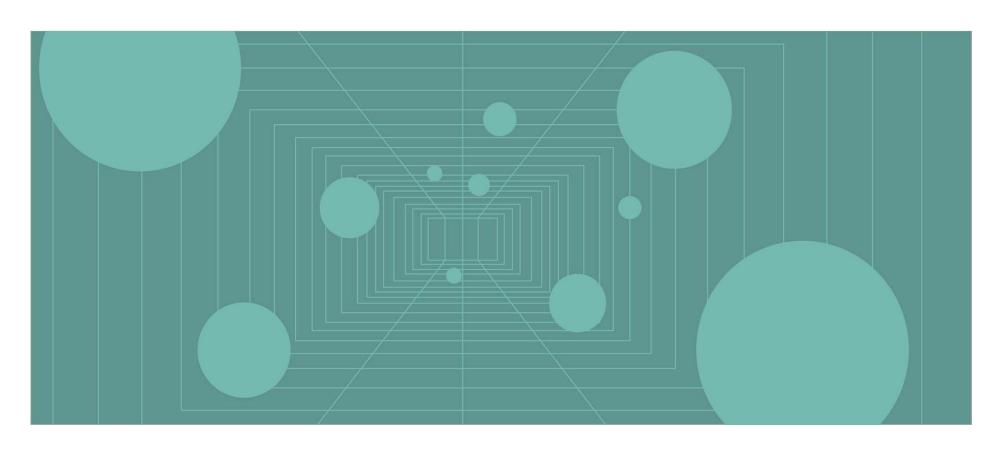
# REVIEW OF MARKET PERFORMANCE

**CALENDAR YEAR 2017** 





## Equity markets outperformed other asset classes in 2017

#### **GLOBAL ASSET CLASS PERFORMANCE**

2017 • US Dollar • Total Return (%)

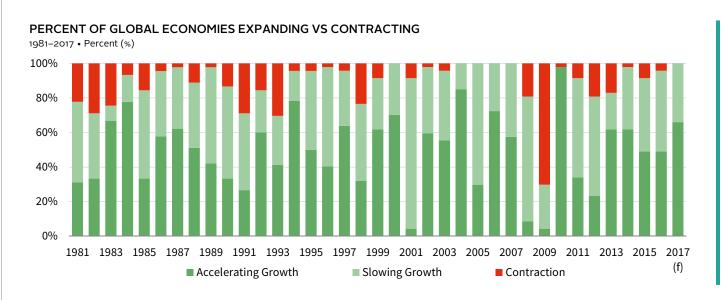


The outperformance came as an uptick in global economic activity helped lift expectations for corporate earnings growth across developed and emerging markets. Beyond broad equities, several real asset investments performed well, including public real estate, gold, and natural resources equities.

Sources: Alerian, Barclays, Bloomberg L.P., Citigroup Global Markets, Federal Reserve, FTSE International Limited, Hedge Fund Research, Inc., Intercontinental Exchange, Inc., MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

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## Economic growth synchronized across developed and emerging markets



2017 real GDP growth figures are expected to be positive across all developed and emerging economies found in MSCI Indexes, a first in a decade. Moreover, growth from the largest economies is expected to remain robust in 2018, propelled by high levels of consumer confidence and business optimism.

#### REAL GDP CONSENSUS GROWTH FORECASTS BY REGION

As of December 31, 2017 • Percent (%)

