



NEPC, LLC

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San Bernardino County
Investment Summary
Quarter Ending September 30, 2016

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Market Environment Update and Outlook

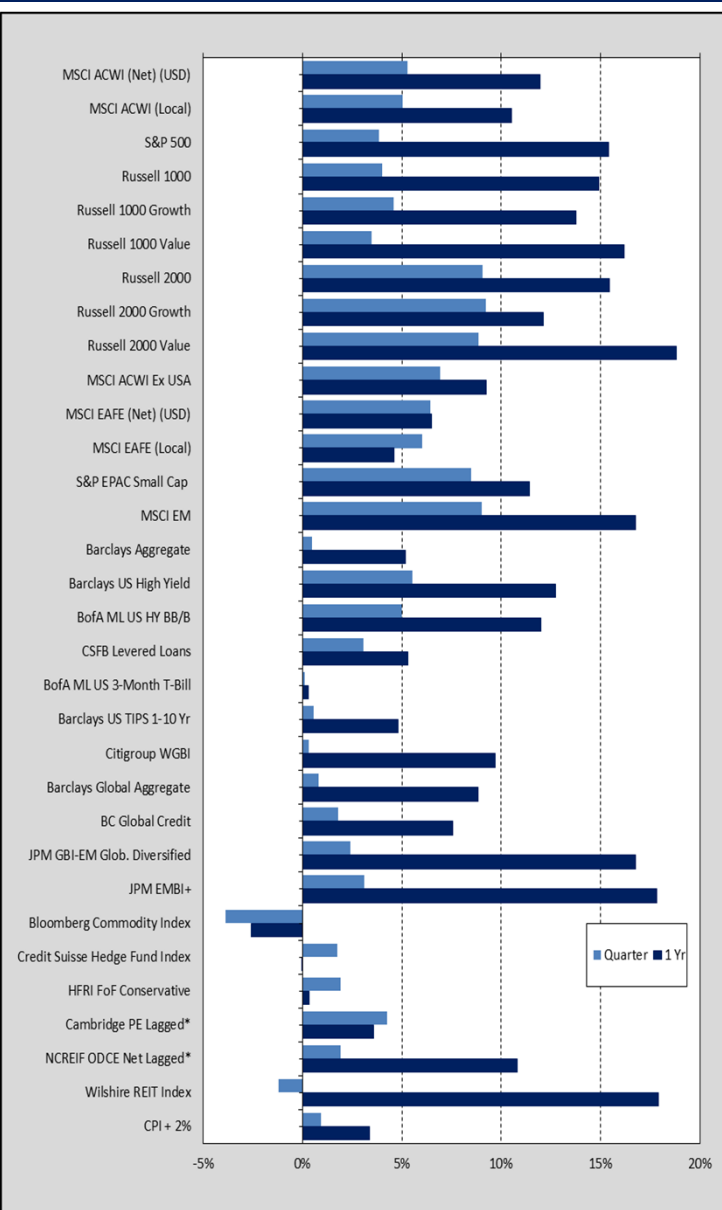


- **Second quarter GDP growth rate (third estimate) printed at a modest 1.4%.**
 - Retail sales ended August at +1.6% on a year-over-year basis. In the same period last year the YoY growth rate was 1.3%.
 - The inventory-to-sales ratio ended August was flat at 1.4 and has remained relatively flat since early 2010.
 - Corporate profits (ended April) as a percent of GDP increased to 8.8% from 8.5% (in January) and remain elevated relative to historical levels.
 - The U.S. trade deficit widened ending August as the rate of change in imports increased to a level not seen since last September.
- **The unemployment rate increased 0.1% to 5.0% in Q3; U-6, a broader measure of unemployment, increased to 9.7% during the third quarter from 9.6%.**
- **The Case-Shiller Home Price Index (ended July) increased to 183.6 from 180.7 in July and is at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally adjusted CPI saw an uptick to 1.36% at the end of September; Capacity Utilization was flat at 75.4% ended Q3.**
- **Fed Funds rate was unchanged at 0.50%. The 10-year Treasury Yield (constant maturity) finished Q3 unchanged at 1.6% vs Q2.**
- **The Fed balance sheet decreased slightly during Q3 2016, while the European Central Bank balance sheet continues to increase.**
 - ECB held its benchmark refinancing rate at 0%, deposit rates -0.4% and asset purchases at €80 billion per month of corporate and public securities.
- **S&P valuations increased slightly in Q2 remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (26.71x) is above the long-term average of 16.68x and above the 10-year average of 22.92x.

San Bernardino County Employees' Retirement Association

Market Environment – Q3 2016 Overview

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI (Net) (USD)	World	5.3%	12.0%	5.2%	10.6%	4.3%
MSCI ACWI (Local)	World (Local Currency)	5.1%	10.5%	7.7%	12.6%	4.6%
Domestic Equity Benchmarks						
S&P 500	Large Core	3.9%	15.4%	11.2%	16.4%	7.2%
Russell 1000	Large Core	4.0%	14.9%	10.8%	16.4%	7.4%
Russell 1000 Growth	Large Growth	4.6%	13.8%	11.8%	16.6%	8.8%
Russell 1000 Value	Large Value	3.5%	16.2%	9.7%	16.2%	5.9%
Russell 2000	Small Core	9.0%	15.5%	6.7%	15.8%	7.1%
Russell 2000 Growth	Small Growth	9.2%	12.1%	6.6%	16.1%	8.3%
Russell 2000 Value	Small Value	8.9%	18.8%	6.8%	15.4%	5.8%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	6.9%	9.3%	0.2%	6.0%	2.2%
MSCI EAFE (Net) (USD)	Int'l Developed	6.4%	6.5%	0.5%	7.4%	1.8%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	6.0%	4.6%	5.3%	11.2%	2.2%
S&P EPAC Small Cap	Small Cap Int'l	8.5%	11.4%	5.6%	11.5%	4.8%
MSCI EM	Emerging Equity	9.0%	16.8%	-0.6%	3.0%	3.9%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	0.5%	5.2%	4.0%	3.1%	4.8%
Barclays US High Yield	High Yield	5.6%	12.7%	5.3%	8.3%	7.7%
BofA ML US HY BB/B	High Yield	5.0%	12.0%	5.6%	8.0%	7.1%
CSFB Levered Loans	Bank Loans	3.1%	5.3%	3.6%	5.4%	4.3%
BofA ML US 3-Month T-Bill	Cash	0.1%	0.3%	0.1%	0.1%	0.9%
Barclays US TIPS 1-10 Yr	Inflation	0.6%	4.8%	1.5%	1.3%	3.8%
Global Fixed Income Benchmarks						
Citigroup WGBI	World Gov. Bonds	0.3%	9.7%	1.8%	0.8%	4.1%
Barclays Global Aggregate	Global Core Bonds	0.8%	8.8%	2.1%	1.7%	4.3%
BC Global Credit	Global Bonds	1.8%	7.6%	2.9%	3.7%	4.6%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	2.4%	16.8%	-2.7%	0.0%	5.5%
JPM EMBI+	Em. Mkt. Bonds	3.1%	17.8%	8.0%	7.3%	7.6%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodity	-3.9%	-2.6%	-12.3%	-9.4%	-5.3%
Credit Suisse Hedge Fund Index	Hedge Fund	1.8%	-0.0%	2.6%	4.3%	4.2%
HFRI FoF Conservative	Fund of Hedge Funds	1.9%	0.3%	2.2%	3.1%	1.5%
Cambridge PE Lagged*	Private Equity	4.2%	3.6%	11.3%	11.3%	10.8%
NCREIF ODCE Net Lagged*	Real Estate	1.9%	10.8%	12.0%	11.7%	5.2%
Wilshire REIT Index	REIT	-1.2%	17.9%	14.3%	15.8%	5.9%
CPI + 2%	Inflation/Real Assets	0.9%	3.4%	3.0%	3.2%	3.8%



* As of 6/30/2016

Global Equity

- **U.S. equities posted modest gains in the third quarter (+3.9%) according to the S&P 500. Volatility related to political change and economic uncertainty continued in the quarter.**
- **Small cap stocks outperformed large cap stocks during the quarter, with the Russell 2000 Index returning 9.0% and the Russell 1000 Index returning 4.0%.**
- **International equities outperformed U.S. markets during the quarter, returning +6.9%, as measured by the MSCI ACWI ex-U.S. Index. Emerging markets returned +9.0 as measured by the MSCI Emerging Markets Index in U.S. dollar terms.**
 - Developed international markets returned +6.4% as measured by the MSCI EAFE Index.

Private Equity

- **Private equity fundraising totaled \$71.7 billion in Q3 2016.**
- **Buyout and Special Situations fundraising totaled \$38 billion in Q3 2016.**
- **Venture capital fundraising totaled \$11.7 billion.**
 - VC fundraising as a percent of total new PE funds is in line with historical post-dot com levels.
- **Fund of fund and multi-manager co-investment fundraising totaled \$3 billion.**
- **Growth equity fundraising totaled \$7.2 billion.**

Fixed Income

- **The nominal yield curve flattened in the Q3. Intermediate yields increased 13 –to- 17 basis points and long duration yields increased 2 basis points.**
- **The spread between two and 10-year rates decreased to 83 basis points in Q3 from 91 basis points in Q2. Treasury Inflation-Protected Securities, or TIPS, returned +0.6% during the quarter, as measured by the Barclays US TIPS 1-10 Yr Index.**
- **The Barclays Long Duration Credit Index gained +2.26% as the long end of the curve ended the quarter 2 basis points higher.**
- **Long Treasuries lost -0.36% and investment-grade US corporate debt gained +0.5%.**
- **The Barclays 1-3 year Government/ Credit Index returned +0.02%. US high yield bonds gained +5.6% driven by lower quality and Energy names.**
- **Emerging markets debt continued its broad rally.**
 - US dollar-denominated debt, as measured by the JP Morgan EMBI Index, gained +3.1%; local currency debt gained +2.4%, according to the JP Morgan GBI-EM Index.
 - 90% of flows have been into EM Hard Currency
 - Despite a spectacular +17% YTD, EM Local 3-year return is still -3.17%

Real Assets/Inflation-Linked Assets

- **Massive energy market dislocation.**
 - Seek inflation sensitive asset classes that offer positive yield
 - Oil prices stabilizing and remain low.
 - Private equity and private debt opportunities may be relatively attractive.
 - Potential for public stressed/distressed credit, equity and commodity plays.

- **Select infrastructure opportunities showing signs of being attractive.**
 - Target opportunistic strategies in niche sub-sectors to take advantage of market dislocations.
 - Secular opportunities may exist within the shipping industry as traditional financing sources (both debt and equity) are less abundant

- **Timber opportunities remain elusive.**
 - Income yields (net) are low as assets are predominantly traded between like-minded institutions
 - Private strategies are illiquid and constrain quick entrance/exit (i.e. long-term lock-up)
 - Liquid strategies have limited pure timber exposure (and limited active-play options)

- **Metals & Mining; weakened commodity prices may be the new norm as China growth shifts.**

- **Agriculture; outlook supported by strong demographic trends.**

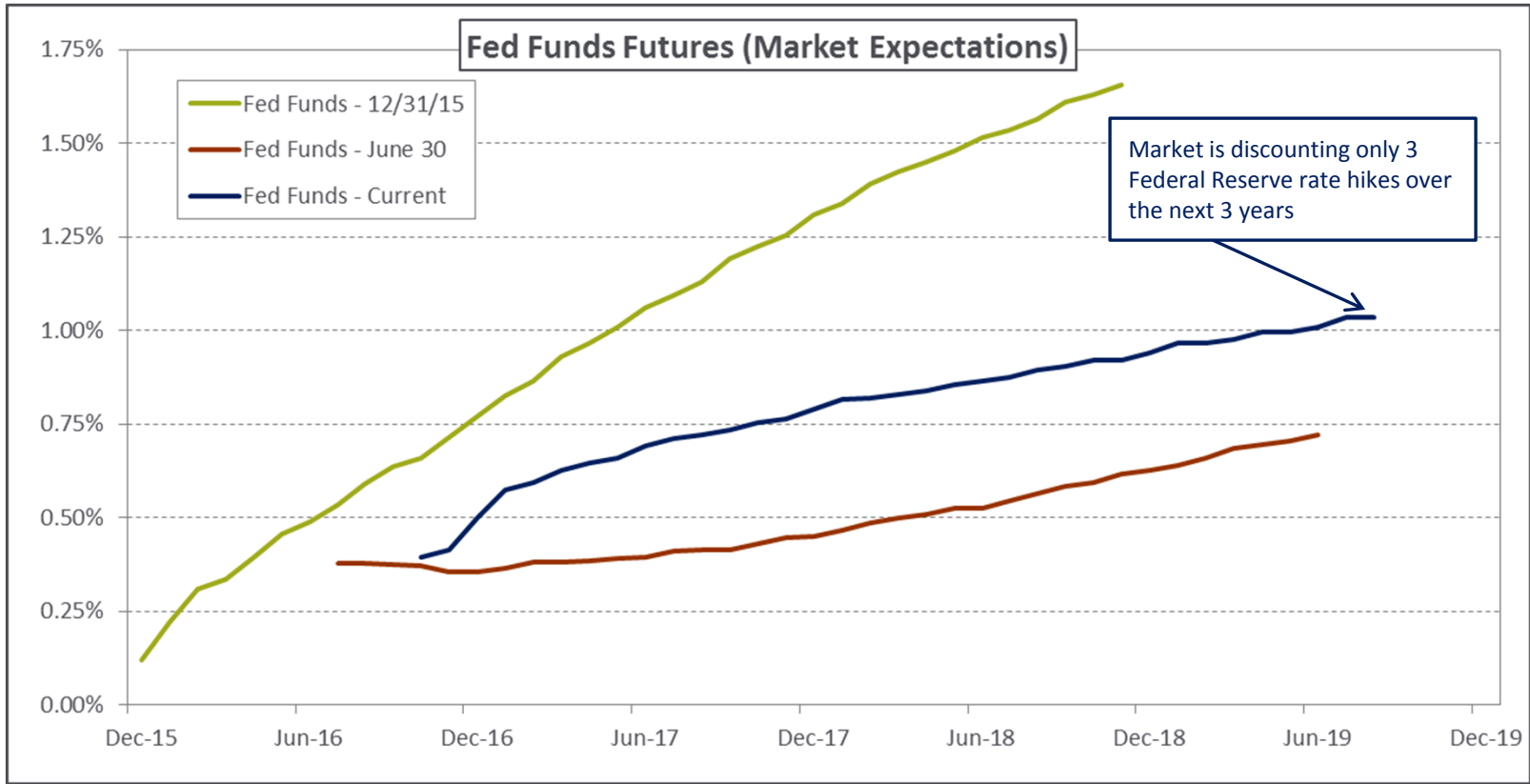
Commodities

- **Commodities ended quarter down -3.9% as measured by the Bloomberg Commodity Index.**
 - Gold lost -0.5% in the third quarter though rallying YTD approximately 24%.
 - Agricultural commodities were lower during the quarter.

Real Estate

- **NEPC continues to be neutral on core real estate in the US and remains positive on non-core real estate, that is, value-add and opportunistic strategies.**
- **Within U.S. core real estate, strong fundamentals continue to be the story along with attractive income spreads relative to interest rates.**
 - Real estate fundamentals and debt terms are attractive, however valuations are high and the possibility of rising interest rates and the impact on cap rates causes concern.
- **Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.**
- **US REITs recorded negative returns -1.2% as measured by the Wilshire REIT Index. The sector is trading at a slight premium to NAV ending Q3.**
- **Europe is viewed as the best place for a marginal dollar of non-core real estate investment.**
 - Current US-dollar denominated investors with currency exposure will feel near-term impact of Brexit, but new investors may benefit from a strong US-dollar. Long-term Brexit implications, however, are unclear.

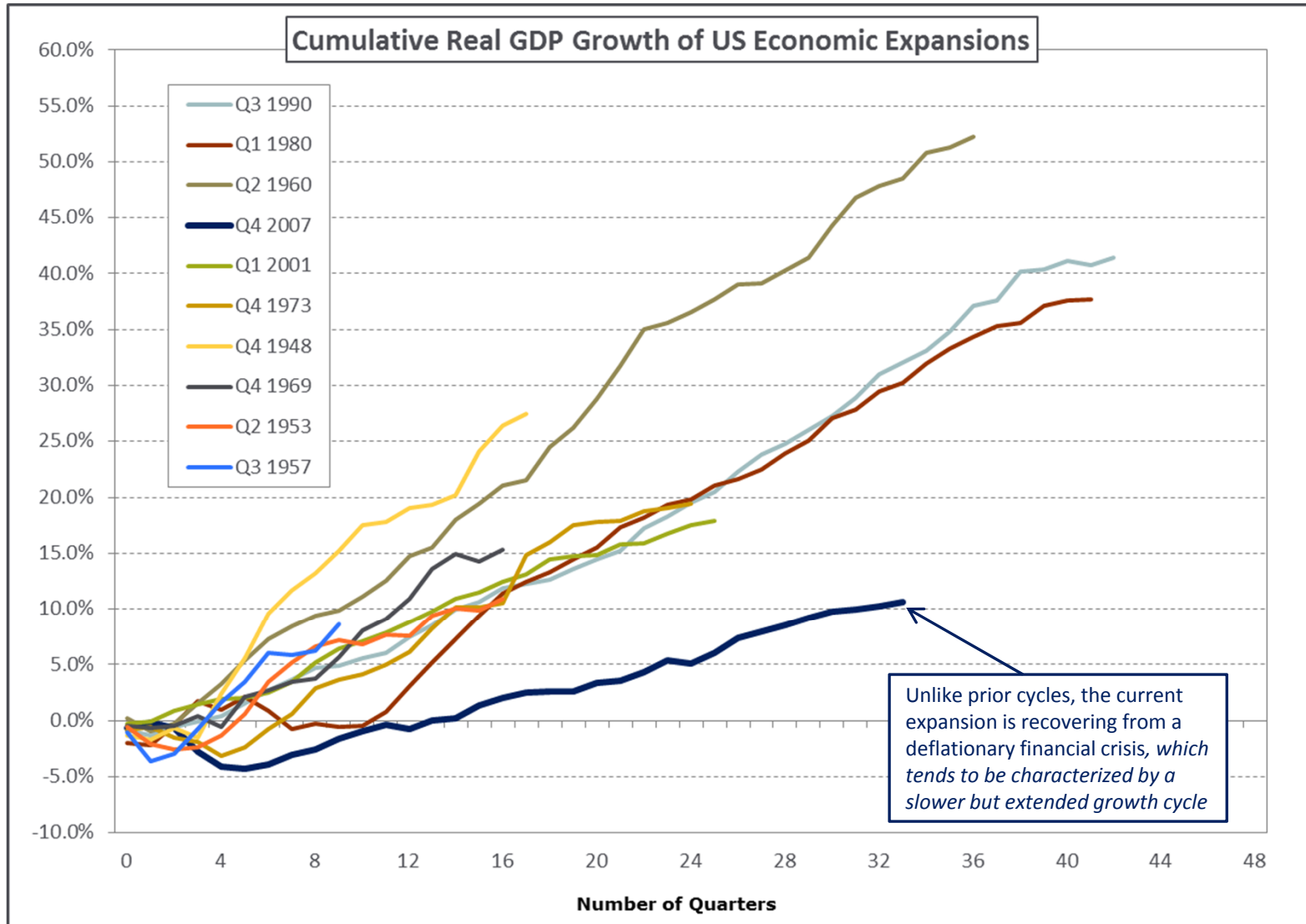
Expectations of Federal Reserve Action Have Decreased Considerably



Source: Bloomberg

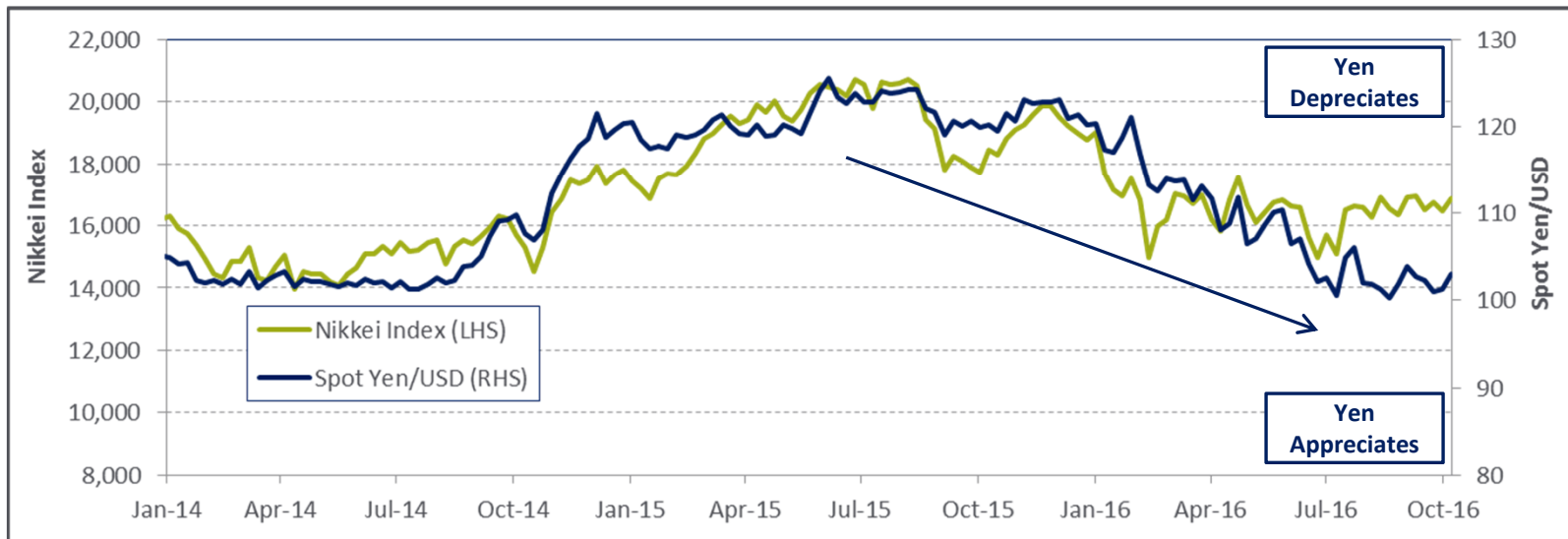
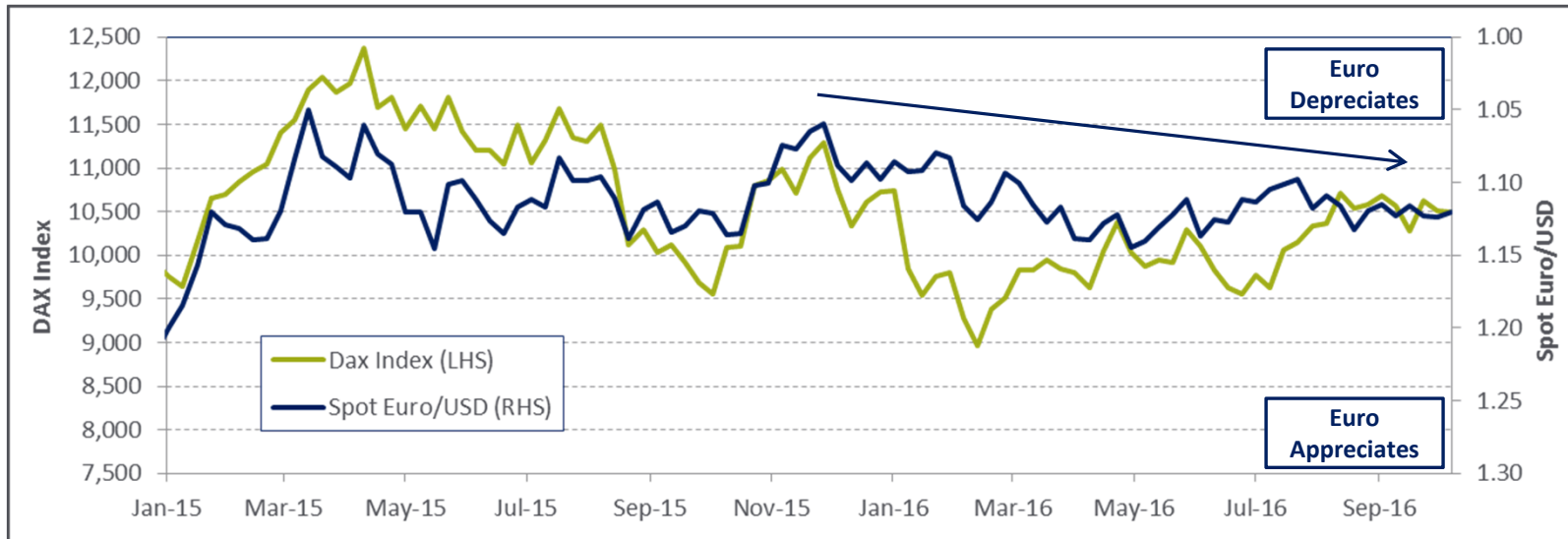
- **Muted, but consistent, US economic growth gives the Fed flexibility to move slowly with policy tightening**
- **Markets discounting a more muted pace increases potential for a negative Fed surprise**

A Prolonged US Economic Expansion can Support an Extended Rally for Risk Assets



Source: Federal Reserve Bank of St. Louis

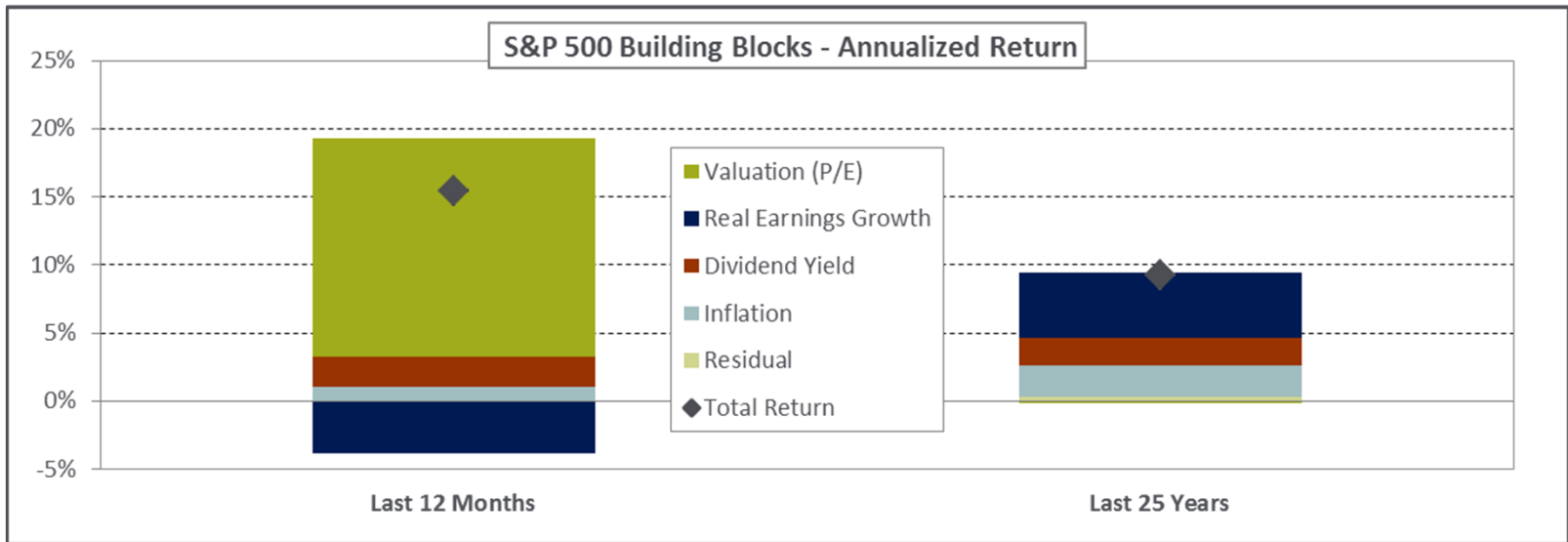
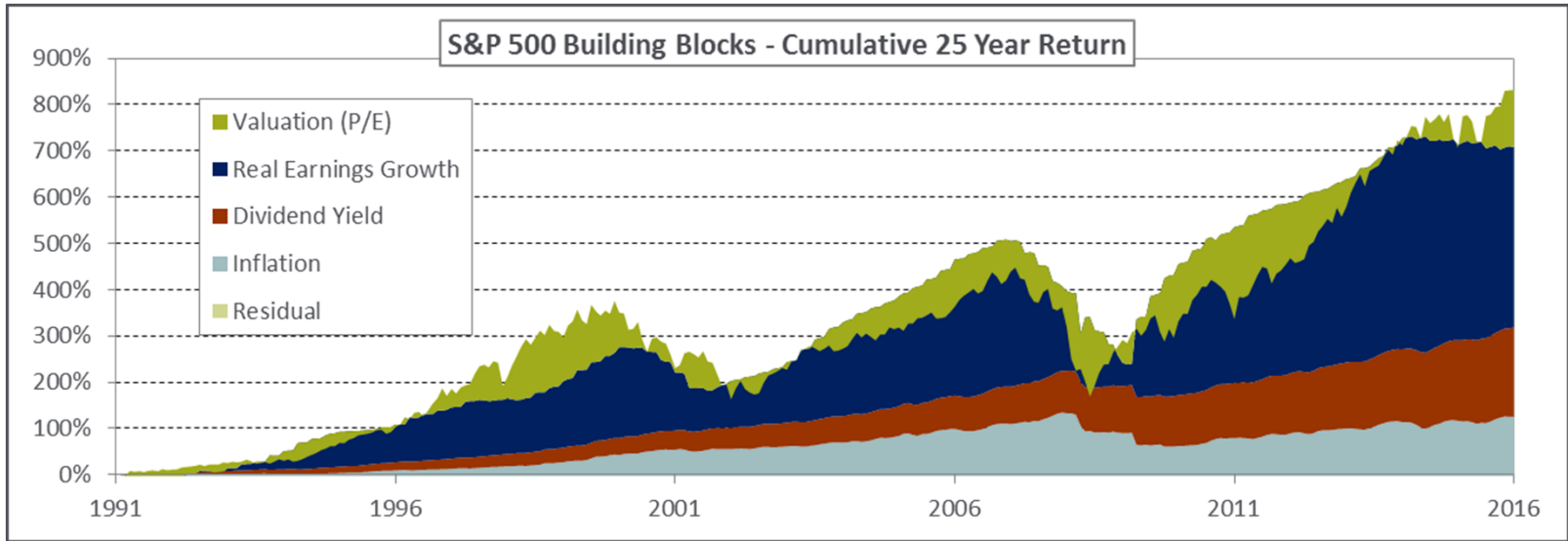
Central Bank Ability to Weaken the Currency and Stimulate Equity Markets has Waned



