



# MARKET SUMMARIES



OCTOBER 2016

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## DOMESTIC EQUITY MARKET SUMMARY OCTOBER 2016

Major U.S. equity indices posted losses in October as two macro concerns, the prospect of a Federal Reserve (Fed) rate hike in December and increased uncertainty over the U.S. presidential election, overcame third quarter earnings. The third quarter earnings came in slightly better than expectations.

The market-based probability of a rate hike at the Fed's December meeting climbed throughout October, finishing at 60%. This was the highest probability yet associated with this meeting. Hopes for a market recovery in the final week of October that stemmed from Hillary Clinton's improved electoral chances were tempered as the FBI revealed it was re-opening the investigation into her email activities after it discovered a new batch of her private-server emails found during an unrelated investigation.

The Dow Jones Industrial Average, the S&P 500, and the NASDAQ composite index all suffered large monthly declines in October, the largest declines since January. The Dow had its third consecutive month of negative returns as it posted a loss of 0.91% to close at 18,142.42. The S&P 500 had somewhat worse performance as it posted a loss of 1.94% to close at 2,126.15. Breadth within the S&P 500 was quite negative as 163 of the index members increased with an

average gain of 4.4% while 340 constituents decreased with an average loss of 5.8%.

The NASDAQ composite index lagged the S&P 500 a bit as it posted a loss of 2.31% to close at 5,489.14 in October. Small cap stocks broke their four month string of out-performance in October as the benchmark S&P 600 declined steadily throughout the month. The index posted a loss of 4.53% to close at 722.59 in October.

As can be expected, sector breadth within the S&P 500 was also negative in October. Only two of the eleven GICS economic sectors had positive returns in October as Financials led the way with a gain of 2.16%. Utility returns were also slightly positive.

Telecom Services, Health Care, and Real Estate turned in the worst performances in October as all three sectors decreased more than 5%. Within Health Care, Biotechnology was particularly impacted as it declined more than 9% as a result of Mrs. Clinton's advocacy for more governmental pricing power throughout her presidential campaign. Even with the renewed email concerns, most polls continued to show Mrs. Clinton with a comfortable, though somewhat narrowed, lead over her challenger.

### Benchmark Returns

Index	October 2016			Calendar Year To Date	
	Close	Price Change (%)	Total Return (%)	Price Change (%)	Total Return (%)
Dow Jones Industrial Avg.	18142.42	-0.91	-0.79	4.12	6.36
S&P 500	2126.15	-1.94	-1.82	4.02	5.87
S&P 500 Value	923.04	-1.68	-1.51	5.36	7.71
S&P 500 Growth	1195.69	-2.20	-2.12	2.75	4.12
S&P 400 Mid Cap	1509.46	-2.76	-2.67	7.93	9.40
S&P 600 Small Cap	722.59	-4.53	-4.48	7.57	8.77
NASDAQ	5189.14	-2.31	-2.26	3.63	4.74

# DOMESTIC EQUITY MARKET SUMMARY (CONCLUDED)

## OCTOBER 2016

### S&P 500 Economic Sector Returns

October 2016		Calendar Year To Date	
Sector	Price Change (%)	Sector	Price Change (%)
Financials	2.16	Utilities	14.01
Utilities	0.82	Energy	12.59
Information Technology	-0.13	Information Technology	10.97
Consumer Staples	-0.96	Materials	7.16
Industrials	-2.07	Industrials	6.67
Materials	-2.21	Telecom Services	5.26
Consumer Discretionary	-2.43	Consumer Staples	4.41
Energy	-2.97	Financials	1.87
Real Estate	-5.59	Consumer Discretionary	-0.08
Health Care	-6.60	Real Estate	-0.33
Telecom Services	-7.49	Health Care	-6.54

Daily Price Change S&P 500 Index - October 2016



# INTERNATIONAL EQUITY MARKET SUMMARY

## OCTOBER 2016

The International stock markets, as measured by the Morgan Stanley Capital International (MSCI) ACWI ex U.S. Index, declined 1.5% in October, following an improvement in September (+1.0%) and a slight increase in August (+0.4%).