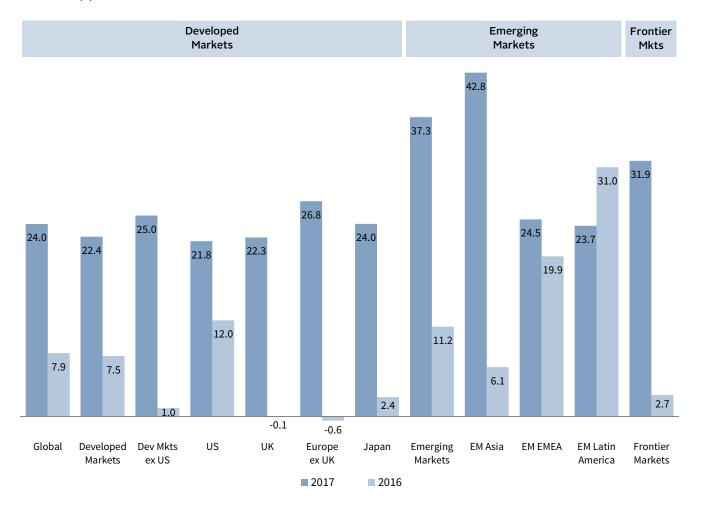




## Equity performance surged in 2017, with emerging markets leading

#### GLOBAL EQUITY PERFORMANCE: CY 2017 VS CY 2016

Total Return (%) • US Dollar

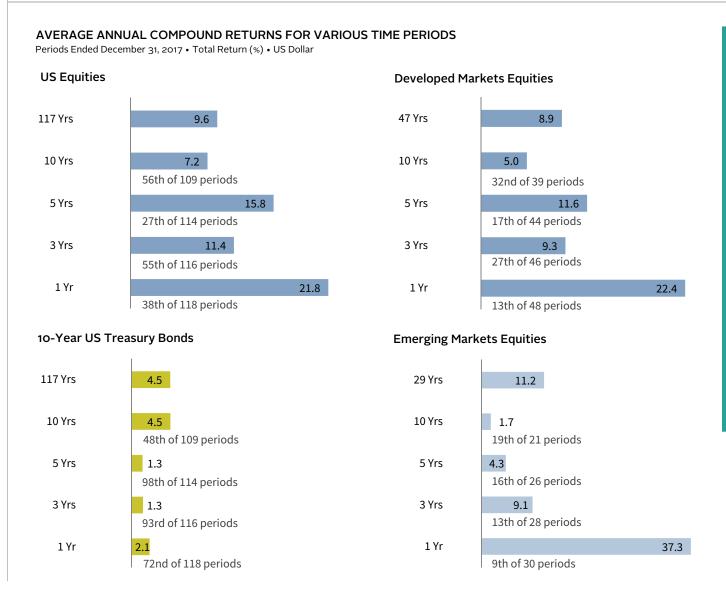


The strong performance by emerging markets equities came as China, which holds a nearly 30% weight in MSCl's index, returned 54.1%. Even though emerging markets were the clear toasts of 2017, developed markets equities also impressed. In fact, many developed markets countries posted their best returns in years.



net of dividend taxes.

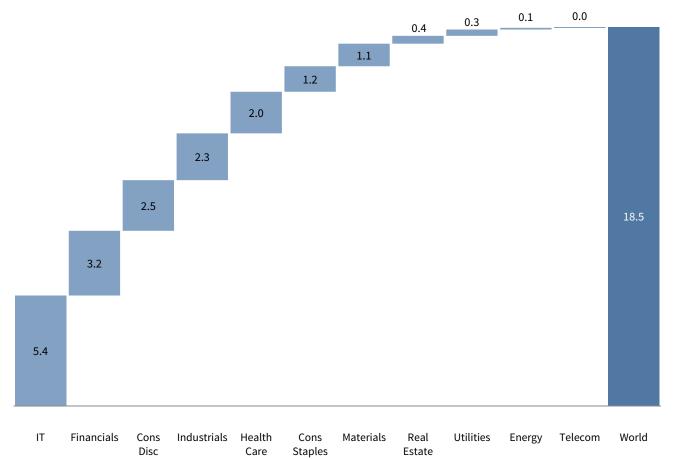
### This year's equity returns compare favorably to long-term trends



In looking at performance over the last ten years, developed markets equities returned a paltry 5.0%, which ranks near the bottom of all such rolling ten-year periods for which we have data. Emerging markets fared even worse, returning just 1.7%. In contrast, tenyear US Treasuries fared reasonably well over the prior ten-year period, at least relative to historical returns, benefiting from the low interest rate environment that followed the global financial crisis.