Source: Bloomberg

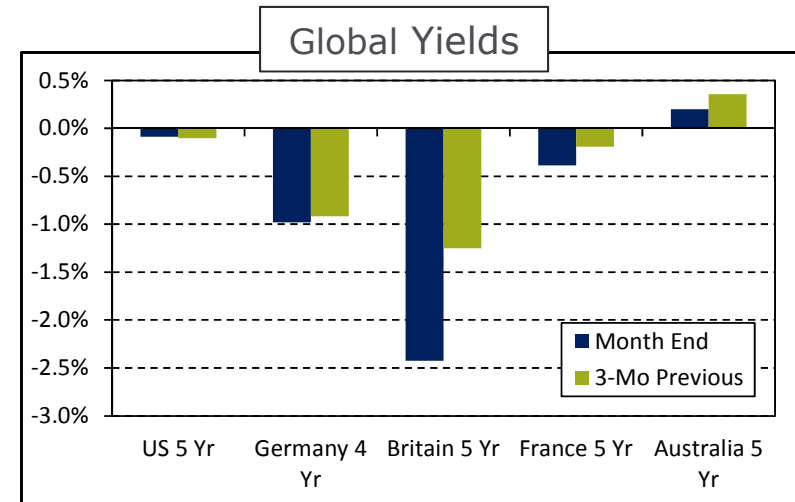


S&P Earnings Weakness has been Overlooked as Expanding Valuations Drive Recent Returns

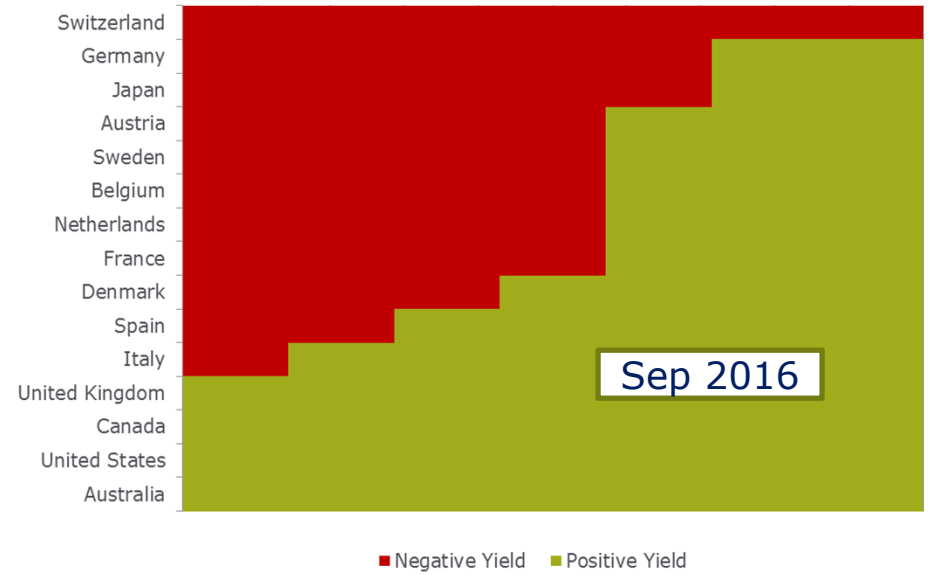
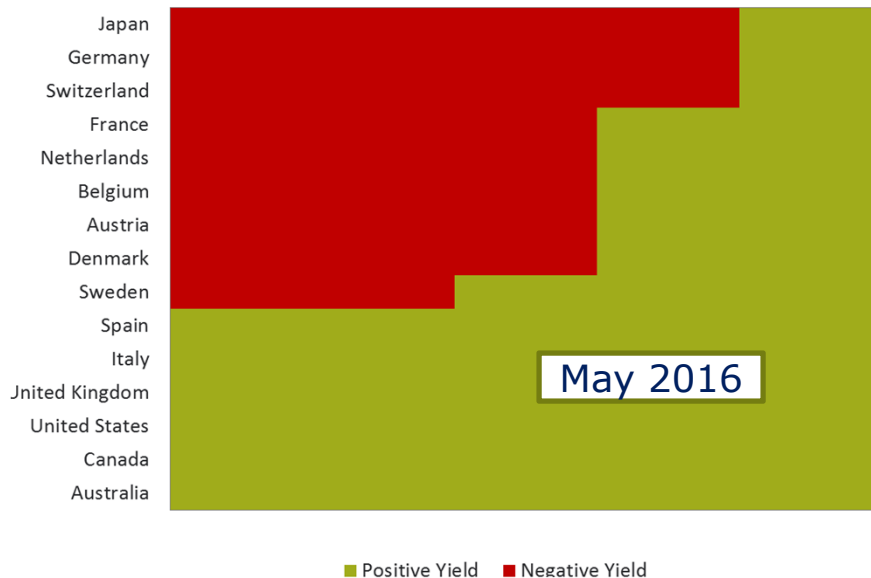


Source: Bloomberg, NEPC

- **Global real yields continue trending lower**

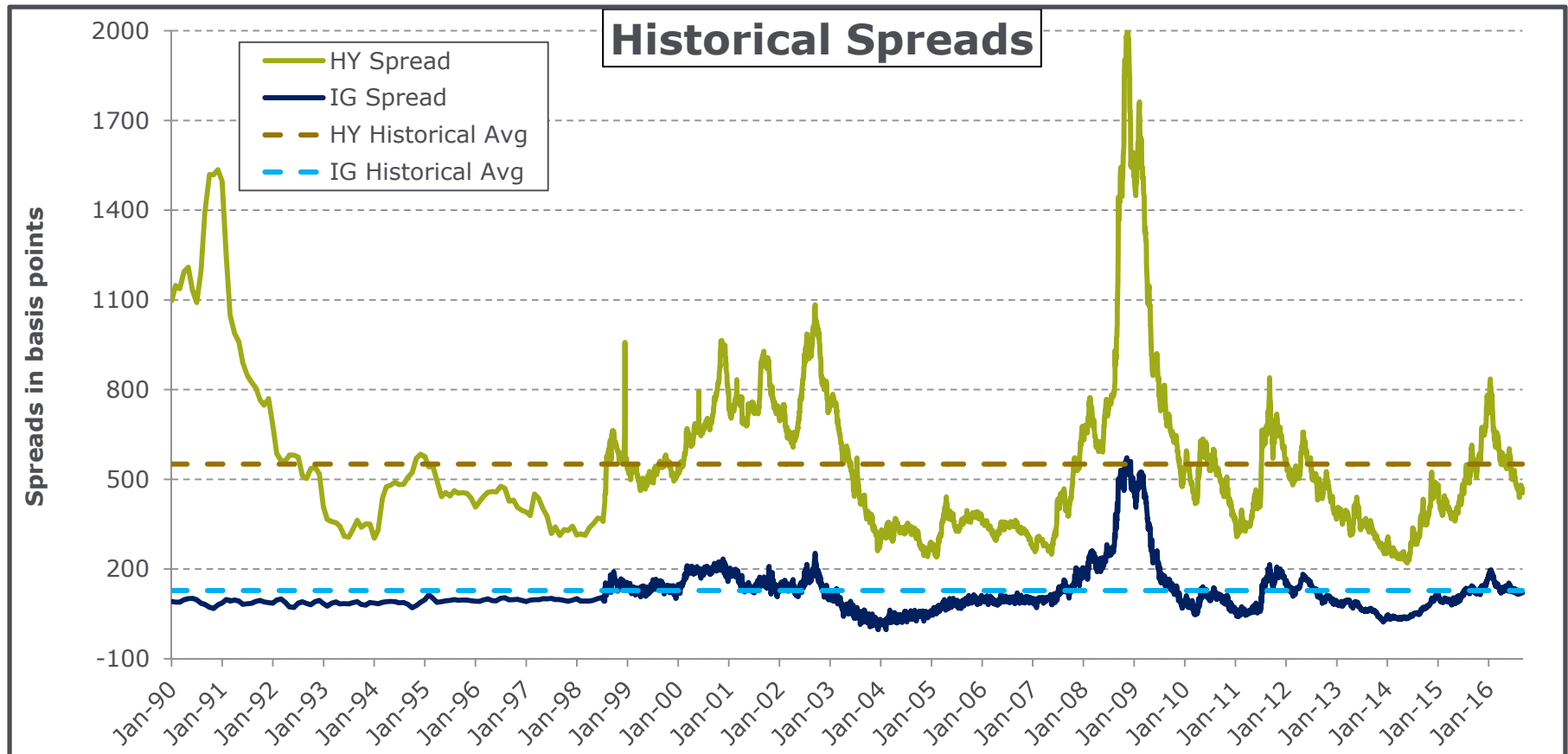


- **Global government yields by maturity buckets – more than a third is negative yielding!**



Credit Cycle and Historical Spreads

- **IG and HY spreads are at or below historical averages**



- **Trim US equity exposure as US markets have rebounded significantly**
 - Remain disciplined and look for rebalancing opportunities should equity markets decline
 - Use tactical strategies to capture pockets of value in US high yield as spreads compress
- **Maintain overweight exposure to non-US developed market equities**
 - Central bank support and dollar strength provide a positive economic backdrop
 - Small-cap equity and global equity are preferred implementation approaches
 - These strategies offer the best opportunity to exploit valuation discrepancies among stocks
- **Emerging Markets offer the most attractive total return opportunity for investors in public markets**
 - China uncertainty, dollar pressure and idiosyncratic country risks temper excitement
 - Overweight small-cap and consumer focused strategies relative to broad mandates
- **Developed market duration exposure is generally unattractive**
 - Preserve US duration exposure with a bias towards TIPS over core bonds
 - Rebalance long treasuries, long credit, and risk parity following recent gains
 - Look to eliminate WGBI focused global bond strategies with yields at historic lows
- **Embrace illiquidity in opportunistic credit and private credit strategies**
 - Stressed credit liquidity magnifies the scale of price movements in traditional credit assets
 - Credit markets ability to absorb an exodus from crowded positions is challenged

Highlights of Third Quarter Happenings at NEPC

September 30, 2016

NEPC Insights

Recent White Papers

- “DC Governance: Slaying the Hydra” (August)
- “Nonprofit Annual Audit Survival Guide” (August)
- “Class is in Session: Lawsuits Against Higher Education Retirement Plans” (September)
- Market Chatter: “NEPC’s Summer Travel: Perspectives on China” (September)
- NEPC’s 11th Annual Defined Contribution Plan & Fee Survey

Webinar

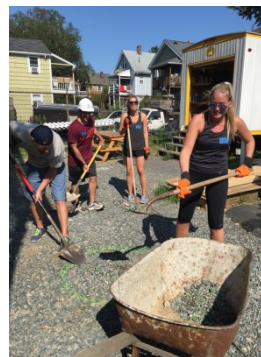
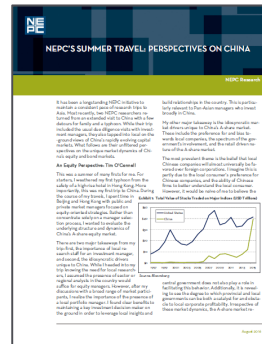
- “2016 Defined Contribution Plan & Fee Survey Webinar” (September); Panel reviewed key findings from our 11th annual NEPC 2016 Defined Contribution Plan & Fee Survey.

Video Series

- “Five Questions with Jeff Roberts on Healthcare Strategic Private Equity Investing” (July)
- “Five Questions with Richard M. Charlton” (July)
- “Discussing Pension Risk Transfers with Chris Levell and Craig Svendsen” (August)

NEPC Recognitions

We are pleased to announce that *Chief Investment Officer* published their fifth annual list of the world’s most influential investment consultants featuring NEPC’s **Tim McCusker, FSA, CFA, CAIA, CIO, Partner**, and **Scott Perry, CAIA, Partner**.



Upcoming Events

The 8th Annual NEPC, LLC Public Fund Workshop will be held January 23-24, 2017 in Tempe, Arizona at the Tempe Mission Palms.

NEPC’s 22nd Annual Investment Conference will be held on May 9-10, 2017 at the InterContinental Hotel in Boston, MA.

ESG – Clearing Up The Confusion Webinar (Coming in December)

NEPC is hosting a webinar to continue the conversation around Environmental, Social and Governance integration (ESG). We aim to help clear up the confusion around what ESG represents and why it has become a growing topic of interest. NEPC will be joined by investment managers from different asset classes who will offer their insights into how they are implementing ESG into their investment portfolios.

NEPC Gives Back

- NEPC employees went “sock-less” and participated in the *Sox for Socks* drive to support the Boston Health Care for the Homeless Program, which provides socks for the homeless men and women of Boston.
- Eighteen NEPC employees volunteered to work with Habitat for Humanity Greater Boston, stepping up to help build new homes for low-income families in need of decent and affordable housing.

Total Fund Performance

San Bernardino County Employees' Retirement Association

Total Fund Performance Summary (Gross)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
Total Fund	\$8,653,368,081	4.6%	20	7.7%	11	7.3%	99	5.6%	89	8.6%	87	4.9%	99
<i>Policy Index</i>		2.6%	99	7.9%	6	10.1%	50	5.3%	97	8.0%	99	5.4%	88
<i>S&P 500</i>		3.9%	36	7.8%	8	15.4%	1	11.2%	1	16.4%	1	7.2%	1
<i>Barclays Aggregate</i>		0.5%	99	5.8%	93	5.2%	99	4.0%	99	3.1%	99	4.8%	99
<i>60% MSCI ACWI (Gross)/40% CITI WGBI</i>		3.4%	61	8.8%	1	11.7%	2	4.3%	99	7.1%	99	4.9%	99
<i>InvestorForce Public DB > \$1B Gross Median</i>		3.6%		6.8%		10.0%		6.3%		10.2%		6.1%	

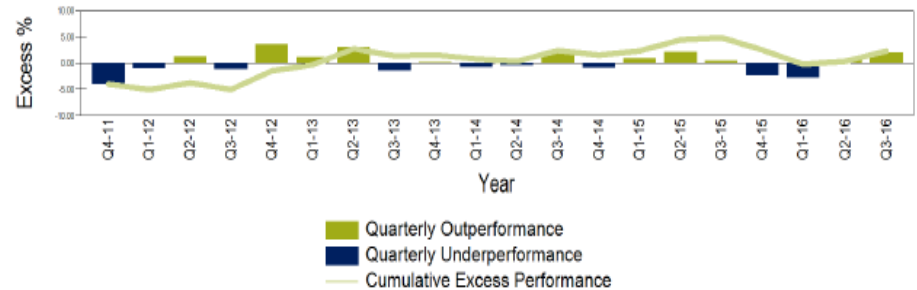
In the year ended September 30, 2016 the Fund returned -7.3% ranking in the 99th percentile of Public Funds > \$1Billion. The Fund's assets totaled \$8.7 billion, an increase of \$541.3 million from a year ago.

The Fund experienced a net investment gain of \$574.9 million in the year ended September 30, 2016 including a net investment gain of \$379.4 million in the third calendar quarter.

In the three -year period ended September 30, 2016 the Fund returned 5.6% and ranked in the 89th percentile among its peers. The Sharpe Ratio over this period of 1.5 ranks in the 1st percentile, indicating that the Fund earned a much higher rate of return for each incremental unit of risk taken during the period versus its peers.

In the five-year period ended September 30, 2016 the Fund returned 8.6% per annum and ranked in the 87th percentile among its peers. On a risk adjusted basis the Fund's Sharpe and Sortino Ratios rank in the 1st percentile indicating both strong returns per unit of risk taken and strong returns per unit of downside risk experienced when compared to a universe of public fund peers >\$1B.

Quarterly and Cumulative Gross Performance vs. Policy



Statistics Summary

3 Years Ending September 30, 2016

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	1.5	1	2.7	1
InvestorForce Public DB > \$1B Gross Median	0.9	--	1.6	--

5 Years Ending September 30, 2016

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	2.1	1	3.5	1
InvestorForce Public DB > \$1B Gross Median	1.4	--	2.2	--

Total Fund Performance Summary

Statistics Summary

1 Year Ending September 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	7.3%	99	4.9%	1	1.4	9	2.4	14
InvestorForce Public DB > \$1B Gross Median	10.0%	--	7.4%	--	1.3	--	1.9	--

Statistics Summary

3 Years Ending September 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	5.6%	89	3.7%	1	1.5	1	2.7	1
InvestorForce Public DB > \$1B Gross Median	6.3%	--	6.5%	--	0.9	--	1.6	--

Statistics Summary

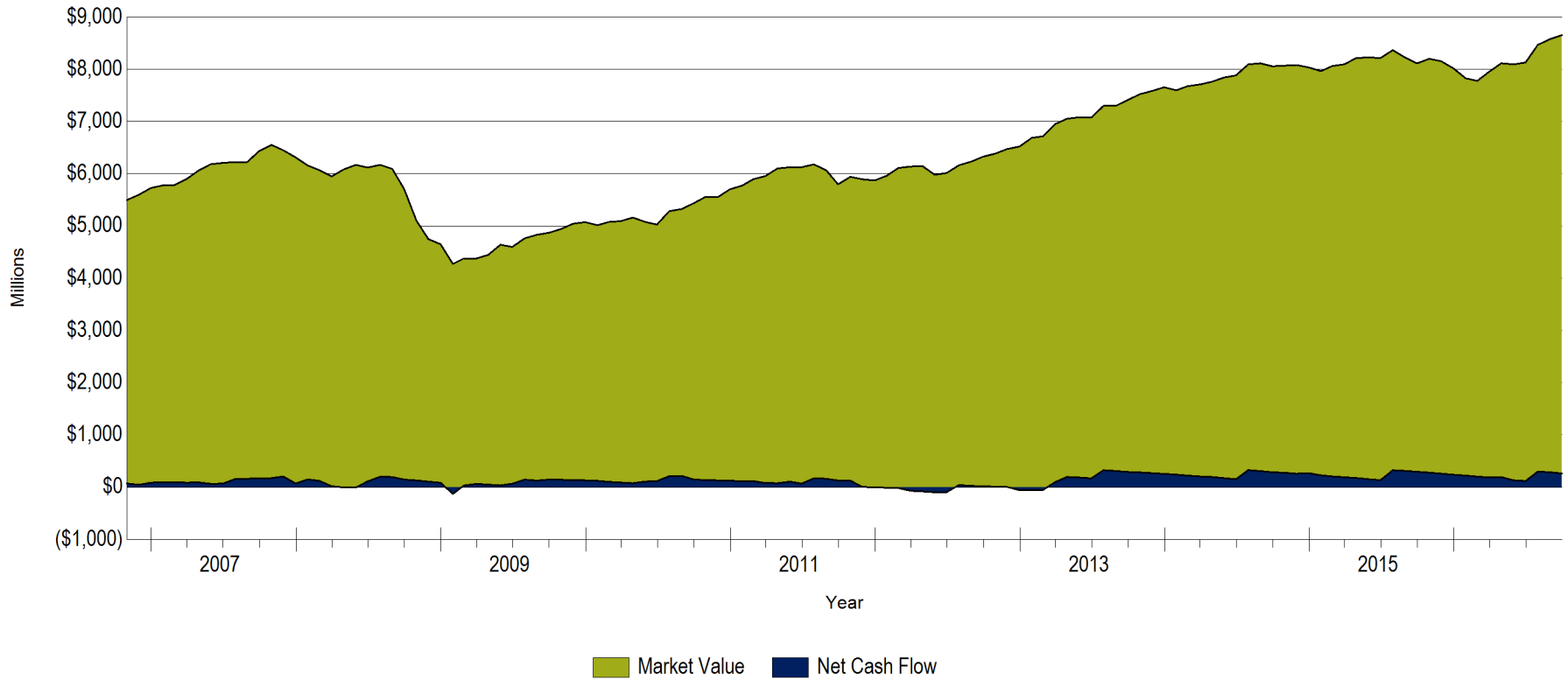
5 Years Ending September 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	8.6%	87	4.0%	1	2.1	1	3.5	1
InvestorForce Public DB > \$1B Gross Median	10.2%	--	6.9%	--	1.4	--	2.2	--

Sortino Ratio requires at least two negative points during the time period in order to calculate

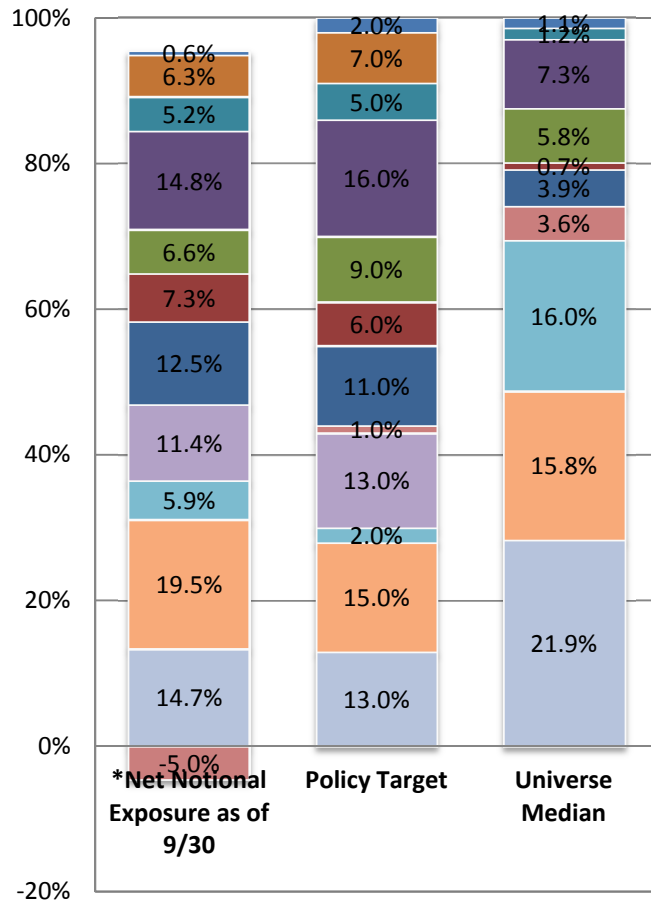
Total Fund Asset Growth Summary

10 Years Ending September 30, 2016



	Last Three Months	One Year	Five Years	Ten Years
Beginning Market Value	\$8,128,956,525	\$8,112,094,828	\$5,797,378,328	\$5,303,377,333
Net Cash Flow	\$145,047,105	-\$33,678,552	\$144,632,587	\$270,983,107
Net Investment Change	\$379,364,450	\$574,951,805	\$2,711,357,166	\$3,079,007,641
Ending Market Value	\$8,653,368,081	\$8,653,368,081	\$8,653,368,081	\$8,653,368,081

Total Fund Asset Allocation vs. Policy Targets



- US Equities
- U.S. Core
- Non-US Core Fixed Income
- Emerging Market Debt
- Private Equity
- Absolute Return
- Int'l Equities
- US Credit
- Non-US Credit
- Real Estate
- Real Assets
- Cash

*Net Notional Exposure is the combination of physical exposures as reported by State Street and the synthetic exposures reported by Russell.
 Universe Medians are a quarter lagged due to availability

	*Net Notional Exposure	*Net Notional Exposure as of 9/30	Policy Target	*Difference	Policy Ranges	Within Range
US Equities	1,193,763	13.8%	13.0%	0.8%	8%-18%	Yes
Int'l Equities	1,559,402	18.0%	15.0%	3.0%	10%-20%	Yes
U.S. Core	476,497	5.5%	2.0%	3.5%	-3%-7%	Yes
US Credit	978,178	11.3%	13.0%	-1.7%	8%-18%	Yes
Non-US Core Fixed Income	(412,164)	-4.8%	1.0%	-5.8%	-4%-6%	No
Non-US Credit	1,069,192	12.4%	11.0%	1.4%	6%-16%	Yes
Emerging Market Debt	627,590	7.3%	6.0%	1.3%	1%-11%	Yes
Real Estate	550,796	6.4%	9.0%	-2.6%	4%-14%	Yes
Private Equity	1,217,996	14.1%	16.0%	-1.9%	11%-21%	Yes
Real Assets	423,774	4.9%	5.0%	-0.1%	0%-10%	Yes
Absolute Return	851,477	9.8%	7.0%	2.8%	2%-12%	Yes
Cash	116,867	1.4%	2.0%	-0.6%	0%-10%	Yes
	8,653,368	100.0%	100.0%			

San Bernardino County Employees' Retirement Association

SBCERA Delta Adjusted Asset Summary

<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Delta Adjusted Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
Total Market Value	8,513.6	100.0%	-0.0	0.0%	8,513.6	100.0%	8,513.6	100.0%	8,513.6	100.0%
Cash	1,521.5	17.87%	-1,074.5	-12.62%	447.1	5.25%	0.0	0.0%	0.0	0.00%
Cash	1,521.5	17.87%	-1,074.5	-12.62%	447.1	5.25%	0.0	0.0%	0.0	0.00%
Equity	1,403.5	16.49%	1,354.8	15.91%	2,758.3	32.4%	3,218.2	37.8%	3,235.2	38.00%
Emerging Markets	444.5	5.22%	196.2	2.3%	640.7	7.53%	677.5	7.96%	681.1	8.00%
Equity Delta Hedge	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.00%
International Developed	122.3	1.44%	794.0	9.33%	916.3	10.76%	1,016.3	11.94%	1,021.6	12.00%
US Large Cap	836.5	9.83%	65.0	0.76%	901.5	10.59%	1,228.0	14.42%	1,234.5	14.50%
US Small Cap	0.1	0.0%	299.7	3.52%	299.8	3.52%	296.4	3.48%	298.0	3.50%
Fixed	2,749.1	32.29%	-280.3	-3.29%	2,468.8	29.0%	2,456.0	28.85%	2,468.9	29.00%
EM High Yield CDX	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.00%
Global ex US Fixed Income	1,761.0	20.68%	-528.4	-6.21%	1,232.6	14.48%	1,228.0	14.42%	1,234.5	14.50%
High Yield **	988.2	11.61%	0.0	0.0%	988.2	11.61%	783.4	9.2%	787.5	9.25%
US Fixed Income	0.0	0.0%	248.0	2.91%	248.0	2.91%	444.6	5.22%	447.0	5.25%
Other	2,839.5	33.35%	0.0	0.0%	2,839.5	33.35%	2,839.5	33.35%	2,809.5	33.00%
Alternatives	202.3	2.38%	0.0	0.0%	202.3	2.38%	202.3	2.38%	204.3	2.40%
Commodities	138.8	1.63%	0.0	0.0%	138.8	1.63%	138.8	1.63%	153.2	1.80%
Infrastructure	68.3	0.8%	0.0	0.0%	68.3	0.8%	68.3	0.8%	68.1	0.80%
Private Equity	1,169.4	13.74%	0.0	0.0%	1,169.4	13.74%	1,169.4	13.74%	1,200.4	14.10%
Real Estate	596.6	7.01%	0.0	0.0%	596.6	7.01%	596.6	7.01%	519.3	6.10%
Tactical Cash	664.1	7.8%	0.0	0.0%	664.1	7.8%	664.1	7.8%	664.1	7.80%

** HY CDX credit spread protection of \$700mm face is not reflected on Asset Summary

For illustrative purposes only. Past performance is not a guarantee of future results.

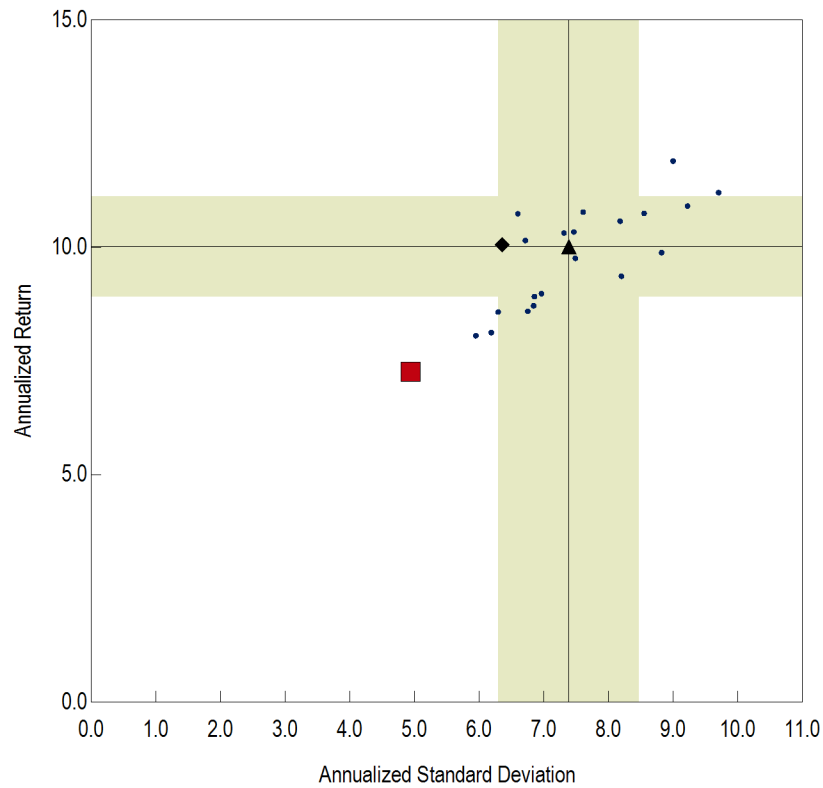
Source: Russell Investments



September 30, 2016

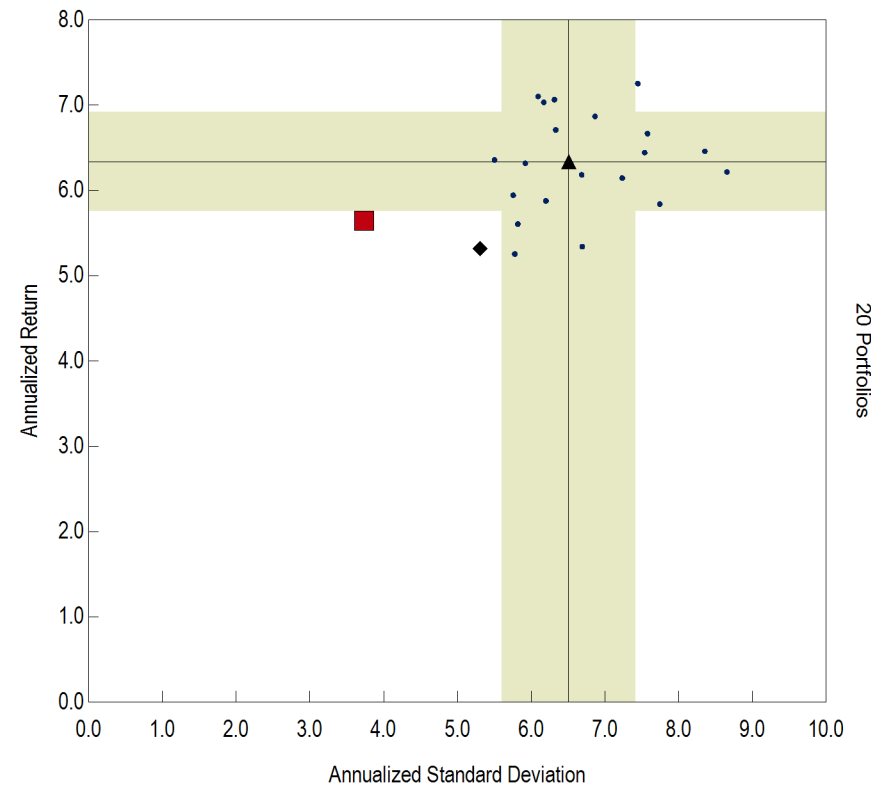
Total Fund Risk/Return

1 Year Ending September 30, 2016



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

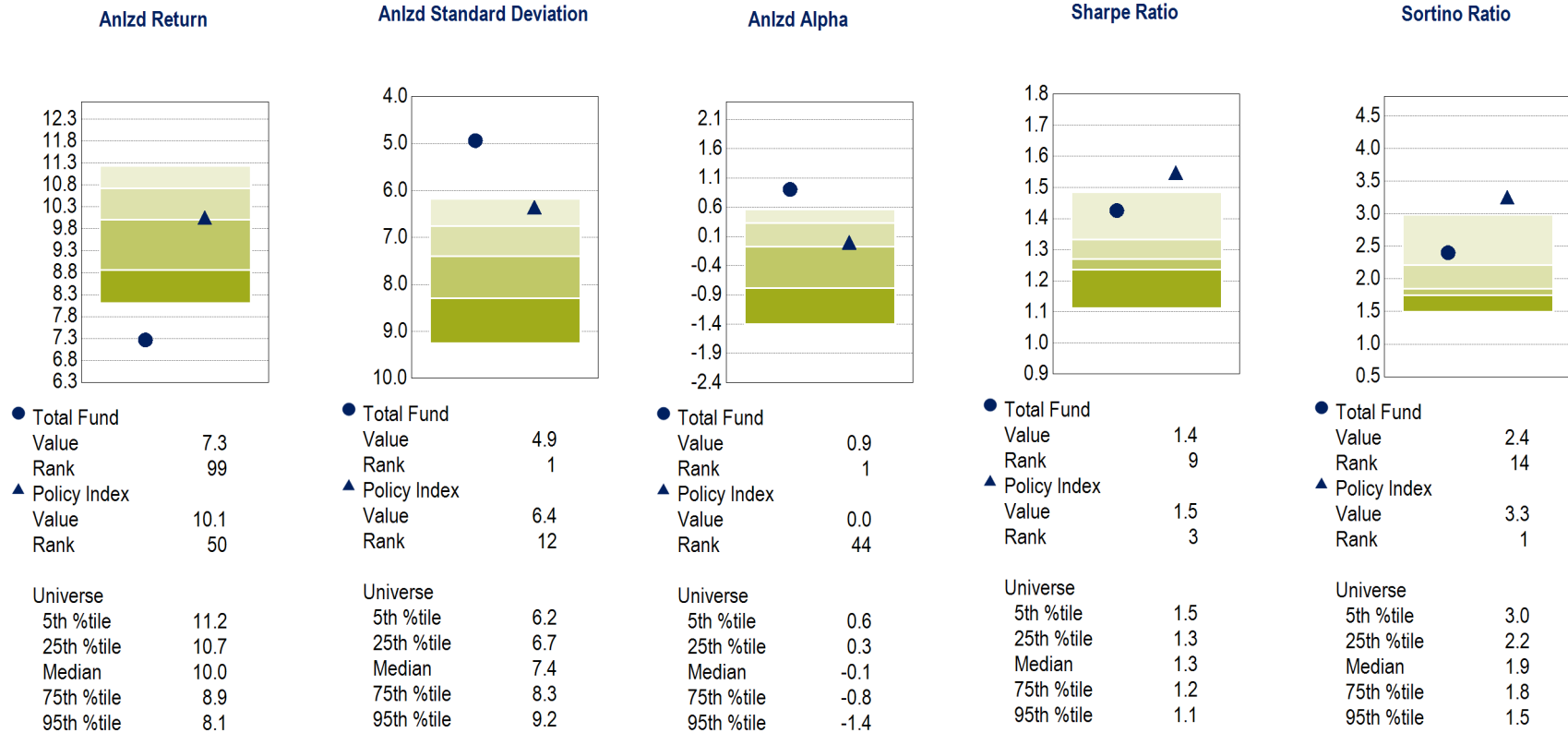
3 Years Ending September 30, 2016



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund Risk Statistics vs. Peer Universe

