



Second Quarter 2016

Keep Calm and Carry On

ECONOMY

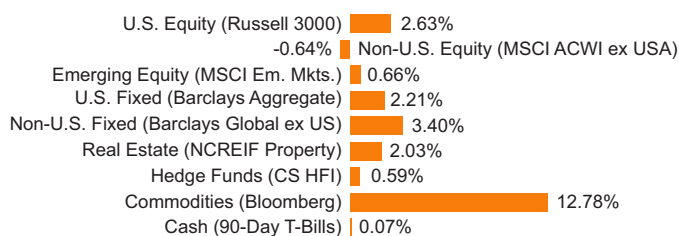
2 Despite global turmoil, all indicators of the U.S. economy pointed toward the strongest growth in consumption in a decade. But a disappointing first read on GDP for the second quarter is likely to give the Fed enough reason to delay a much-anticipated September rate hike.

Any Relief in Sight?

FUND SPONSOR

4 Corporate funds outperformed all others during the quarter because of their higher exposure to U.S. fixed income investments. But that brought little relief for their funding status, which fell by more than 3 percentage points.

Broad Market Quarterly Returns



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

Greener Grass

U.S. EQUITY

6 The **S&P 500** ended the quarter only 1.5% below its all-time high achieved in May 2015, indicating that for investors wary of the turbulence around the world, the grass does appear to be greener in the United States.

Fasten Your Seat Belts

NON-U.S. EQUITY

9 Markets around the world ended the quarter relatively stable despite the Brexit vote, with the **MSCI ACWI ex USA Index** down only slightly (-0.64%), and the **MSCI Pacific Index** up a bit (+0.87%). The **MSCI Europe Index**, not surprisingly, finished down more 2.69%.

Rally Across the Board

U.S. FIXED INCOME

12 All sectors rallied during the quarter and produced positive returns, with investment-grade corporates leading the way, as investors assessed the broad strength of the U.S. economy and relatively attractive opportunities with the U.S. fixed income markets in the wake of Brexit.

How Low Can Rates Go?

NON-U.S. FIXED INCOME

15 Major global bond indices showed positive returns for the quarter, as sovereign yields fell. Most major global currencies weakened against the U.S. dollar; the British pound was hit hardest. Emerging market bonds continued to rebound despite a bumpy ride.

It Really Is Location, Location, Location

REAL ESTATE

17 The U.S. real estate market has become increasingly attractive and has captured nearly 30% of global capital allocations in 2016. Investors are flooding into the U.S. due to low government bond yields globally, Brexit uncertainties, and concerns about China's slowing growth.

Sticker Shock

PRIVATE EQUITY

19 Fundraising surged in the second quarter, with a large jump in venture capital. The investment pace by funds into companies slowed, but the amount invested into VC companies increased. And IPOs by both buyout-backed and VC-backed firms increased in the quarter.

Caution as Britannia Waives the Rule

HEDGE FUNDS

20 Hedge funds eked out modest gains in the second quarter, with convertible arb funds performing best and short bias the worst. Emerging market and fixed income arb funds showed positive returns, making up for losses in the first quarter.

Target Date Funds Continue to Rule

DEFINED CONTRIBUTION

21 As usual, target date funds attracted most of the assets during the first quarter, and now command more than a quarter of total DC assets. But the **Callan DC Index** lagged the Age 45 Target Date Fund by 42 bps in the quarter.

Keep Calm and Carry On

ECONOMY | Jay Kloepfer

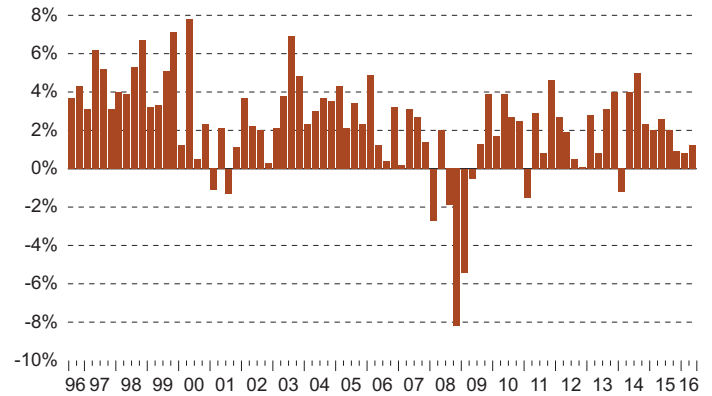
Voters in the United Kingdom narrowly approved a referendum to leave the European Union on June 23, and this unexpected result completely overshadowed everything else that happened in the global economy during the second quarter. Global bond yields fell to record lows, the British pound hit a 31-year low versus the U.S. dollar, and global equity markets plunged before quickly bouncing back to regain much of what they lost over a period of just a week.

In the background, the U.S. economy seemed to be calmly carrying on, as all indicators pointed toward the strongest growth in consumption in a decade. The first read of second-quarter gross domestic product (GDP) growth was therefore clearly disappointing at just 1.2%, dashing consensus expectations (or maybe just hopes) for a rate of 2% or higher. The revision to the first-quarter result was disappointing as well, pulled down from 1.1% to just 0.8%. The U.S. economy has now expanded by just 1.2% over the past year, the weakest 12-month gain since the reduction in Federal fiscal stimulus during 2013. Second-quarter growth was fueled by the standout strength in consumer spending, which increased at a robust rate of 4.2%. Gains in employment, disposable income, and home asset values (boosting household wealth)—along with low energy prices, modest inflation, and low interest rates—are providing the tailwind for consumers. Weighing down overall GDP growth is continued retrenchment in non-residential fixed investment, a blip downward in residential investment, and the fourth consecutive quarter of inventory reduction, which subtracted more than 1% from overall GDP growth. This weak GDP growth is likely to give the Federal Reserve sufficient reason to delay a much-anticipated September rate hike.

The job market gave quite a scare during the second quarter and was likely a primary factor in derailing what looked to be a certain Fed rate hike in June. April job gains slowed to 144,000 after averaging close to 200,000 during the first quarter, and then plummeted to just 11,000 in May, before recovering to an impressive 287,000 gain in June. The April and May

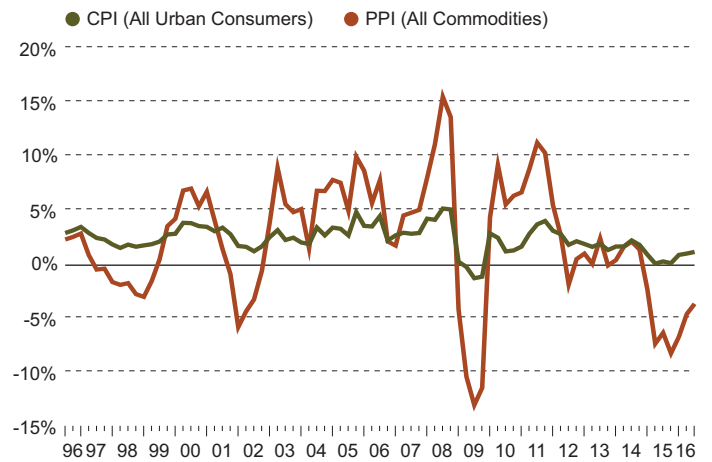
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

jobs reports spurred fears that the economy was stalling, but the June gain may dispel some of those fears. As the U.S. economy approaches full employment, payroll gains can't grow at 200,000 per month indefinitely, let alone the 250,000 rate achieved in much of 2015. The unemployment rate remains below 5%, although it actually bounced up in June from 4.7% to 4.9% as more people rejoined the workforce. The biggest challenge for the labor market is the mismatch between the strong demand for skilled labor and the ample supply of relatively lower-skilled workers.

The conundrum holding back stronger economic growth is the decline in company capital investment in a period of very low interest rates. Non-residential fixed investment fell in both the first and second quarters of 2016, dragged down by the collapse in drilling activity for oil and natural gas. The strong dollar has also hit exports and domestic sales of manufacturing industries exposed to international competition, and weak global growth has suppressed prices for agricultural goods. On a more positive note, the impact of these forces suppressing capital spending has peaked and is fading relative to last year. The Institute for Supply Management's index of manufacturing activity rose back above 50—the line between expansion and contraction—and reached a 16-month high in June, suggesting that manufacturing may have bottomed in the first quarter of the year. Another anomaly impacting GDP growth is the inventory buildup caused by last winter's warm weather. A huge buildup in natural gas stocks was to be expected, but oddly enough, the warm weather spurred excess inventories in wholesalers and retailers, and the correction has slowed demand from manufacturers.

The Brexit vote will likely be a small bump in the road for U.S. trade. U.S. exports of goods and services to the U.K. and the EU constitute just 1% and 3% of GDP, respectively. The damage to U.S. GDP will likely be limited to a few tenths of one percent. The larger impact may come from Brexit's potential to dampen consumer and business confidence and to complicate central governments' attempts to address global economic stagnation.

The European Central Bank (ECB) continued its efforts to stimulate euro-zone economies, where unemployment remains at 10%. The ECB began buying corporate bonds in June, reaching nearly 5 billion euros by the end of the month. The average yield on investment-grade European corporate debt dropped to a record low of less than 1%. Negative-yielding government debt

The Long-Term View

Index	2016 2nd Qtr	Periods ended December 31, 2015			
		Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	2.63	0.48	12.18	7.35	10.03
S&P 500	2.46	1.38	12.57	7.31	9.82
Russell 2000	3.79	-4.41	9.19	6.80	10.50
Non-U.S. Equity					
MSCI EAFE	-1.46	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	0.66	-14.92	-4.80	3.61	—
S&P ex-U.S. Small Cap	-1.30	5.92	5.51	5.33	6.80
Fixed Income					
Barclays Aggregate	2.21	0.55	3.25	4.51	6.15
90-Day T-Bill	0.07	0.05	0.07	1.24	2.93
Barclays Long G/C	6.55	-3.30	6.98	6.45	8.08
Citi Non-U.S. Govt	4.04	-5.54	-1.30	3.05	5.37
Real Estate					
NCREIF Property	2.03	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	6.96	3.20	11.96	7.41	12.13
Alternatives					
CS Hedge Fund	0.59	-0.71	3.55	4.97	—
Cambridge PE*	—	6.69	13.08	11.18	15.74
Bloomberg Commodity	12.78	-24.66	-13.47	-6.43	—
Gold Spot Price	6.88	-10.46	-5.70	7.41	4.02
Inflation – CPI-U	1.22	0.73	1.53	1.86	2.30

*Private equity data is time-weighted return for period. Most recent quarterly data not available. Sources: Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

in the euro zone surged to nearly \$12 trillion. By comparison, U.S. yields look high, suggesting further downward pressure on seemingly rock-bottom U.S. interest rates is possible. The decline in U.S. rates since the start of the year caught most market participants by surprise. The consensus was for the U.S. to embark on a path to gradually higher rates, starting this year. As expectations for rising rates fade, the fear is that the optimism for growth which would have justified higher rates will fade, too.