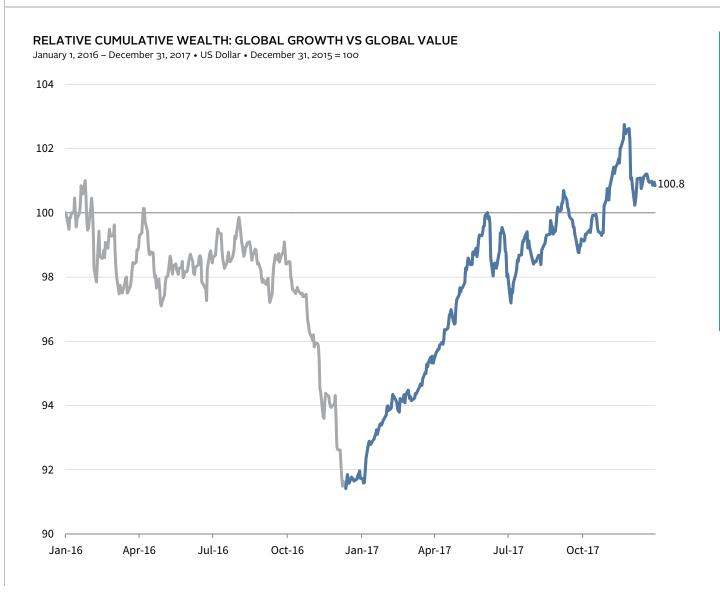
## Information technology and financials drove developed equity performance

## **DEVELOPED MARKETS SECTOR CONTRIBUTIONS TO TOTAL RETURN** 2017 • Percent (%) • Local Currency



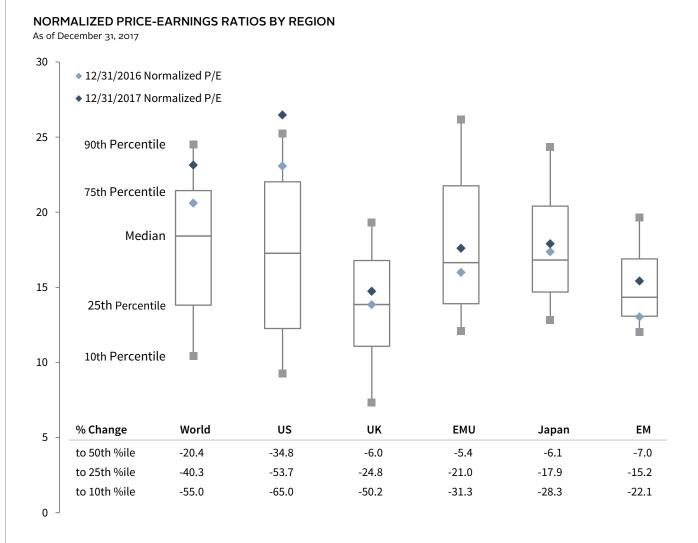
These two sectors, which are the largest in the MSCI World Index, contributed nearly half of the index's total performance in 2017. Information technology, in particular, benefited from heady performances by industry leaders Facebook, Apple, Netflix, and Google—prompting industry analysts to coin the term FANG stocks to represent these high flyers.

## Growth equities outperformed in 2017, reversing gains made by value equities in late 2016



High weights to equities in the information technology, consumer discretionary, and industrials sectors helped growth equities outperform value this year. Value equities, which looked poised to make further advances against growth at the beginning of 2017, came up short as inflation expectations fell in major markets.

## Valuations uniformly increased across major countries and regions



US valuations started the year at overvalued and jumped to very overvalued by the end of the year. A reversion for our composite normalized price-earnings ratio to the long-time median in the United States would imply an index price decline of nearly 35%. In contrast, current valuations for developed markets excluding the United States and for emerging markets look more appealing.