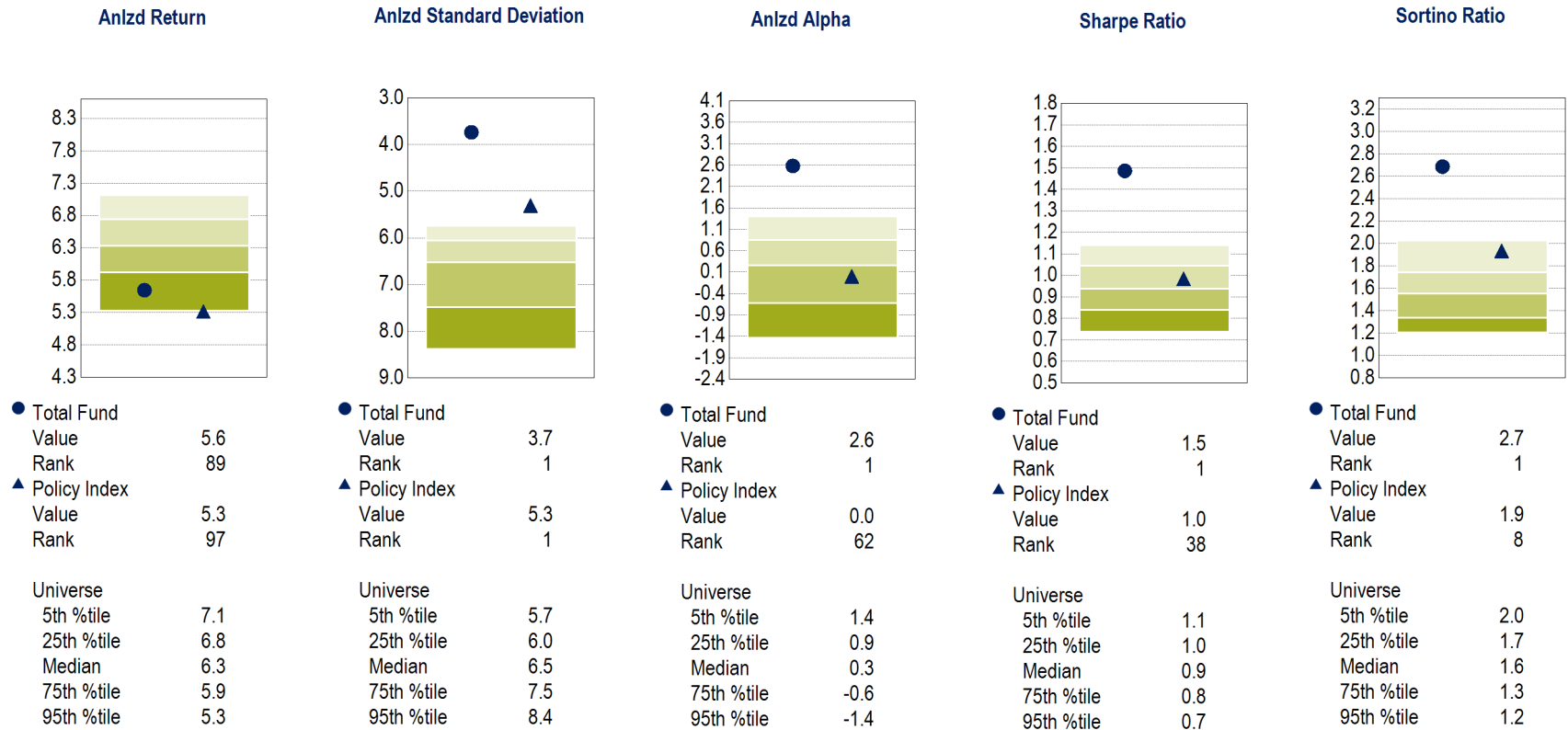
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
1 Year



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 20 Portfolios

Total Fund Risk Statistics vs. Peer Universe

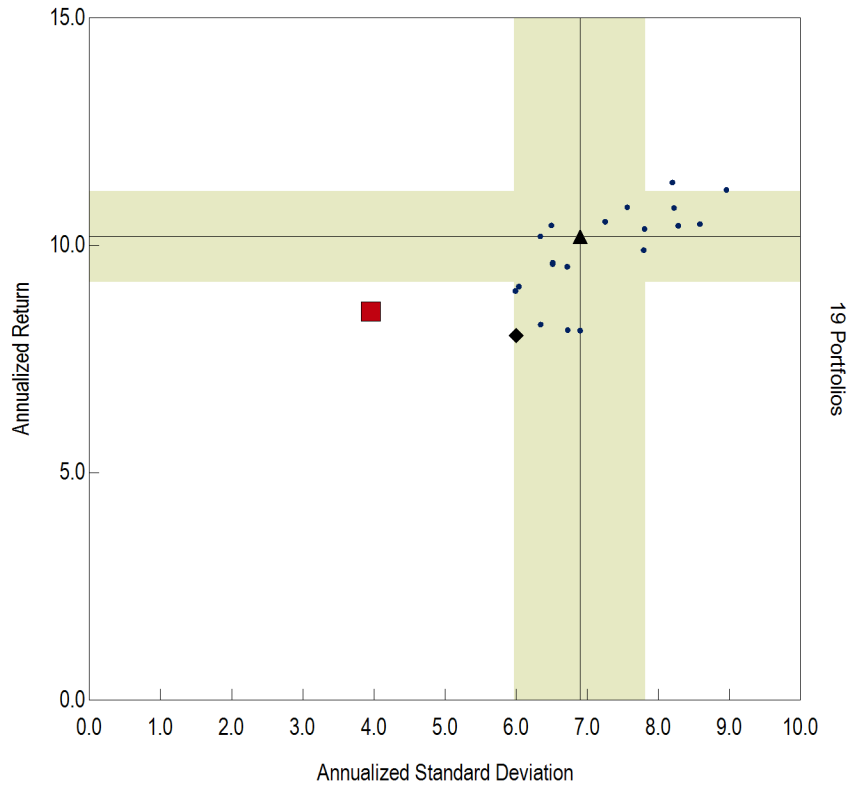
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
3 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 20 Portfolios

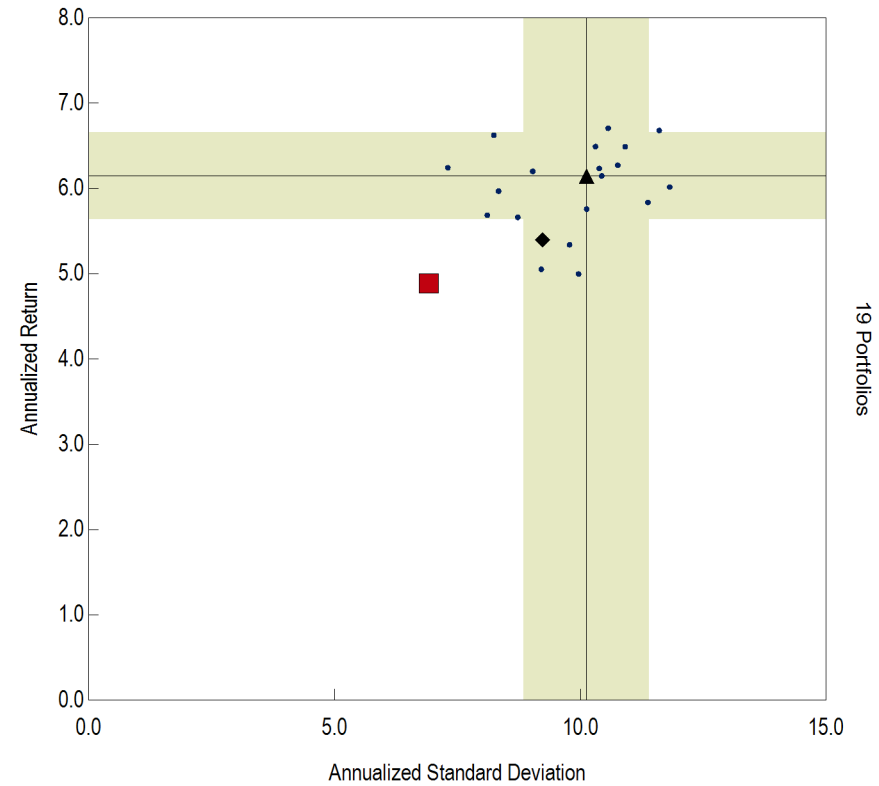
Total Fund Risk/Return

5 Years Ending September 30, 2016



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

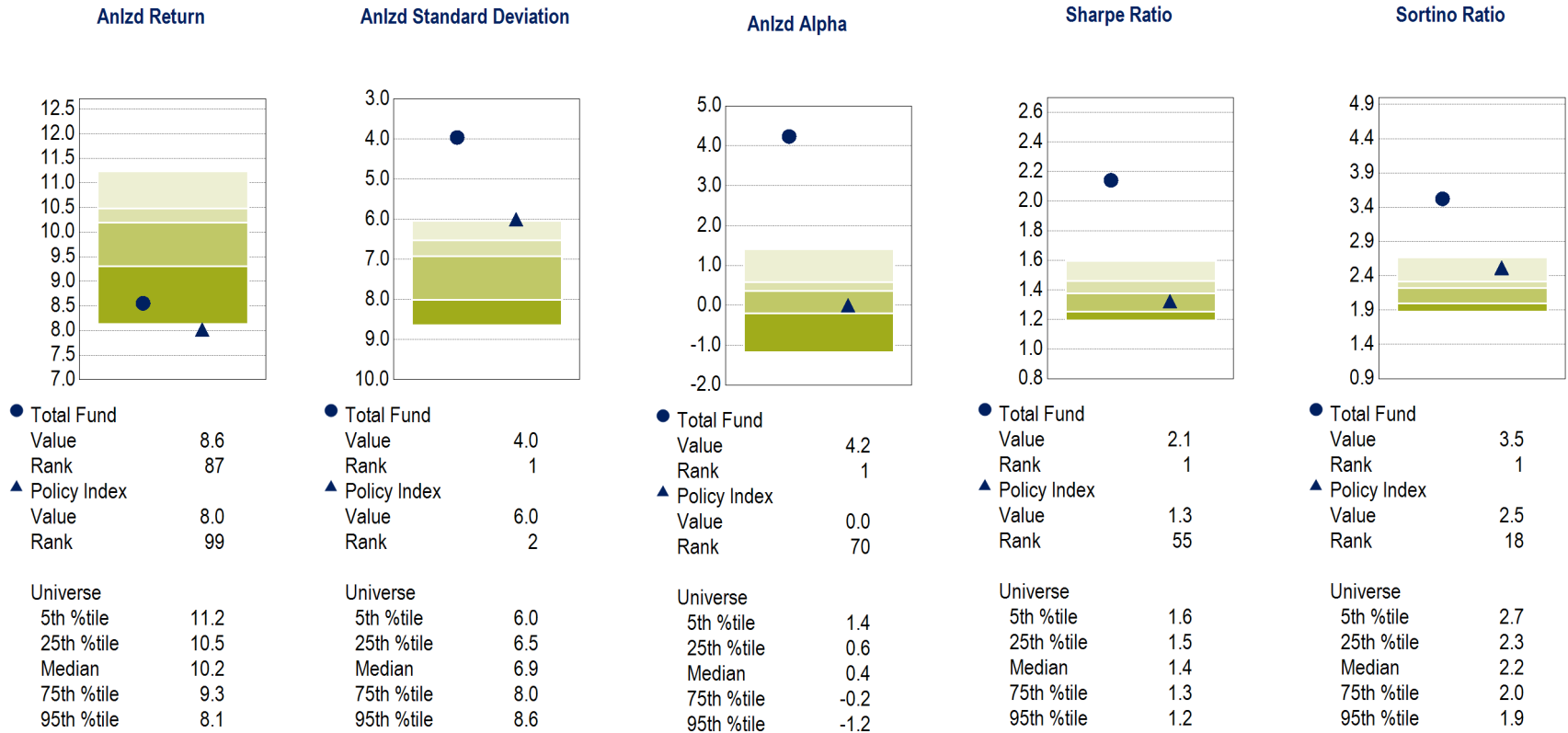
10 Years Ending September 30, 2016



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund Risk Statistics vs. Peer Universe

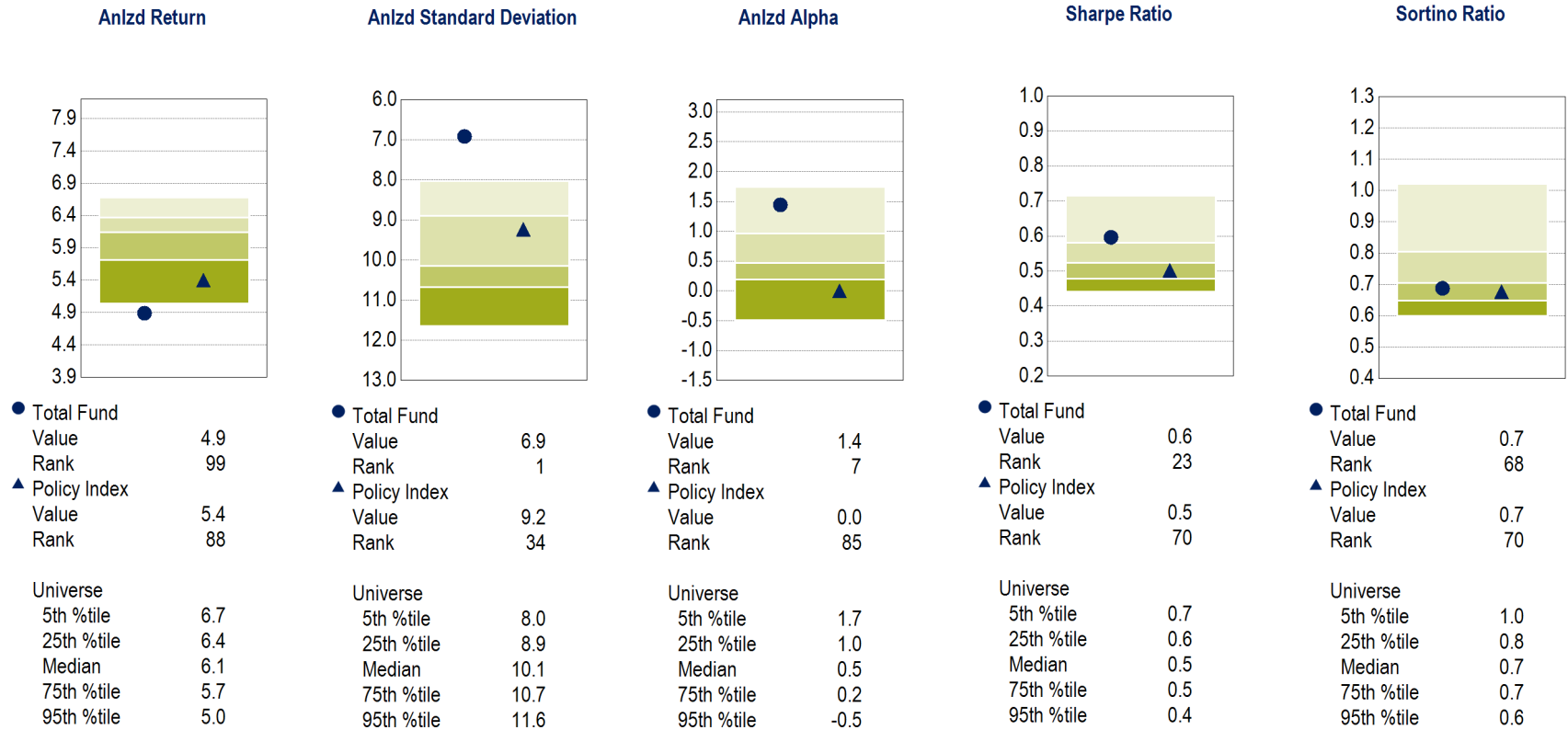
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
5 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 19 Portfolios

Total Fund Risk Statistics vs. Peer Universe

Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
10 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 19 Portfolios

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

1 Years Ending September 30, 2016

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Total Fund	100.0%	7.3%	99	4.9%	1	3.7%	-0.8	85
Policy Index	--	10.1%	50	6.4%	12	0.0%	--	--
Domestic Equity	9.6%	1.7%	99	4.5%	1	15.9%	-0.8	63
Russell 3000	--	15.0%	36	12.8%	75	0.0%	--	--
International Developed	1.4%	42.1%	1	31.7%	99	23.9%	1.5	10
MSCI EAFE	--	6.5%	46	15.0%	83	0.0%	--	--
International Emerging	5.2%	11.7%	--	14.6%	--	4.7%	-1.1	--
MSCI Emerging Markets	--	16.8%	--	18.9%	--	0.0%	--	--
U.S. Credit Strategies	11.7%	4.1%	91	3.9%	35	4.4%	-1.0	91
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	8.6%	52	5.2%	71	0.0%	--	--
Non-U.S. Credit Composite	13.6%	7.0%	--	4.0%	--	13.1%	-0.2	--
BofA Merrill Lynch Euro High Yield Constrained	--	9.2%	--	11.3%	--	0.0%	--	--
Non-U.S. Core Composite	0.9%	6.7%	68	8.0%	83	5.5%	-0.4	62
Barclays Global Aggregate	--	8.8%	44	5.0%	52	0.0%	--	--
Emerging Markets Debt Composite	7.3%	15.6%	55	6.6%	45	6.6%	-0.2	53
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	16.6%	47	9.0%	68	0.0%	--	--
Alpha Pool Composite	18.9%	3.7%	--	5.9%	--	5.9%	0.1	--
91 Day T-Bill + 3%	--	3.2%	--	0.0%	--	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	14.1%	6.1%	--	3.1%	--
Cambridge Associates Global All PE (Qtr Lag)	--	2.7%	--	3.1%	--
Real Estate Composite	6.5%	13.9%	4	1.9%	32
NCREIF Property Index 1 Qtr Lag	--	10.6%	43	4.5%	73
Real Assets Composite	4.9%	-2.6%	--	8.1%	--
Bloomberg Commodity Index	--	-2.6%	--	15.2%	--

Percent of Total equals 95% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

3 Years Ending September 30, 2016

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Total Fund	100.0%	5.6%	89	3.7%	1	3.1%	0.1	56
Policy Index	--	5.3%	97	5.3%	1	0.0%	--	--
Domestic Equity	9.6%	-0.7%	99	4.8%	1	14.4%	-0.8	70
Russell 3000	--	10.4%	24	11.0%	57	0.0%	--	--
International Developed	1.4%	5.8%	1	23.8%	99	17.5%	0.3	23
MSCI EAFE	--	0.5%	57	12.6%	86	0.0%	--	--
International Emerging	5.2%	-1.3%	--	13.0%	--	5.2%	-0.1	--
MSCI Emerging Markets	--	-0.6%	--	16.4%	--	0.0%	--	--
U.S. Credit Strategies	11.7%	5.2%	44	3.1%	7	3.7%	0.1	45
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	4.6%	46	4.0%	55	0.0%	--	--
Non-U.S. Credit Composite	13.6%	5.2%	--	3.3%	--	9.9%	0.6	--
BofA Merrill Lynch Euro High Yield Constrained	--	-0.6%	--	10.1%	--	0.0%	--	--
Non-U.S. Core Composite	0.9%	-2.0%	95	7.7%	86	5.6%	-0.7	97
Barclays Global Aggregate	--	2.1%	70	4.2%	45	0.0%	--	--
Emerging Markets Debt Composite	7.3%	5.0%	53	5.9%	31	4.9%	0.5	54
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	2.7%	63	8.3%	67	0.0%	--	--
Alpha Pool Composite	18.9%	3.4%	--	3.8%	--	3.7%	0.1	--
91 Day T-Bill + 3%	--	3.1%	--	0.0%	--	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	14.1%	11.8%	--	4.2%	--
Cambridge Associates Global All PE (Qtr Lag)	--	11.0%	--	6.6%	--
Real Estate Composite	6.5%	12.4%	53	3.5%	50
NCREIF Property Index 1 Qtr Lag	--	11.6%	79	4.7%	62
Real Assets Composite	4.9%	0.8%	--	5.8%	--
Bloomberg Commodity Index	--	-12.3%	--	14.2%	--

Percent of Total equals 95% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

5 Years Ending September 30, 2016

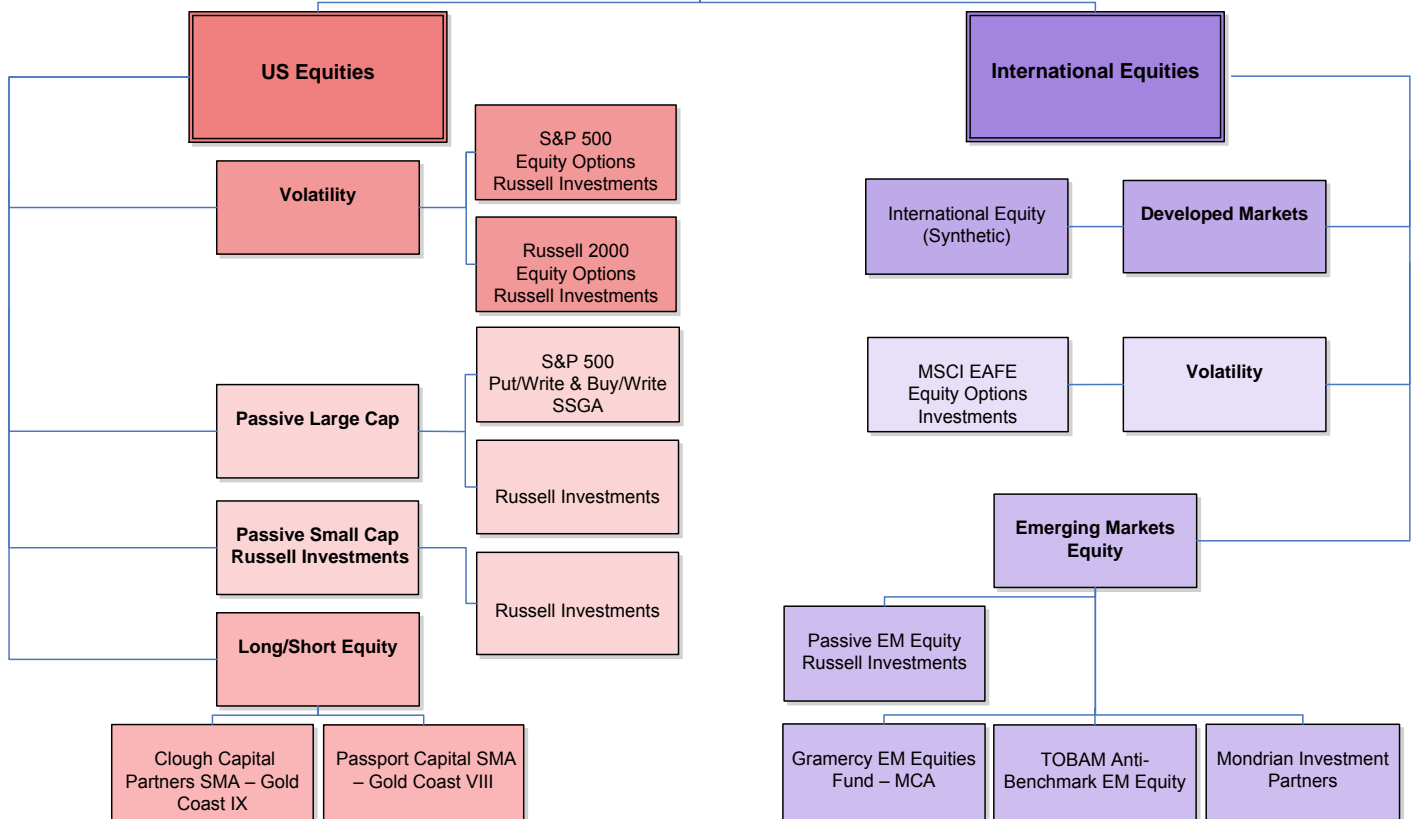
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Total Fund	100.0%	8.6%	87	4.0%	1	3.6%	0.1	73
Policy Index	--	8.0%	99	6.0%	2	0.0%	--	--
Domestic Equity	9.6%	4.3%	99	5.4%	1	12.8%	-0.9	95
Russell 3000	--	16.4%	29	11.4%	27	0.0%	--	--
International Developed	1.4%	19.5%	1	23.7%	99	16.2%	0.7	14
MSCI EAFE	--	7.4%	76	14.2%	92	0.0%	--	--
International Emerging	5.2%	2.1%	--	15.3%	--	4.4%	-0.2	--
MSCI Emerging Markets	--	3.0%	--	17.3%	--	0.0%	--	--
U.S. Credit Strategies	11.7%	7.3%	12	3.6%	11	5.4%	0.1	13
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	6.7%	15	4.0%	20	0.0%	--	--
Non-U.S. Credit Composite	13.6%	7.3%	--	4.5%	--	11.8%	0.0	--
BofA Merrill Lynch Euro High Yield Constrained	--	6.8%	--	13.0%	--	0.0%	--	--
Non-U.S. Core Composite	0.9%	2.7%	68	9.1%	90	7.1%	0.1	77
Barclays Global Aggregate	--	1.7%	82	4.2%	33	0.0%	--	--
Emerging Markets Debt Composite	7.3%	4.8%	60	7.0%	27	4.7%	0.2	62
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	3.9%	65	9.0%	66	0.0%	--	--
Alpha Pool Composite	18.9%	6.2%	--	3.2%	--	3.2%	1.0	--
91 Day T-Bill + 3%	--	3.1%	--	0.0%	--	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	14.1%	11.6%	--	4.6%	--
Cambridge Associates Global All PE (Qtr Lag)	--	9.9%	--	7.0%	--
Real Estate Composite	6.5%	10.8%	92	3.5%	27
NCREIF Property Index 1 Qtr Lag	--	11.5%	90	4.6%	29
Real Assets Composite	4.9%	2.9%	--	5.4%	--
Bloomberg Commodity Index	--	-9.4%	--	13.8%	--

Percent of Total equals 95% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.