### International Indices

	Monthly Return %
MSCI ACWI ex U.S.	-1.5%
MSCI Europe	-3.4%
MSCI Pacific	0.1%
MSCI Emerging Markets	0.2%

### MSCI ACWI ex U.S. - %

Financials	2.2%
Energy	1.2%
Materials	0.7%
Consumer Discretionary	-0.4%
Industrials	-2.0%
Information Technology	-2.1%
Telecom Services	-2.7%
Utilities	-3.0%
Consumer Staples	-5.9%
Health Care	-7.1%

Financials (+2.2%) led all sectors in September, which was a reversal from the prior month. Energy (+1.2%) and Materials (+0.7%) followed with gains. All other sectors declined with Healthcare being the biggest laggard (-7.1%). Brent crude declined slightly by 1.5% to finish at \$48 a barrel. Brazil's Petrobras released its new price guidelines, which from a macroeconomic standpoint indicated that Brazilian inflation might become more volatile as the company opened the way for more frequent price changes.

**EUROPE:** Antitrust discussions in Europe heated

up as the media speculated that Google would offer their rebuttals to charges from the European Commission that it hindered competition of its search and advertising services. Lost among tensions preceding the U.S. election was the collapse of a Europe-Canada trade deal. Financials (+3.4%) led all sectors and Information Technology (-8.7%) was hammered. Telecom equipment giants, such as Ericsson and Nokia, struggled due to weak end markets. In the case of Ericsson, there was a vacuum of leadership in the C suite.

**PACIFIC:** Japan's exports fell for a 12th consecutive month in October as exporters struggled with a stronger Japanese Yen (+3.4% in USD) and soft global demand. Yet volumes increased in October by the most in nearly two years.

**EMERGING MARKETS:** Encouraging political developments helped drive a nearly 14% rally in Brazil. The lower house approved a spending cap and left wing parties lost ground in local elections. Energy (+5.2%) led all sectors and Consumer Staples (-2.2%) lagged.

Figure 1 below: ETF Fund flows showed American inflows and China outflows.

Country	Netflow	Netflow	Flow%
<b>Highest</b>			
10) United States		+9,598	+0.5
11) Canada		+380	+0.7
12) United Kingdom		+305	+1.0
13) Europe ex UK*		+294	+7.2
14) Asia Pac ex Japan*		+223	+1.3
15) Hong Kong		+176	+0.9
16) Latam Region*		+127	+5.3
17) India		+110	+0.7
18) Italy		+109	+2.2
19) Asia Pacific*		+103	+1.3
<b>Lowest</b>			
20) Australia		-51	-0.4
21) Philippines		-54	-20.4
22) Thailand		-68	-8.3
23) European Union*		-152	-4.9
24) Greater China*		-222	-5.6
25) Germany		-290	-0.7
26) Japan		-299	-0.1
27) Taiwan		-304	-3.2
28) European Region*		-782	-0.8
29) China		-2,551	-2.6

### MSCI Index – October 2016



Source: Bloomberg, Morgan Stanley

## PUBLIC REAL ESTATE MARKET SUMMARY OCTOBER 2016

The global real estate securities markets, as measured by the FTSE EPRA / NAREIT Developed Index, experienced another poor month of returns and dropped 5.7% in October, following negative returns in September (-0.9%) and August (-2.6%). The real estate markets underperformed the broader equity market (MSCI World), which declined 1.9% in October. The real estate universe posted negative returns across the board in U.S. Dollar terms with Asia (-3.2%) having the smallest decline, followed by North America (-5.9%), Continental Europe (-8.6%), and the United Kingdom (-10.3%). Markets were nervous about the U.S. election and a potential Federal Reserve interest rate hike in December. U.S. Treasury yields increased 23 basis points in October.

