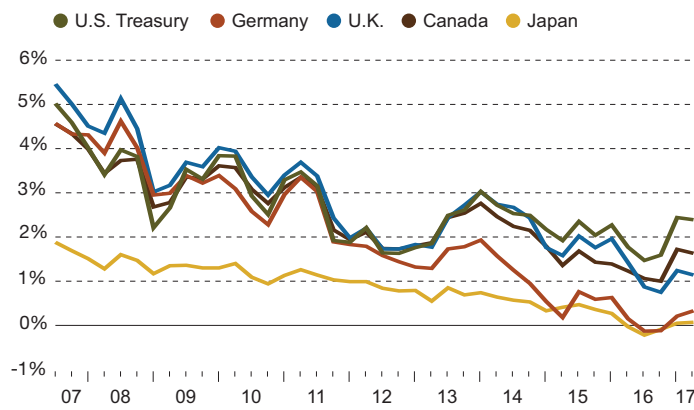
Source: Bloomberg Barclays

## NON-U.S. FIXED INCOME (Continued)

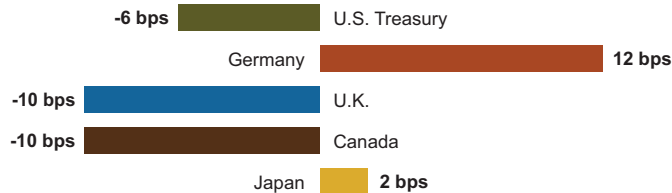
Emerging markets performed quite well. The U.S. dollar-denominated **JPM EMBI Global Diversified Index** rose 3.87%, and only three countries out of 65 posted negative returns for the quarter. Mexico, the most heavily weighted in the Index, was the strongest performer (+5.46%). Venezuela was the worst, falling 1.29%. Emerging market currencies also

generally appreciated versus the U.S. dollar, accounting for the JPM GBI-EM Global Diversified Index's 6.50% rise. Argentina reentered the Index in February, and its debt posted the strongest return (+15.60%). Mexico (+13.60%) and Brazil (+9.69%) were also top performers, while Turkey (-0.68%) was the only country in the index to deliver a negative return.

### 10-Year Global Government Bond Yields

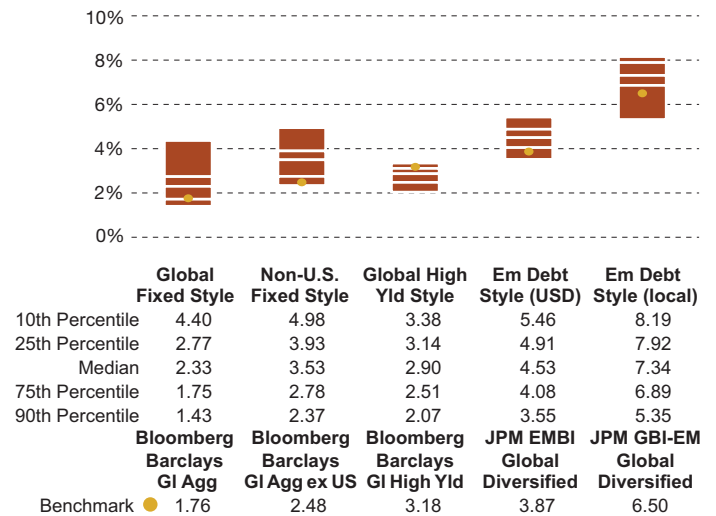


### Change in 10-Year Yields from 4Q16 to 1Q17



Source: Bloomberg

### Callan Style Group Quarterly Returns



Sources: Bloomberg Barclays, Callan, JPMorgan Chase

# New Year, New Lows

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index** advanced 1.55% during the first quarter (1.15% from income and 0.40% from appreciation). This was the lowest return since 2010, eclipsing the fourth quarter's mark of 1.73%. Appreciation fell for the eighth consecutive quarter and made up less than a third of total return.

Industrial (+2.83%) was the best-performing sector for the fourth consecutive quarter with Retail (+1.56%) and Apartments (+1.30%) also posting positive returns; Hotels (-0.16%) fared the worst and the was only property sector to fall during the quarter. All property sectors posted lower results than the previous quarter.