Global Equity Portfolio

Global Equity Strategies
28% +/- 10% Target Allocation Range



San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Equity	1,396,922,548	16.1	3.0	99	10.4	1	9.3	97	0.7	99	6.5	99	--	--
MSCI ACWI			<u>5.3</u>	42	<u>6.6</u>	69	<u>12.0</u>	69	<u>5.2</u>	91	<u>10.6</u>	99	<u>4.3</u>	99
Excess Return			<u>-2.3</u>		<u>3.8</u>		<u>-2.7</u>		<u>-4.5</u>		<u>-4.1</u>			
InvestorForce Public DB Total Eq Gross Median			5.1		7.5		12.9		7.4		13.6		5.5	
Domestic Equity	828,233,567	9.6	1.8	99	3.7	99	1.7	99	-0.7	99	4.3	99	-0.1	99
Russell 3000			<u>4.4</u>	50	<u>8.2</u>	52	<u>15.0</u>	36	<u>10.4</u>	24	<u>16.4</u>	29	<u>7.4</u>	51
Excess Return			<u>-2.6</u>		<u>-4.5</u>		<u>-13.3</u>		<u>-11.1</u>		<u>-12.1</u>		<u>-7.5</u>	
InvestorForce Public DB US Eq Gross Median			4.4		8.2		14.1		9.8		16.0		7.4	
Large Cap Equity	652,203,886	7.5	2.4	88	6.5	64	4.3	95	0.6	99	6.1	99	0.7	99
S&P 500			<u>3.9</u>	72	<u>7.8</u>	51	<u>15.4</u>	30	<u>11.2</u>	21	<u>16.4</u>	46	<u>7.2</u>	73
Excess Return			<u>-1.5</u>		<u>-1.3</u>		<u>-11.1</u>		<u>-10.6</u>		<u>-10.3</u>		<u>-6.5</u>	
eA All US Equity Gross Median			5.1		7.8		13.2		9.2		16.2		8.0	
SsgA S&P500	616,222,371	7.1	<u>3.3</u>	79	<u>5.0</u>	75	<u>9.0</u>	80	<u>6.8</u>	80	<u>9.9</u>	99	<u>3.0</u>	99
S&P 500			<u>3.9</u>	72	<u>7.8</u>	51	<u>15.4</u>	30	<u>11.2</u>	21	<u>16.4</u>	46	<u>7.2</u>	73
Excess Return			<u>-0.6</u>		<u>-2.8</u>		<u>-6.4</u>		<u>-4.4</u>		<u>-6.5</u>		<u>-4.2</u>	
eA All US Equity Gross Median			5.1		7.8		13.2		9.2		16.2		8.0	
Russell US Large Cap Volatility	35,981,515	0.4	<u>-11.1</u>	99	<u>-4.9</u>	99	<u>-39.6</u>	99	<u>-52.8</u>	99	<u>-32.1</u>	99	<u>--</u>	<u>--</u>
S&P 500			<u>3.9</u>	72	<u>7.8</u>	51	<u>15.4</u>	30	<u>11.2</u>	21	<u>16.4</u>	46	<u>7.2</u>	73
Excess Return			<u>-15.0</u>		<u>-12.7</u>		<u>-55.0</u>		<u>-64.0</u>		<u>-48.5</u>			
eA All US Equity Gross Median			5.1		7.8		13.2		9.2		16.2		8.0	

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

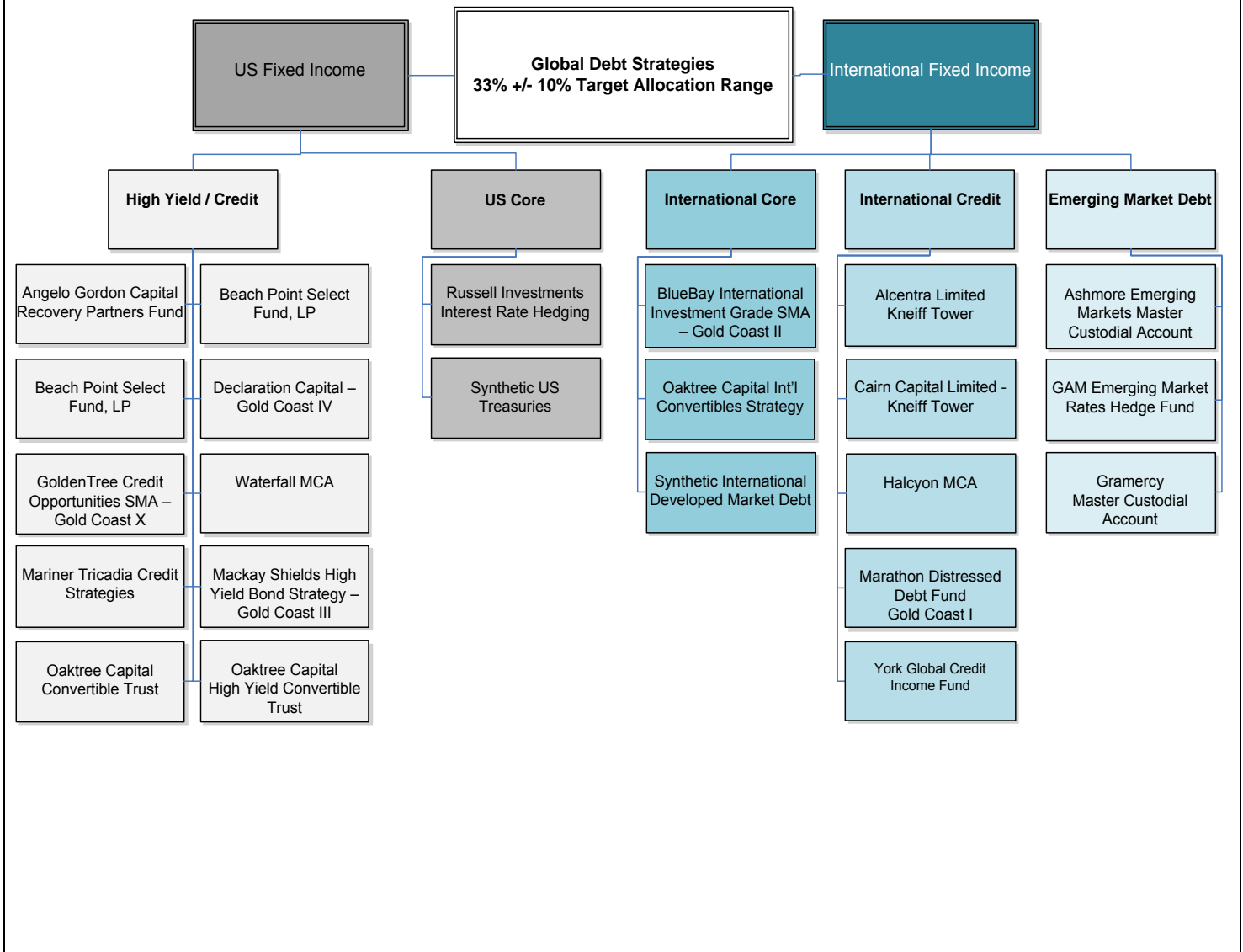
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	94,367	0.0	0.1	99	0.4	99	0.4	99	-46.0	99	-26.7	99	--	--
<i>Russell 2000</i>			<u>9.0</u>	29	<u>11.5</u>	41	<u>15.5</u>	42	<u>6.7</u>	64	<u>15.8</u>	66	<u>7.1</u>	82
Excess Return			-8.9		-11.1		-15.1		-52.7		-42.5			
<i>eA US Small Cap Equity Gross Median</i>			7.6		10.5		14.4		7.5		16.9		8.4	
Russell US Small Cap Volatility	94,367	0.0	0.1	97	0.4	97	0.4	99	-46.0	99	-26.7	99	--	--
<i>Russell 2000</i>			<u>9.0</u>	13	<u>11.5</u>	21	<u>15.5</u>	30	<u>6.7</u>	80	<u>15.8</u>	58	<u>7.1</u>	76
Excess Return			-8.9		-11.1		-15.1		-52.7		-42.5			
<i>eA All US Equity Gross Median</i>			5.1		7.8		13.2		9.2		16.2		8.0	
LongShort Equity	175,935,314	2.0	-0.4	99	-4.4	99	-6.1	99	-1.0	99	2.2	99	--	--
<i>Credit Suisse Long Shrt Eqt USD</i>			<u>1.9</u>	99	<u>-3.2</u>	99	<u>-1.7</u>	99	<u>4.0</u>	99	<u>6.6</u>	99	<u>4.8</u>	99
Excess Return			-2.3		-1.2		-4.4		-5.0		-4.4			
<i>InvestorForce Public DB US Eq Gross Median</i>			4.4		8.2		14.1		9.8		16.0		7.4	
Clough	83,862,205	1.0	3.7	74	-3.6	99	-4.6	99	0.3	99	4.2	99	--	--
Passport	92,073,108	1.1	-3.9	99	-1.1	98	-5.4	99	1.9	98	6.1	99	--	--

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
International Equity	568,688,981	6.6	5.0	52	23.3	1	24.3	1	1.9	97	8.9	77	3.8	--
MSCI EAFE			<u>6.4</u>	46	<u>1.7</u>	99	<u>6.5</u>	99	<u>0.5</u>	99	<u>7.4</u>	86	<u>1.8</u>	--
Excess Return			-1.4		21.6		17.8		1.4		1.5		2.0	
InvestorForce Public DB Gbl Eq Gross Median			5.6		6.8		11.7		10.0		16.4		--	
International Developed	121,706,899	1.4	4.9	88	40.7	1	42.1	1	5.8	1	19.5	1	6.5	1
MSCI EAFE			<u>6.4</u>	50	<u>1.7</u>	91	<u>6.5</u>	46	<u>0.5</u>	57	<u>7.4</u>	76	<u>1.8</u>	89
Excess Return			-1.5		39.0		35.6		5.3		12.1		4.7	
InvestorForce Public DB Dev Mkt ex-US Eq Gross Median			6.4		4.5		6.5		0.8		7.9		3.3	
Russell International Volatility	121,706,899	1.4	4.9	84	40.7	1	42.1	1	5.8	18	22.7	1	--	--
MSCI EAFE			<u>6.4</u>	59	<u>1.7</u>	71	<u>6.5</u>	69	<u>0.5</u>	86	<u>7.4</u>	89	<u>1.8</u>	91
Excess Return			-1.5		39.0		35.6		5.3		15.3			
eA All EAFE Equity Gross Median			6.7		3.4		8.4		2.6		9.5		3.5	
International Emerging	446,982,083	5.2	5.1	--	10.0	--	11.7	--	-1.3	--	2.1	--	4.3	--
MSCI Emerging Markets			<u>9.0</u>	--	<u>16.0</u>	--	<u>16.8</u>	--	<u>-0.6</u>	--	<u>3.0</u>	--	<u>3.9</u>	--
Excess Return			-3.9		-6.0		-5.1		-0.7		-0.9		0.4	
Mondrian	124,206,022	1.4	3.6	98	13.4	70	13.5	82	-0.9	87	3.4	81	5.6	45
MSCI Emerging Markets			<u>9.0</u>	47	<u>16.0</u>	47	<u>16.8</u>	59	<u>-0.6</u>	81	<u>3.0</u>	88	<u>3.9</u>	83
Excess Return			-5.4		-2.6		-3.3		-0.3		0.4		1.7	
eA Emg Mkts Equity Gross Median			8.8		15.7		18.1		1.2		5.1		5.4	
Gramercy Emerging Market Equity	65,979,642	0.8	10.0	23	11.5	85	16.8	59	--	--	--	--	--	--
MSCI Emerging Markets			<u>9.0</u>	47	<u>16.0</u>	47	<u>16.8</u>	59	<u>-0.6</u>	81	<u>3.0</u>	88	<u>3.9</u>	83
Excess Return			1.0		-4.5		0.0							
eA Emg Mkts Equity Gross Median			8.8		15.7		18.1		1.2		5.1		5.4	
Tobam	256,697,250	3.0	4.8	92	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			<u>9.0</u>	47	<u>16.0</u>	47	<u>16.8</u>	59	<u>-0.6</u>	81	<u>3.0</u>	88	<u>3.9</u>	83
Excess Return			-4.2											
eA Emg Mkts Equity Gross Median			8.8		15.7		18.1		1.2		5.1		5.4	

Global Debt Strategies



San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fixed	2,819,833,851	32.6	3.6	1	7.5	20	7.7	14	5.2	2	6.9	1	--	--
<i>InvestorForce Public DB Total Fix Inc Gross Median</i>			0.7		5.7		5.0		3.4		3.7		5.5	
U.S. Credit Strategies	1,016,582,148	11.7	2.3	60	5.1	85	4.1	91	5.2	44	7.3	12	8.7	1
<i>50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index</i>			<u>4.0</u>	9	<u>10.3</u>	19	<u>8.6</u>	52	<u>4.6</u>	46	<u>6.7</u>	15	<u>5.8</u>	40
Excess Return			-1.7		-5.2		-4.5		0.6		0.6		2.9	
<i>BofA Merrill Lynch US High Yield Master II TR</i>			5.5	2	15.3	1	12.8	7	5.3	44	8.2	4	7.6	2
<i>eA Global Credit Fixed Income Gross Median</i>			2.4		9.1		8.7		4.1		5.2		5.6	
AG Capital	4,004,032	0.0	16.1	1	1.0	97	-2.1	98	1.5	79	5.0	58	--	--
Golden Tree Asset Management	350,168,424	4.0	1.3	93	7.1	82	5.6	87	9.9	1	12.8	1	--	--
Beach Point Capital (Formerly Post)	131,729,510	1.5	4.6	7	8.2	68	8.2	63	7.6	2	10.0	3	--	--
Golden Tree Distressed Debt	28,246,949	0.3	-0.9	99	-5.3	99	-5.2	99	15.8	1	13.2	1	--	--
Mackay / Gold Coast	97,092,030	1.1	5.6	2	9.0	53	7.3	82	5.4	43	6.4	22	8.1	1
Mariner Tricadia	75,068,060	0.9	0.1	98	-3.3	99	-5.5	99	1.2	79	4.5	78	--	--
MD SASS Waterfall Victoria	28,357,722	0.3	1.8	--	5.7	--	8.7	--	--	--	--	--	--	--
OCM Convertible	16,496,264	0.2	4.8	6	2.9	94	1.8	95	3.7	63	7.3	12	--	--
OCM High Income	16,202,934	0.2	5.5	3	8.5	64	8.3	61	6.1	23	7.0	14	--	--
Russell Interest Rate Hedging	17,891,754	0.2	-5.6	99	-34.1	99	-40.9	99	-36.5	99	-27.1	99	--	--
Stone Tower Credit (Apollo)	76,934,428	0.9	3.2	33	7.5	65	7.6	59	4.1	36	--	--	--	--
Sutherland REIT Holdings	90,644,602	1.0	3.1	--	3.9	--	4.0	--	--	--	--	--	--	--
Waterfall Asset Management	42,869,694	0.5	0.1	--	28.6	--	30.5	--	--	--	--	--	--	--
Waterfall Victoria	40,551,960	0.5	2.6	--	8.7	--	11.5	--	--	--	--	--	--	--

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

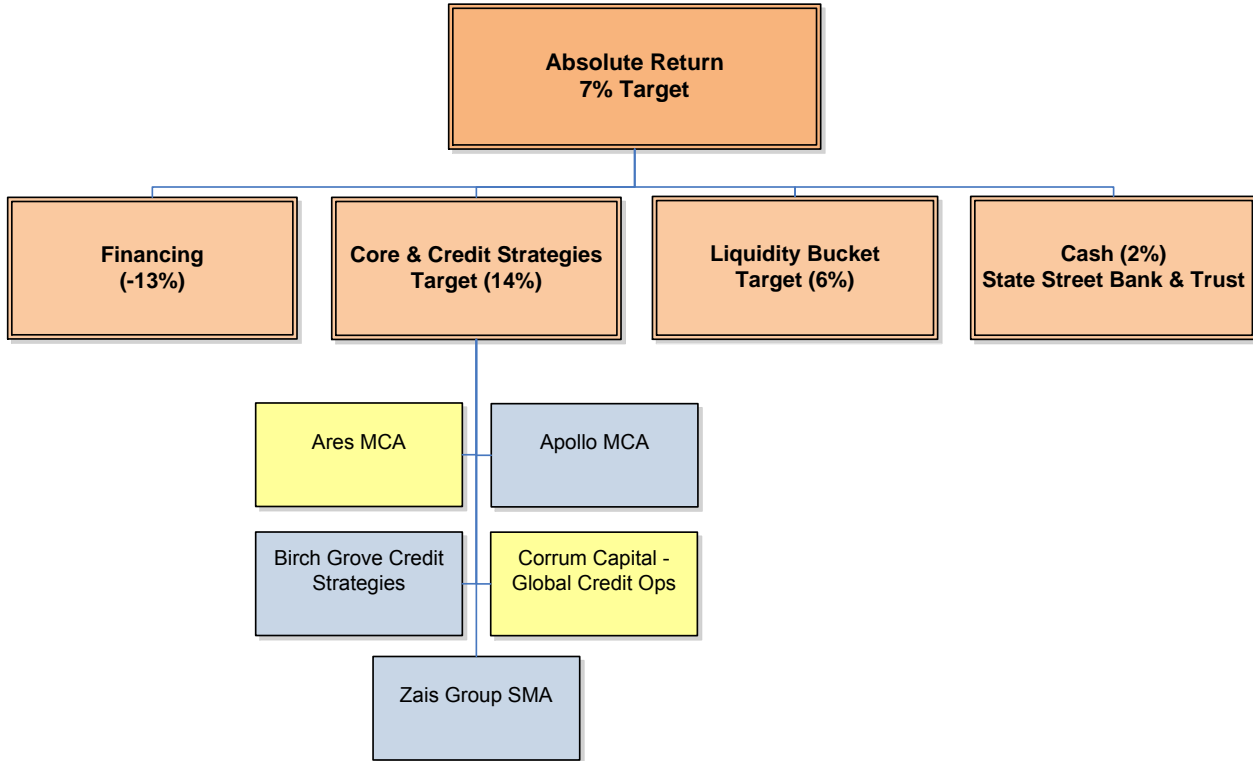
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Non-U.S. Fixed Income Composite	1,803,251,703	20.8	4.3	1	8.9	7	9.9	2	5.2	2	6.7	1	5.5	51
Barclays Global Aggregate			0.8	50	9.9	2	8.8	3	2.1	99	1.7	99	4.3	97
Excess Return			3.5		-1.0		1.1		3.1		5.0		1.2	
InvestorForce Public DB Total Fix Inc Gross Median			0.7		5.7		5.0		3.4		3.7		5.5	
Non-U.S. Credit Composite	1,175,662,147	13.6	3.1	--	5.9	--	7.0	--	5.2	--	7.3	--	--	--
BofA Merrill Lynch Euro High Yield Constrained			4.7	--	10.8	--	9.2	--	-0.6	--	6.8	--	6.5	--
Excess Return			-1.6		-4.9		-2.2		5.8		0.5		--	
Marathon/Gold Coast	200,914,649	2.3	2.0	79	-0.9	98	0.1	96	5.7	35	6.6	16	--	--
Alcentra Core European Credit	325,289,789	3.8	1.8	84	6.0	84	9.9	20	11.4	1	14.9	1	--	--
Halcyon Asset Management	91,331,839	1.1	7.7	1	13.1	5	13.5	6	--	--	--	--	--	--
BofA Merrill Lynch Euro High Yield Constrained			4.7	7	10.8	14	9.2	42	-0.6	93	6.8	15	6.5	20
Excess Return			3.0		2.3		4.3							
eA Global Credit Fixed Income Gross Median			2.4		9.1		8.7		4.1		5.2		5.6	
Oaktree Capital	36,370,019	0.4	4.4	7	5.1	85	6.4	85	1.1	79	4.6	77	--	--
York Global Credit	134,607,175	1.6	4.9	6	8.0	70	7.2	82	6.5	13	--	--	--	--
BofA Merrill Lynch Euro High Yield Constrained			4.7	7	10.8	14	9.2	42	-0.6	93	6.8	15	6.5	20
Excess Return			0.2		-2.8		-2.0		7.1					
eA Global Credit Fixed Income Gross Median			2.4		9.1		8.7		4.1		5.2		5.6	
Cairn Composite	307,282,552	3.6	3.1	21	7.2	82	7.4	81	2.2	78	3.7	85	--	--
BofA Merrill Lynch Euro High Yield Constrained			4.7	7	10.8	14	9.2	42	-0.6	93	6.8	15	6.5	20
Excess Return			-1.6		-3.6		-1.8		2.8		-3.1			
eA Global Credit Fixed Income Gross Median			2.4		9.1		8.7		4.1		5.2		5.6	
Non-U.S. Core Composite	79,866,125	0.9	3.0	38	8.1	59	6.7	68	-2.0	95	2.7	68	--	--
Barclays Global Aggregate			0.8	85	9.9	40	8.8	44	2.1	70	1.7	82	4.3	85
Excess Return			2.2		-1.8		-2.1		-4.1		1.0			
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Bluebay/Goldcoast	79,866,125	0.9	3.0	38	8.1	59	6.7	68	-2.0	95	2.7	69	--	--
Barclays Global Aggregate			0.8	85	9.9	40	8.8	44	2.1	70	1.7	82	4.3	85
Excess Return			2.2		-1.8		-2.1		-4.1		1.0			
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Emerging Markets Debt Composite	627,589,556	7.3	6.6	2	15.0	59	15.6	55	5.0	53	4.8	60	4.6	95
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified			3.2	59	15.9	51	16.6	47	2.7	63	3.9	65	6.7	68
Excess Return			3.4		-0.9		-1.0		2.3		0.9		-2.1	
eA All Emg Mkts Fixed Inc Gross Median			3.5		15.9		16.3		5.7		6.5		7.8	
Ashmore Emerging Markets Liquid Investments	142,748,789	1.6	3.2	59	15.9	51	16.6	47	2.7	63	3.9	65	6.7	68
JP Morgan GBI - EM Global Diversified Index			2.4	84	16.8	37	16.8	46	-2.7	93	0.0	94	5.5	89
Excess Return			0.8		-0.9		-0.2		5.4		3.9		1.2	
eA All Emg Mkts Fixed Inc Gross Median			3.5		15.9		16.3		5.7		6.5		7.8	
Ashmore Local Currency	100,756,134	1.2	3.8	23	18.5	1	16.9	1	-3.5	98	-0.8	98	--	--
JP Morgan ELMI+			1.5	66	7.4	66	7.2	62	-2.7	97	-0.8	98	2.6	96
Excess Return			2.3		11.1		9.7		-0.8		0.0		--	
JP Morgan EMBI Global Index			3.7	24	15.0	5	16.8	1	7.4	1	7.4	12	7.6	8
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
GAM Emerging Markets Rates	43,274,572	0.5	0.4	99	5.7	99	5.6	99	2.8	62	--	--	--	--
JP Morgan ELMI+			1.5	95	7.4	98	7.2	98	-2.7	93	-0.8	99	2.6	99
Excess Return			-1.1		-1.7		-1.6		5.5		--		--	
JP Morgan EMBI Global Index			3.7	42	15.0	59	16.8	46	7.4	19	7.4	37	7.6	57
eA All Emg Mkts Fixed Inc Gross Median			3.5		15.9		16.3		5.7		6.5		7.8	
Gramercy Funds Management LLC	253,173,821	2.9	8.8	1	13.8	70	17.7	31	11.1	1	--	--	--	--
JP Morgan ELMI+			1.5	95	7.4	98	7.2	98	-2.7	93	-0.8	99	2.6	99
Excess Return			7.3		6.4		10.5		13.8		--		--	
JP Morgan EMBI Global Index			3.7	42	15.0	59	16.8	46	7.4	19	7.4	37	7.6	57
eA All Emg Mkts Fixed Inc Gross Median			3.5		15.9		16.3		5.7		6.5		7.8	
Prudential Investment Management	87,636,240	1.0	9.7	1	17.1	30	16.0	54	--	--	--	--	--	--
JP Morgan ELMI+			1.5	95	7.4	98	7.2	98	-2.7	93	-0.8	99	2.6	99
Excess Return			8.2		9.7		8.8		--		--		--	
JP Morgan EMBI Global Index			3.7	42	15.0	59	16.8	46	7.4	19	7.4	37	7.6	57
eA All Emg Mkts Fixed Inc Gross Median			3.5		15.9		16.3		5.7		6.5		7.8	

Absolute Return (Alpha Pool)

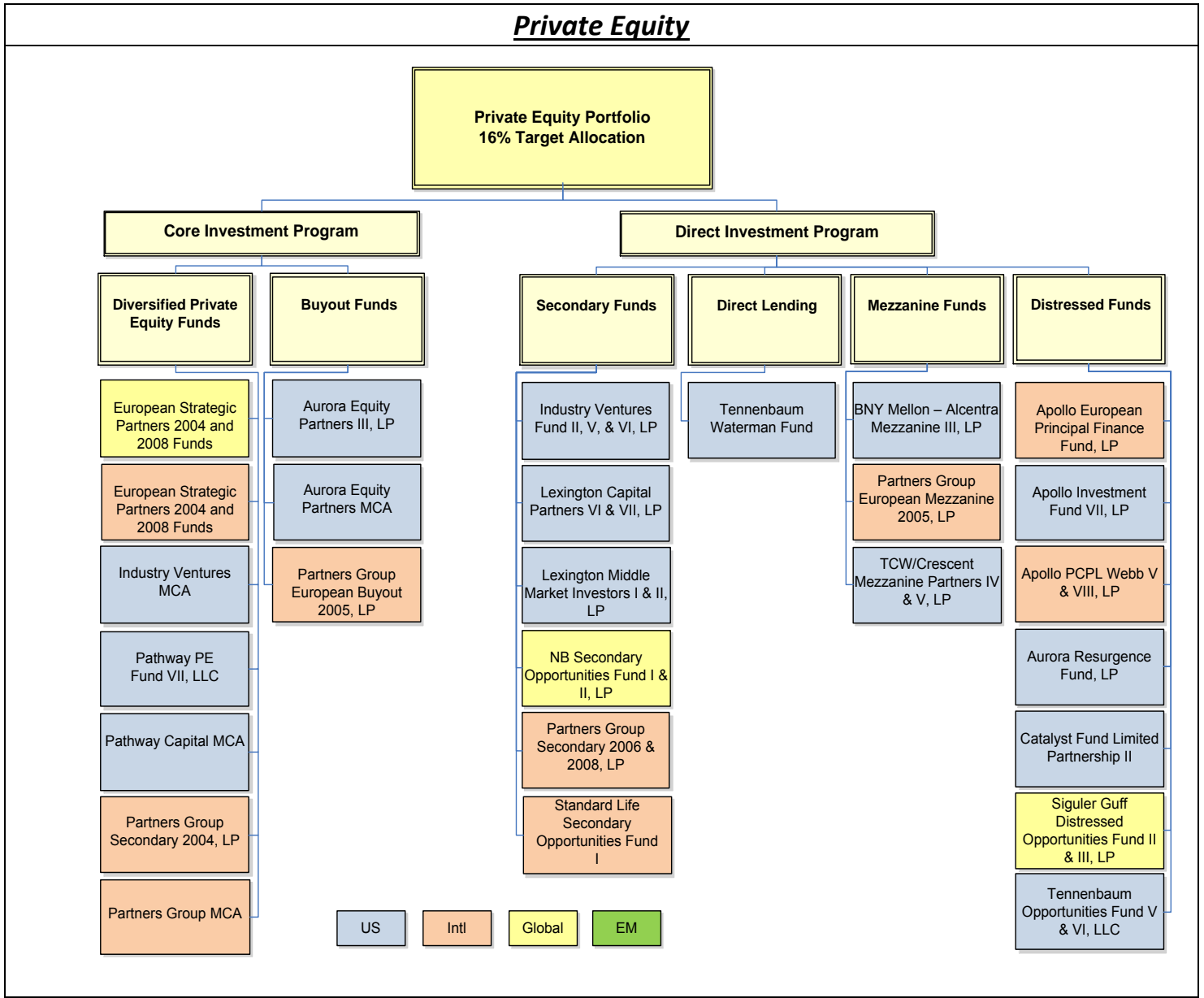


San Bernardino County Employees' Retirement Association

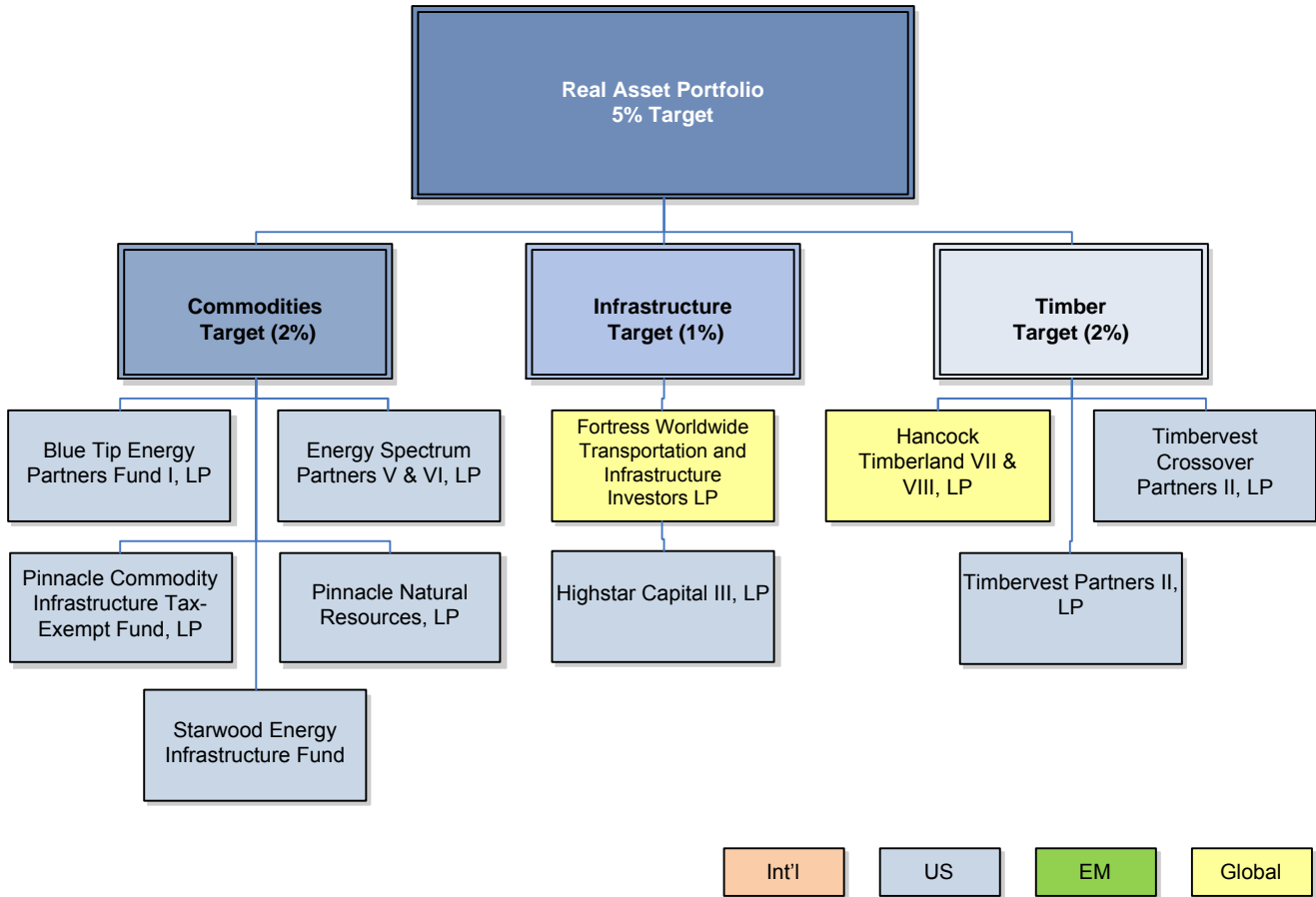
Alpha Pool Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Alpha Pool Composite	1,638,616,308	18.9	5.9	--	7.1	--	3.7	--	3.4	--	6.2	--	4.7	--
91 Day T-Bill + 3%			0.8	--	2.4	--	3.2	--	3.1	--	3.1	--	3.8	--
Excess Return			5.1		4.7		0.5		0.3		3.1		0.9	
Alpha Liquidity (Ssga)	155,600,770	1.8	0.2	95	0.5	97	0.5	97	0.3	85	0.3	96	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Apollo Craft Mid Cap Trade	25,000,000	0.3	--	--	--	--	--	--	--	--	--	--	--	--
Apollo Global Management	36,767,637	0.4	5.9	3	9.5	44	11.1	20	--	--	--	--	--	--
Ares Eco Alpha	125,077,919	1.4	3.8	23	2.9	90	-1.0	98	-16.0	99	-4.7	99	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Ares Eco Master Fund II	70,195,113	0.8	--	--	--	--	--	--	--	--	--	--	--	--
Ares Strategic Investment	227,677,922	2.6	3.5	26	3.2	89	-2.9	99	--	--	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Birch Grove Credit Strategies	114,017,537	1.3	11.6	1	2.9	90	2.6	92	5.2	22	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Sterling Stamos	160,137,742	1.9	3.7	24	4.3	84	2.9	91	4.4	33	2.9	66	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Stone Tower Off (Apollo)	375,697,617	4.3	3.5	28	7.8	61	6.4	69	6.1	11	8.9	4	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Zais	116,394,173	1.3	12.0	1	6.0	75	-0.8	98	4.8	26	9.6	2	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Zais Group Invest Advisors	207,985,029	2.4	12.3	1	21.2	1	10.9	21	6.5	5	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		5.2	
Zais Zephyr A 6 LP	21,608,688	0.2	5.1	--	--	--	--	--	--	--	--	--	--	--