Recent Quarterly Economic Indicators

	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14	3Q14
Employment Cost–Total Compensation Growth	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%	2.2%
Nonfarm Business–Productivity Growth	1.9%*	-0.6%	-1.7%	2.0%	3.1%	-0.8%	-1.7%	3.1%
GDP Growth	1.2%	0.8%	0.9%	2.0%	2.6%	2.0%	2.3%	5.0%
Manufacturing Capacity Utilization	75.0%	75.3%	75.4%	75.6%	75.5%	75.5%	76.0%	75.7%
Consumer Sentiment Index (1966=100)	92.4	91.5	91.3	90.8	94.2	95.5	89.8	83.0

*Estimate.

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

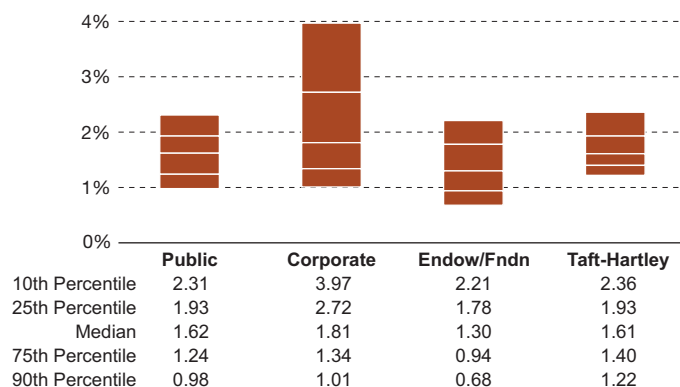
Any Relief in Sight?

FUND SPONSOR | Rufash Lama

A closer look at returns for the quarter from the Callan Fund Sponsor Databases reveals that the median corporate fund bested all other fund types. Corporate funds also had the widest dispersion of returns, and the highest total return as shown by results for funds in the 10th percentile. However, some Taft-Hartley funds outperformed the lowest-performing corporate funds, as shown by returns in the 90th percentile.

The outperformance of corporate funds during the quarter stemmed from their higher exposure to U.S. fixed income, particularly those funds with long duration. At the other end of the spectrum, endowments/foundations lagged all other fund types given their minimal exposure to U.S. fixed income. Higher allocations to non-U.S. equity and hedge funds also dragged down relative performance for endowments/foundations. Over longer time periods (5 and 10 years), compound returns for all fund sponsors have been in the range of 5% to 7%, with endowments/foundations lagging over short- and long-term periods.

Callan Fund Sponsor Returns for the Quarter



Source: Callan

The median funded status of corporate defined benefit plans declined for the quarter, primarily due to the dramatic fall in interest rates. Based on data from actuaries and asset managers, the median and average funded ratio fell by more than 3 percentage points in the quarter, to 76.0% and 76.4%, respectively. Year to date, the median funded status has declined by more than 6 percentage points.

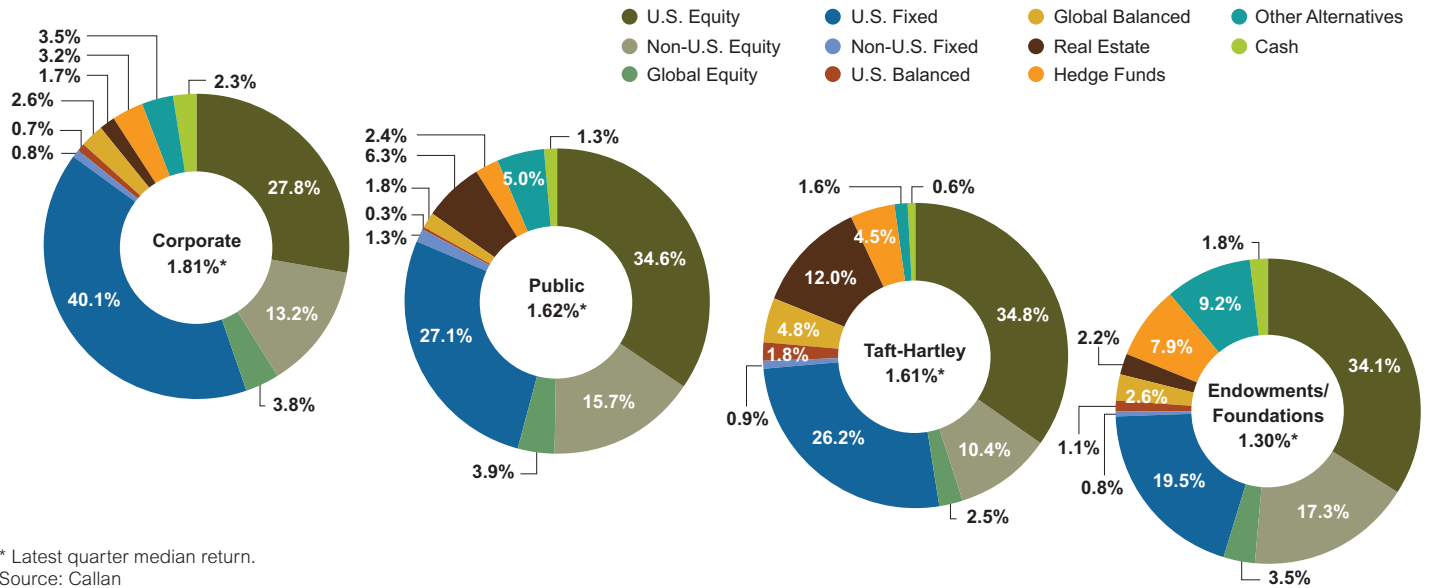
Callan Database Median Returns* for Periods ended June 30, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	1.62	2.98	0.54	6.39	6.42	5.65	5.94
Corporate Funds	1.81	3.88	1.66	6.59	6.62	5.85	6.00
Endowments/Foundations	1.30	2.05	-1.55	5.24	5.53	5.34	5.69
Taft-Hartley	1.61	2.69	0.97	7.12	6.97	5.54	5.68

*Returns less than one year are not annualized.

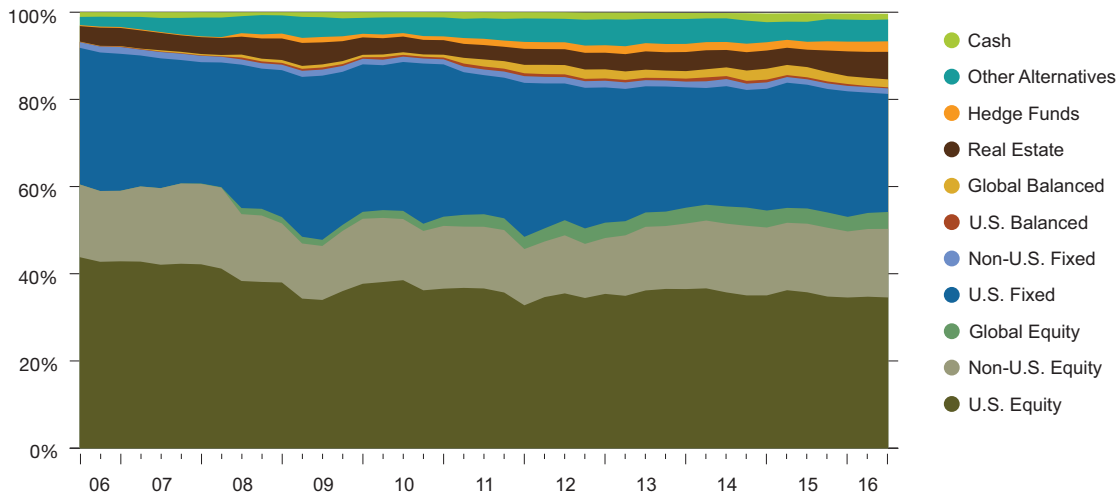
Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance 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.

Callan Fund Sponsor Average Asset Allocation



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.

Greener Grass

U.S. EQUITY | Lauren Mathias, CFA

Though the **S&P 500 Index** ended in positive territory (+2.46%), it was subject to substantial volatility during the quarter. The U.K.'s vote to leave the European Union sent global markets reeling in late June; the S&P 500 fell 5.3% in the first two trading days after the vote. Volatility, as measured by VIX, spiked but remained below values posted in January. Despite uncertainty abroad and the steep drop after Brexit, the S&P 500 ended the quarter only 1.5% below its all-time high achieved in May 2015. Amid the global turmoil, it appears the grass is greener in the U.S.