The West surpassed all other regions for the second quarter in a row, rising 1.96%; the East was the weakest, up only 0.95%. Transaction volume fell steeply to \$6.6 billion, a 53% decline from last quarter's all-time high. This also represented a drop of 13% from the first quarter of 2016. Appraisal capitalization rates stayed mostly flat, increasing to 4.44%, 1 basis point above last quarter's all-time low of 4.43%. Transaction capitalization rates recovered from the precipitous decline of the fourth quarter and rose from 5.7% to 6.3%. The spread between appraisal and transactional rates increased to 183 bps.

Occupancy rates dropped slightly from the 15-year high in the fourth quarter to 92.96%. Apartment occupancy rates increased slightly while Industrial, Office, and Retail rates decreased.

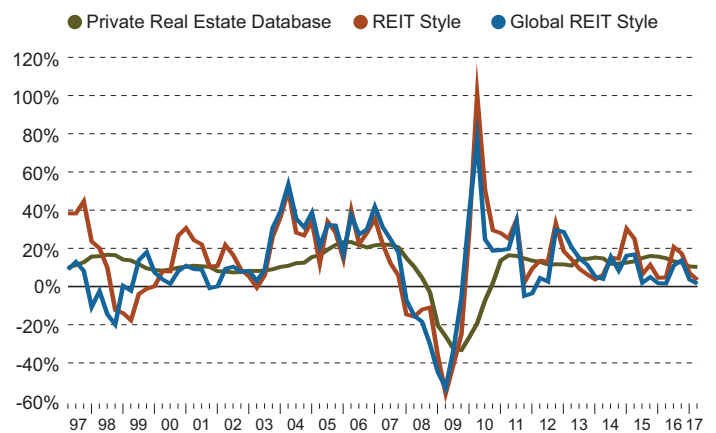
The **NCREIF Open End Diversified Core Equity Index** rose 1.54%. This marked a 34 basis point decrease from the fourth quarter return of 1.88%, and was the lowest for the index since 2010. Income accounted for 0.84% of the return, moderating slightly; appreciation (+0.71%, with rounding accounting for the slight discrepancy) fell to a new seven-year low.

Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, outperformed their U.S. counterparts and rose 2.29%. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, gained 1.16% for the quarter.

In the U.S., REITs enjoyed two months of positive returns to start the quarter before giving some of the gains back with a poor showing in March. Retail (-4.75%) fared the worst, hurt by weak earnings results from large retailers and the fear of store closings because of the emergence of e-commerce. Hotel (-1.90%) and Self Storage (-1.42%) also did poorly. Health Care (+6.92%) recovered from a sharp decline in the fourth quarter on the back of the failure of the new administration to fulfill its promise to repeal the Affordable Care Act. Specialty (+13.23%), Timber (+12.85%), Infrastructure (+12.25%), and Data Centers (+11.45%) all experienced double-digit gains.

Europe, as represented by the **FTSE EPRA/NAREIT Europe Index**, bested the U.S. in both local currency and U.S. dollar terms, buoyed by a weakening greenback and improving

## Rolling One-Year Returns



Source: Callan

\*Index subreturns are calculated separately from index return and may not total.

## REAL ESTATE (Continued)

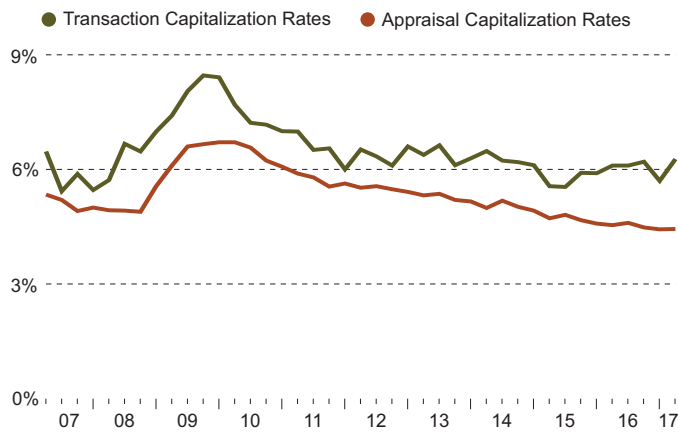
economic data. Markets also reacted positively to the failure of populist politicians to gain power in the Netherlands. As in the U.S., Retail lagged the broader index as e-commerce continued to take market share from traditional retailers.

The Asia-Pacific region beat all others with the **FTSE EPRA/NAREIT Asia Index** jumping 5.94% during the first quarter in U.S. dollar terms. Singapore and Hong Kong were the major

winners, up 17.4% and 16.2%, respectively. In both countries this was mainly attributed to strong performance by their residential sectors.