In the Asia market, Australia (-8.2%) was the worst performer as the sentiment turned weaker on yields. The Reserve Bank of Australia left the cash rate unchanged at 1.5% in October. The country's year-to-date gain was 10.3%. Japan increased 2.3% in local currency terms, but decreased 1.4% in USD terms. The Japanese developers rallied in October and outperformed the JREITs. A combination of factors drove the strong developer performance in October: better than expected data from the office and condominium markets, investors hunting for recent underperforming sectors, and rising expectations of improved shareholder returns due to significant discount to NAVs.

In the European markets, a combination of factors affected the weak market sentiment: the upcoming elections in various European countries, the uncertainty of the next policy move regarding the quarter-end programs, and the macro economic data. The United Kingdom was the worst year-to-date performer with a decline of 28.3%.

### FTSE EPRA/NAREIT Developed Index Country Total Return (USD)

Country	October 2016 %	Calendar Year To Date %
Italy	-1.10	-19.10
Hong Kong	-1.30	18.40
Japan	-1.40	7.10
Norway	-2.60	37.40
Israel*	-3.00	16.70
Spain	-3.00	-6.40
New Zealand*	-3.90	16.20
Canada	-4.40	18.60
Singapore	-5.10	9.90
Belgium	-5.20	10.60
Switzerland	-5.50	9.80
Global	-5.70	4.80
USA	-5.90	5.00
Ireland	-6.40	-7.30
Austria	-6.70	11.80
Netherlands	-7.40	-8.50
Finland	-7.70	5.70
Australia	-8.20	10.30
Germany	-8.80	11.50
France	-10.40	1.20
United Kingdom	-10.60	-28.30
Sweden	-10.70	0.90

\*Index contains only one name.

## PUBLIC REAL ESTATE MARKET SUMMARY (CONCLUDED) OCTOBER 2016

The U.S. REITs, as measured by the FTSE EPRA / NAREIT United States Index, decreased 5.9% in October. An increased probability of a Federal Reserve rate hike due to better economic indicators in conjunction with hawkish rhetoric, election uncertainty, and elevated expectations during third quarter earnings season all combined to weigh on the U.S. listed real estate space. Lodging (-2.0%), Residential (-2.6%), and Self-Storage (-5.2%) were several of the worst performing sectors calendar year-to-date and outperformed the broader REIT space as lower expectations in addition to investors seeking to gain exposure to lower duration and less interest rate sensitive names contributed to the relative outperformance.

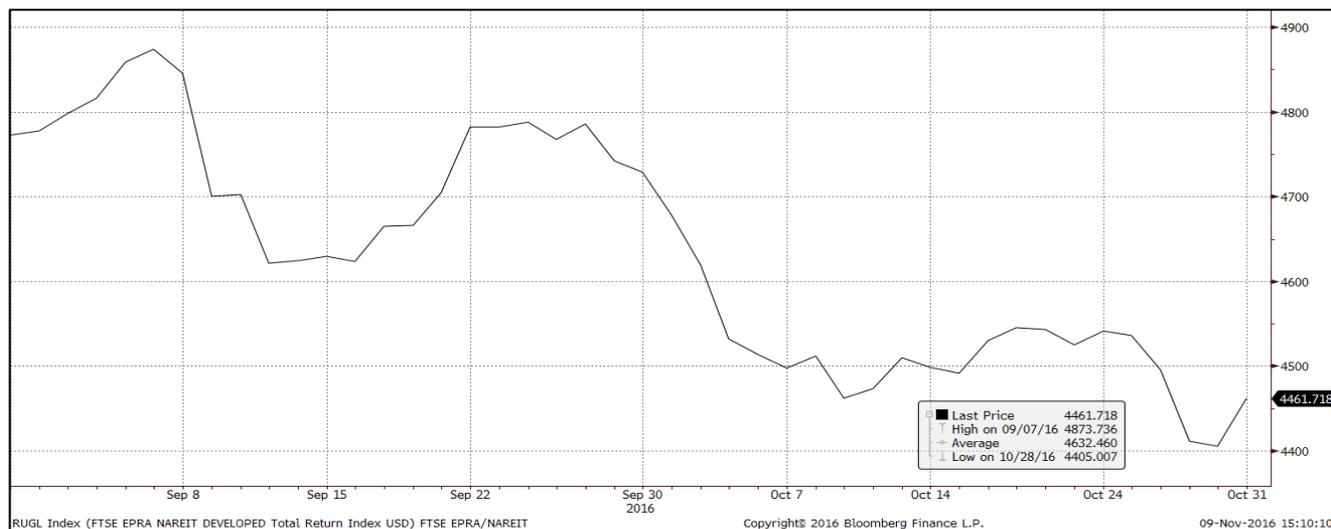
The Diversified (-5.7%) sector slightly outperformed the broader REIT space, but the sector was dragged down by Data Center REITs. Elevated earnings expectations as well as fears that record cloud leasing would abate to normalized levels negatively impacted