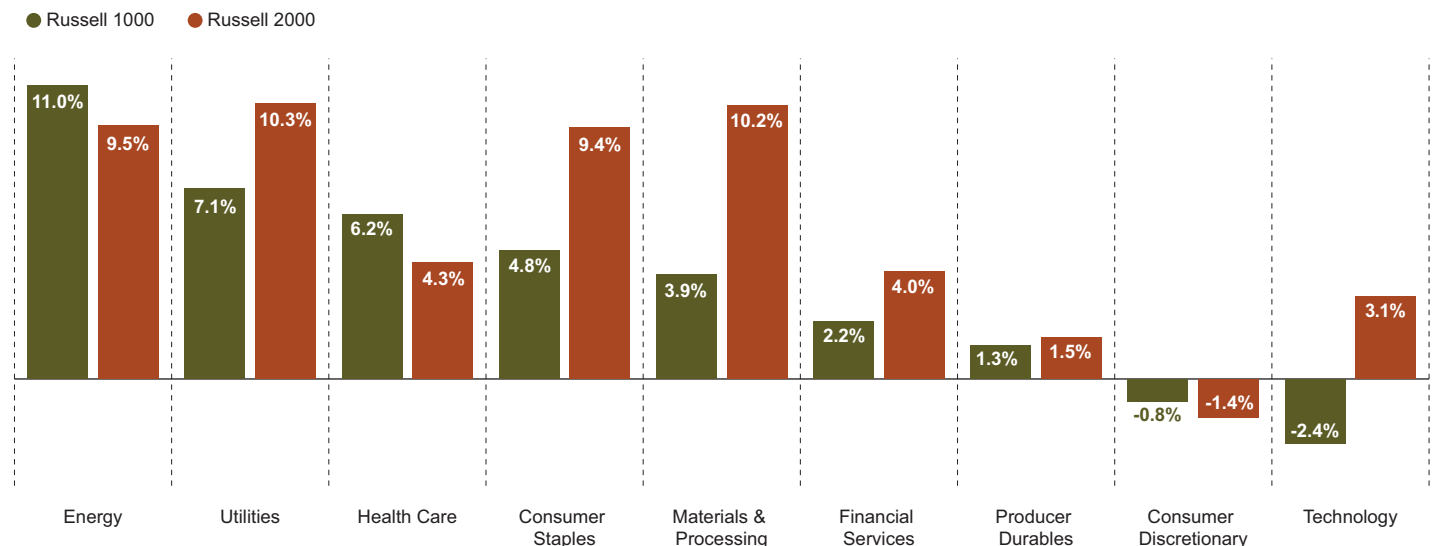
Global markets did not appear to affect domestic production either: Manufacturing activity increased (the ISM Composite Index hit a 16-month high); existing home sales were up 4.5% in May; and retail sales showed strength. But disappointing unemployment figures—4.7% due to a lower labor force

participation rate of 62.6%—and low first-quarter GDP prompted the Fed to keep interest rates at current levels.

After another strong quarter, value remained ahead of growth in all capitalizations (**Russell 2000 Value Index**: +4.31% and **Russell 2000 Growth Index**: +3.24%); the difference was most significant within large capitalizations (**Russell 1000 Value Index**: +4.58% and **Russell 1000 Growth Index**: +0.61%). Smaller was better: micro-, small-, and mid-capitalization companies outpaced large-capitalization stocks (**Russell Microcap Index**: +3.97%, **Russell 2000 Index**: +3.79%, **Russell Midcap Index**: +3.18%, and **Russell 1000 Index**: +2.54%).

With economic uncertainty and lower interest rates in the foreseeable future, defensive and yielding areas of the mar-

Economic Sector Quarterly Performance



Source: Russell Investment Group

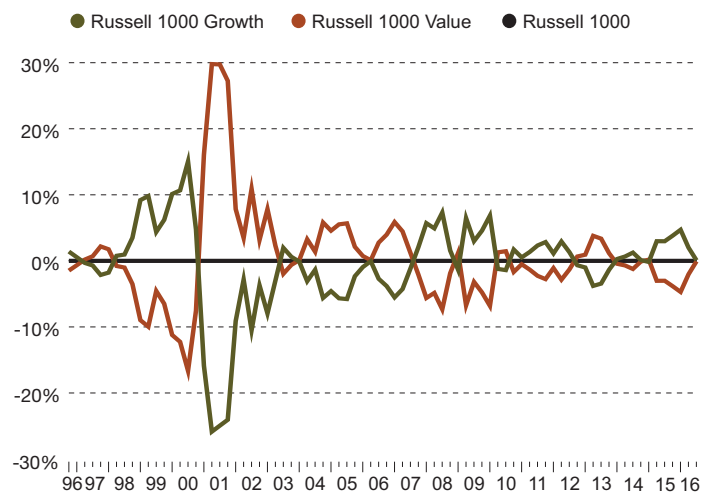
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing 10 sectors.

ket did well: Utilities, Telecommunications, Health Care, and Consumer Staples. Factors like low beta and high dividend yield were in favor and boosted the performance of these sectors. After a long period of poor performance, Energy was by far the leading sector, buoyed by an almost 30% increase in oil prices. Financials lagged, mostly due to a tough June—both the Brexit crisis and absent interest rate hike were the culprits. Health Care and Technology, large sectors in the growth benchmark, were dragged down by the pharmaceuticals/

biotechnology and hardware and equipment industries, respectively. Stock correlations elevated in June, making it challenging for active management; however, levels remain below those experienced in 2015.

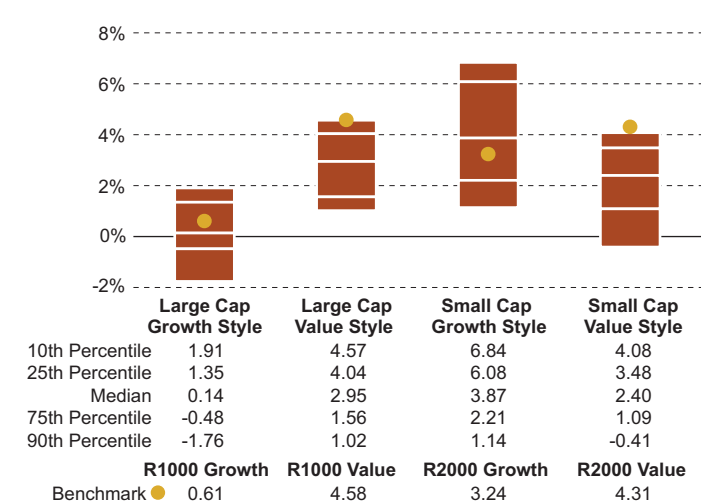
The U.S. equity market managed to escape a tumultuous June with positive results in the full quarter. However, active funds have found it challenging to outpace their respective benchmarks this year—fewer than 50% were able to do so.

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 June 30, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	506	3,007	1,000	800	2,507	2,006
% of Russell 3000	82%	100%	92%	27%	17%	7%
Wtd Avg Mkt Cap (\$bn)	127.80	106.54	114.81	12.03	3.79	1.70
Price/Book Ratio	2.7	2.6	2.7	2.4	2.1	1.9
Forward P/E Ratio	16.6	17.1	17	18.5	18.4	18.7
Dividend Yield	2.2%	2.1%	2.1%	1.8%	1.7%	1.6%
5-Yr Earnings (forecasted)	11.9%	12.0%	12.0%	10.2%	11.7%	12.9%

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

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended June 30, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	1.73	1.44	0.33	11.02	11.74	7.68	6.31
Russell 3000	2.63	3.62	2.14	11.13	11.60	7.40	6.09
Russell 1000	2.54	3.74	2.93	11.48	11.88	7.51	6.02
S&P 500	2.46	3.84	3.99	11.66	12.10	7.42	5.75
Large Cap Growth Style	0.14	-1.72	-0.14	12.60	11.60	8.68	5.75
Russell 1000 Growth	0.61	1.36	3.02	13.07	12.35	8.78	5.50
Large Cap Value Style	2.95	3.34	-0.81	9.20	10.97	6.52	7.07
Russell 1000 Value	4.58	6.30	2.86	9.87	11.35	6.13	6.38
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	1.67	3.33	-1.67	10.90	10.64	8.25	9.24
Russell Midcap	3.18	5.50	0.56	10.80	10.90	8.07	8.68
Mid Cap Growth Style	2.31	-0.02	-5.69	9.24	8.94	8.17	7.86
Russell Midcap Growth	1.56	2.15	-2.14	10.52	9.98	8.12	6.99
Mid Cap Value Style	3.29	4.90	-0.82	10.13	10.67	8.17	9.91
Russell Midcap Value	4.77	8.87	3.25	11.00	11.70	7.79	9.50
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	2.85	2.80	-4.76	9.34	10.24	7.92	9.43
Russell 2000	3.79	2.22	-6.73	7.09	8.35	6.20	6.96
Small Cap Growth Style	3.87	-1.57	-12.40	7.18	8.37	7.55	7.39
Russell 2000 Growth	3.24	-1.59	-10.75	7.74	8.51	7.14	5.91
Small Cap Value Style	2.40	4.64	-2.44	8.63	9.94	7.61	10.00
Russell 2000 Value	4.31	6.08	-2.58	6.36	8.15	5.15	7.73
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Broad Style	2.21	2.85	-4.23	8.86	10.29	9.49	-
Russell 2500	3.57	3.98	-3.67	8.61	9.48	7.32	8.09
Smid Cap Growth Style	3.25	-0.46	-8.43	8.00	8.70	8.35	8.01
Russell 2500 Growth	2.70	-0.03	-7.69	9.06	9.27	7.96	6.76
Smid Cap Value Style	2.39	5.38	-4.11	8.27	9.86	7.95	10.08
Russell 2500 Value	4.37	7.84	0.22	8.14	9.59	6.52	8.77
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	-0.88	0.98	0.99	11.18	14.59	9.98	-
Consumer Staples	4.94	10.42	18.31	15.50	15.49	12.63	-
Energy	10.94	14.41	-8.17	-3.18	-0.85	3.18	-
Financial Services	2.35	-1.03	-1.30	9.00	11.42	0.99	-
Health Care	6.04	-1.44	-5.23	16.22	17.08	11.43	-
Materials & Processing	4.70	10.67	1.01	8.70	6.88	6.17	-
Producer Durables	1.28	6.10	4.35	11.33	10.81	6.76	-
Technology	-2.06	-0.37	2.44	14.67	11.81	9.83	-
Utilities	7.34	23.69	28.37	13.60	12.63	8.50	-

*Returns less than one year are not annualized.

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

Fasten Your Seat Belts

NON-U.S. EQUITY | Lyman Jung

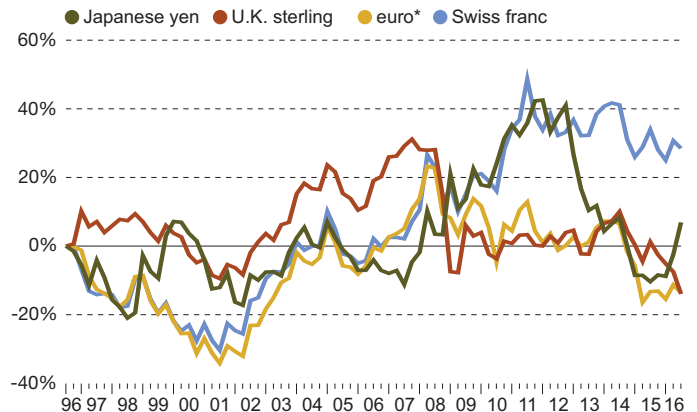
For the second consecutive quarter, non-U.S. equity markets endured a bout of extreme volatility. After a tepid start to the quarter, markets reacted to the surprise June 23 Brexit referendum to leave the European Union. Global markets lost \$2 trillion the day after, but quickly stabilized. In this uncertain environment, we expect volatility to continue.