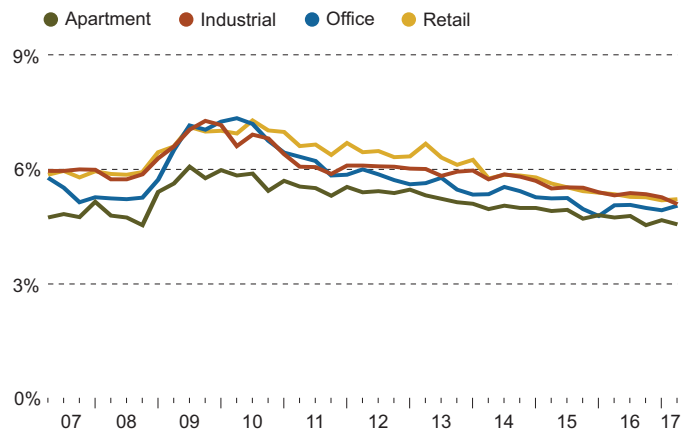
Commercial mortgage-backed securities (CMBS) issuance for the quarter was down sharply, by 58%, to \$11.3 billion from the \$26.9 billion in the fourth quarter of 2016. This represents a 42% decrease from the first quarter of 2016 (\$19.4 billion).

### NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF  
Note: Transaction capitalization rate is equal weighted.

### NCREIF Capitalization Rates by Property Type



Source: NCREIF  
Note: Capitalization rates are appraisal-based.

# On a Roll

## PRIVATE EQUITY | Gary Robertson

New private equity partnership commitments totaled \$80.0 billion in the first quarter, with 310 new partnerships formed, according to preliminary data from *Private Equity Analyst*. The number of partnerships jumped 75% from 177 in the first quarter of 2016, and the dollar volume rose 51% from \$53.1 billion. KKR Americas Fund XII raised the most money in the quarter, \$3.1 billion, and its final close of \$13.9 billion exceeded its \$12 billion target.

Investments by funds into companies totaled 379 deals, up 18% from 322 in the prior quarter, according to *Buyouts* newsletter. The announced total volume was \$35.0 billion, up 24% from \$28.3 billion in the fourth quarter. The \$6.0 billion take-private of hospital staffing firm Team Health Holdings was the quarter's largest buyout. Nine deals with announced values of \$1 billion or more closed in the quarter.

According to the National Venture Capital Association, new investments in VC companies totaled 1,808 rounds with \$16.5 billion of announced value. The number of rounds fell by 5% from 1,898 in the fourth quarter, but disclosed value increased 15% from \$14.3 billion.

Buyout M&A exits fell steeply; there were just 117 in the first quarter, down 25% from the prior quarter's 157, according to

### Funds Closed January 1 to March 31, 2017

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	145	7,505	9%
Buyouts	108	54,622	68%
Subordinated Debt	13	3,038	4%
Distressed Debt	7	4,526	6%
Secondary and Other	7	5,162	6%
Fund-of-funds	30	5,178	6%
<b>Totals</b>	<b>310</b>	<b>80,031</b>	<b>100%</b>

Source: Private Equity Analyst  
Figures may not total due to rounding.

*Buyouts*. Announced deal value also dropped: 30 deals totaling \$14.4 billion, off 47% from \$27.0 billion in the fourth. Three buyout-backed IPOs in the first quarter raised an aggregate \$2.4 billion. The number of IPOs was the same as the prior quarter, but the proceeds increased from \$2.0 billion.

Venture-backed M&A exits totaled 132 and disclosed value hit \$10.4 billion. The number of exits declined 19% but the dollar volume increased 53% from the fourth quarter, which had 162 sales totaling \$6.8 billion. There were seven VC-backed IPOs in the first quarter with a combined float of \$4 billion. The fourth quarter also had seven but they only raised \$684 million.

Please see our upcoming issue of *Private Markets Trends* for more in-depth coverage.