Data Center REITs. Office REITs (-5.6%) outperformed the broader REIT space on relatively low expectations and strong earnings results. The two most challenged sectors in October were the Healthcare (-6.8%) and Retail (-9.2%) sectors. The Healthcare sector underperformed due to elevated expectations in conjunction with decelerating senior housing related income as well as expectations of rising interest rates in the near term.

### US Sector Total Return

Sector	October 2016 %	Calendar Year To Date %
Lodging/Resorts	-2.0	1.2
Residential	-2.6	1.3
Industrial	-3.6	24.2
Self Storage	-5.2	-13.4
Office	-5.6	6.2
Diversified	-5.7	14.4
US All Sectors	-5.9	5.0
Healthcare	-6.8	11.0

FTSE EPRA/NAREIT Index Daily Price Change - October 2016



Source: Bloomberg

## PRIVATE REAL ESTATE MARKET SUMMARY OCTOBER 2016

The net asset value as of October 31, 2016, was approximately \$1.72 billion. For the month, the private real estate program called in approximately \$10 million in capital. Since inception of the program to date, total capital called is approximately \$2.3 billion. General partners returned approximately \$1.3 billion in the form of income, capital gain, or return of capital.

The System did not close on any new commitments in October.

The commitment target for fiscal year 2017

is \$0 with a range of \$0 to \$250 million. The private real estate portfolio is at 6.8% of the overall System's assets, which is just below the 7% allocation. The near term focus continues to be on renewed commitments to fund managers in which the System has investments, commingled "club funds" with significant potential to drive terms and conditions, niche property sectors, co-investments, and select international investments. Since inception, the System's total commitment in the private real estate program is approximately \$2.9 billion.

## PRIVATE EQUITY MARKET SUMMARY OCTOBER 2016

The System closed on one new investment during October (Deal 2 in the table below). The System committed \$35 million through October 31, 2016. The System's target for commitments for fiscal year 2017 is \$750 million with a range of \$563 million to \$938 million. As of October 31, 2016, the Private Equity portfolio Net Asset Value was \$2.63 billion, or 10.4% of the System's assets.

From program inception through October 31, 2016, the System closed on 74 funds and 26 co-investments with commitments totaling \$6.2 billion (adjusted for currency exchange rates). In addition, ERS holds LP Advisory Committee seats on 44 active funds and two fund LP Advisory Observer seats.