Private Equity

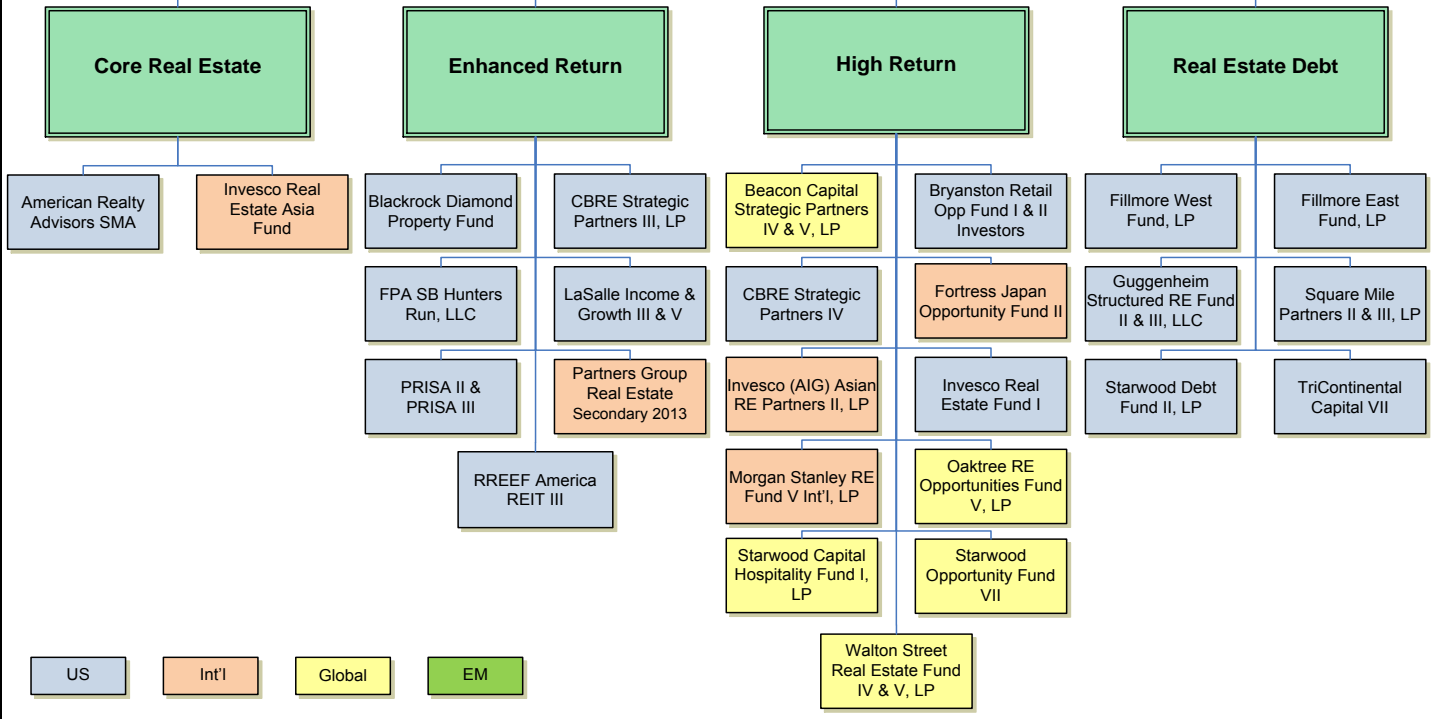


Real Asset Portfolio



Real Estate

**Real Estate Portfolio
9% Target Allocation**



San Bernardino County Employees' Retirement Association

Alternatives Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Equity Composite	1,217,996,271	14.1	2.7	--	6.2	--	6.1	--	11.8	--	11.6	--	9.1	--
Cambridge Associates Global All PE (Qtr Lag)			<u>2.3</u>	--	<u>4.3</u>	--	<u>2.7</u>	--	<u>11.0</u>	--	<u>9.9</u>	--	<u>10.2</u>	--
Excess Return			0.4		1.9		3.4		0.8		1.7		-1.1	
Russell 3000			4.4	--	8.2	--	15.0	--	10.4	--	16.4	--	7.4	--
Cambridge Associates US All PE (1 Qtr Lag)			4.2	--	5.0	--	3.6	--	11.3	--	11.3	--	10.8	--
Real Estate Composite	560,904,161	6.5	2.4	3	11.0	7	13.9	4	12.4	53	10.8	92	3.8	99
NCREIF Property Index 1 Qtr Lag			<u>2.0</u>	20	<u>7.3</u>	34	<u>10.6</u>	43	<u>11.6</u>	79	<u>11.5</u>	90	<u>7.4</u>	1
Excess Return			0.4		3.7		3.3		0.8		-0.7		-3.6	
InvestorForce Public DB Real Estate Pub+Priv Gross Median			1.8		6.7		9.6		12.6		12.4		5.9	
Real Assets Composite	423,774,017	4.9	1.9	--	3.8	--	-2.6	--	0.8	--	2.9	--	2.0	--
Bloomberg Commodity Index			<u>-3.9</u>	--	<u>8.9</u>	--	<u>-2.6</u>	--	<u>-12.3</u>	--	<u>-9.4</u>	--	<u>-5.3</u>	--
Excess Return			5.8		-5.1		0.0		13.1		12.3		7.3	
NCREIF Timberland 1 Qtr Lag			1.1	--	2.7	--	3.5	--	7.8	--	6.7	--	6.4	--
Timber	202,334,652	2.3	-0.5	--	5.0	--	3.4	--	4.8	--	5.4	--	2.7	--
NCREIF Timberland 1 Qtr Lag			<u>1.1</u>	--	<u>2.7</u>	--	<u>3.5</u>	--	<u>7.8</u>	--	<u>6.7</u>	--	<u>6.4</u>	--
Excess Return			-1.6		2.3		-0.1		-3.0		-1.3		-3.7	
Infrastructure	68,322,865	0.8	16.1	--	14.3	--	-11.9	--	-5.2	--	-1.1	--	--	--
Russell 3000			4.4	--	8.2	--	15.0	--	10.4	--	16.4	--	7.4	--
Excess Return			11.7		6.1		-26.9		-15.6		-17.5			
Commodities	153,116,500	1.8	-0.5	--	-1.2	--	-0.9	--	-0.5	--	2.2	--	--	--
Bloomberg Commodity Index			<u>-3.9</u>	--	<u>8.9</u>	--	<u>-2.6</u>	--	<u>-12.3</u>	--	<u>-9.4</u>	--	<u>-5.3</u>	--
Excess Return			3.4		-10.1		1.7		11.8		11.6			

Appendix: Private Equity and Real Estate Performance



San Bernardino County Employees' Retirement Association

Private Equity Performance Ending June 30, 2016

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Cumulative Distributions	Valuation	IRR	TVPI Ratio
Apollo European Principal Finance Fund (Feeder), LP	2009	\$ 53,713,065	\$ 46,299,286	\$ 67,008,041	\$ 2,291,016	11.91%	1.50
Apollo Investment Fund VII, L.P.	2008	\$ 10,000,000	\$ 8,324,297	\$ 14,184,563	\$ 2,967,146	24.55%	2.07
Apollo PCPL Webb V	2010	\$ 4,844,398	\$ 4,844,398	\$ 5,196,757	\$ 61,836	6.80%	1.09
Apollo PCPL Webb VIII	2010	\$ 4,734,303	\$ 4,734,303	\$ 12,146,258	\$ 2,504	46.47%	2.57
ARES European Loan Opp Fund	2015	\$ 15,000,000	\$ 8,413,136	\$ -	\$ 8,436,116	0.27%	1.00
Ares Special Situations Fund IV, LP	2015	\$ 50,000,000	\$ 17,326,733	\$ -	\$ 9,547,366	-42.18%	0.55
Aurora Equity Partners III, L.P.	2005	\$ 25,000,000	\$ 23,544,536	\$ 41,219,765	\$ 2,823,824	14.49%	1.75
Aurora Equity Partners IV, L.P.	2012	\$ 20,000,000	\$ 15,523,201	\$ 1,381,143	\$ 25,640,646	15.41%	1.52
Aurora Resurgence Fund, L.P.	2008	\$ 15,000,000	\$ 5,653,009	\$ 10,350,965	\$ -	17.60%	1.82
Baring Asia Private Equity Fund IV, L.P.	2015	\$ 2,931,918	\$ 2,922,361	\$ 435,400	\$ 2,499,608	0.35%	1.00
BNY Mellon - Alcentra Mezzanine III	2012	\$ 25,000,000	\$ 23,254,658	\$ 26,583,881	\$ 48,546	12.49%	1.15
Catalyst Fund II, L.P.	2007	\$ 10,000,000	\$ 9,934,668	\$ 4,033,566	\$ 17,473,529	13.17%	2.15
Catalyst Fund LP IV, L.P.	2015	\$ 8,000,000	\$ 2,300,242	\$ -	\$ 2,377,378	3.49%	1.03
Charlesbank Equity Fund VIII	2015	\$ 7,500,000	\$ 2,972,334	\$ -	\$ 3,167,215	7.30%	1.07
DRI II, L.P.	2009	\$ 20,000,000	\$ 19,917,669	\$ 25,865,694	\$ 427,500	19.65%	1.33
European Strategic Partners 2004	2004	\$ 240,495,940	\$ 219,867,940	\$ 224,979,016	\$ 45,322,290	3.65%	1.23
European Strategic Partners 2008	2010	\$ 31,275,603	\$ 25,066,280	\$ 9,598,810	\$ 19,627,096	5.00%	1.16
Industry Ventures Fund V	2008	\$ 10,000,000	\$ 9,500,000	\$ 20,449,631	\$ 8,673,299	33.39%	3.07
Industry Ventures Fund VI	2011	\$ 20,000,000	\$ 18,000,000	\$ 10,095,633	\$ 13,489,693	11.33%	1.31
Industry Ventures Partnership Holdings Fund II, L.P.	2012	\$ 25,000,000	\$ 21,750,000	\$ 5,231,047	\$ 37,265,695	29.35%	1.95
Industry Ventures Partnership Holdings Fund III, L.P.	2013	\$ 25,000,000	\$ 16,500,000	\$ 803,450	\$ 18,410,595	13.09%	1.16
Industry Ventures Partnership Holdings Fund III-A, L.P.	2014	\$ 12,500,000	\$ 9,625,000	\$ 1,972,074	\$ 8,766,379	9.22%	1.12
Industry Ventures Partnership Holdings IV, LP	2016	\$ 25,000,000	\$ 1,000,000	\$ -	\$ 931,263	-6.86%	0.93
Industry Ventures Secondary VII, L.P.	2013	\$ 25,000,000	\$ 16,625,000	\$ 1,307,027	\$ 17,796,233	12.09%	1.15
Insight Venture Partners III Co-Invest	2014	\$ 4,000,000	\$ 3,544,000	\$ -	\$ 4,036,904	7.80%	1.14
Lexington Capital Partners VI-B	2006	\$ 25,000,000	\$ 24,591,319	\$ 26,517,021	\$ 7,081,269	6.67%	1.37
Lexington Capital Partners VII (Offshore)	2011	\$ 25,000,000	\$ 19,517,417	\$ 17,106,059	\$ 12,416,799	17.00%	1.50
Lexington Middle Market I	2005	\$ 25,000,000	\$ 24,771,942	\$ 30,274,231	\$ 8,132,862	11.39%	1.55
Lexington Middle Market II - Offshore	2008	\$ 10,000,000	\$ 9,773,736	\$ 7,741,634	\$ 6,337,193	13.68%	1.44
NB Secondary Opportunities I, LP	2005	\$ 20,000,000	\$ 18,500,843	\$ 20,695,364	\$ 4,097,778	7.07%	1.34
NB Secondary Opportunities II, LP	2008	\$ 20,000,000	\$ 16,761,241	\$ 19,421,920	\$ 6,972,787	15.89%	1.55
Partners Group Access 632, L.P.	2014	\$ 2,782,028	\$ 2,782,028	\$ -	\$ 3,988,424	16.64%	1.42
Partners Group Access 648, L.P.	2014	\$ 4,372,977	\$ 4,028,602	\$ 19,449	\$ 3,271,002	-10.62%	0.82
Partners Group Access 680 L.P.	2015	\$ 7,272,991	\$ 7,272,991	\$ -	\$ 7,182,986	-1.23%	0.99
Partners Group Client Access 8 LP	2014	\$ 5,531,585	\$ 5,531,585	\$ 6,810,960	\$ 11,110,283	64.69%	3.24
Partners Group Direct Investment 2012, L.P.	2013	\$ 18,146,136	\$ 16,509,621	\$ 6,371,323	\$ 14,913,199	15.54%	1.29
Partners Group European Mandate, L.P.	2004	\$ 237,243,934	\$ 196,136,552	\$ 201,010,374	\$ 59,218,174	5.60%	1.33
Partners Group European Mezzanine 2005	2005	\$ 101,076,654	\$ 101,076,654	\$ 105,111,381	\$ 22,064,849	3.78%	1.26
Partners Group Princess Learning IC LTD	2014	\$ 5,096,089	\$ 5,814,832	\$ 1,550,144	\$ 4,150,743	-2.62%	0.98
Partners Group Seabras Holdings, LLC	2015	\$ 4,800,000	\$ 2,253,156	\$ -	\$ 2,261,937	0.47%	1.00
Partners Group Secondary 2006 LP	2006	\$ 54,396,715	\$ 51,077,528	\$ 48,273,024	\$ 12,028,993	3.63%	1.18
Partners Group Secondary 2008, L.P.	2009	\$ 26,586,424	\$ 23,690,725	\$ 23,495,313	\$ 11,112,229	9.38%	1.45
Partners Group Starfrost Limited	2014	\$ 6,225,376	\$ 3,687,483	\$ -	\$ 4,546,910	8.83%	1.23
Pathway Private Equity Fund VII, L.P.*	2004	\$ 904,500,000	\$ 763,092,239	\$ 658,075,890	\$ 533,137,104	9.63%	1.52
Siguler Guff DOF II	2006	\$ 30,000,000	\$ 30,000,000	\$ 39,998,565	\$ 2,289,275	8.66%	1.41
Siguler Guff DOF III	2008	\$ 10,000,000	\$ 9,700,000	\$ 11,278,661	\$ 3,674,779	10.75%	1.54
SL Capital SOF I LP	2014	\$ 25,000,000	\$ 12,839,338	\$ 1,139,667	\$ 14,188,685	12.34%	1.19
TCW/Crescent Mezzanine IV, L.P.	2006	\$ 40,000,000	\$ 39,590,976	\$ 43,109,680	\$ 1,510,268	2.86%	1.13
TCW/Crescent Mezzanine V, L.P.	2008	\$ 20,000,000	\$ 19,949,723	\$ 22,497,673	\$ 3,865,723	9.69%	1.32
Tennenbaum Energy Opportunities Fund, LP	2016	\$ 20,000,000	\$ 2,643,281	\$ 276,907	\$ 2,695,669	11.34%	1.12
Tennenbaum Opportunities Fund V, L.P.	2007	\$ 10,000,000	\$ 10,000,000	\$ 8,719,275	\$ 4,566,802	4.81%	1.33
Tennenbaum Opportunities Fund VI, L.P.	2011	\$ 20,000,000	\$ 18,237,736	\$ 7,648,130	\$ 16,211,406	8.73%	1.31
Tennenbaum Special Situations Fund IX	2015	\$ 50,000,000	\$ 19,759,730	\$ -	\$ 18,853,445	-9.54%	0.95
Tennenbaum Waterman Fund, LP	2012	\$ 70,000,000	\$ 70,000,000	\$ 16,277,234	\$ 72,328,057	10.32%	1.27
The Resolute Fund III	2014	\$ 8,000,000	\$ 2,767,308	\$ -	\$ 3,265,507	13.70%	1.18
Thoma Bravo XI	2014	\$ 8,000,000	\$ 7,073,858	\$ -	\$ 7,918,435	10.55%	1.12
Total: San Bernardino		\$2,504,026,136	\$ 2,076,875,493	\$1,806,262,600	\$1,137,477,248	8.08%	1.40

Note: all metrics are calculated since inception

* Denotes cash adjusted

San Bernardino County Employees' Retirement Association

Real Estate Performance Ending June 30, 2016

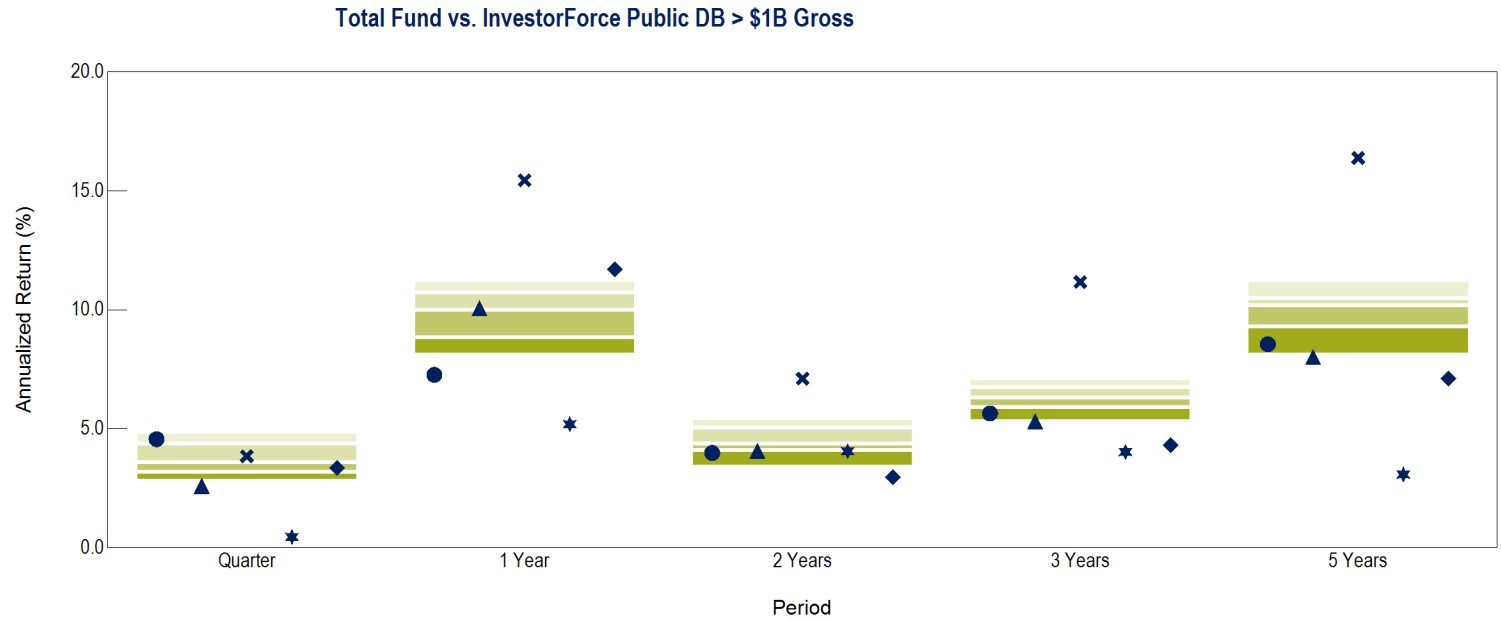
Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Cumulative Distributions	Valuation	IRR	TVPI Ratio
American Realty Advisors	1996	\$ 128,009,773	\$ 128,009,773	\$ 100,418,126	\$ 192,889,131	7.65%	2.29
American Realty Value Add	2006	\$ 13,125,215	\$ 13,125,215	\$ 32,065,484	\$ 122,023	10.96%	2.45
Beacon Capital Strategic Partners IV, L.P.	2006	\$ 39,000,000	\$ 38,000,000	\$ 30,085,408	\$ 930,851	-3.53%	0.82
Beacon Capital Strategic Partners V, L.P.	2007	\$ 20,000,000	\$ 18,000,000	\$ 9,728,232	\$ 1,550,737	-7.84%	0.63
BlackRock Diamond Property Fund	2005	\$ 25,000,000	\$ 25,000,000	\$ 14,180,505	\$ 889,178	-9.73%	0.60
Bryanston Real Estate Opportunity Fund II, L.P.	2009	\$ 20,000,000	\$ 8,589,256	\$ 9,103,079	\$ 2,470,301	9.96%	1.35
Bryanston Retail Opportunity Fund, L.P.	2004	\$ 20,000,000	\$ 8,228,165	\$ 18,492,031	\$ 9,433,327	71.19%	3.39
CBRE Strategic Partners III	2003	\$ 10,000,000	\$ 10,000,000	\$ 12,698,783	\$ -	8.02%	1.27
CBRE Strategic Partners IV	2005	\$ 40,000,000	\$ 40,000,000	\$ 1,532,153	\$ 2,285,779	-24.61%	0.10
Fillmore East Fund	2006	\$ 25,000,000	\$ 31,403,818	\$ 20,777,177	\$ -	-9.78%	0.66
Fillmore West Fund	2008	\$ 20,000,000	\$ 19,561,557	\$ 10,391,238	\$ 11,674,276	1.87%	1.13
Fortress Japan Opportunity Fund II	2012	\$ 21,739,130	\$ 9,185,378	\$ 4,651,065	\$ 17,738,419	24.57%	2.43
Invesco Asian Real Estate Partners II (USD), LP	2007	\$ 20,000,000	\$ 8,374,055	\$ 9,171,403	\$ 1,644,751	6.61%	1.29
Invesco High Yield Debt Fund I	2007	\$ 20,000,000	\$ 20,000,000	\$ 8,567,605	\$ -	-35.57%	0.43
Invesco Real Estate Asia Fund	2014	\$ 51,732,500	\$ 51,732,500	\$ -	\$ 61,945,796	9.30%	1.19
INVESCO Real Estate Fund I	2005	\$ 10,000,000	\$ 9,248,390	\$ 9,621,591	\$ 414,970	1.58%	1.09
LaSalle Income & Growth Fund IV	2005	\$ 20,000,000	\$ 19,469,417	\$ 13,482,024	\$ -	-5.51%	0.69
Morgan Stanley Real Estate Fund V International	2005	\$ 27,500,000	\$ 27,377,414	\$ 31,743,090	\$ 1,534,859	7.16%	1.21
Oaktree Real Estate Opportunities V	2012	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 12,394,898	13.04%	1.49
Partners Group RE Secondary 2013 (USD) A	2014	\$ 65,000,000	\$ 25,884,805	\$ 2,125,103	\$ 32,889,394	32.94%	1.35
Prologis Japan Fund	2005	\$ 25,290,819	\$ 25,290,819	\$ 33,126,118	\$ -	4.81%	1.31
Prudential PRISA II	2004	\$ 100,000,441	\$ 100,000,441	\$ 30,177,524	\$ 111,448,907	8.41%	1.36
Prudential PRISA III	2003	\$ 40,000,300	\$ 40,000,300	\$ 37,507,297	\$ 34,297,538	20.02%	1.67
RREEF America REIT III	2004	\$ 20,000,000	\$ 20,539,309	\$ 23,049,951	\$ 706,157	3.09%	1.16
Square Mile Partners II	2007	\$ 20,000,000	\$ 19,831,232	\$ 5,078,710	\$ 667,687	-17.68%	0.29
Square Mile Partners III LP	2008	\$ 20,000,000	\$ 21,506,020	\$ 27,102,570	\$ 3,974,706	12.37%	1.45
Starwood Capital Hospitality Fund I-2	2006	\$ 30,000,000	\$ 30,000,000	\$ 18,811,980	\$ 11,919,071	0.35%	1.02
Starwood Debt Fund II, LP	2008	\$ 20,000,000	\$ 17,599,882	\$ 21,669,663	\$ 249,012	6.47%	1.25
Starwood Opportunity Fund VII - A	2006	\$ 25,000,000	\$ 25,000,000	\$ 11,011,048	\$ 9,801,441	-2.16%	0.83
Structured Real Estate III, LP (Guggenheim)	2008	\$ 20,000,000	\$ 20,000,000	\$ 16,320,664	\$ -	-4.99%	0.82
Tri Continental Capital VII	2005	\$ 23,000,000	\$ 22,343,057	\$ 1,186,286	\$ 2,023,524	-19.83%	0.14
Tuckerman Multi-Family Development Fund III	2002	\$ 10,000,000	\$ 10,219,311	\$ 16,939,699	\$ -	26.67%	1.66
Walton Street Real Estate Fund IV, LP	2003	\$ 10,000,000	\$ 9,770,890	\$ 15,024,332	\$ 1,058,652	10.89%	1.65
Walton Street Real Estate Fund V, LP	2006	\$ 40,000,000	\$ 40,000,000	\$ 14,352,676	\$ 17,927,828	-2.65%	0.81
Total: San Bernardino		\$ 1,024,398,178	\$938,291,004	\$ 635,192,616	\$544,883,212	4.00%	1.25

Note: all metrics are calculated since inception

Appendix: Market Environment



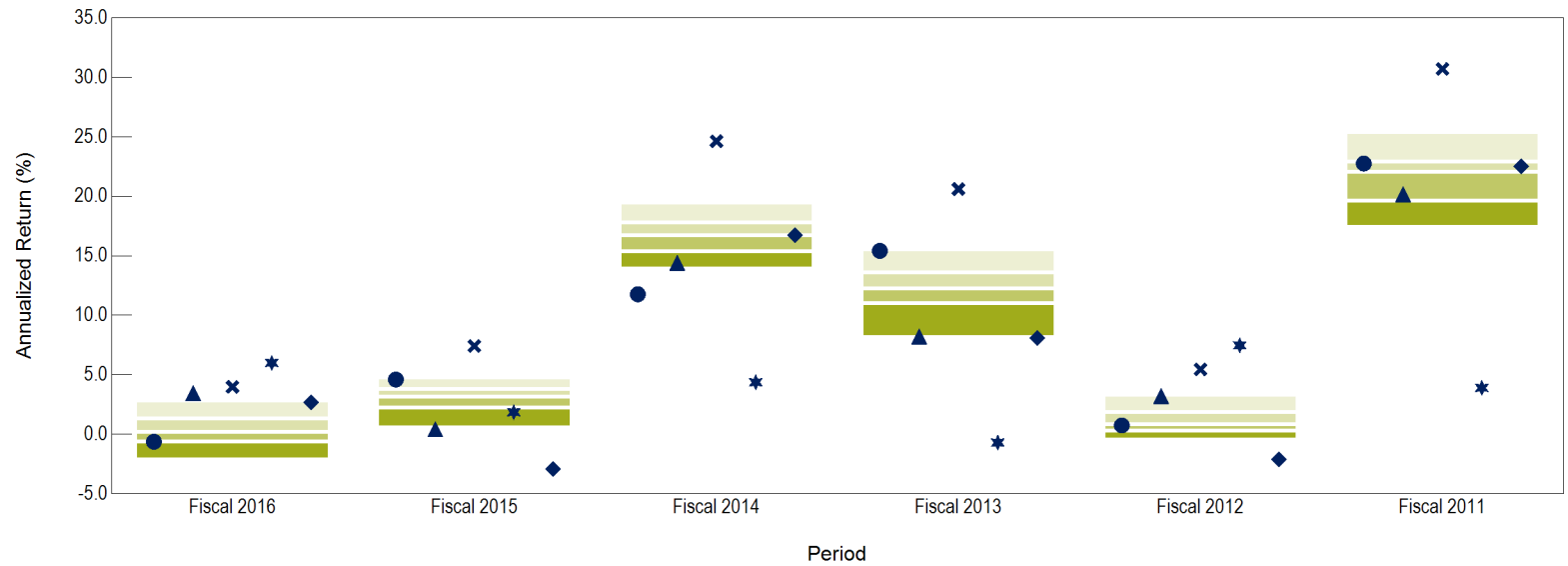
Total Fund Return Summary vs. Peer Universe



	Return (Rank)									
5th Percentile	4.9		11.2		5.5		7.1		11.2	
25th Percentile	4.4		10.7		5.1		6.8		10.5	
Median	3.6		10.0		4.4		6.3		10.2	
75th Percentile	3.2		8.9		4.1		5.9		9.3	
95th Percentile	2.8		8.1		3.4		5.3		8.1	
# of Portfolios	20		20		20		20		19	
● Total Fund	4.6	(20)	7.3	(99)	4.0	(81)	5.6	(89)	8.6	(87)
▲ Policy Index	2.6	(99)	10.1	(50)	4.1	(80)	5.3	(97)	8.0	(99)
× S&P 500	3.9	(36)	15.4	(1)	7.1	(1)	11.2	(1)	16.4	(1)
* Barclays Aggregate	0.5	(99)	5.2	(99)	4.1	(80)	4.0	(99)	3.1	(99)
◆ 60% MSCI ACWI (Gross)/40% CITI WGBI	3.4	(61)	11.7	(2)	3.0	(99)	4.3	(99)	7.1	(99)

Fiscal Year Ending 6/30 Total Fund Return Summary vs. Peer Universe

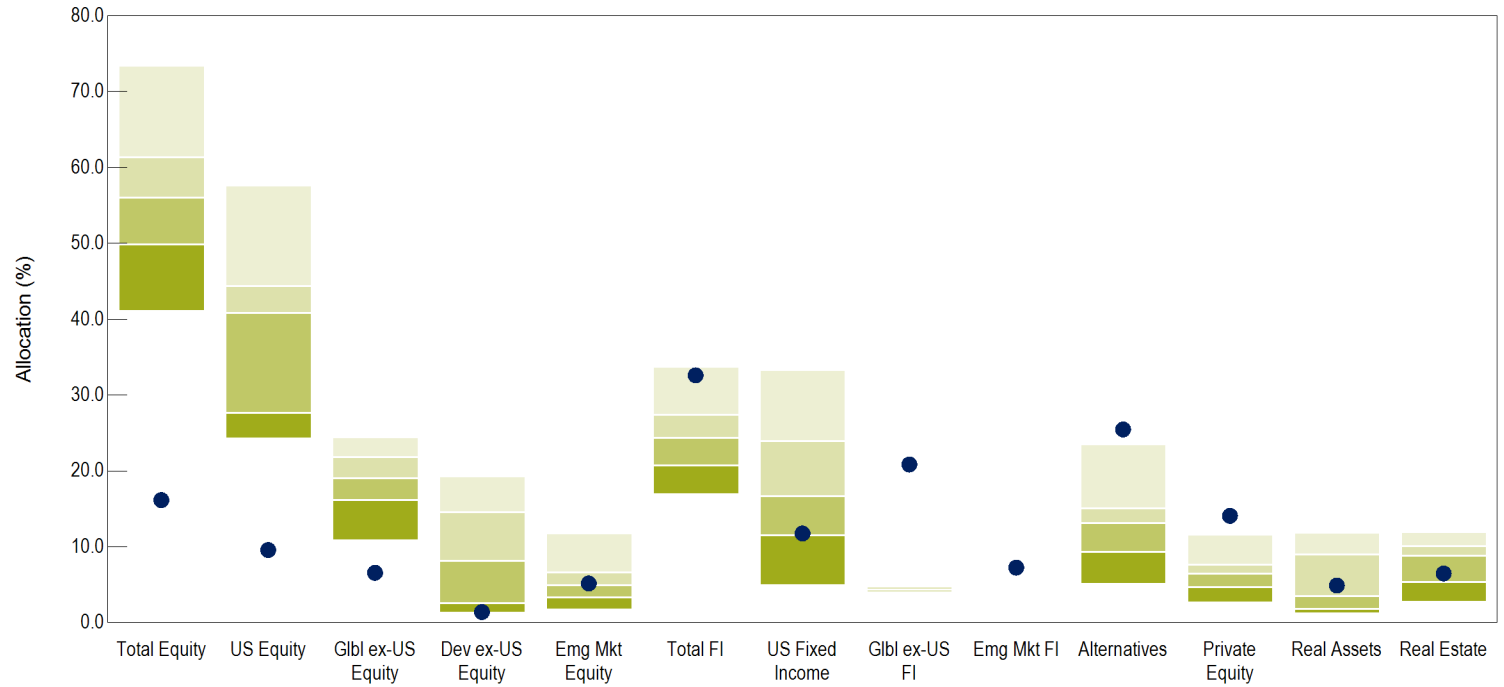
Total Fund vs. InvestorForce Public DB > \$1B Gross