### Private Equity Performance Database (%) (Pooled Horizon IRRs through September 30, 2016\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	3.33	3.35	17.77	14.78	10.51	6.72	20.92
Growth Equity	3.82	8.77	11.95	12.28	11.20	10.92	13.62
All Buyouts	3.91	11.48	11.97	13.68	10.41	12.96	12.60
Mezzanine	2.92	9.19	8.75	10.32	9.38	8.96	9.17
Distressed	4.22	7.72	7.30	11.93	9.42	10.71	10.67
<b>All Private Equity</b>	<b>3.80</b>	<b>9.08</b>	<b>12.24</b>	<b>13.41</b>	<b>10.37</b>	<b>11.06</b>	<b>13.23</b>
S&P 500	3.85	15.43	11.16	16.37	7.24	7.15	7.91
Russell 3000	4.40	14.96	10.44	16.36	7.37	7.61	8.03

Private equity returns are net of fees.  
Sources: Standard & Poor's, Thomson Reuters/Cambridge  
\*Most recent data available at time of publication.

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Market Review* and other Callan publications.



# Dollops of Alpha with Beta

HEDGE FUNDS | Jim McKee

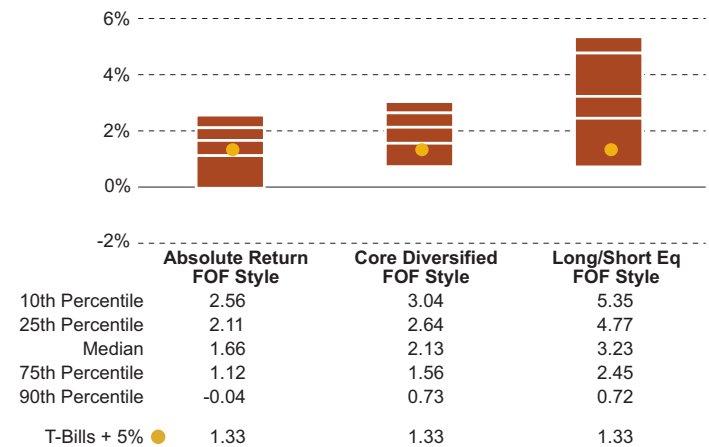
The U.S. economy moved steadily forward with revived animal spirits in the first quarter. Tangible evidence of growth and inflation emerged in the euro zone, soothing market worries globally. Amid geopolitical anxieties testing the Trump administration, the **S&P 500 Index** cleared 6.07% with very little market volatility. With more upbeat expectations abroad, **MSCI EAFE** climbed 7.25% while **MSCI Emerging Markets** soared 11.44%. After being beaten down in the prior quarter, the **Citi 10-Year Treasury** (+0.79%) held steady.

With global risk appetites encouraged by improving fundamentals, most hedge fund strategies generated positive returns. The **Credit Suisse Hedge Fund Index (CS HFI)**, a proxy of unmanaged hedge fund interests gross of fees, advanced 2.07%. Representing live hedge fund portfolios net of all fees, the median manager in the **Callan Hedge Fund-of-Funds Database** appreciated 2.29%.

Within CS HFI, *Long-Short Equity* (+3.46%) was particularly strong in the first quarter compared to 2016, even after adjusting for equity beta. Lack of market volatility and distinct trends left *Managed Futures* (-1.02%) and *Global Macro* (+0.24%) struggling.

Within the **Callan Hedge Fund-of-Funds Database**, market exposures differentiated performance. Supported by the stock market rallies around the globe, the median *Callan Long/Short Equity FOF* (+3.23%) outpaced the *Callan Absolute Return FOF* (+1.66%). With exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 2.13%.

## Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

## Callan Database Median and Index Returns\* for Periods ended March 31, 2017

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
<b>Hedge Fund-of-Funds Database</b>	<b>2.29</b>	<b>2.29</b>	<b>8.04</b>	<b>2.00</b>	<b>4.66</b>	<b>3.24</b>	<b>4.83</b>
CS Hedge Fund Index	2.07	2.07	5.67	1.92	3.95	3.62	5.83
CS Equity Market Neutral	2.13	2.13	-2.19	-0.62	1.26	-2.99	0.55
CS Convertible Arbitrage	2.25	2.25	9.43	1.78	3.33	3.61	4.74
CS Fixed Income Arbitrage	2.32	2.32	8.02	3.15	4.64	3.43	4.23
CS Multi-Strategy	2.76	2.76	7.92	5.05	6.9	5.09	6.98
CS Distressed	2.23	2.23	10.91	0.82	5.28	3.75	6.94
CS Risk Arbitrage	1.21	1.21	4.94	1.78	2.33	3.18	3.74
CS Event-Driven Multi-Strategy	2.88	2.88	10.33	-1.48	3.53	3.4	6.11
CS Long/Short Equity	3.46	3.46	3.91	2.44	5.35	3.99	6.29
CS Global Macro	0.24	0.24	6.2	2.57	2.87	5.53	7.88
CS Managed Futures	-1.02	-1.02	-11.63	4.15	0.59	3.06	5.02
CS Emerging Markets	4.27	4.27	10.28	4.04	4.55	3.79	7.59