ERS Private Equity - Deals Closed During Fiscal Year 2017						
Deal #	Fund Name	Fiscal Year	Geography / Strategy	Commitment (Local Currency)	Commitment (USD) <sup>(1)</sup>	
1	Co-Investment #25	2017	SS - Energy	\$ 25,000,000	\$ 25,000,000	
2	Co-Investment #26	2017	SS - Energy	\$ 10,000,000	\$ 10,000,000	
<b>Total PE Commitments - FY 2017</b>					<b>\$ 35,000,000</b>	
<b>Footnotes:</b>						
(1) Foreign exchange rates as of:		October 31, 2016				
EURO / USD:		1.110				
GBP / USD:		1.220				

# FIXED INCOME MARKET SUMMARY

## OCTOBER 2016

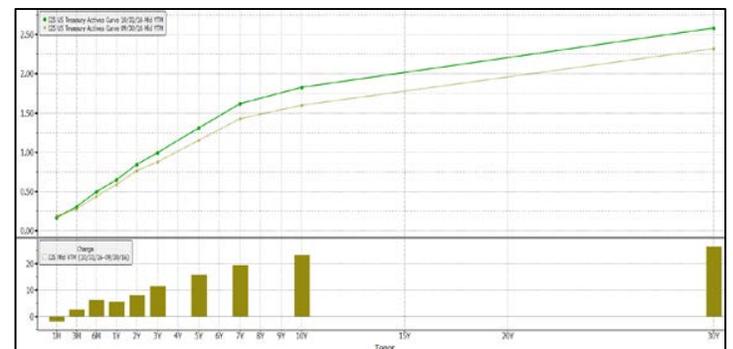
### Economy

U.S. economic data continued to show gradual improvements in the overall economy. Investors' expectations for a Federal Reserve (Fed) rate increase were 80% in October, an increase from 60% at the end of September. Going forward the Fed will continue to be focused on the labor market and inflation when considering whether to raise rates in December.

- Labor Market:** The U.S. economy added 161k jobs in September, slightly below the median survey of 171k. The previous month's report was revised upward from 156k to 191k jobs added. The unemployment rate declined from 5% back to 4.9%. There were some signs that there is upward pressure on wages as average hourly wages increased 2.8% year-to-date, which is the highest level since 2009.
- Inflation:** The Fed's broader gauge of inflation, Core PCE, remained flat at 1.7% year-to-date. While the figure was still below the Fed's target rate of 2%, the Fed believed that inflation will rise to 2 percent over the medium term as the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further.
- GDP Growth:** Top line Gross Domestic Product growth was impressive as the economy grew 2.9% in the third quarter of 2016 versus estimates of 2.6%. Drilling down into this number, however, showed that growth was driven primarily by exports and inventories, which is likely unsustainable.
- Housing:** Sales of existing homes increased 3.2% in October, following an increase of 0.9% in September. The sales increase beat estimates of a 0.4% increase, but overall sales were still down in the third quarter and weighed on Gross Domestic Product.
- ISM Non-Manufacturing:** The ISM non-manufacturing index declined to 54.8, missing expectations of 56. The report missed expectations, but the index was in line with the six month and twelve month moving averages, which were consistent with continued economic growth.
- Durable Goods:** Durable goods new orders declined 0.3% in October and missed expectations of a 0.1% decline. The data suggested that capital spending is likely to remain weak through 2016.
- Retail Sales:** Retail sales experienced a disappointing 0.1% decrease in October. The negative figure highlighted the ongoing concern over consumer spending.

in October as the 2-year-10-year spread widened 14 basis points (bps). Given the yield curve steepening, longer duration underperformed as evidenced by the Intermediate Treasury Index outperforming overall Treasuries -0.50% versus -1.10%. High Yield continued to be the top performer as spreads compressed for the ninth consecutive month; the index returned 0.39% in October, which brought returns to 15.56% year-to-date.

	Total Return October %	Total Return Calendar Year 2016 %
Barclays Capital Intermediate Credit	-0.32	5.35
Barclays Capital Intermediate Treasury	-0.50	2.87
U.S. Treasury	-1.10	3.92
U.S. Agency	-0.45	2.96
Corporate	-0.81	8.31
Securitized	-0.29	3.56
U.S. Corporate High Yield	0.39	15.56
Emerging Markets	-0.64	12.09



### The Bond Markets

As investors came to a greater consensus that the Federal Reserve will raise rates in December, there was a more pronounced steepening of the yield curve

## HEDGE FUND MARKET SUMMARY OCTOBER 2016

The Absolute Return Portfolio posted an estimated gain of +0.24% in October. The target return of 90-day T-bills + 400bps reached +0.43% over the same period. Fiscal year-to-date, the Absolute Return Portfolio returned an estimated +1.27% while the target return reached +0.87% over the same period.