Despite the vote, the **MSCI ACWI ex USA Index** ended the quarter down only slightly (-0.64%), buoyed by accommodative central bank policies and a strong rebound in commodity prices. Energy (+8.05%) led the charge followed by Health Care (+4.29%), as investors favored defensive, dividend-paying stocks amid the turmoil. Economic and interest-rate-sensitive sectors fared worst, with Consumer Discretionary (-6.87%) and Financials (-4.31%) leading the plunge.

Around the broader markets, the **MSCI Emerging Markets Index** (+0.66%) bested its developed counterpart in the **MSCI World ex USA Index** (-1.05%). Without Canada (+3.40%), one of the best-performing countries in developed markets, the **MSCI EAFE Index** was even more depressed (-1.46%). The **MSCI ACWI ex USA Growth Index** continued an eight-quarter trend of outperforming the Value Index. Moreover, the **MSCI ACWI ex USA Small Cap** (-0.87%) topped its developed cousin, the **MSCI World ex USA Small Cap Index** (-1.28%).

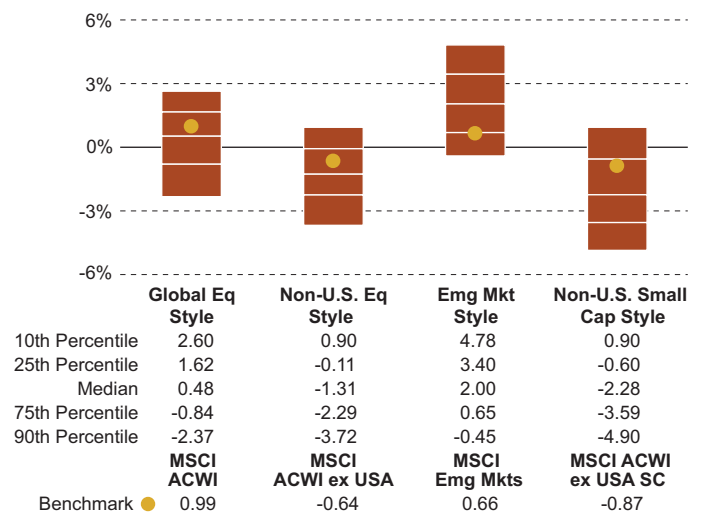
As Brexit dominated the headlines, European equity markets fell sharply only to rally in the final few days of the quarter. The **MSCI Europe Index** finished down 2.69%. Amid a general move to safe-haven countries, Switzerland (+2.03%) was a top-performer. Italy (-10.45%) and Spain (-7.67%) were among the worst mainly due to double-digit declines in banks burdened by souring loans and the potential loss of the U.K. as the financial center. Regionally, European sectors performed in line with the rest of the developed world. Energy stocks contributed 12.51% thanks to oil at nearly \$50. Conversely, Consumer Discretionary and Financials tumbled 11.10% and 10.82%, respectively,

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



*German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

weighed down by recession fears and concerns about a slowdown in finance and investment activity.

In contrast to Europe, the **MSCI Pacific Index** (+0.87%) fared much better, boosted by Japan (+1.01%) and New Zealand (+5.85%). While Japan was positive on a U.S. dollar-return basis, on a local-return basis it fell 7.80% because the yen

NON-U.S. EQUITY (Continued)

surged 10% in the quarter—despite operating in a negative interest rate environment. The yen has been bolstered by its re-emergence as a haven currency with an uncertain Europe and also by the dollar's recent weakness after the Federal Reserve pared back expectations of U.S. interest rate increases. New Zealand gained on improved sentiment partly due to a reported trade surplus that was more than double analysts' forecasts.

Emerging market countries produced a wide spectrum of returns, but closed out the quarter slightly ahead (MSCI Emerging Market Index: +0.66%). Commodity producers such as Brazil (+13.90%) and Russia (+4.05%) benefited from the rebound in oil prices, continuing their first-quarter rally. The former was also propped up by an impeachment motion against President Dilma Rousseff that sent the equity market into a frenzied rally. Stocks in China ended the quarter nearly flat (+0.11%) thanks to a slower predicted growth of 6.6%, the weakest since the Global Financial Crisis. Further, concerns about the amount of debt on corporate balance sheets and recent policy changes

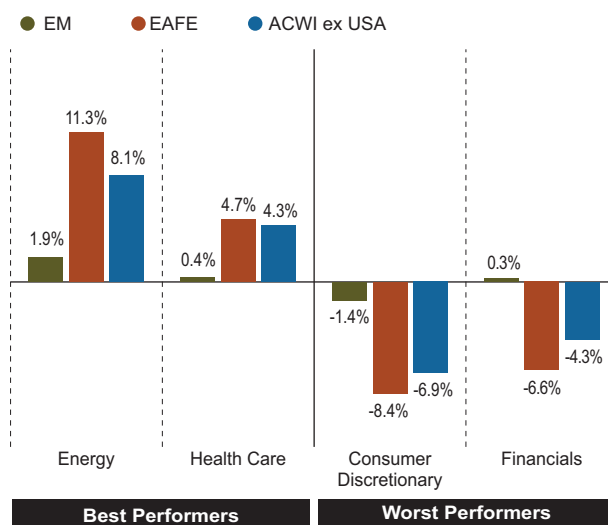
Quarterly Return Attribution for Non-U.S. Developed Countries (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	0.46%	3.79%	-3.20%	5.13%
Austria	-9.99%	-7.67%	-2.51%	0.12%
Belgium	2.29%	4.92%	-2.51%	1.05%
Canada	3.40%	3.82%	-0.40%	6.82%
Denmark	-0.58%	1.84%	-2.37%	1.40%
Finland	-2.12%	0.40%	-2.51%	0.69%
France	-4.31%	-1.85%	-2.51%	6.79%
Germany	-5.57%	-3.14%	-2.51%	6.11%
Hong Kong	0.94%	0.96%	-0.02%	2.34%
Ireland	-9.87%	-7.55%	-2.51%	0.33%
Israel	-3.80%	-1.72%	-2.38%	0.55%
Italy	-10.45%	-8.14%	-2.51%	1.38%
Japan	1.01%	-7.80%	9.56%	16.43%
Netherlands	-5.06%	-2.72%	-2.51%	2.24%
New Zealand	5.85%	3.19%	2.58%	0.13%
Norway	2.35%	3.55%	-1.16%	0.45%
Portugal	-2.76%	-0.25%	-2.51%	0.11%
Singapore	0.35%	0.29%	0.05%	0.96%
Spain	-7.67%	-5.29%	-2.51%	2.08%
Sweden	-5.38%	-1.11%	-4.32%	1.95%
Switzerland	2.03%	3.80%	-1.70%	6.55%
U.K.	-0.73%	6.73%	-6.99%	13.83%

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

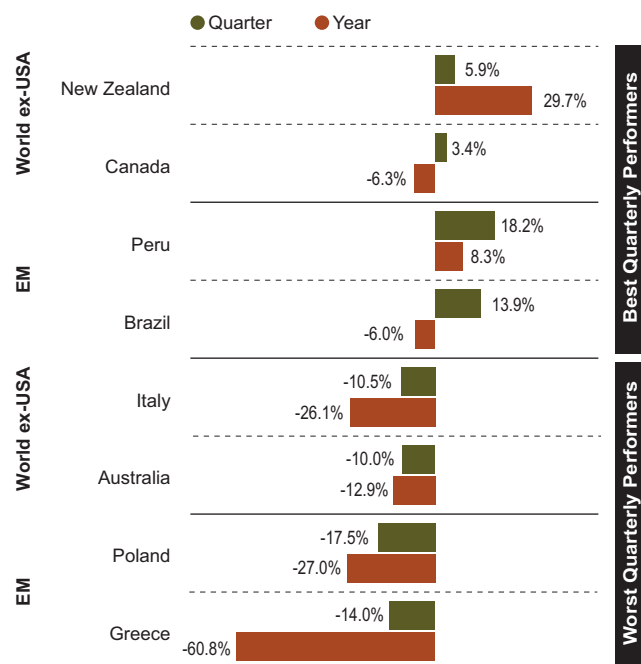
led to questions on how much stimulus the government would provide to sustain growth. Elsewhere, stocks in India (+3.72%) advanced on faster-than-expected growth and earnings of some of its biggest companies, bolstered by optimism about the nation's economic recovery.

Quarterly Returns: Strong and Struggling Sectors



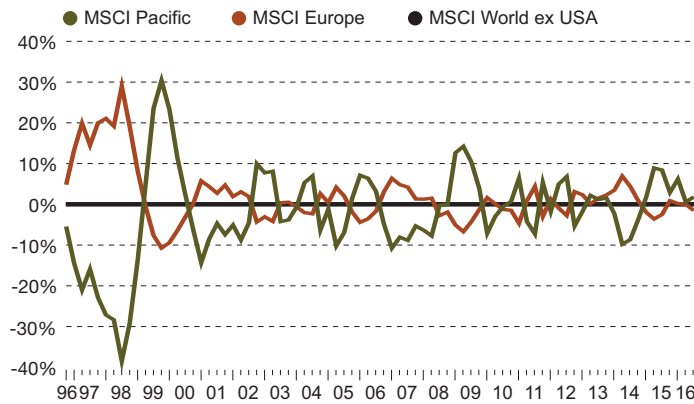
Source: MSCI

Quarterly and Annual Country Performance Snapshot



Source: MSCI

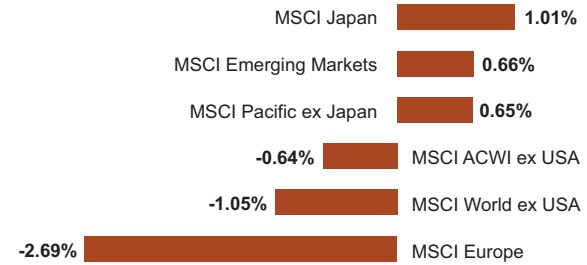
Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