## Momentum outperformed other factors in 2017

#### FACTOR PERFORMANCE FOR DEVELOPED MARKETS EQUITIES

2008-17 • Local Currency

Return (%)										5-Year	10-Year	
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Strategy	AACR	AACR
-27.4%	40.2%	24.0%	6.9%	17.8%	35.3%	15.9%	7.4%	14.2%	28.6%	Momentum	15.0%	6.5%
-28.8%	28.8%	16.1%	4.5%	16.0%	31.7%	11.1%	6.1%	14.0%	24.0%	Growth	14.7%	6.6%
-36.4%	27.5%	12.3%	3.9%	15.7%	29.0%	11.0%	5.3%	12.0%	23.0%	Quality	14.0%	8.6%
-38.2%	25.7%	10.2%	3.7%	15.3%	28.9%	9.8%	5.2%	9.0%	18.6%	Small Cap	15.3%	8.2%
-38.7%	24.6%	10.0%	-5.5%	13.7%	28.7%	9.3%	2.4%	7.7%	18.5%	World	13.7%	5.6%
-39.3%	22.6%	9.2%	-5.5%	12.4%	27.6%	8.9%	2.1%	6.3%	15.1%	Minimum Volatility	12.7%	7.1%
-39.7%	13.7%	7.7%	-5.5%	10.9%	22.7%	8.5%	1.0%	4.4%	13.3%	High-Dividend Yield	11.2%	5.3%
-40.7%	11.4%	6.2%	-9.0%	9.1%	22.1%	6.3%	-1.9%	4.0%	13.2%	Value	12.6%	4.6%

Value strategies lagged other factors in 2017, with momentum strategies outperforming it by around 15%, according to MSCI indexes. Over the last ten-year period, quality strategies have been top performers, returning 8.6% to investors annually.

Spread of Returns Between Highest- and Lowest-Performing Strategies within a Given Period

Percentage Points

13.3	28.7	17.7	16.0	8.7	13.1	9.6	9.3	10.2	15.4
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4.0 3.9

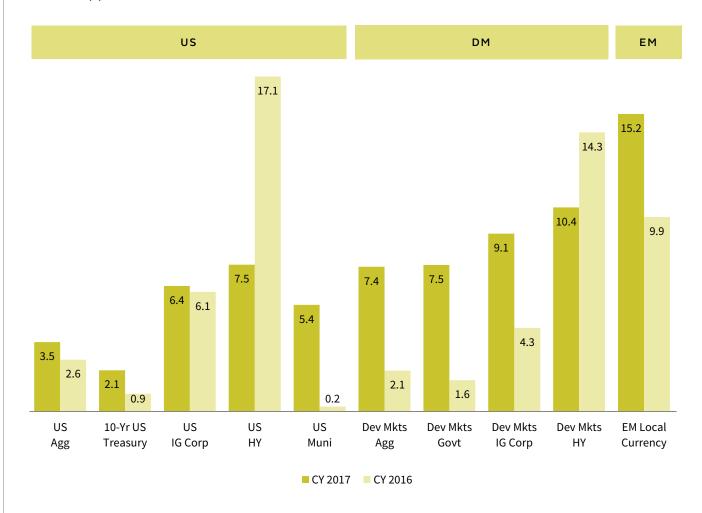
Through

12/31/2017

## Investment-grade bond performance improved in 2017

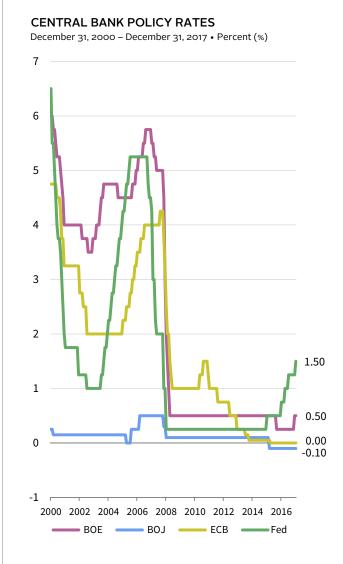
#### GLOBAL BOND PERFORMANCE: CY 2017 VS CY 2016