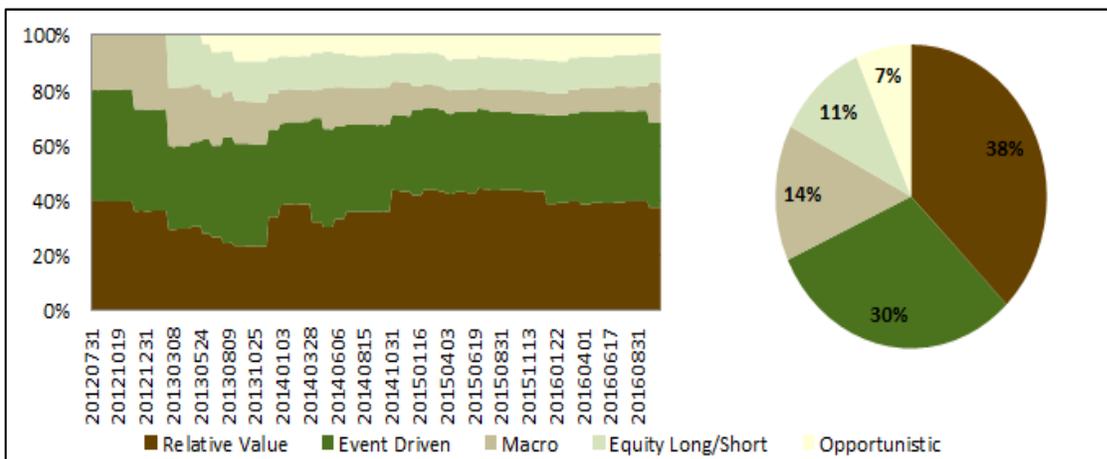
October was a mixed month across most major asset classes. The upcoming U.S. presidential election, an anticipated December rate hike by the Federal Reserve, and uncertainty regarding the European Central Bank's quantitative easing program led to choppy conditions in a number of markets. Most global equity markets traded in a sideways manner as the majority posted small gains/losses in October. Within foreign exchanges, the U.S. Dollar appreciated versus most global currencies, which included the Euro and Japanese Yen. In Fixed Income, U.S.

Treasury yields increased as the 10-year closed at 1.82% in October, its highest level since June. Performance during October was led by macro focused strategies such as Wellington and Complus as well as event driven strategies such as Taconic. The three managers posted estimated gains of 1.60%, 1.51%, and 0.75%, respectively. The largest losses were in equity strategies such as Pentwater and Northwest as well as systematic macro strategies such as Aspect. The three managers posted estimated losses of -3.80%, -1.50%, and -3.91%, respectively.

The graphs below indicate current and historical strategy positioning of the Absolute Return Portfolio. A clear overweight to Event Driven and Relative Value strategies remains. The prior underweight to the Macro strategy was addressed and exposure to the strategy is now above the minimum guideline of 10%.

**Historical Strategy Exposure**

**Current Strategy Exposure**



## PRIVATE INFRASTRUCTURE MARKET SUMMARY OCTOBER 2016

The System closed on one new transaction during October, a \$48.8 million commitment. The System is targeting total commitments for fiscal year 2017 of \$300 million with a range of \$225 million to \$375 million.

Since inception, Private Infrastructure closed

on ten co-investments and four funds with commitments totaling \$706.8 million (adjusted for currency exchange rates). The System holds an LP Advisory Committee seat on four funds. As of October 31, 2016, the Infrastructure portfolio Net Asset Value was \$365.3 million, or 1.4% of the System's assets.