Style Median and Index Returns* for Periods ended June 30, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	0.48	-0.92	-4.47	7.16	7.08	5.37	6.31
MSCI World	1.01	0.66	-2.78	6.95	6.63	4.43	4.86
MSCI ACWI	0.99	1.23	-3.73	6.03	5.38	4.26	4.98
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Style	-1.31	-3.49	-9.43	3.27	2.83	2.91	6.25
MSCI World ex USA	-1.05	-2.98	-9.84	1.88	1.23	1.63	4.47
MSCI ACWI ex USA	-0.64	-1.02	-10.24	1.16	0.10	1.87	4.96
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI Europe ex UK	-3.53	-6.02	-10.80	2.58	0.66	1.56	4.52
MSCI Japan	1.01	-5.58	-8.94	2.71	4.21	0.14	2.32
MSCI Japan (local)	-7.80	-19.47	-23.66	3.82	9.31	-0.93	1.00
MSCI Pacific	0.87	-2.94	-8.19	2.16	2.98	1.72	4.10
MSCI Pacific (local)	-4.29	-13.22	-17.85	4.25	7.59	0.59	2.38
MSCI Pacific ex Japan	0.65	2.47	-6.75	1.08	0.86	5.43	8.89
MSCI Pacific ex Japan (local)	2.64	0.47	-5.02	5.64	5.69	5.01	6.69
MSCI United Kingdom	-0.73	-3.05	-12.14	0.67	1.71	1.43	4.22
MSCI United Kingdom (local)	6.73	6.89	3.36	5.00	5.50	4.78	4.57
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	2.00	6.57	-8.83	-0.07	-2.06	4.88	10.67
MSCI Emerging Markets	0.66	6.41	-12.05	-1.56	-3.78	3.54	9.12
MSCI Emerging Markets (local)	0.70	3.45	-7.70	3.70	2.02	5.72	9.92
MSCI Frontier Markets	0.47	-0.47	-12.09	1.00	1.45	0.18	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	-2.28	-3.11	-3.61	7.82	6.35	5.52	10.28
MSCI World Small Cap	1.61	2.29	-3.76	7.60	6.80	5.58	8.51
MSCI ACWI Small Cap	1.51	2.22	-4.72	6.79	5.83	6.00	8.60
MSCI World ex USA Small Cap	-1.28	-0.69	-3.35	6.34	3.61	3.33	8.17
MSCI ACWI ex USA Small Cap	-0.87	-0.20	-5.46	4.93	2.28	4.08	8.71

*Returns less than one year are not annualized.
Sources: Callan, MSCI.

Rally Across the Board

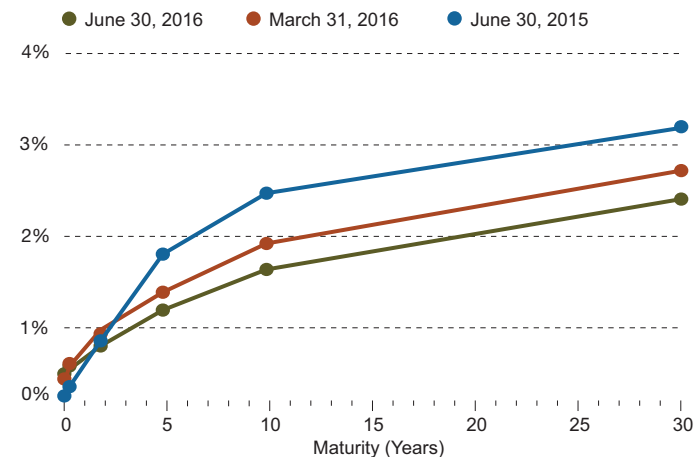
U.S. FIXED INCOME | Nate Wong, CFA

Treasuries rallied in a flight to quality during the second quarter as U.S. economic data and trepidation surrounding the U.K.'s Brexit dominated activity. The Fed changed to a more dovish tone as the quarter ended. The **Barclays U.S. Aggregate Index** increased 2.21% while the **Barclays High Yield Corporate Index** again outpaced it with a 5.52% gain.

The surprising vote in the U.K. to exit the European Union triggered an immediate run on risk assets. The panic was short-lived and credit spreads ended the quarter marginally tighter as more-rational investors assessed the broader strength of the U.S. economy and the relatively attractive opportunities within the U.S. fixed income markets.

Following the Brexit vote, the Fed elected not to make any changes at its June meeting. Its forward-looking dot plot now implies a reduced number of rate hikes from four to three, while the long-term projection for the short-term rate was lowered from 3.25% to 3.0%.

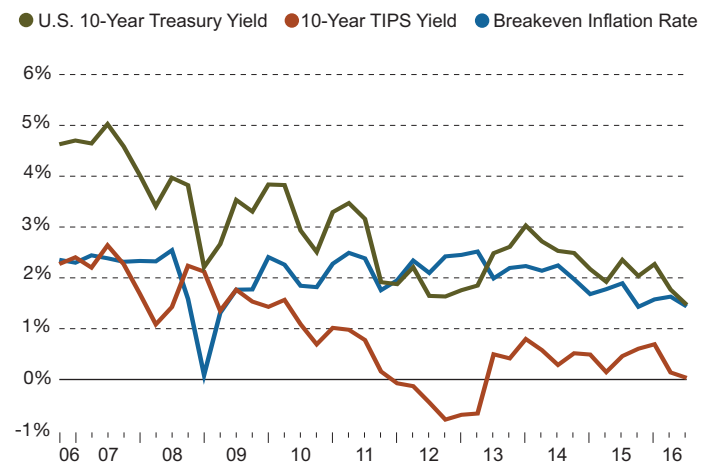
U.S. Treasury Yield Curves



Source: Bloomberg

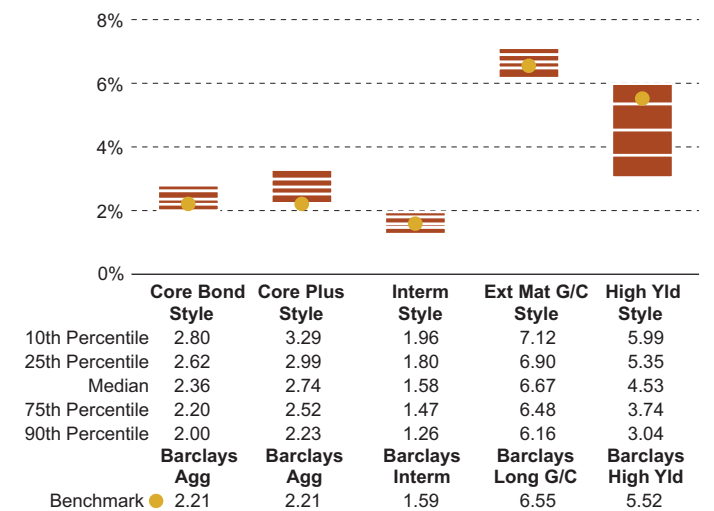
Yields declined across the maturity spectrum with the 10-year yield closing the quarter at 1.47%, its lowest level in nearly three years. Weak economic data and the negative yield environment around the globe contributed to downward pressure on U.S. yields. The 2- to 30-year spread tightened to 170 bps by the end of the quarter. Treasury returns were strong, particularly on the

Historical 10-Year Yields



Source: Bloomberg

Callan Style Group Quarterly Returns



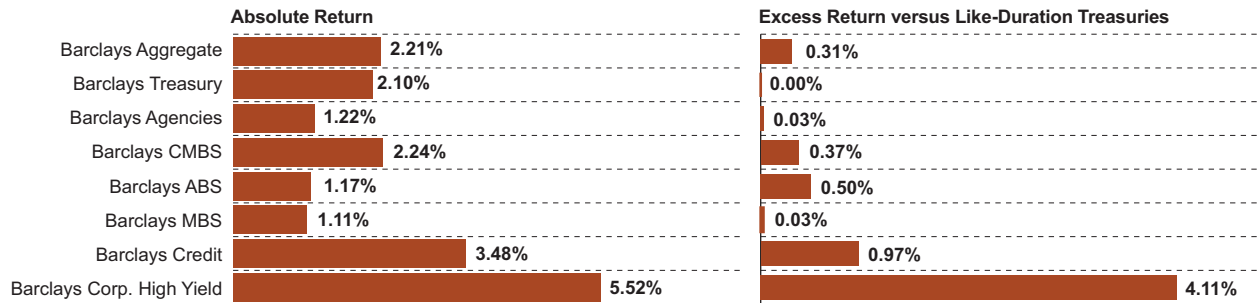
Sources: Barclays, Callan

long end of the curve, with 30-year Treasuries gaining 7.24%. All sectors rallied and produced positive returns, with investment-grade corporates leading the way. Inflation-protected securities trailed their nominal counterparts but continued their strong performance for the year.

Corporate credit performed well across the quality spectrum, gaining 3.48% and outperforming Treasuries by 97 bps on a duration-adjusted basis. Companies took advantage of low rates, with new issuance of \$350 billion during the quarter.

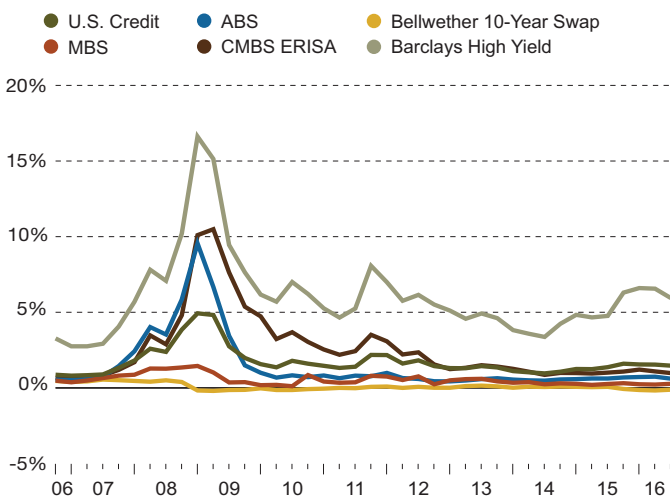
On a duration-adjusted basis, industrials outperformed utilities and financials. Corporate spreads were generally flat before experiencing some widening in reaction to the Brexit and ended the quarter at 156 bps. MBS gained 1.11%, outperforming like-duration Treasuries by 3 bps. MBS spreads also widened as the quarter closed on prepayment fears. High-yield bonds continued to rebound, gaining 5.52% and outperforming like-duration Treasuries by 411 bps. New issuance amounted to \$84 billion, returning to more normal levels and more than doubling the amount in the prior quarter.