Total Return (%) • US Dollar



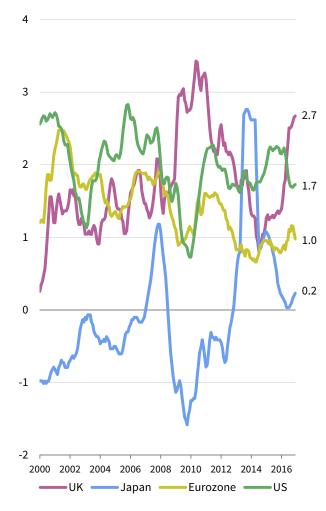
High-yield bonds in developed markets performed worse in 2017 than in 2016, though that performance still bested investment-grade options. Performance by emerging markets local currency debt stood out this year, returning just over 15%—its best year since 2012.

## US rates moved higher in 2017





December 31, 2000 - November 30, 2017 • Percent (%)

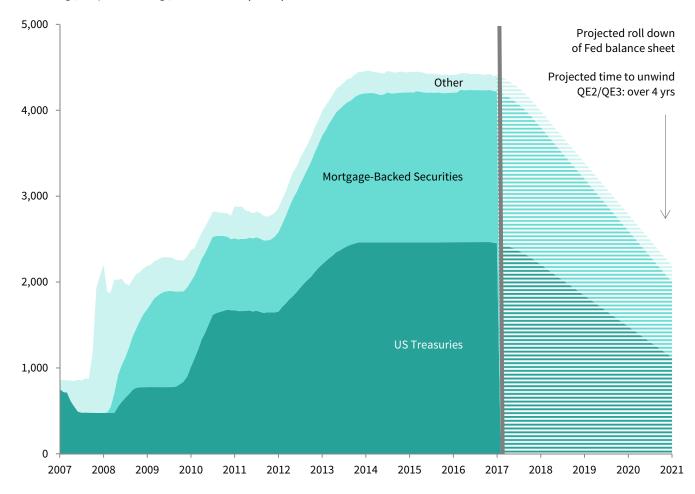


Citing strengthening economic conditions, the Federal Reserve hiked rates three times in 2017, with the target upper bound reaching 1.50% by year end. Beyond the United States, the United Kingdom was the only other G4 central bank to hike rates in 2017, as inflation pressures linked to its weakened currency grew.

## The Fed began to normalize its balance sheet

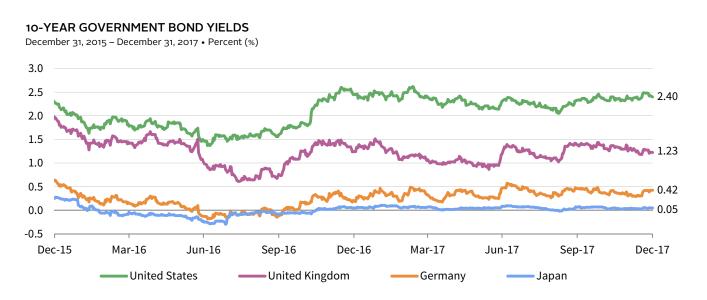
#### GROWTH OF THE FEDERAL RESERVE'S BALANCE SHEET

December 31, 2007 - December 31, 2021 • US Dollar (billions)



In September, the central bank announced it would begin to reduce its \$4.5 trillion balance sheet, seeking to unwind its post-crisis stimulus efforts. Investors largely shrugged off the announcement, despite the unique nature of the task.

## Major government bond yields remained low throughout 2017



With US short rates rising and long-dated rates holding mostly firm, the Treasury yield curve flattened in 2017. One key measure, the tenyear/two-year spread, sank to its lowest level in a decade, prompting concerns that its narrowing could portend future economic difficulties.