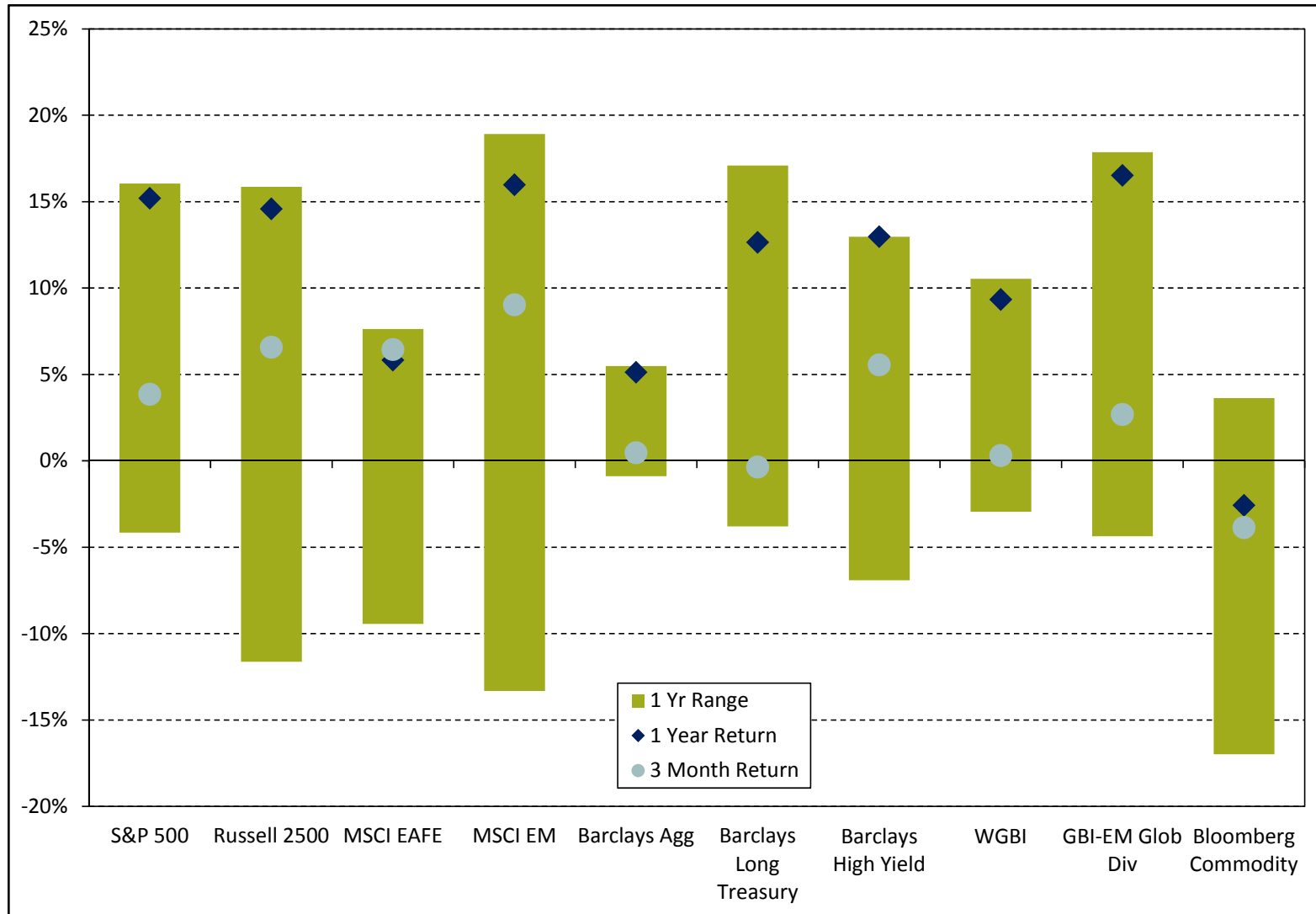
	Fiscal 2016		Fiscal 2015		Fiscal 2014		Fiscal 2013		Fiscal 2012		Fiscal 2011	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	2.8		4.8		19.4		15.5		3.3		25.4	
25th Percentile	1.4		3.9		17.8		13.6		1.9		22.9	
Median	0.3		3.2		16.7		12.3		0.9		22.1	
75th Percentile	-0.6		2.3		15.4		11.0		0.3		19.6	
95th Percentile	-2.1		0.6		13.9		8.2		-0.4		17.4	
# of Portfolios	91		92		65		78		70		67	
● Total Fund	-0.6	(77)	4.6	(7)	11.8	(99)	15.4	(7)	0.8	(58)	22.7	(32)
▲ Policy Index	3.5	(3)	0.4	(96)	14.4	(87)	8.2	(96)	3.2	(6)	20.2	(71)
× S&P 500	4.0	(2)	7.4	(1)	24.6	(1)	20.6	(1)	5.4	(1)	30.7	(1)
* Barclays Aggregate	6.0	(1)	1.9	(87)	4.4	(99)	-0.7	(99)	7.5	(1)	3.9	(99)
◆ 60% MSCI ACWI (Gross)/40% CITI WGBI	2.7	(8)	-2.9	(99)	16.7	(51)	8.1	(96)	-2.1	(99)	22.5	(38)

Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. InvestorForce Public DB > \$1B Gross

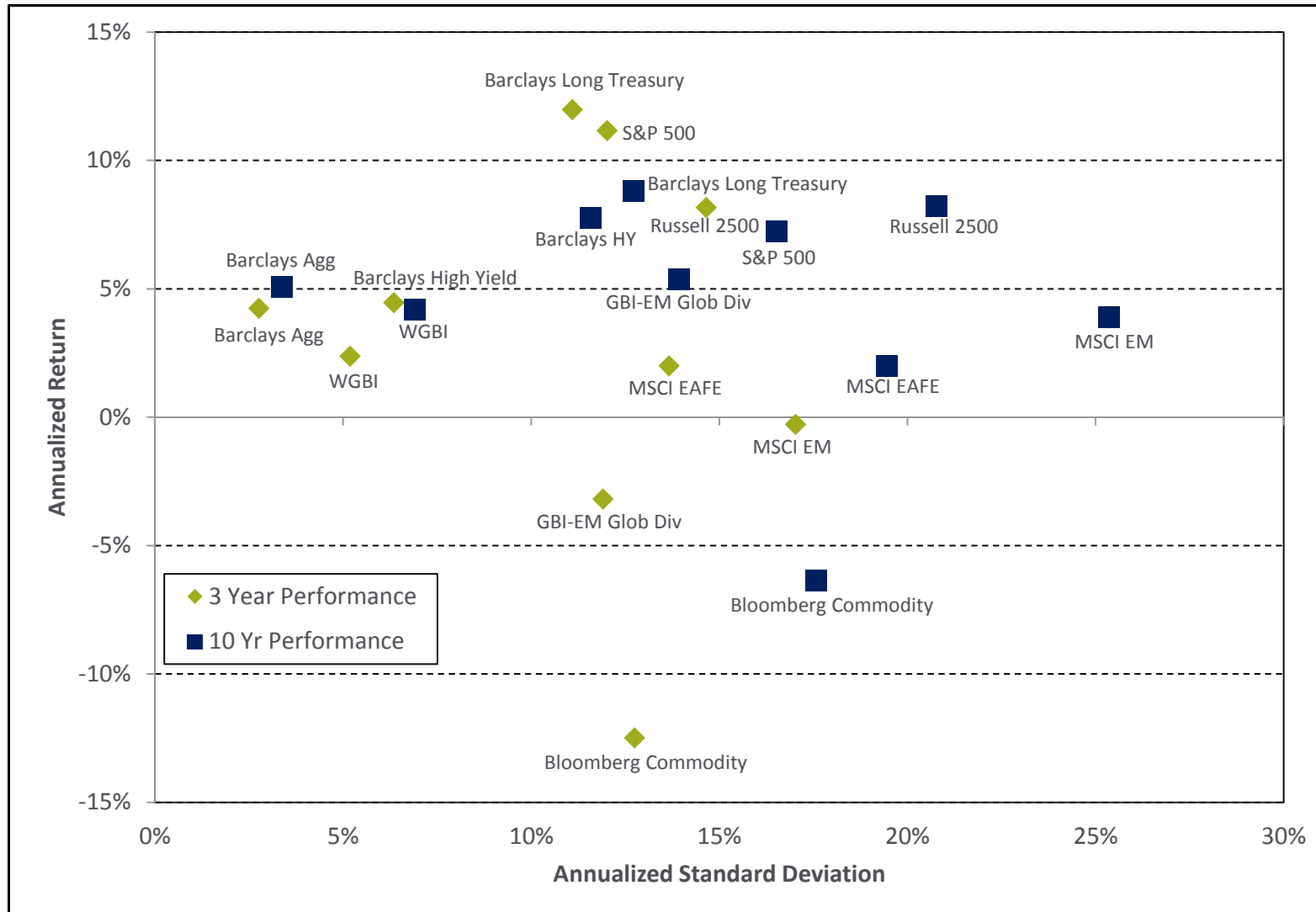


	Allocation (Rank)													
5th Percentile	73.4	57.6	24.5	19.3	11.8	33.7	33.3	5.1	4.1	23.5	11.6	11.9	11.9	--
25th Percentile	61.4	44.5	21.9	14.7	6.7	27.5	24.0	4.9	4.1	15.1	7.7	9.1	10.2	--
Median	56.1	40.9	19.1	8.3	5.0	24.5	16.8	4.4	4.1	13.2	6.6	3.6	8.9	--
75th Percentile	49.9	27.7	16.3	2.7	3.4	20.8	11.6	4.1	4.1	9.4	4.7	1.9	5.5	--
95th Percentile	41.1	24.3	11.0	1.4	1.9	17.0	5.0	4.1	4.1	5.2	2.8	1.3	2.8	--
# of Portfolios	18	14	16	7	11	18	16	4	2	12	11	5	13	--
● Total Fund	16.1 (99)	9.6 (99)	6.6 (99)	1.4 (95)	5.2 (49)	32.6 (6)	11.7 (75)	20.8 (1)	7.3 (1)	25.5 (4)	14.1 (1)	4.9 (45)	6.5 (69)	--



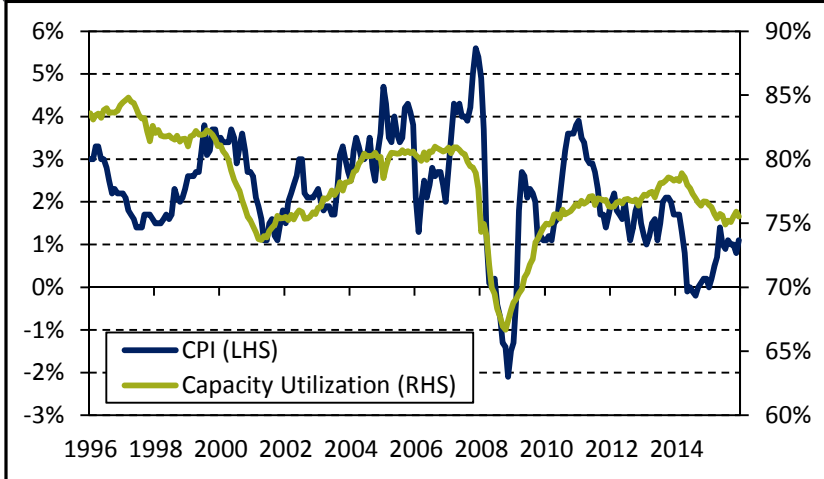
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, JP Morgan
 *1 Yr Range: Represents range of cumulative high/low daily index returns for an investment made one year ago

Long Term Broad Market Performance Summary as of 09/30/2016



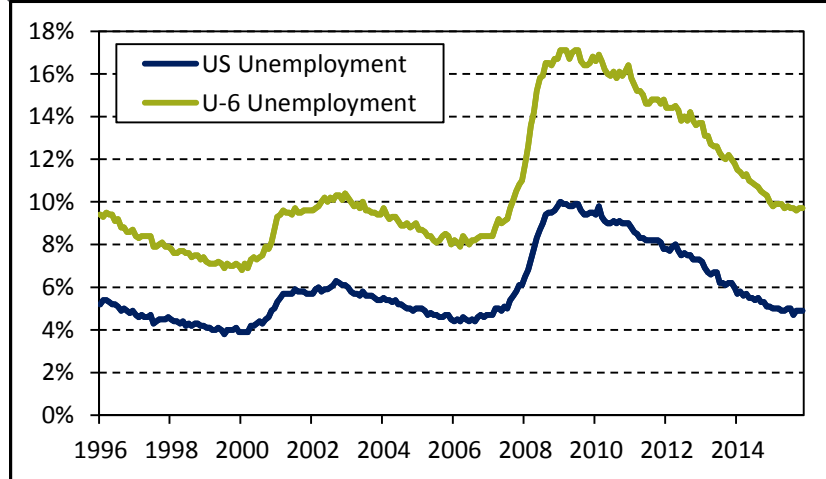
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, JP Morgan

Inflation experiences slight uptick



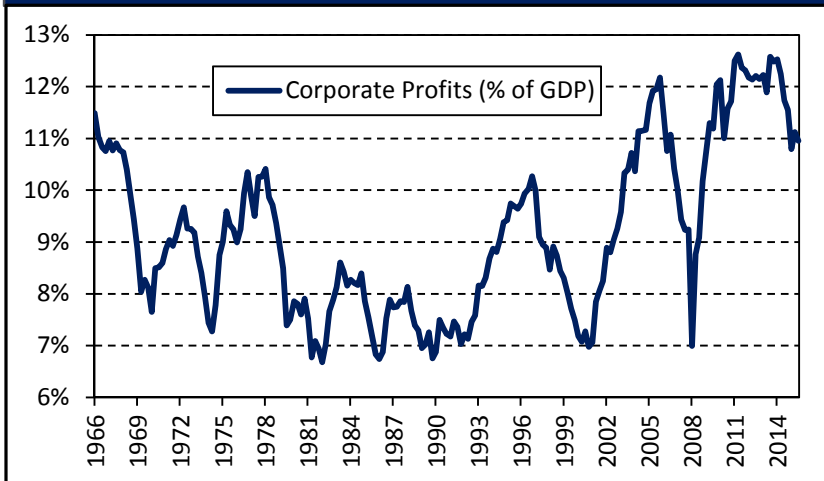
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment remains steady



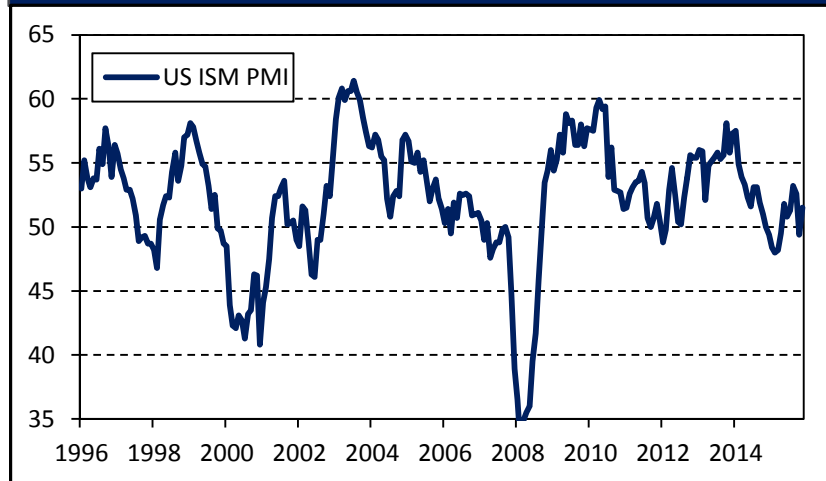
Source: Bloomberg, Bureau of Labor Statistics

Corporate profits continue to decline



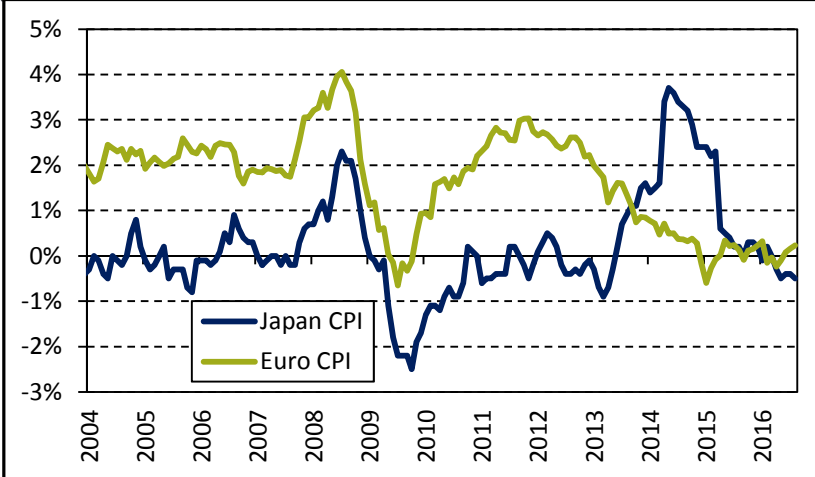
Source: Bloomberg, Bureau of Economic Analysis

Manufacturing is relatively neutral



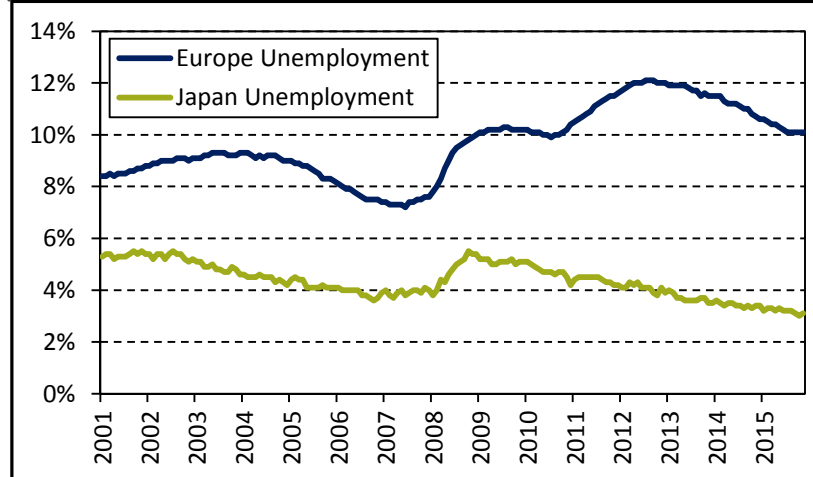
Source: Bloomberg, Institute for Supply Management

Inflation in Europe experiences a slight uptick



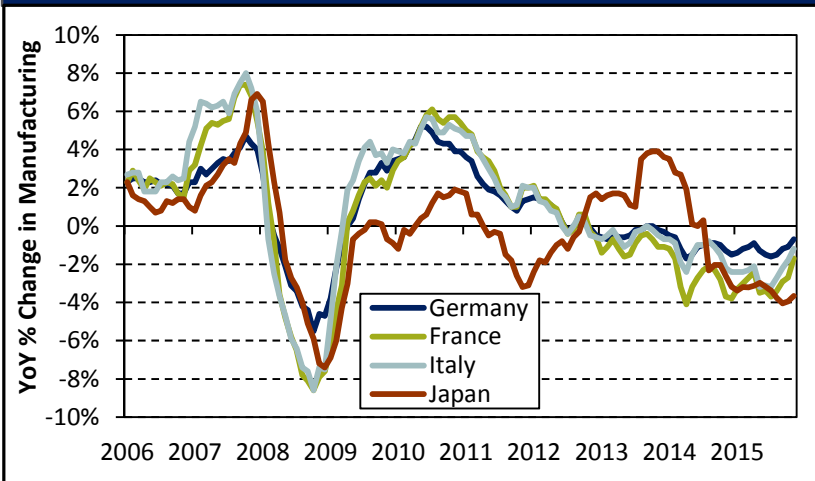
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Europe unemployment trending lower



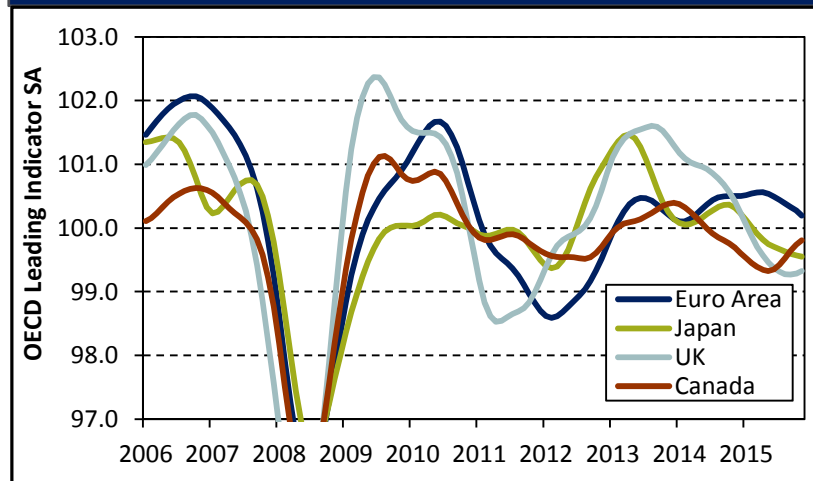
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing approaches neutral territory



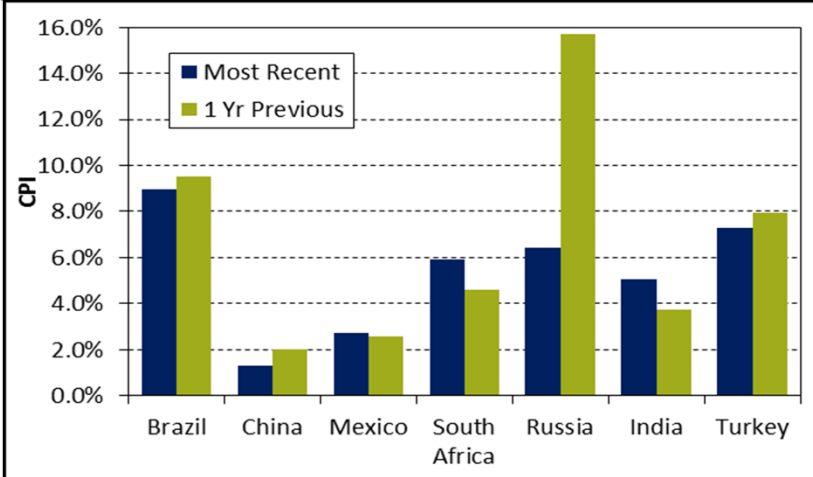
Source: Bloomberg, OECD, Eurostat

Euro Area and Japan leading indicators have declined



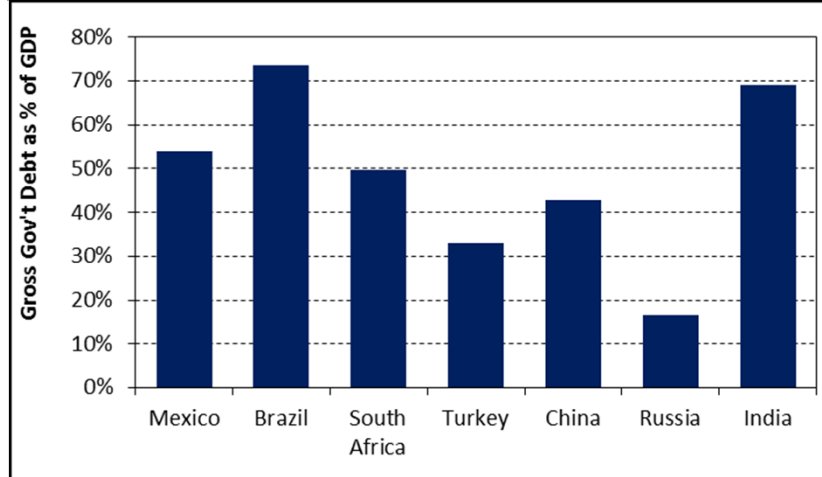
Source: Bloomberg, OECD

EM inflation varies by country



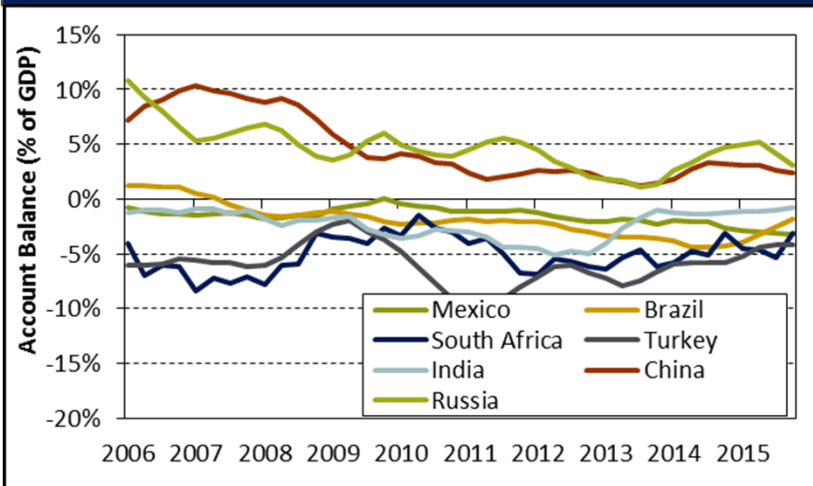
Source: Bloomberg

Relatively healthy Debt/GDP ratios



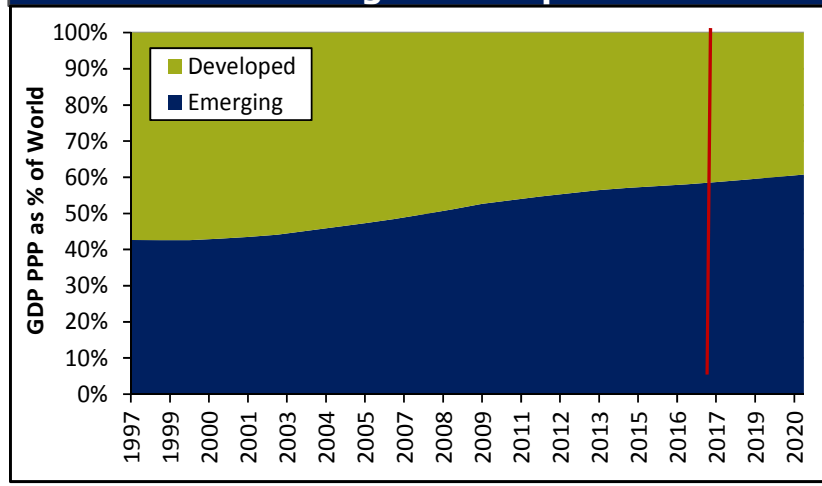
Source: Bloomberg, IMF

Account balances remain steady



Source: Bloomberg

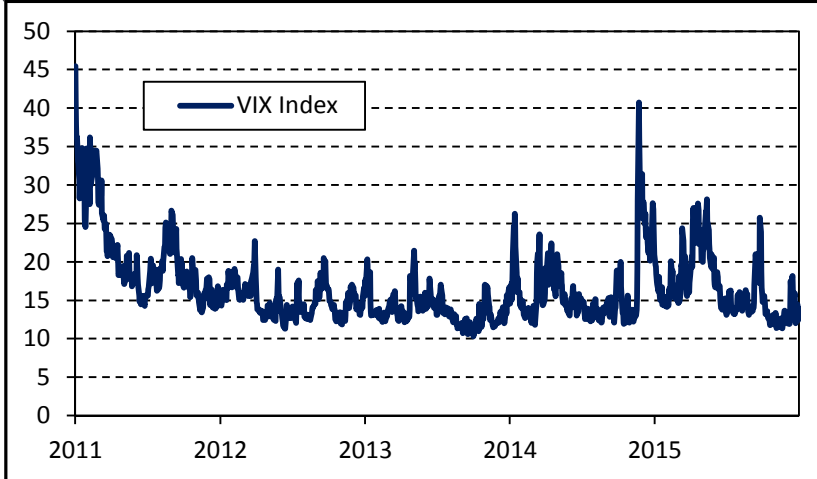
EM continues trending higher as a percent of global output