Fixed Income Index Quarterly Returns



Source: Barclays

Effective Yield Over Treasuries



Source: Barclays

U.S. Fixed Income Index Characteristics as of June 30, 2016

Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Barclays Aggregate	1.91	5.47	7.77
Barclays Universal	2.42	5.36	7.63
Barclays Govt/Credit	1.85	6.69	8.96
1-3 Year	0.89	1.91	1.98
Intermediate	1.41	4.08	4.44
Long-Term	3.36	15.59	24.36
Barclays Long Credit	4.16	13.99	23.99
Barclays Corp High Yield	7.27	4.26	6.30
Barclays TIPS	1.47	5.26	8.71
Barclays Muni Bond 1-5 Year	0.94	2.67	3.16
Barclays Muni 1-10 Year	1.20	3.97	5.81
Barclays Municipal	1.61	5.55	13.06

Source: Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended June 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Broad Fixed Income							
Core Bond Style	2.36	5.39	6.20	4.37	4.25	5.62	5.54
Core Bond Plus Style	2.74	5.68	5.45	4.48	4.62	6.00	6.09
Barclays Aggregate	2.21	5.31	6.00	4.06	3.76	5.13	5.08
Barclays Universal	2.53	5.68	5.82	4.19	4.01	5.30	5.33
Long-Term							
Extended Maturity Credit Style	6.77	14.26	14.09	9.26	9.15	8.65	--
Barclays Long Credit	6.65	13.92	13.76	8.70	8.45	8.14	7.78
Extended Maturity Gov/Credit Style	6.67	14.56	15.48	9.46	9.61	9.00	8.22
Barclays Long Gov/Credit	6.55	14.33	15.72	9.33	9.18	8.42	7.88
Intermediate-Term							
Intermediate Style	1.58	3.95	4.44	3.19	3.23	4.92	4.92
Barclays Intermediate Gov/Credit	1.59	4.07	4.33	2.95	2.90	4.48	4.52
Short-Term							
Defensive Style	0.72	1.76	1.95	1.57	1.49	3.13	3.30
Barclays Gov/Credit 1-3 Year	0.67	1.65	1.59	1.22	1.10	2.80	3.03
Bank Loans							
Bank Loan Style	2.54	4.22	1.99	3.29	4.29	4.67	4.85
Credit Suisse Leveraged Loans	2.86	4.23	0.93	3.03	3.87	4.10	4.51
High Yield							
High Yield Style	4.53	7.34	1.10	4.37	5.97	7.52	7.95
Barclays Corp High Yield	5.52	9.06	1.62	4.18	5.84	7.56	7.93
Unconstrained							
Unconstrained Fixed Style	1.50	1.74	0.92	2.11	2.77	4.68	6.31
90 Day T-Bill + 3%	0.81	1.63	3.19	3.09	3.09	4.04	4.44
Stable Value							
Stable Value Style	0.45	0.91	1.81	1.79	2.14	3.03	3.82
iMoneyNet Mutual Fund Avg	0.03	0.05	0.06	0.03	0.03	0.94	--
TIPS							
Inflation-Linked Style	1.74	6.35	4.30	2.27	2.70	4.82	5.60
Barclays TIPS	1.71	6.24	4.35	2.31	2.63	4.75	5.49
Municipal							
Short Municipal Style	0.43	0.82	1.17	0.94	1.02	1.95	2.07
Barclays Municipal 1-5 Year	0.75	1.55	2.60	2.03	1.93	3.30	3.26
Intermediate Municipal Style	2.06	3.54	6.19	4.29	4.10	4.23	4.21
Barclays Municipal 1-10 Year	1.44	2.70	4.88	3.62	3.45	4.33	4.21
Long Municipal Style	2.63	4.42	8.10	5.93	5.76	5.43	5.42
Barclays Municipal	2.61	4.33	7.65	5.58	5.33	5.13	5.10

*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

How Low Can Rates Go?

NON-U.S. FIXED INCOME | Kevin Machiz, CFA, FRM

Sovereign yields fell in the second quarter, driven largely by a knee-jerk reaction to Brexit, sentiment to reduce risk, and globally loose monetary policy. That led major global bond indices to show positive returns for the quarter.

In addition, most major global currencies weakened against the U.S. dollar during the quarter. The British pound was hit hardest, plummeting 7% versus the U.S. dollar. While the U.S. dollar broadly strengthened immediately following Brexit, some of those gains were quickly erased over the remainder of the quarter. The Japanese yen took an opposite tack among global currencies during the quarter and soared 10% versus the U.S. dollar by the end of the period. The yen's tendency to strengthen in risk-off environments proved a tailwind to unhedged foreign bond returns for the quarter. The euro was weaker versus the

Quarterly Return Attribution for Non-U.S. Gov't Indices (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	0.19%	3.51%	-3.20%	2.17%
Austria	-0.02%	2.56%	-2.51%	1.76%
Belgium	0.81%	3.40%	-2.51%	2.90%
Canada	1.58%	1.99%	-0.40%	2.29%
Denmark	1.51%	3.97%	-2.37%	0.79%
Finland	-0.18%	2.39%	-2.51%	0.70%
France	0.32%	2.90%	-2.51%	11.31%
Germany	0.27%	2.85%	-2.51%	8.49%
Ireland	-0.92%	1.63%	-2.51%	0.91%
Italy	-2.08%	0.45%	-2.51%	10.81%
Japan	12.91%	3.06%	9.56%	35.77%
Malaysia	-1.89%	1.38%	-3.22%	0.54%
Mexico	-5.45%	1.79%	-7.11%	0.99%
Netherlands	0.42%	3.01%	-2.51%	2.76%
Norway	-0.08%	1.08%	-1.16%	0.29%
Poland	-5.79%	0.27%	-6.04%	0.67%
Singapore	0.56%	0.51%	0.05%	0.42%
South Africa	5.03%	4.58%	0.43%	0.53%
Spain	-0.33%	2.23%	-2.51%	6.22%
Sweden	-1.65%	2.79%	-4.32%	0.57%
Switzerland	-0.83%	0.88%	-1.70%	0.27%
U.K.	-0.73%	6.74%	-6.99%	8.83%

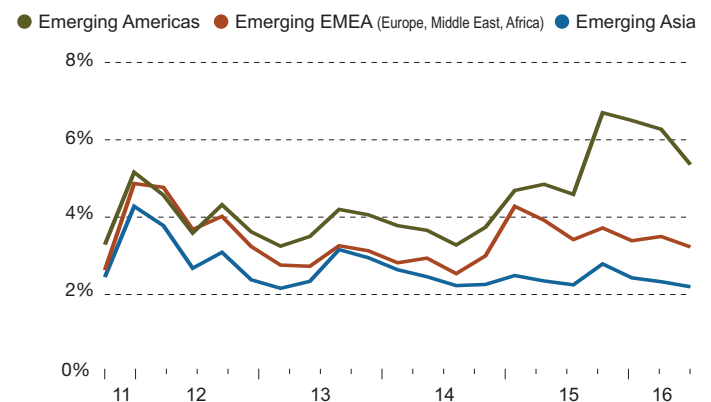
Source: Citigroup

dollar (-2.51%). The ECB maintained its dovish stance, keeping interest rates negative and proceeding with asset purchases announced in March. Interest rates fell across developed markets, leading to strong bond returns. The **Barclays Global Aggregate** gained 2.89% (+2.51% hedged).

In Germany, 10-year yields fell 28 bps and joined the rapidly growing universe of negative-yielding bonds. Similarly, 10-year yields in Japan, which were already negative, fell a further 19 bps as the Bank of Japan maintained its easy monetary policy stance. The 10-year yield in the U.K. led the pack following Brexit, falling 55 bps, though it remained in positive territory by the end of the quarter. Market expectations moved firmly toward relatively easier monetary policy in the U.K.

Emerging market bonds continued to rebound in the second quarter despite a bumpy ride. Falling bond yields were a tailwind and narrowing sovereign credit spreads further contributed to returns. The hard currency **JPM EMBI Global Diversified Index** gained 5.02%. Hard currency returns in most countries were positive, led by Venezuela. Bonds there have suffered extreme volatility as markets speculate on the timing of the country's default. The local currency **JPM GBI-EM Global Diversified** returned 2.96%, as local yields in emerging markets generally followed those in developed markets lower. Brazil was the leader for returns in local markets as yields fell and

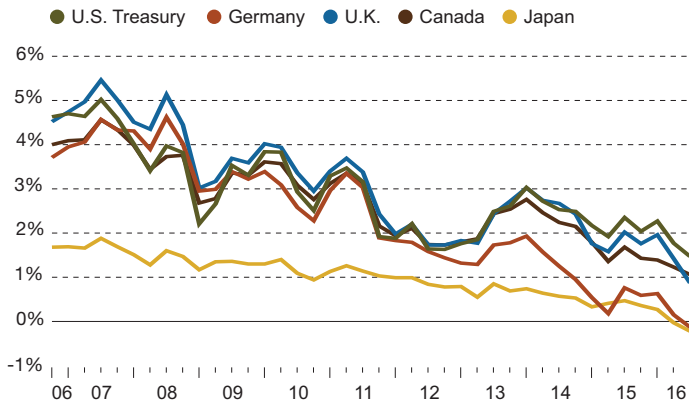
Emerging Spreads Over Developed (By Region)



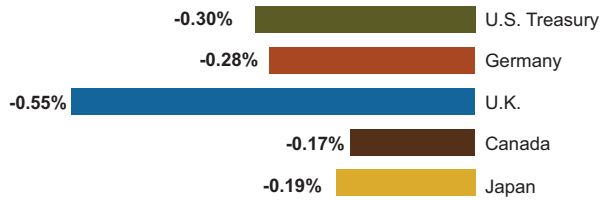
Source: Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



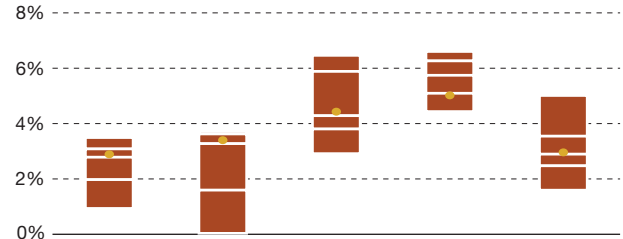
Change in 10-Year Yields from 1Q16 to 2Q16