#### 10-YEAR/2-YEAR US TREASURY YIELD SPREAD

December 31, 2015 - December 31, 2017 • Percent (%)

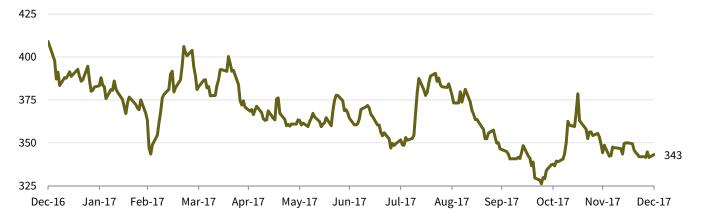


## Corporate bonds spreads tightened throughout the year

#### OPTION-ADJUSTED SPREADS ON US INVESTMENT-GRADE AND HIGH-YIELD BONDS December 31, 2016 - December 31, 2017 • Basis Points **US Investment-Grade Bonds** 125 120 115 110 105 100 95 Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17

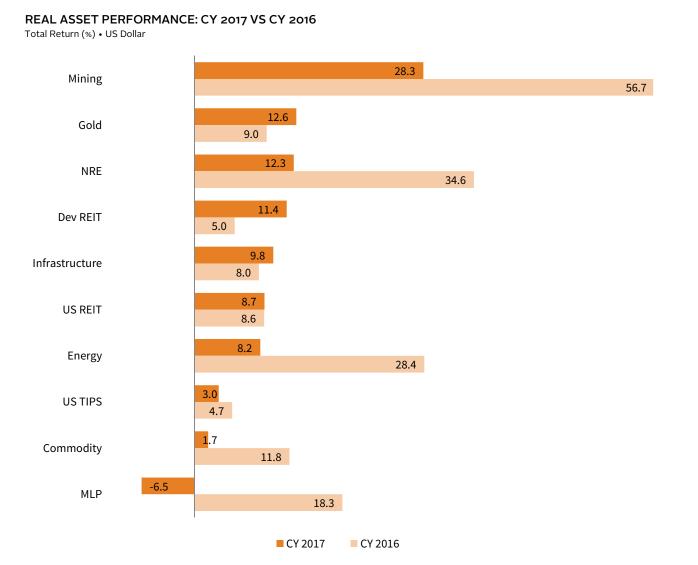
Yields compressed across both US investment-grade and high-yield bond sectors, as demand for higher yielding fixed income assets remained strong in Europe and Asia. This compression has left both sectors offering yields near their historical lows.

#### **US High-Yield Bonds**



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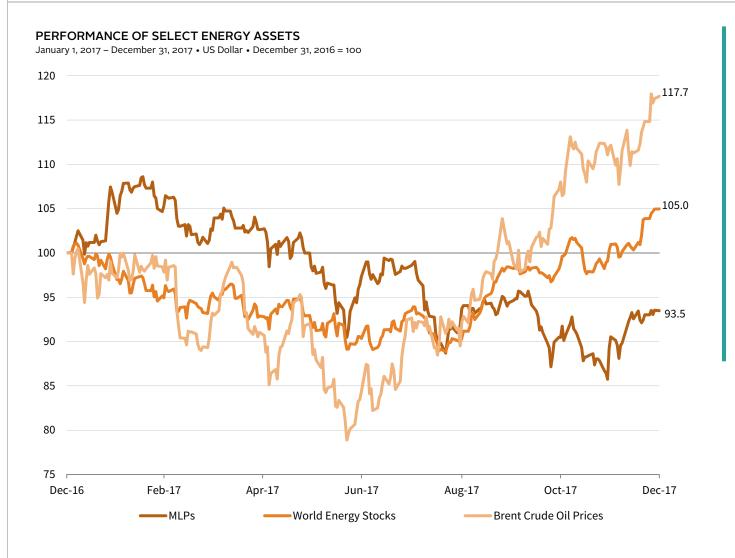
## Mining equities outperformed other public real assets



The strong performance in mining equities came as supply/demand fundamentals across several underlying industrial metals tightened and global economic activity picked up. This performance contributed to natural resources equities returns, a category that includes both mining and energy equities.