Source: Bloomberg, IMF

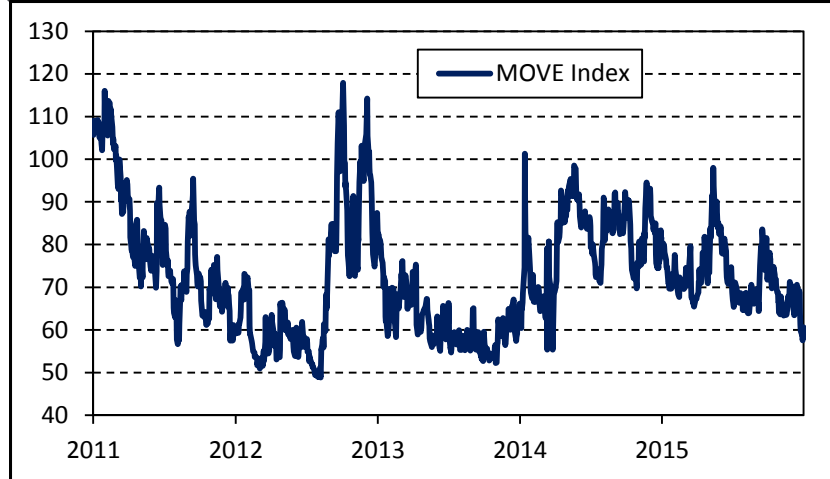
Volatility

Equity volatility seeing recent decrease



Source: Bloomberg, CBOE

Treasury volatility continues decreasing as a rate hike approaches



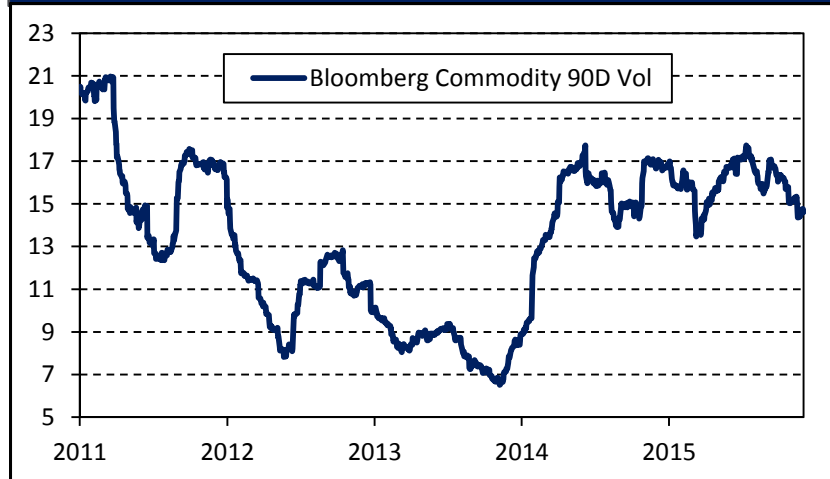
Source: Bloomberg, Merrill Lynch

Currency volatility remains elevated



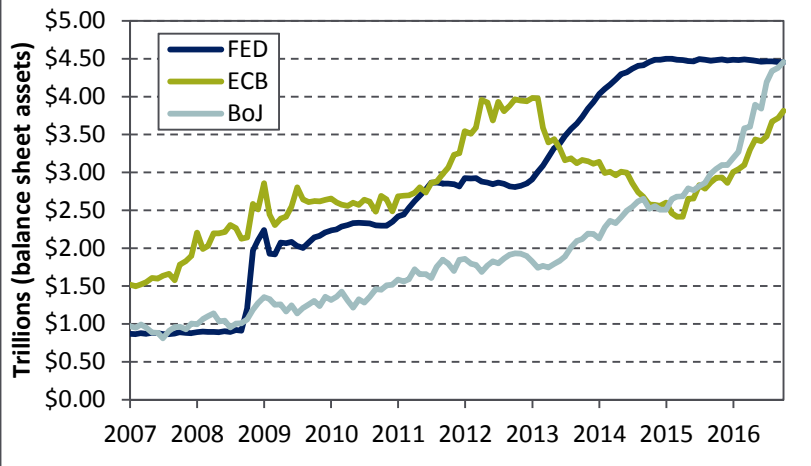
Source: Bloomberg, Deutsche Bank

Commodity volatility continues to decline



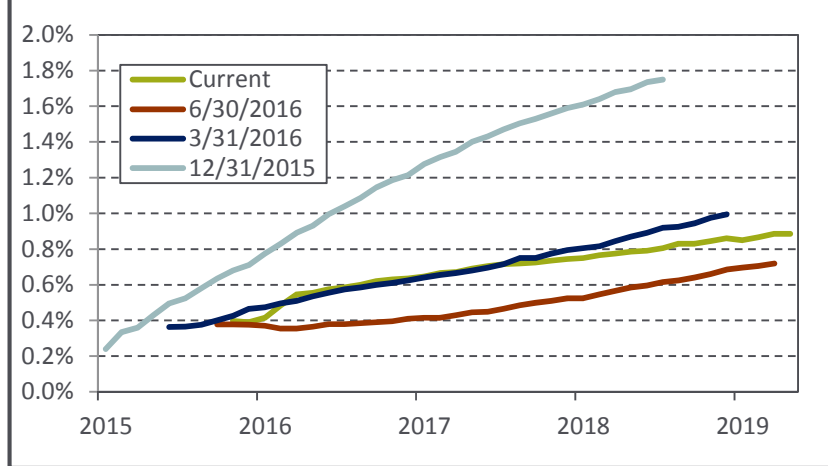
Source: Bloomberg, Merrill Lynch

Central banks continue increasing balance sheet size



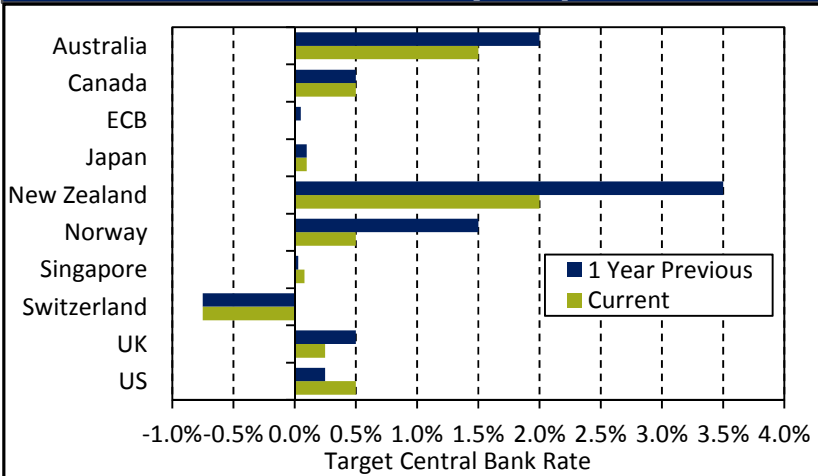
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

Market expectations for interest rates echo the lower for longer sentiment



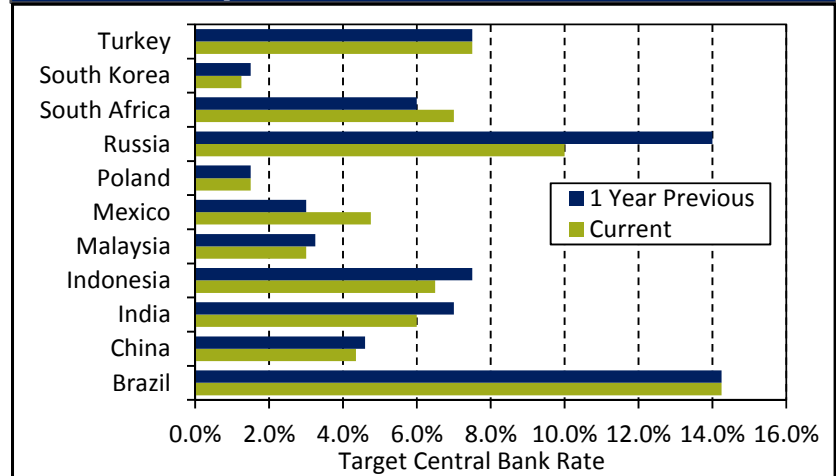
Source: Bloomberg, Federal Reserve

Developed market interest rates are mostly lower than one year previous



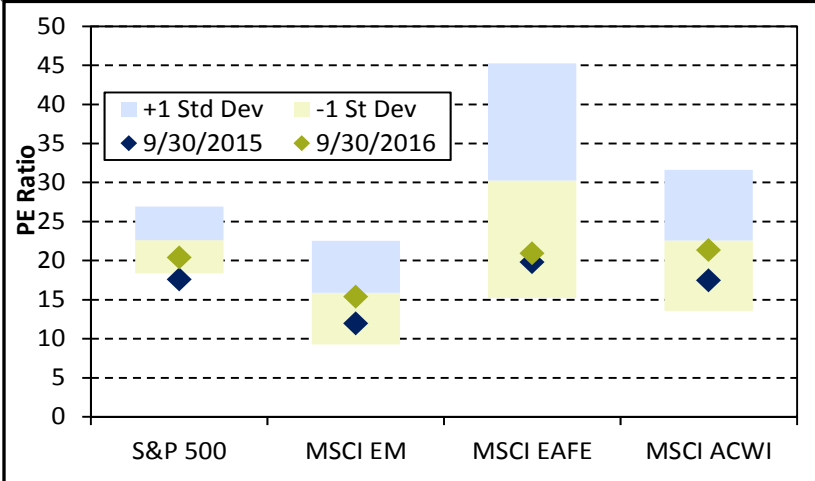
Source: Bloomberg

EM central bank policies vary by country-specific economic conditions



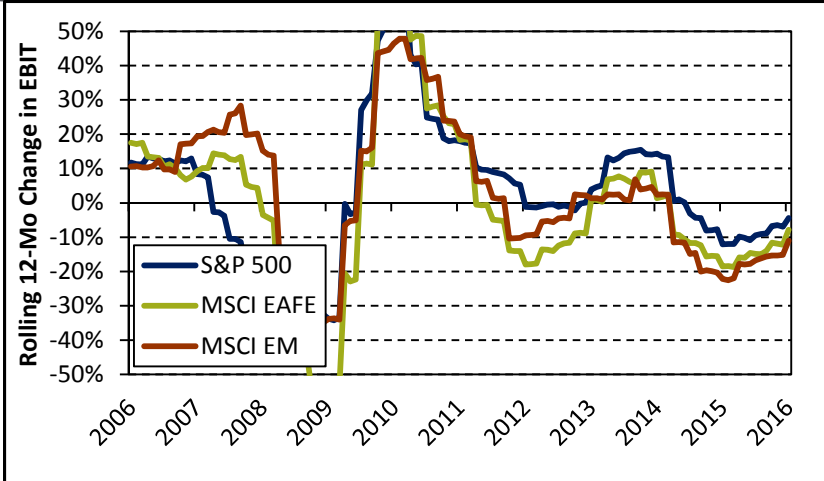
Source: Bloomberg

Global valuations increased over the year



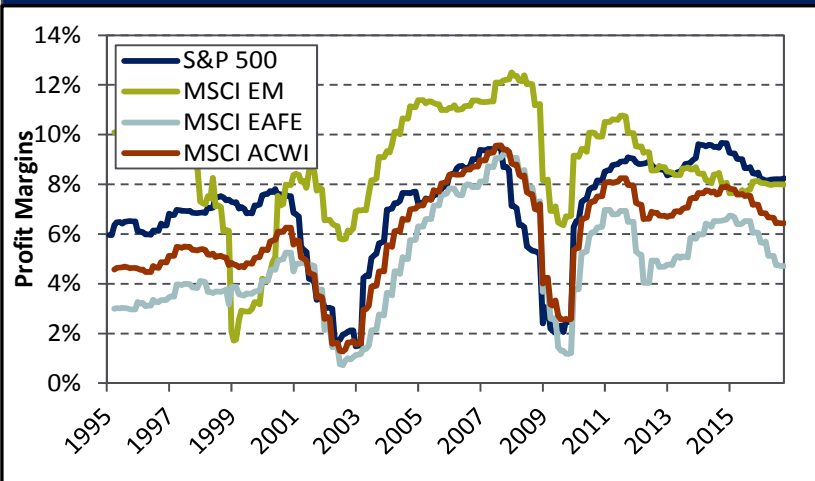
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom
 *Standard deviation calculations based on 20 years of data

Earnings growth increases slightly



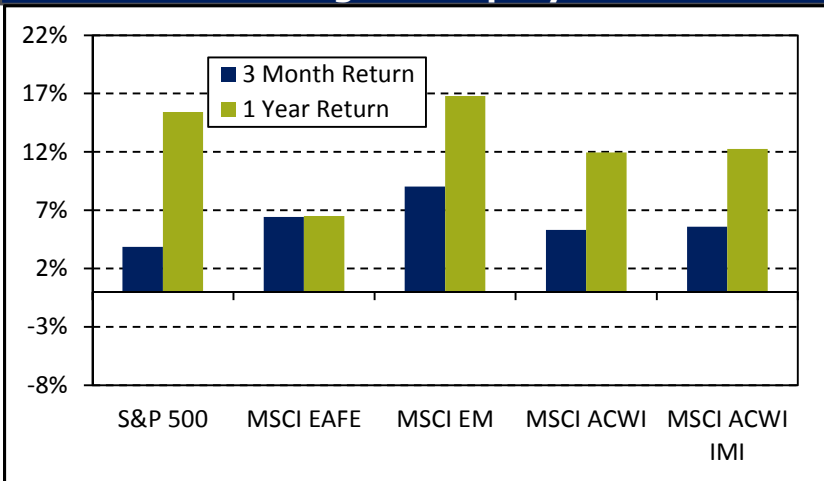
Source: Bloomberg, Standard and Poors, MSCI

Profit margins continue to decline



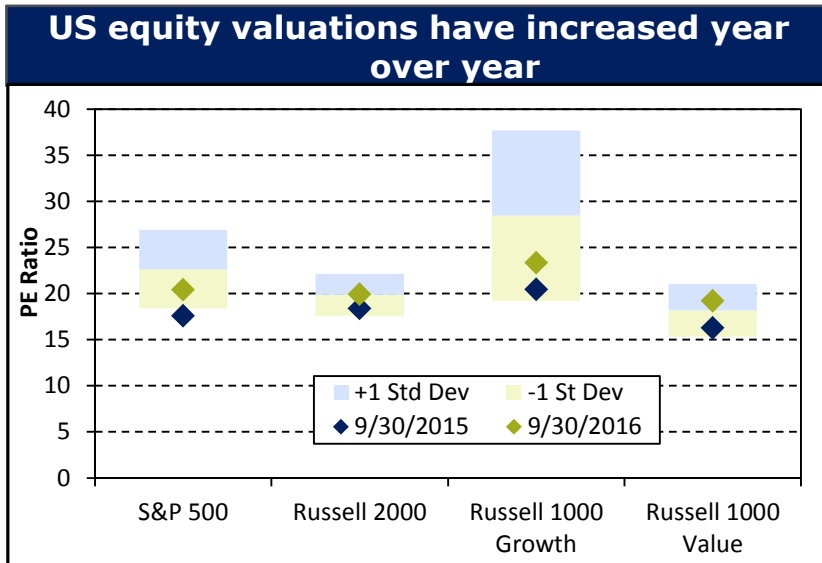
Source: Bloomberg, MSCI

Broadly positive short-term returns for global equity

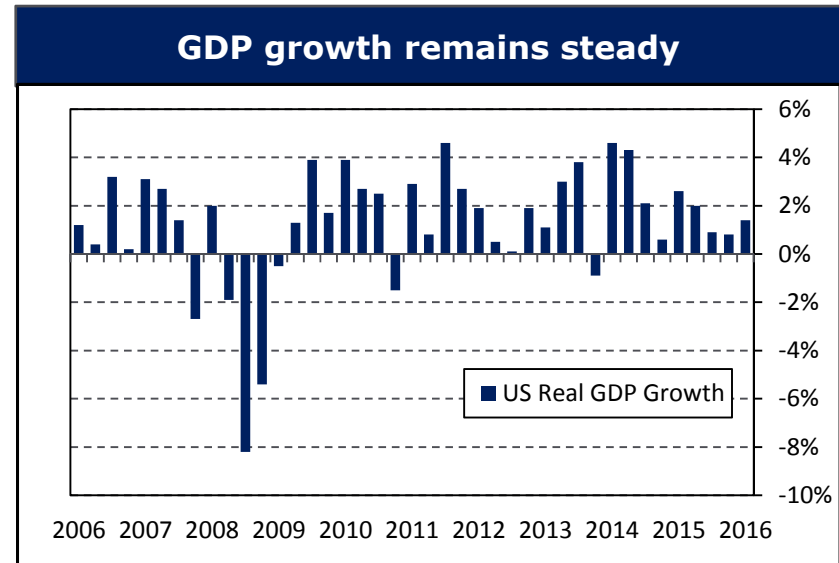


Source: Bloomberg, MSCI

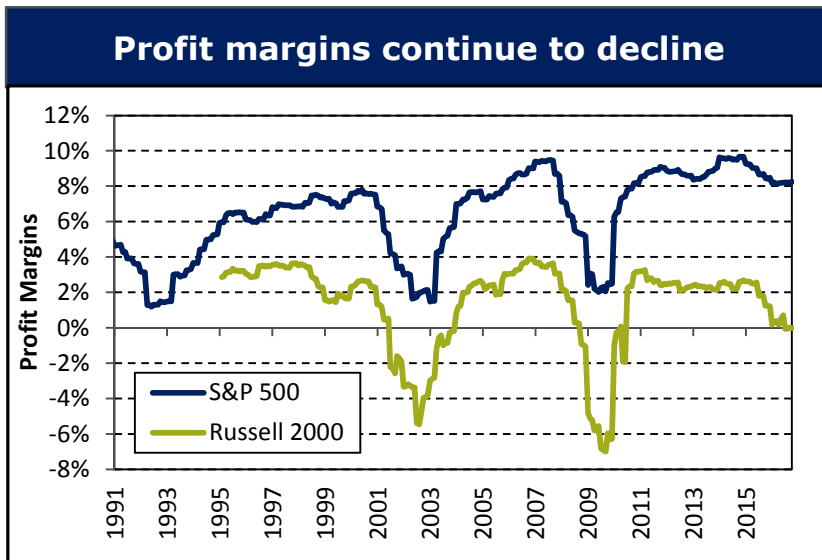
US Equity



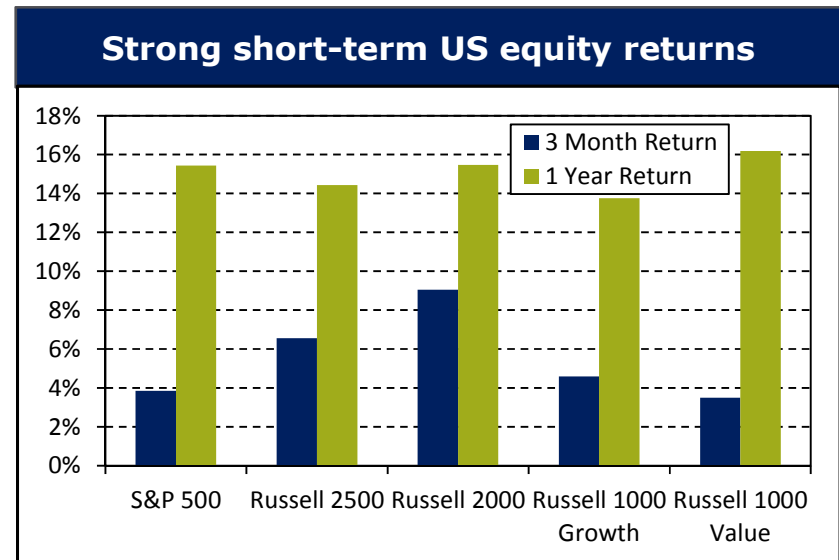
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive* Standard deviation calculations based on 20 years of data



Source: Bloomberg, Bureau of Economic Analysis

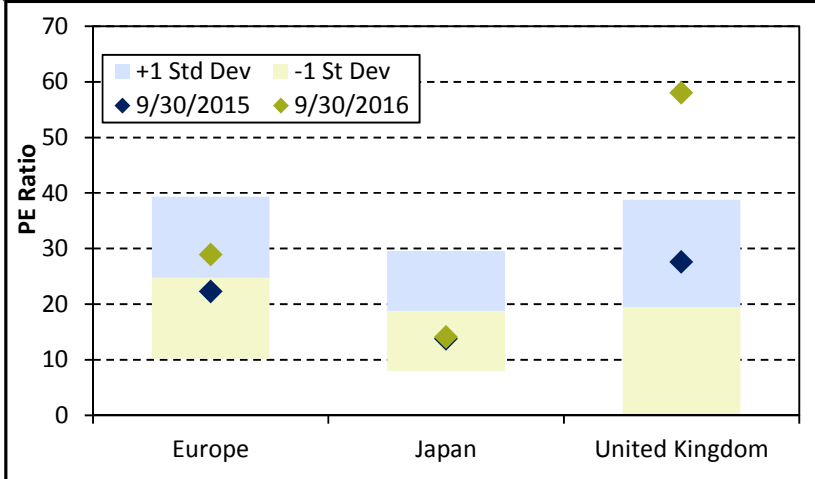


Source: Bloomberg, Standard and Poors, Russell



Source: Bloomberg, Standard and Poors, Russell

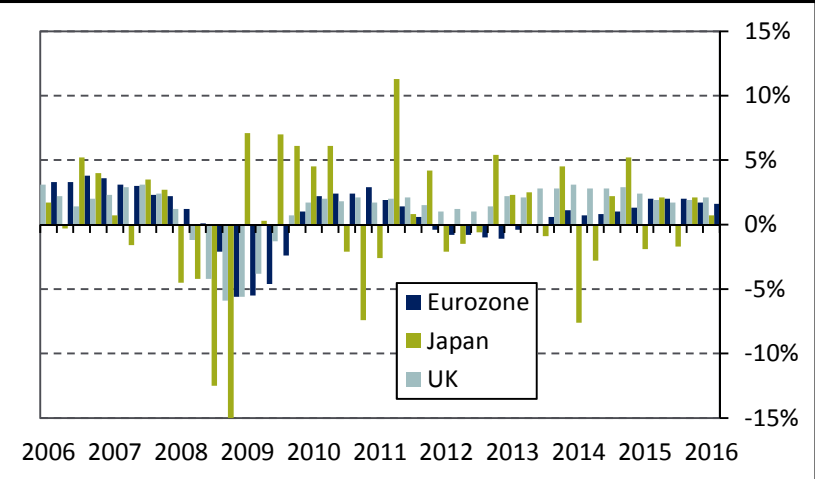
UK PE ratio remains elevated



Source: Bloomberg, MSCI, FTSE *UK represented by FTSE 100 Index

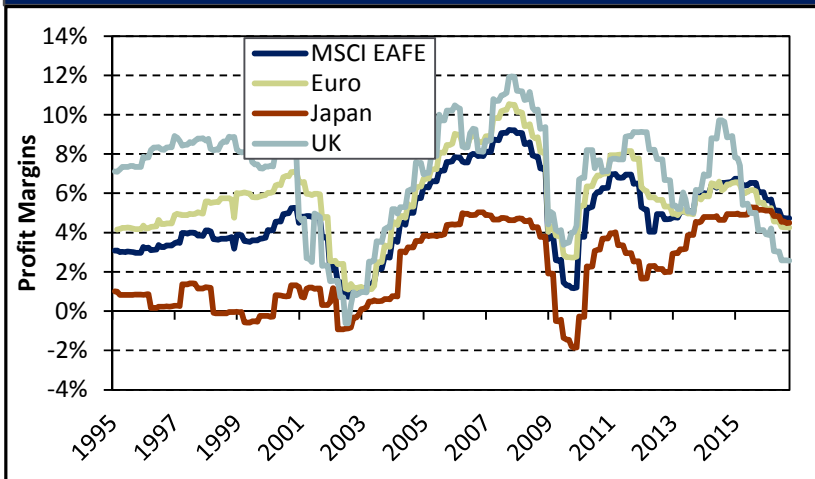
*Standard deviation calculations based on 20 years of data, with Europe since 12/1998

Global growth varies by country



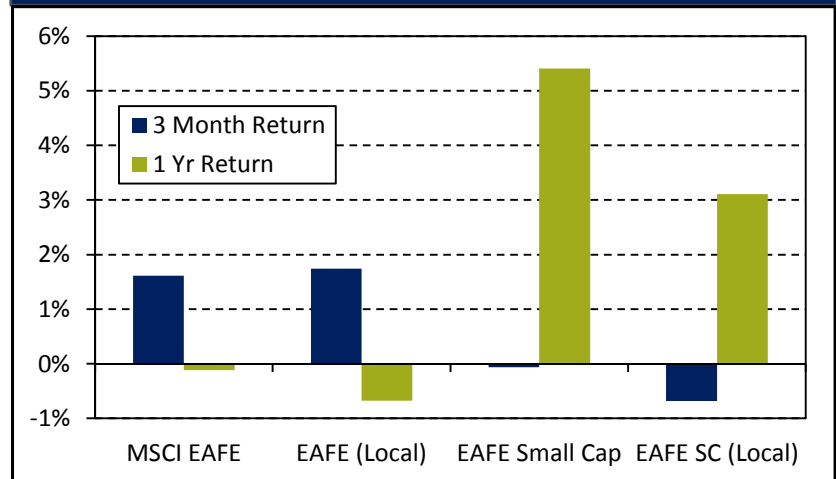
Source: Bloomberg

Margins continue to decline, particularly in the UK



Source: Bloomberg, MSCI

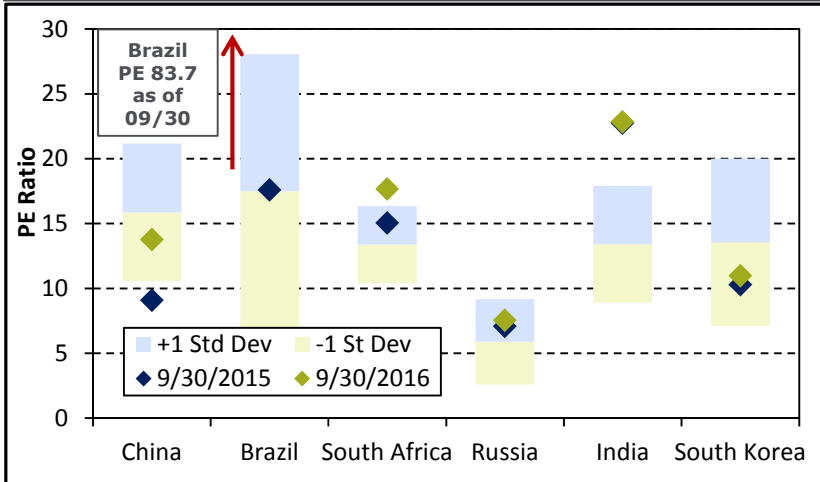
EAFE small cap returns have struggled in recent months



Source: Bloomberg, MSCI



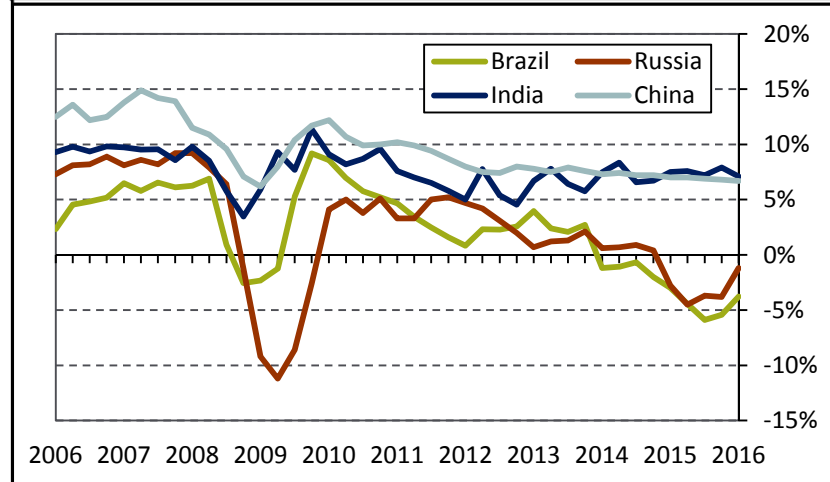
Regional valuations similar year over year with the exception of Brazil



Source: Bloomberg, MSCI

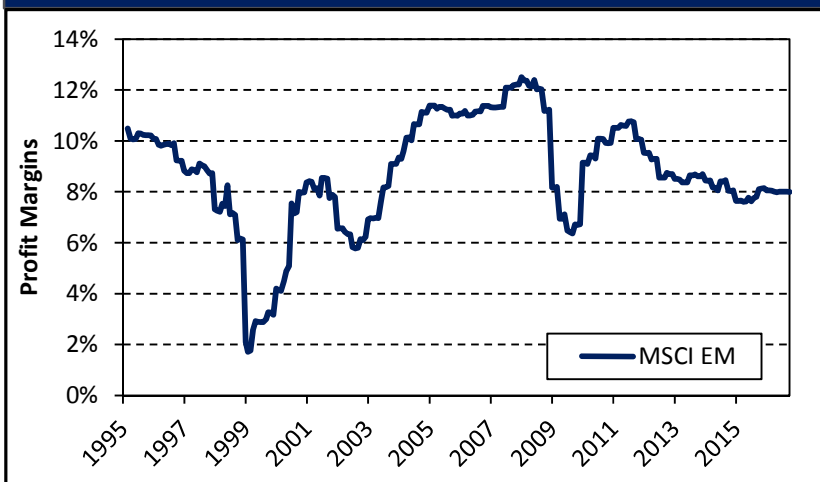
*Standard deviation calculations based on 20 years of data, with Russia since 01/1998