Source: Bloomberg

the currency strengthened. During the quarter, Brazil's President Dilma Rousseff was suspended from the presidency during her impeachment trial. The market in Brazil has experienced volatility as the political future of the country is being determined.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yld	Em Debt USD DB	Em Debt Local
10th Percentile	3.52	3.75	6.82	6.63	5.04
25th Percentile	3.11	3.65	6.40	6.29	3.57
Median	2.81	3.30	4.43	5.77	2.92
75th Percentile	2.00	1.62	4.02	5.12	2.50
90th Percentile	0.96	0.06	3.15	4.46	1.62
Barclays GI Agg Benchmark	2.89	3.40	4.43	5.02	2.96

Sources: Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended June 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income							
Global Fixed Income Style	2.81	8.34	7.56	2.84	2.20	4.89	6.54
Barclays Global Aggregate	2.89	8.96	8.87	2.80	1.77	4.40	5.50
Global Fixed Income Style (hedged)	2.67	5.87	7.22	5.49	5.29	5.60	5.83
Barclays Global Aggregate (hedged)	2.51	5.87	7.37	5.15	4.76	5.03	4.92
High Yield							
Global High Yield Style	4.43	7.59	1.16	2.90	4.94	7.00	9.08
Barclays Global High Yield	4.43	8.73	3.76	4.35	5.71	7.80	8.70
Non-U.S. Fixed Income							
Non-U.S. Fixed Income Style	3.30	11.49	10.12	2.17	1.04	4.39	6.71
Barclays Global Agg ex US	3.40	11.94	11.24	1.85	0.34	3.83	5.85
Emerging Markets Fixed Income							
Emerging Debt Style (US\$)	5.77	11.06	8.44	5.62	5.99	8.35	10.42
JPM EMBI Global Diversified	5.02	10.31	9.79	7.20	6.46	7.97	9.16
Emerging Debt Style (local)	2.92	13.64	1.62	-3.12	-2.10	5.04	7.18
JPM GBI-EM Global Diversified	2.96	14.30	2.24	-3.49	-2.19	5.74	--
Emerging Debt Blend Style	4.03	11.28	4.99	1.14	2.77	8.01	11.56
JPM EMBI GI Div/JPM GBI-EM GI Div	3.99	12.34	6.11	1.82	2.14	6.94	--
Emerging Debt Corporate Style	4.45	8.60	4.93	5.71	5.32	--	--
JPM CEMBI	4.27	9.02	5.78	5.72	5.45	7.45	--

*Returns less than one year are not annualized.

Sources: Barclays, Callan, JPMorgan Chase.

It Really Is Location, Location, Location

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index** gained 2.03% during the second quarter, the lowest return since the first quarter of 2010, recording a 1.19% income return and a 0.84% appreciation return. Industrial (+2.90%) and retail (+2.17%) topped property sector performance for the quarter while hotels (+1.46%) brought up the rear. The West region was the strongest performer, up 2.46%, while the East was the worst at 1.73%. Transaction volume hit \$9 billion, which represents a 25% increase over the second quarter of 2015. Appraisal capitalization rates increased to 4.60%, up from an all-time low of 4.55% last quarter. Occupancy rates also increased and hit a 15-year high at 93.2%. All property types have seen occupancy increase for the year, though retail was down 20 bps for the quarter.

The preliminary return for the **NFI-ODCE Index** was 1.91%, comprising a 0.90% income return and a 1.01% appreciation return. This marks a decrease of 5 bps from last quarter's return and a new low since 2010. The U.S. real estate market has become increasingly attractive and has captured nearly 30% of global capital allocations in 2016. Investors are flooding into the U.S. due to low government bond yields globally, uncertainty caused by the Brexit vote in late June, and concerns about China's slowing growth. According to Preqin, which provides data on the alternative assets industry, the amount of dry powder for real estate investing globally increased to \$234 billion in the quarter, up 11.4% from year-end 2015.

The **FTSE EPRA/NAREIT Developed REIT Index (USD)** overcame the shock of Brexit and gained 3.74%, while U.S. REITs tracked by the **FTSE NAREIT Equity Index** surged ahead 6.96%.

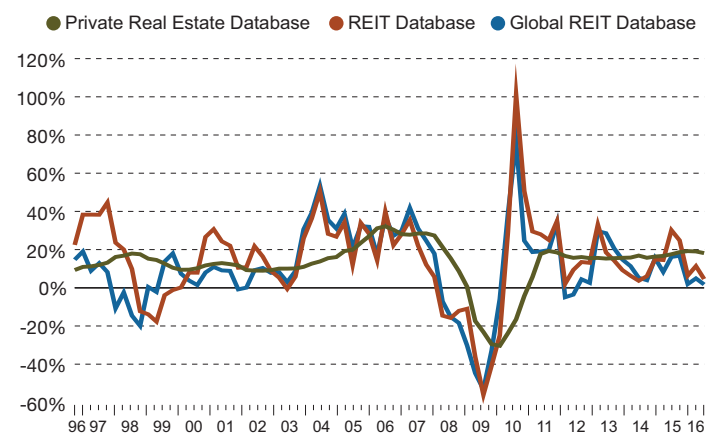
In the U.S., the strong performance of REITs was attributed to investors in search of yield. After the Brexit vote cast doubt on a Fed rate increase, global bond yields compressed 25 bps, making high-yielding REITs more attractive. Data centers (+20.59%), industrial (+15.38%), and infrastructure (+15.33%) were the

best-performing sectors. Self-storage (-5.76%) suffered a sharp fall from grace and was the worst performer in the second quarter after being the strongest performer in the first. Strong data center performance was driven by robust tenant demand and less economic sensitivity. Conversely, self-storage assets with more acute economic sensitivity struggled due to fears of slowing growth. As of June 30, U.S. REITs were trading at a 7.1% premium to net asset value (NAV), contrasting sharply with U.K. REITs, which were trading at a 21.6% discount to NAV.

Uncertainty over the Brexit vote—and its surprising result—had a tremendous effect on real estate in the U.K. compared to continental Europe. According to Cushman & Wakefield, investment volume in the U.K. was down 25% year-to-date compared to 2015, versus a 10% increase in the rest of the EU.

CMBS issuance for the quarter was \$10.8 billion, down sharply from the second quarter of 2015 (\$26.0 billion) and first quarter of 2016 (\$19.3 billion). The decline was attributed to continued concerns over economic instability, including the Brexit vote; only \$800 million in CMBS was issued in June.

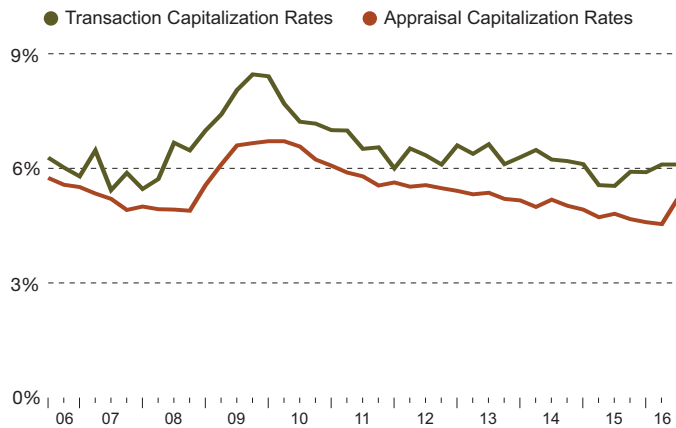
Rolling One-Year Returns



Source: Callan

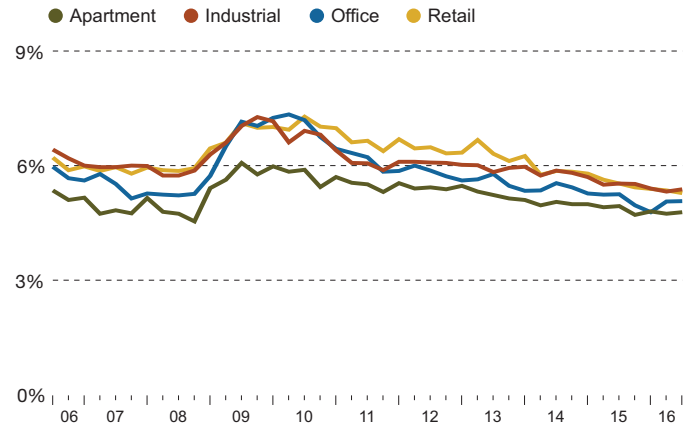
REAL ESTATE (Continued)

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.

Callan Database Median and Index Returns* for Periods ended June 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Private Real Estate							
Real Estate Database (net of fees)	2.17	4.38	11.86	13.09	12.23	4.89	7.36
NCREIF Property	2.03	4.29	10.64	11.61	11.51	7.40	8.91
NFI-ODCE (value wtd. net)	1.91	3.89	10.80	11.97	11.66	5.19	6.95
Public Real Estate							
REIT Database	5.91	11.24	23.23	13.97	12.99	8.24	12.57
FTSE NAREIT Equity	6.96	13.38	24.04	13.58	12.60	7.45	11.29
Global Public Real Estate							
Global REIT Database	2.96	7.74	10.87	9.50	9.24	5.56	10.14
FTSE EPRA/NAREIT Developed REIT	3.74	9.38	12.57	8.95	8.63	5.00	9.81
Global ex U.S. Public Real Estate							
Global ex-U.S. REIT Database	0.50	4.36	0.47	4.98	5.50	3.12	--
EPRA/NAREIT Dev REITs ex-U.S.	0.68	5.91	1.40	4.26	4.97	3.12	9.31

*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Sticker Shock

PRIVATE EQUITY | Gary Robertson

In fundraising, *Private Equity Analyst* reports that second-quarter commitments totaled \$102.2 billion with 196 new partnerships formed. The number of funds raised increased by only 11% from 177 in the first quarter, but the dollar volume rocketed 92% from \$53.2 billion. Distressed debt surged to \$13.3 billion from only \$2.4 billion in the first quarter of 2016. Venture capital also saw a large jump of \$14.6 billion from only \$8.9 billion in the first quarter.