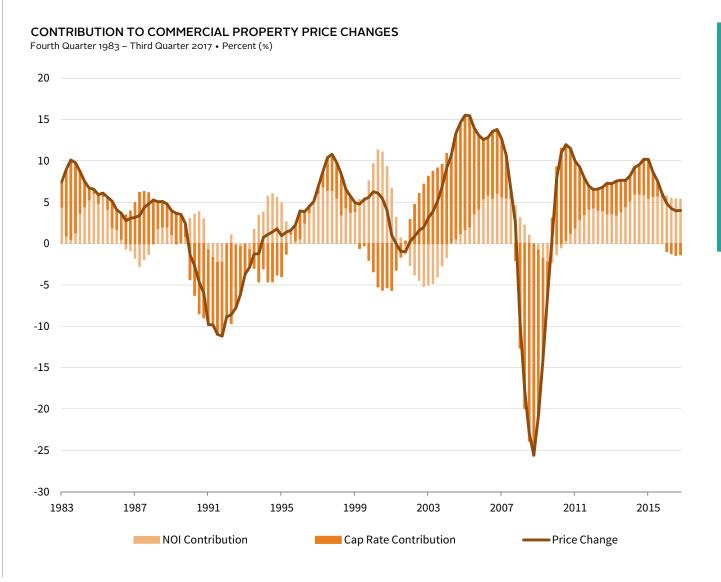
Sources: Alerian, Barclays, Bloomberg L.P., EPRA, FTSE International Limited, Intercontinental Exchange, Inc., MSCI Inc., National Association of Real Estate Investment Trusts, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

## Late oil price rally helped energy equities



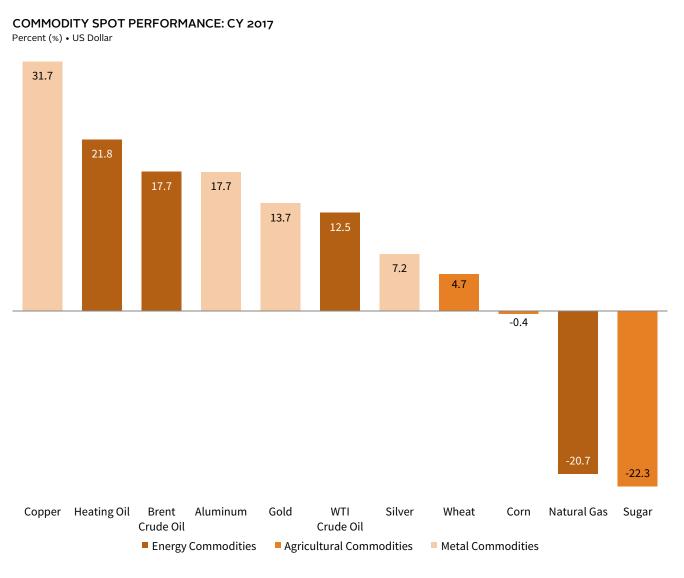
The recovery in oil prices coincided with declining inventory levels and an agreement by OPEC and several non-OPEC countries to extend production cuts through the end of 2018. This recovery helped energy equities finish in the black in 2017, but MLPs were not as fortunate. Struggling with questions of growth and financing costs, among others, MLPs ended the year in the red.

## Growth in US commercial real estate prices slow



Since 2010, falling cap rates have accounted for half of the gains in US commercial real estate prices, but in recent quarters this trend has stalled. This stalling resulted in price growth in the low single digits, the lowest level since the global financial crisis.

## Copper led commodities higher



The decline in the dollar and the uptick in global economic activity helped copper and other industrial metal prices surge in 2017. Beyond metals, energy commodities excluding natural gas also performed well, as supply/demand fundamentals moved closer to balance.

## Private investments have performed well over long time horizons

**CA US Venture Capital** 

Russell 3000® mPME

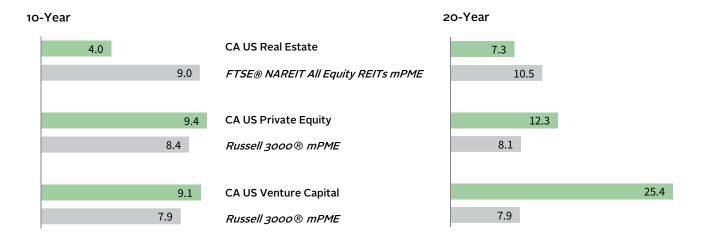
18.5



Over both ten-year and 20-year trailing periods, US private equity and US venture capital have outperformed public markets, according to Cambridge Associates modified Public Market Equivalent methodology.