\*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

# Eventful Year, but TDFs Still Rule

## DEFINED CONTRIBUTION | Tom Szkwarla

The Callan DC Index™ increased 7.99% during the wild year that was 2016, its best year since 2013. And the Index did not suffer a single negative quarter, ending with a fourth quarter return of 1.59%. But the Index trailed the average Age 45 Target Date Fund, which gained 8.59% in 2016.

For the year, DC plan balances increased 8.31%. Almost all of the growth is attributable to market performance. Inflows (participant and plan sponsor contributions) added only 32 basis points to total growth.

Turnover (i.e., net transfer activity levels within DC plans) in 2016 reached 2.31%, the highest since 2012.

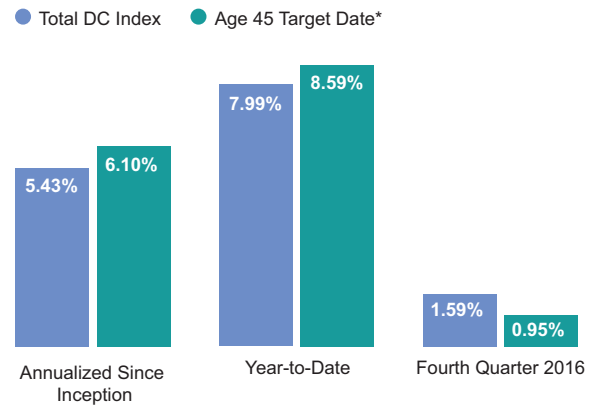
Last year, flows retreated from equities into stable value, money market, and domestic fixed income funds. As usual, TDFs dominated net inflows for the quarter and the year. For the year, roughly 61 cents of every dollar flowed to TDFs. The fourth quarter of 2016 saw a significant spike in TDF assets, increasing 1.3% from the third quarter to make up 29.0% of the average DC plan.

The Callan DC Index's equity allocation ended the quarter at 69%, below the equity allocation of the average Age 45 Target Date Fund (74%) but above the Index's historical average (67%).

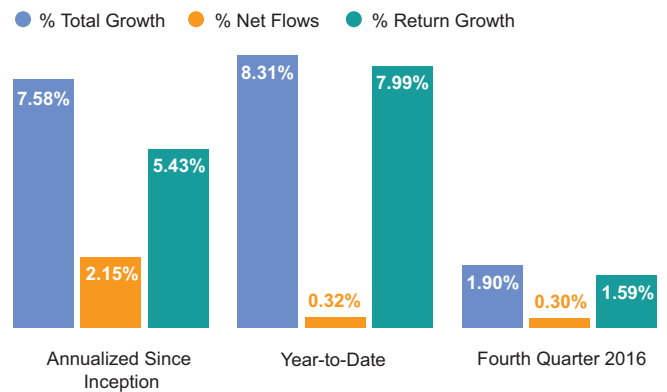
TDFs' dominance of the typical DC plan continues to grow. When TDFs are held within a DC plan, they now account for 35% of plan assets, up from 30% a year ago. The next largest plan holding, U.S. large cap equity funds, now account for 22.7% of plan assets. The fourth quarter of 2016 marks the highest level of TDF prevalence (91%) since the inception of the Callan DC Index™.

*The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.*

### Investment Performance



### Growth Sources



### Net Cash Flow Analysis (Fourth Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	68.47%
Stable Value	22.76%
U.S. Large Cap	-30.44%
Company Stock	-40.41%
<b>Total Turnover**</b>	<b>0.50%</b>

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

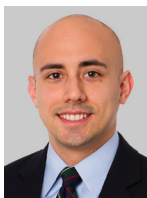
\* The Age 45 Fund transitioned from the average 2030 TDF to the 2035 TDF in June 2013.

\*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

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The *Capital Market Review* is a quarterly macroeconomic indicator newsletter that provides thoughtful insights on the economy and recent performance in the equity, fixed income, alternatives, international, real estate, and other capital markets.

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