According to *Buyouts* newsletter, the investment pace by funds into companies totaled 356 transactions, bringing the first-half total to 816. The deal count is down by 86 transactions (19%) from the first quarter, and 216 transactions (21%) from the first half of 2015. The announced aggregate dollar volume in the second quarter was \$37.6 billion, and \$95.8 billion for the first half. The announced volume is down by \$20.6 billion (35%) from the first quarter, but up \$26 billion (27%) year-to-date. Only six deals with announced values of \$1 billion or more closed in the second quarter, down from 12 in the first quarter.

According to the National Venture Capital Association, new investments in venture capital companies totaled 961 rounds and \$15.3 billion in announced volume. The number of rounds decreased from 1,011 in the first quarter, but the dollar volume jumped from \$12.7 billion, primarily due to a \$3.5 billion expansion investment in Uber.

Funds Closed January 1 to June 30, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent*
Venture Capital	201	23,441	15%
Buyouts	119	102,687	66%
Subordinated Debt	9	2,397	2%
Distressed Debt	11	15,568	10%
Secondary and Other	10	5,513	4%
Fund-of-funds	23	5,767	4%
Totals	373	155,373	100%

Source: Private Equity Analyst

*Totals more than 100% due to rounding.

Regarding exits, *Buyouts* reports that there were 118 private M&A exits of buyout-backed companies, with 35 deals disclosing values totaling \$24.6 billion. The M&A exits count was down from 140 in the first quarter, but the announced value increased from \$15.6 billion. There were three buyout-backed IPOs floating an aggregate \$1.6 billion—a recovery from no IPOs in the first quarter.

Venture-backed M&A exits totaled 64 transactions, with 11 disclosing a total dollar volume of \$9.0 billion. The number of private sale exits declined from 91 in the first quarter, but the announced dollar volume increased from the first quarter's \$5.2 billion, driven by a single \$5.8 billion biotechnology exit. There were 12 VC-backed IPOs in the second quarter with a combined float of \$893.9 million. For comparison, the first quarter of 2016 had 6 IPOs and total issuance of \$574.5 million.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through December 31, 2015*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	2.1	13.8	22.0	16.5	11.1	4.7	24.3
Growth Equity	3.3	9.2	13.6	11.3	11.8	9.8	14.3
All Buyouts	2.4	8.5	13.3	12.3	11.2	11.8	12.8
Mezzanine	0.5	5.2	9.5	10.7	9.6	7.8	9.5
Distressed	-0.1	1.8	9.2	9.4	9.6	10.7	10.8
All Private Equity	2.1	8.6	14.1	12.4	11.0	9.6	13.8
S&P 500 Index	7.0	1.4	15.1	12.6	7.3	5.0	8.2
Russell 3000	6.3	0.5	14.7	12.2	7.4	5.4	8.3

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/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.

Caution as Britannia Waives the Rule

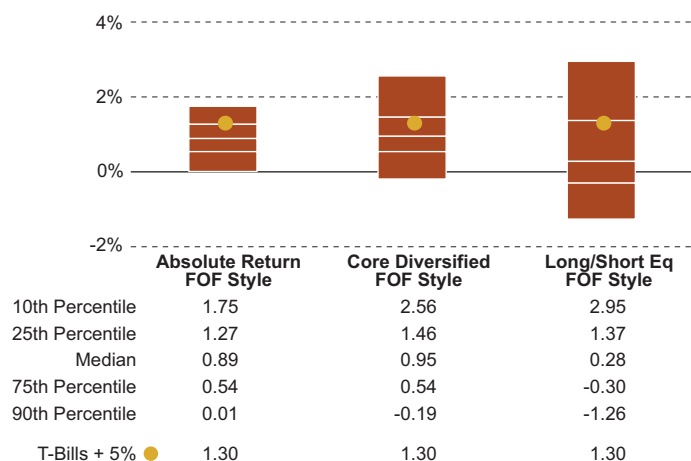
HEDGE FUNDS | Jim McKee

Amid the sudden disorder caused by Brexit, already cautious hedge funds mistrustful of the first quarter's skittishness were relatively unaffected and eked out modest gains, on average. Representing a paper portfolio of hedge fund interests without implementation costs, the **Credit Suisse Hedge Fund Index** (CS HFI) gained 0.59%. The median manager in the **Callan Hedge Fund-of-Funds Database** edged ahead 0.78%, net of all fees.

Returns across underlying strategies, however, were varied. The strongest performers were *Convertible Arb* (+2.65%), *Event-Driven Multi-Strategy* (+2.24%), and *Distressed* (+1.95%), as their credit exposures mended strongly from weakness in the prior quarter. *Emerging Markets* (+1.77%) and *Fixed Income Arb* (+1.02%) also regained ground from first-quarter losses.

Aside from the endangered species of *Short Bias* managers (-6.32%), the quarter's most notable loser was *Equity Market Neutral* (-3.17%), caught flat-footed by shifting risk appetites surrounding Brexit. Suffering from range-bound markets earlier in the quarter, *Managed Futures* lost 2.22% while *Global Macro* salvaged a 0.71% gain. The average *Long/Short Equity* fell 1.21%, trailing the S&P 500 (+2.46%) for the third consecutive quarter.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Within Callan's Hedge Fund-of-Funds Database, market movements only marginally affected investment styles in the second quarter. For instance, despite the stock rally at quarter end, the median *Callan Long/Short Equity FOF* (+0.28%) trailed the *Callan Absolute Return FOF* (+0.89%). With exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 0.95%.

Callan Database Median and Index Returns* for Periods ended June 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	0.78	-2.18	-5.26	2.32	2.94	3.43	4.56
CS Hedge Fund Index	0.59	-1.62	-4.23	2.49	2.88	4.17	5.69
CS Equity Market Neutral	-3.17	-3.52	-1.49	1.02	1.13	-2.43	0.72
CS Convertible Arbitrage	2.65	2.24	0.10	1.16	2.48	3.90	4.52
CS Fixed Income Arbitrage	1.02	-0.21	-0.37	2.37	4.07	3.25	4.17
CS Multi-Strategy	1.24	0.65	1.23	5.90	5.99	5.51	6.68
CS Distressed	1.95	-0.04	-5.25	1.41	3.17	4.08	6.93
CS Risk Arbitrage	0.58	2.71	0.73	1.55	1.46	3.46	3.49
CS Event-Driven Multi-Strategy	2.24	-3.46	-12.43	-0.49	0.32	3.98	5.92
CS Long/Short Equity	-1.21	-5.01	-5.00	4.53	4.00	4.73	5.86
CS Dedicated Short Bias	-6.32	-7.16	4.31	-8.41	-10.15	-9.89	-7.63
CS Global Macro	0.71	-1.54	-3.86	1.54	3.11	5.75	8.15
CS Managed Futures	-2.22	2.03	5.37	6.54	2.34	4.20	5.59
CS Emerging Markets	1.77	0.52	-2.43	2.39	2.21	4.50	7.85

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

Target Date Funds Continue to Rule

DEFINED CONTRIBUTION | Tom Szkwarla

In a tumultuous first quarter, the Callan DC Index™ earned just 0.38%, lagging the Age 45 Target Date Fund, which gained nearly 1%. Over the past three years the Index has performed in line with the Age 45 fund; however, since inception, it has trailed with just 5.09% annually versus the Age 45 fund's 5.70% return.

For the quarter, DC plan balances grew 0.85%. Inflows—participant and plan sponsor contributions—added slightly more to total growth (+0.475%) than market performance (+0.375%).

As usual, target date funds attracted the majority of assets during the quarter, approximately 72 cents of every dollar that flowed into DC funds. Target date funds grew to their largest allocation yet, commanding 26.1% of total DC assets in the quarter. The growth seems to be at the expense of U.S. equity, which contracted to 23.4% of total assets.

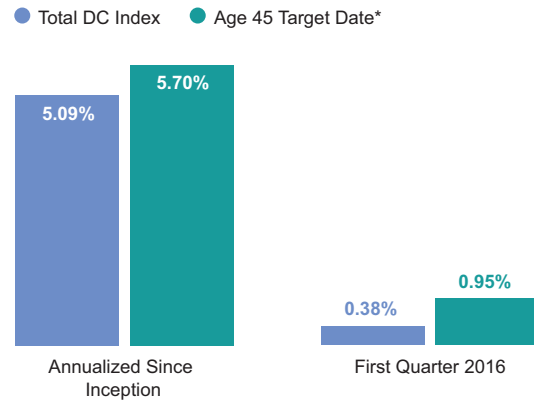
Stable value was the only other asset class with sizable inflows; this asset class typically attracts flows when markets are weak or particularly volatile. Several DC investments saw material net outflows, including U.S. equities (large and small/mid cap), U.S./global balanced, U.S. fixed income, non-U.S. equities, and company stock.

Overall turnover (i.e., net transfer activity levels within DC plans) was on par with last quarter (0.46%) at 0.44%. Turnover has been well below the historical average of 0.64% since mid-2014.

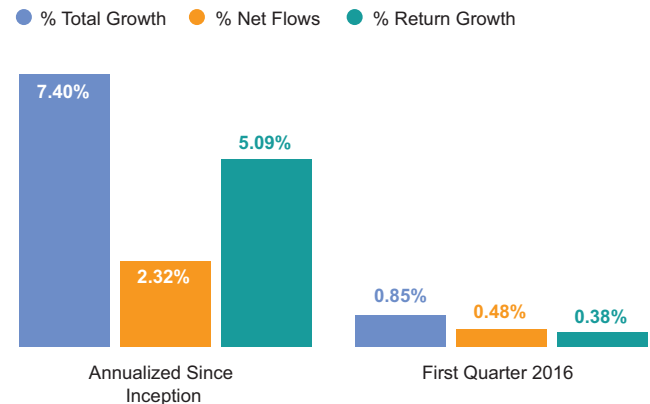
The Callan DC Index's overall equity allocation ended the quarter at 69%. Overall equity allocation has remained fairly static over the past few quarters, modestly above the Index's historical average (67%).

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 (First Quarter 2016)* (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	71.60%
Stable Value	15.57%
U.S. Small/Mid Cap	-23.49%
U.S. Large Cap	-29.02%
Total Turnover**	0.44%

Source: Callan DC Index
Data provided here is the most recent available at time of publication.

* DC Index inception date is January 2006.

**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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