14.1

15.1



8.1

## Equity hedge fund strategies led peers in performance

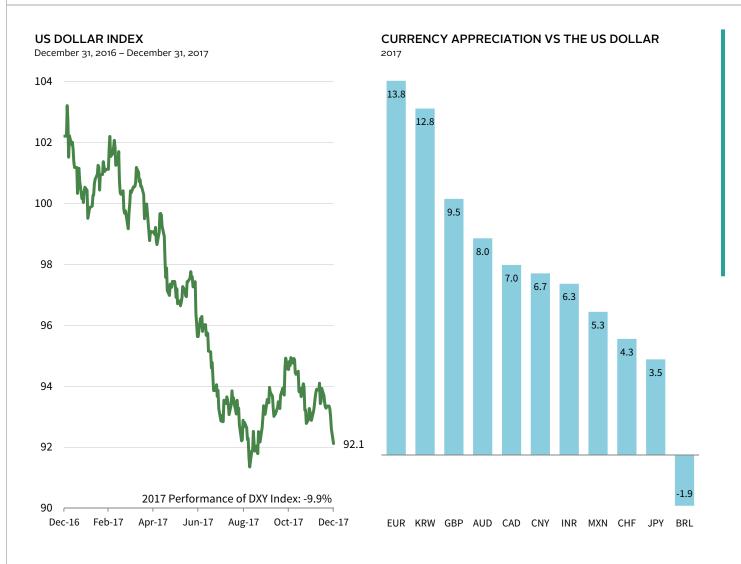
#### **HEDGE FUND PERFORMANCE: HFRI INDEXES**

2017 • Total Return (%)



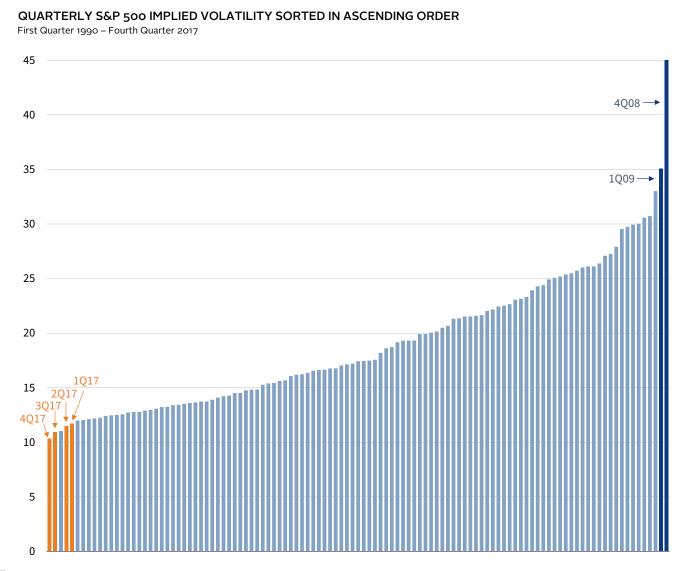
Preliminary data from Hedge Fund Research, Inc., suggest emerging markets equity hedge funds outpaced other strategies in 2017. Hedge fund returns at a broad industry level were solid, with the widely followed HFRI Fund Weighted Composite returning a preliminary 8.5%, and the HFRI Equity Hedge, 13.2%.

## The dollar fell, even as the Fed hiked rates three times in 2017



The US dollar ended the year down nearly 10%, when looking at a basket of major developed markets currencies. Virtually every major currency made gains against the US dollar, including the euro (13.8%), the pound (9.5%), and the yen (3.5%).

## Volatility was uniquely muted in 2017



The average quarterly value of the VIX hit its lowest level in fourth quarter 2017, as investors embraced improving economic growth estimates as indicative of smooth sailing ahead. Even if volatility is currently low, investors should guard against getting too complacent, as risks are present.



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