Russia and Brazil experience upward trends in growth



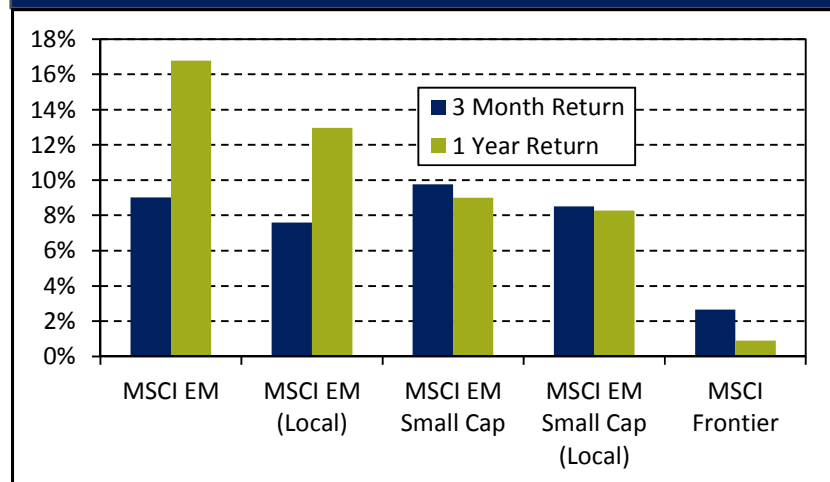
Source: Bloomberg

Profit margins in line with history

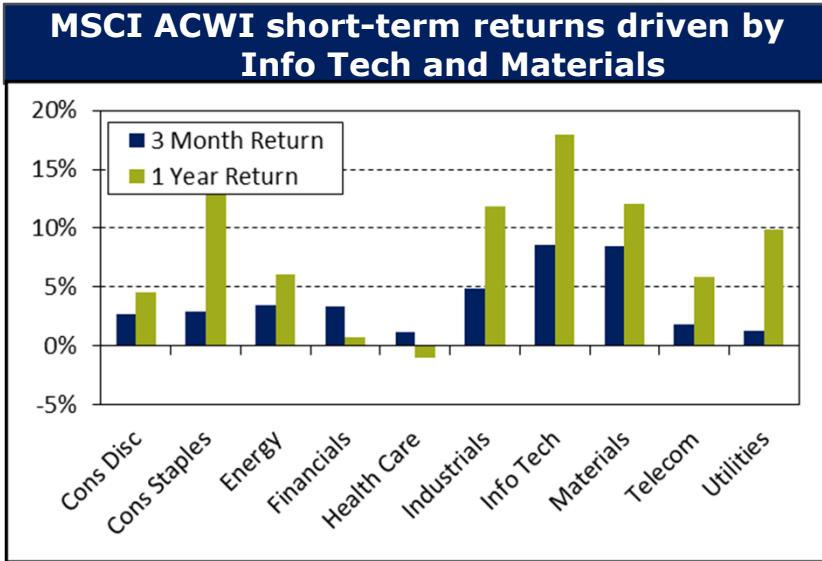


Source: Bloomberg, MSCI

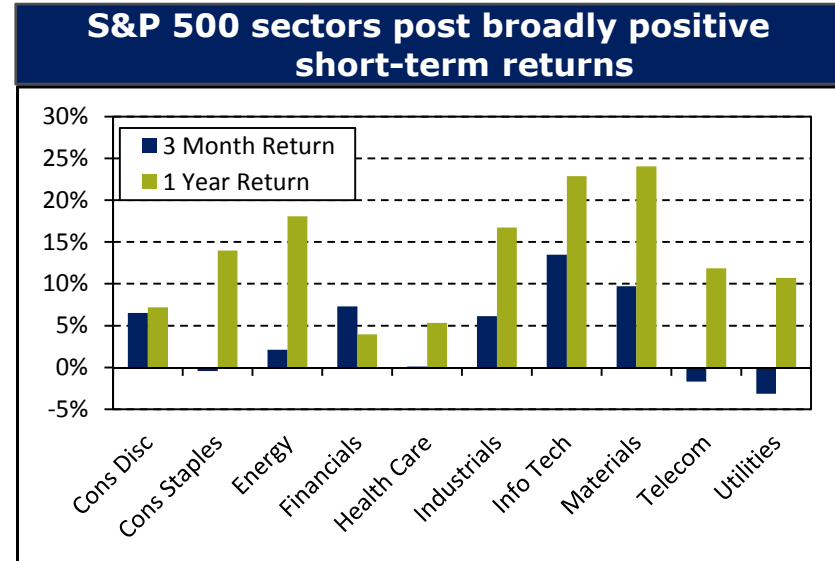
Strong short-term returns for EM



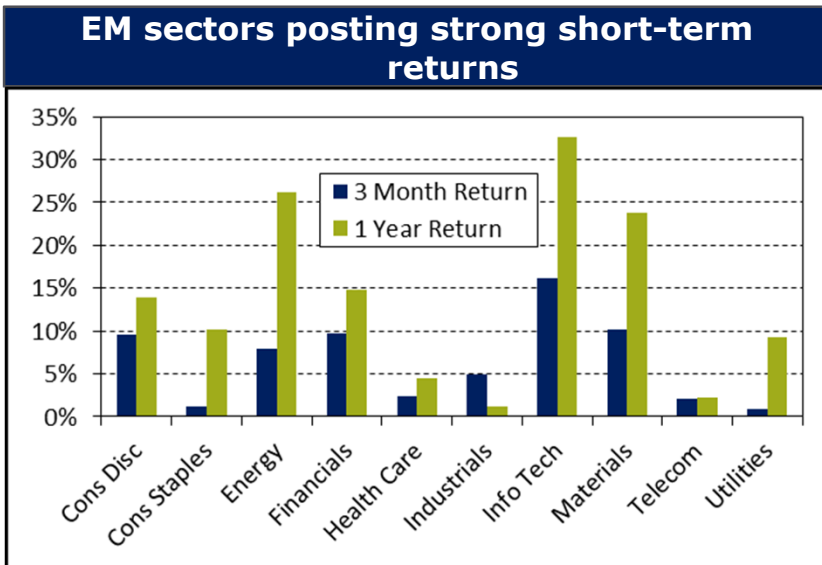
Source: Bloomberg, MSCI



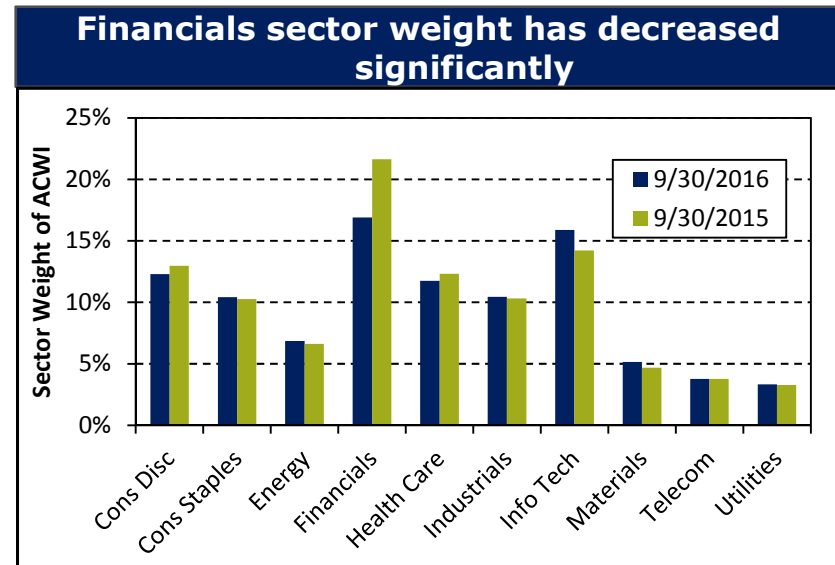
Source: Bloomberg, MSCI



Source: Bloomberg, Standard and Poors

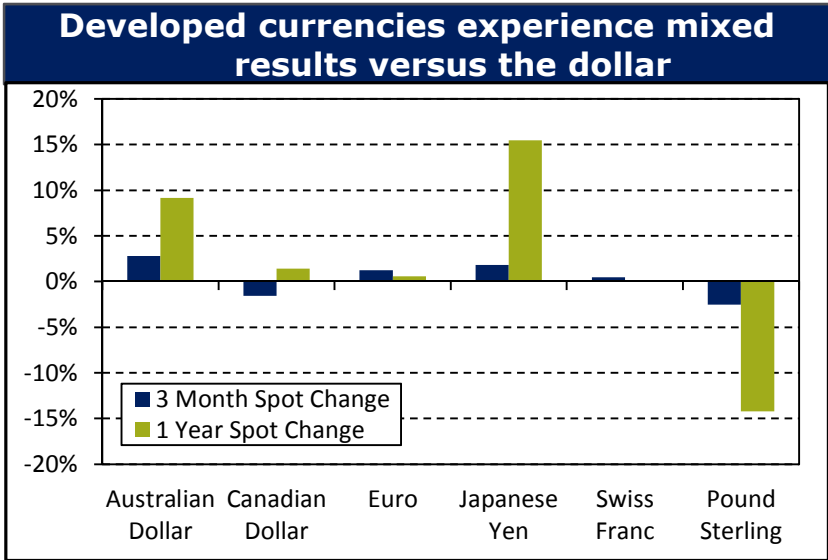


Source: Bloomberg, MSCI

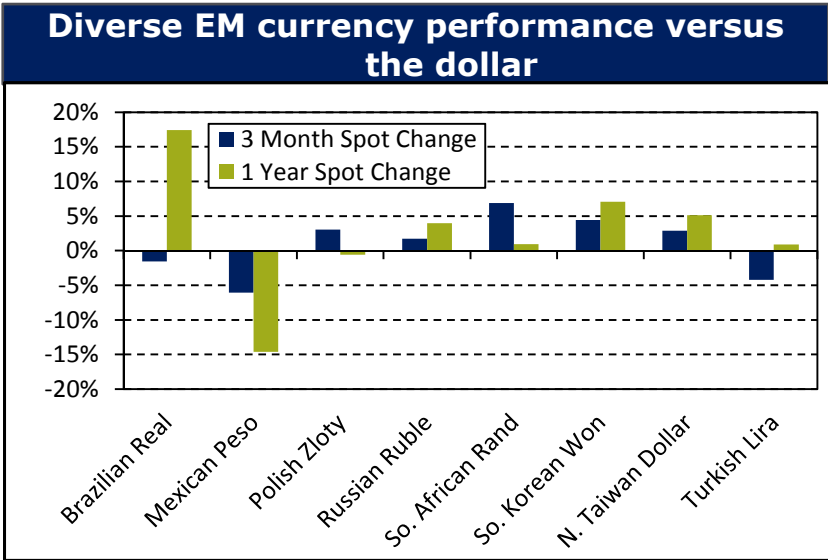


Source: Bloomberg, MSCI

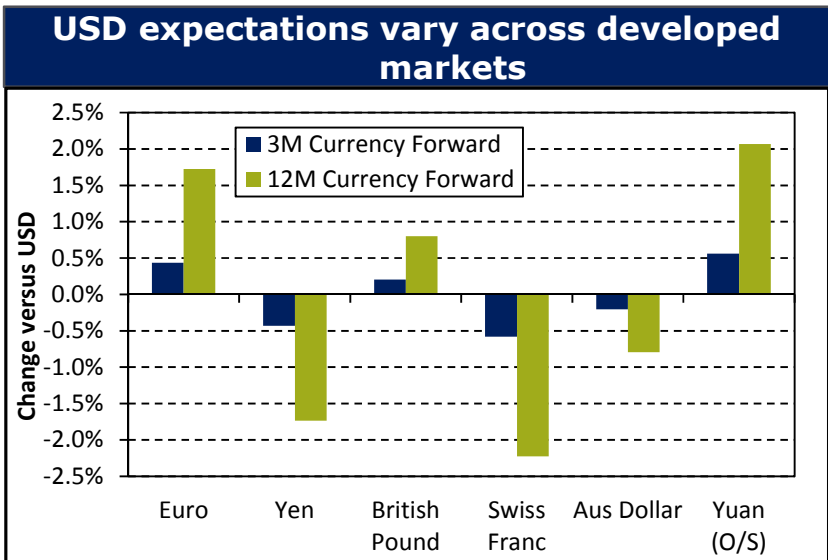
Currencies



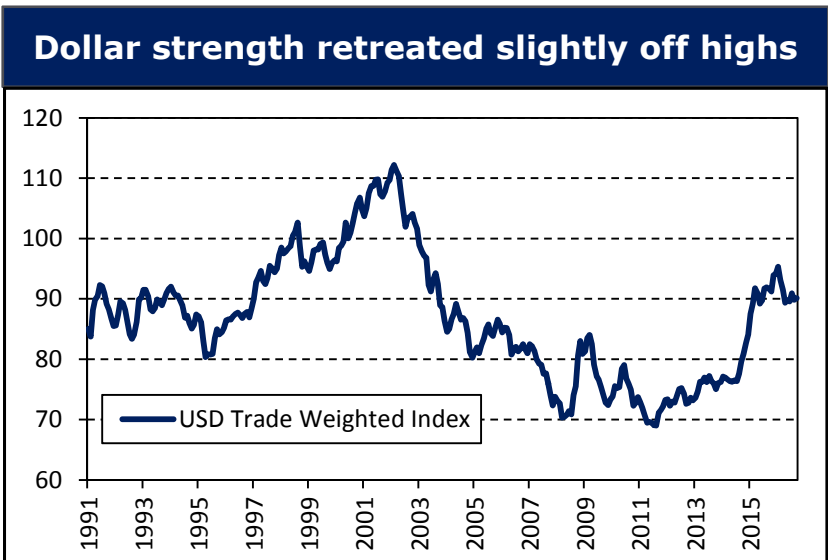
Source: Bloomberg



Source: Bloomberg

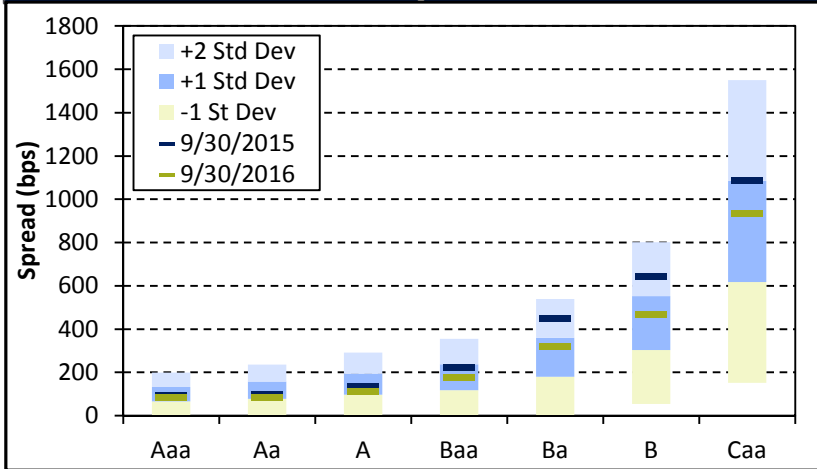


Source: Bloomberg



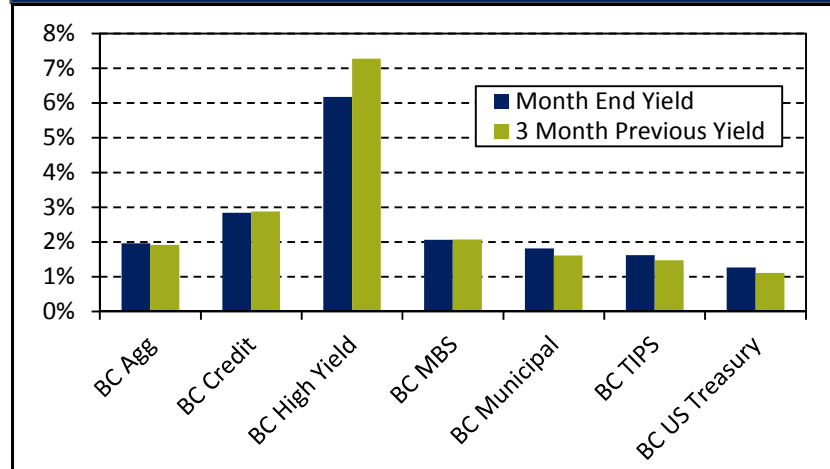
Source: Bloomberg, Federal Reserve

Spreads remain lower than the previous year



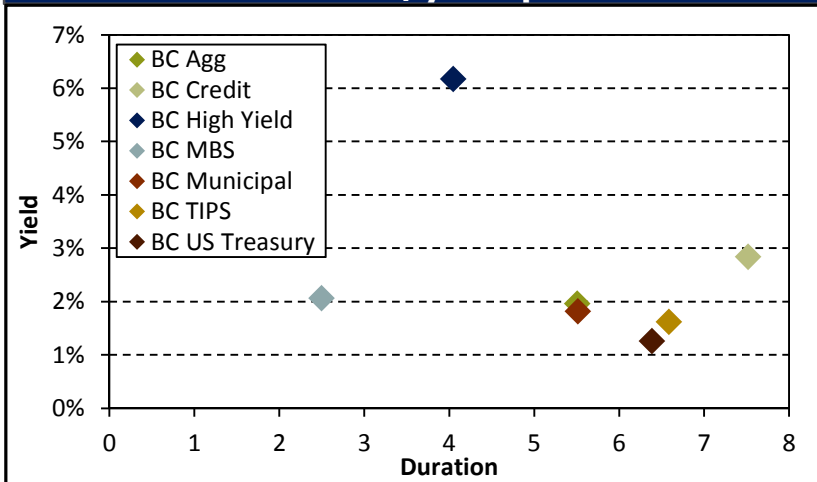
Source: Bloomberg, Barclays
 *Standard deviation calculations based on 20 years of data

Except high yield, yields have remained similar over recent months



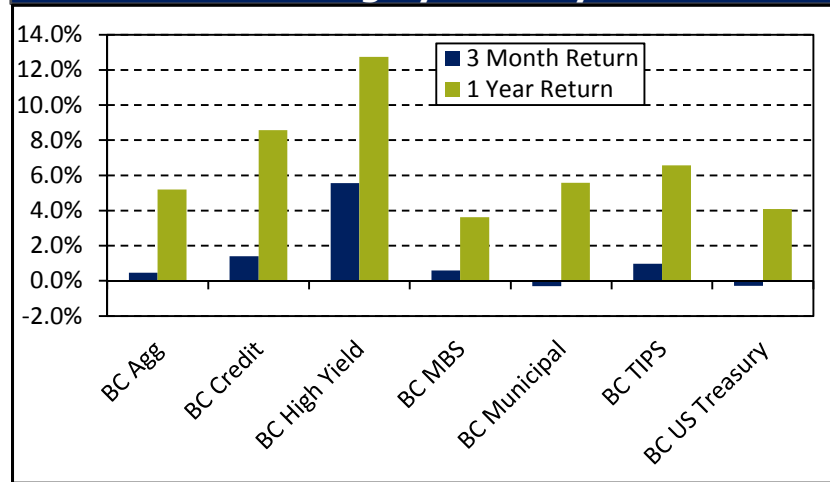
Source: Bloomberg, Barclays

TIPS look attractive among similar duration/yield profiles

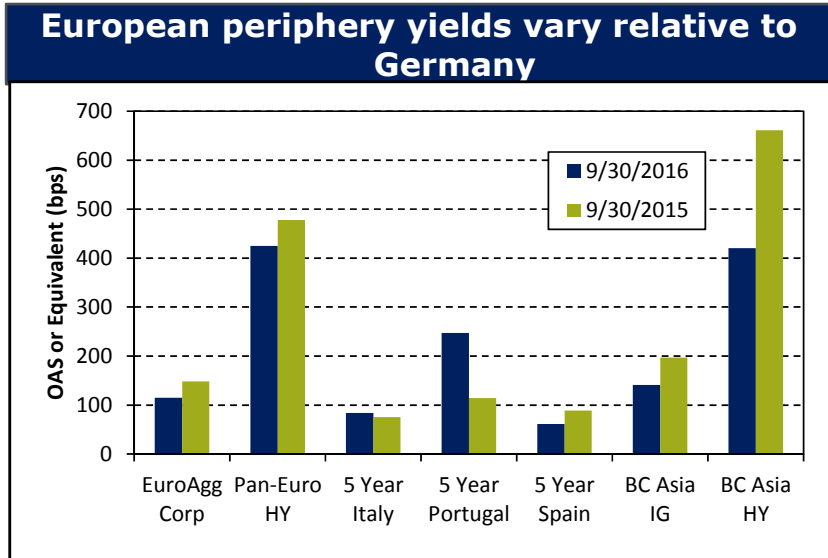


Source: Bloomberg, Barclays

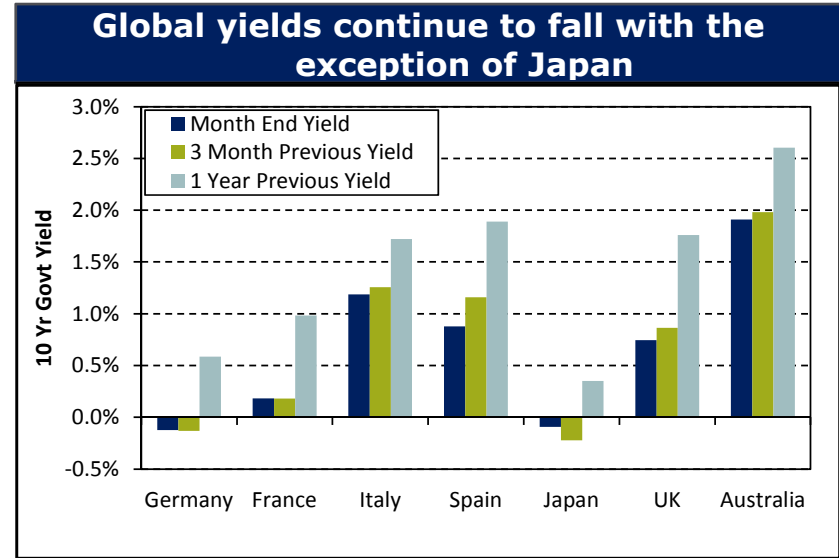
Relatively flat returns except the credit and high yield rally



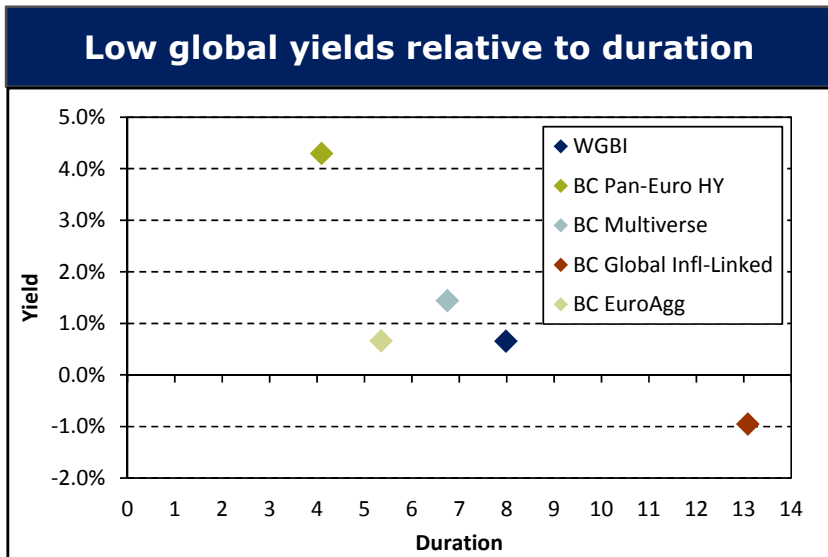
Source: Bloomberg, Barclays



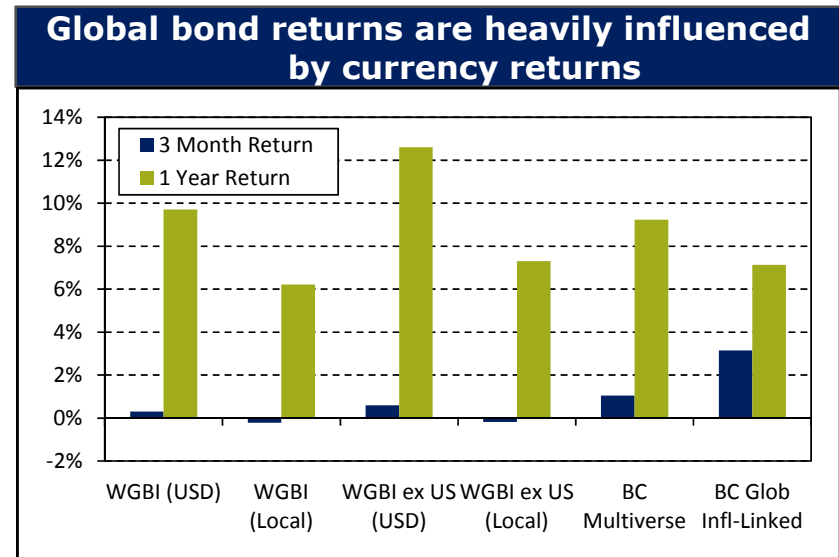
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund



Source: Bloomberg

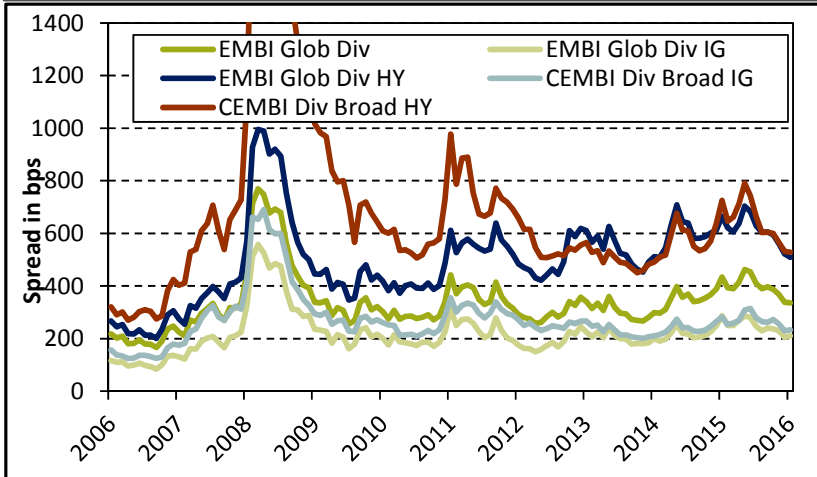


Source: Bloomberg, Citigroup, Barclays



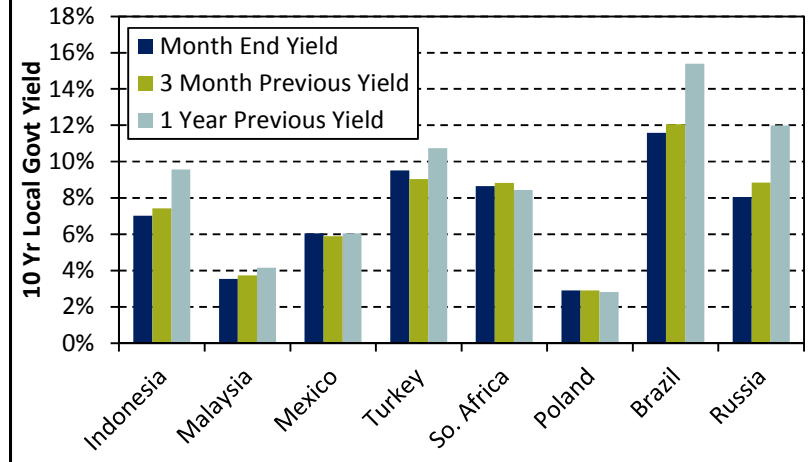
Source: Bloomberg, Citigroup, Barclays

Spreads continue to decline



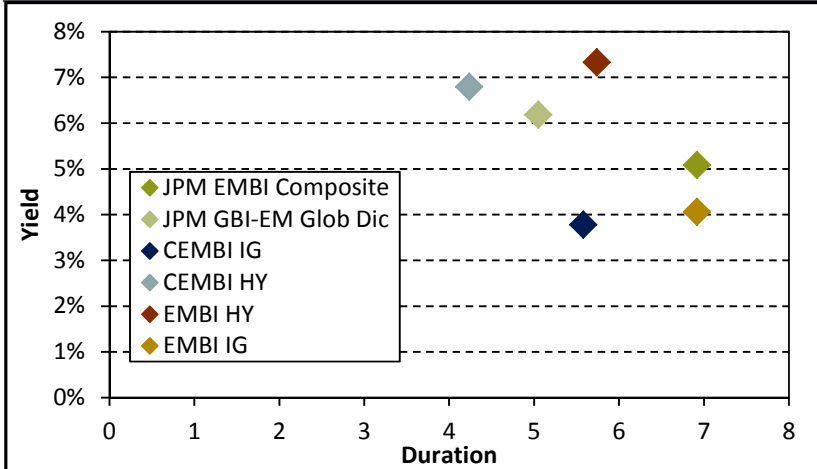
Source: Bloomberg, JP Morgan

EM local bond yields have declined for more volatile markets



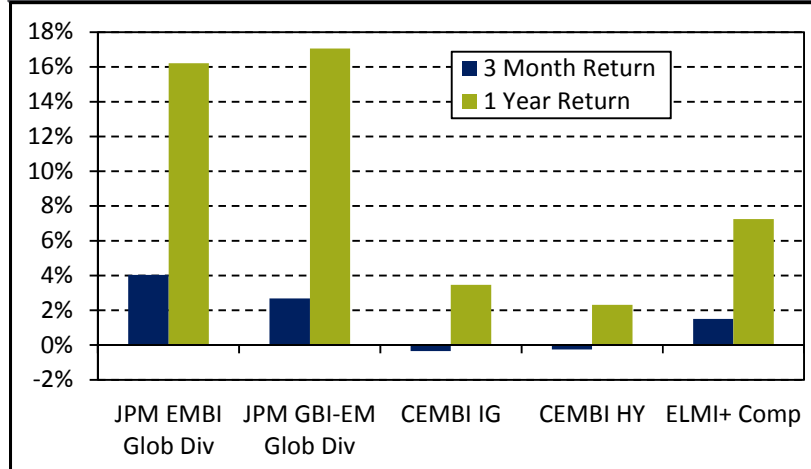
Source: Bloomberg

EM yields remain attractive versus global counterparts



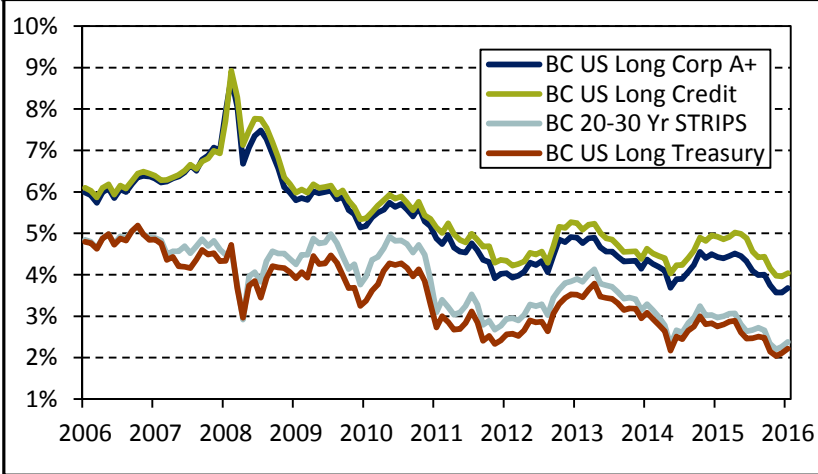
Source: Bloomberg, JP Morgan

EM debt continues to perform well



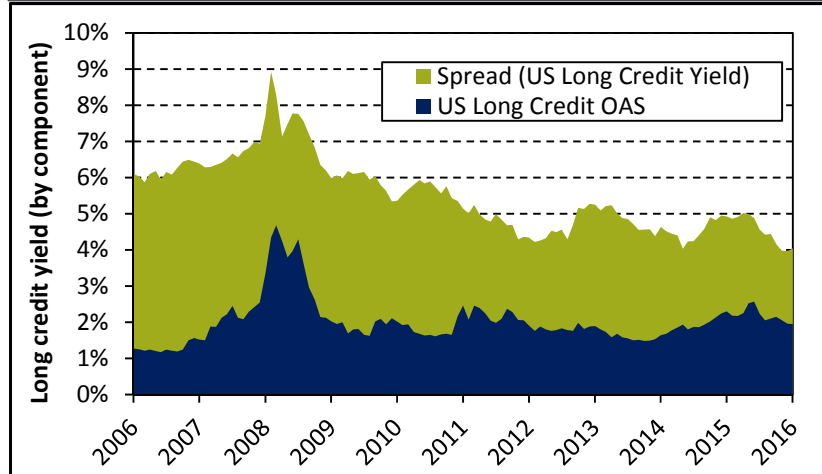
Source: Bloomberg, JP Morgan

Long duration yields continue to decline



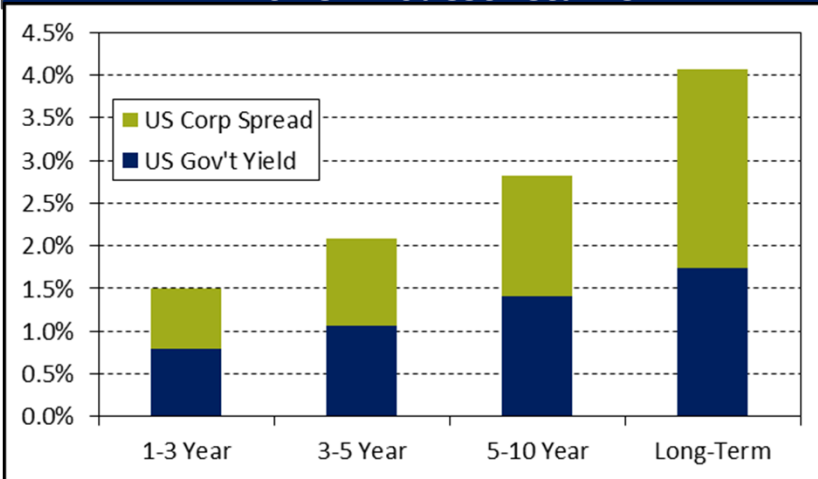
Source: Bloomberg, Citigroup, Barclays

Lower yields driven by real rates



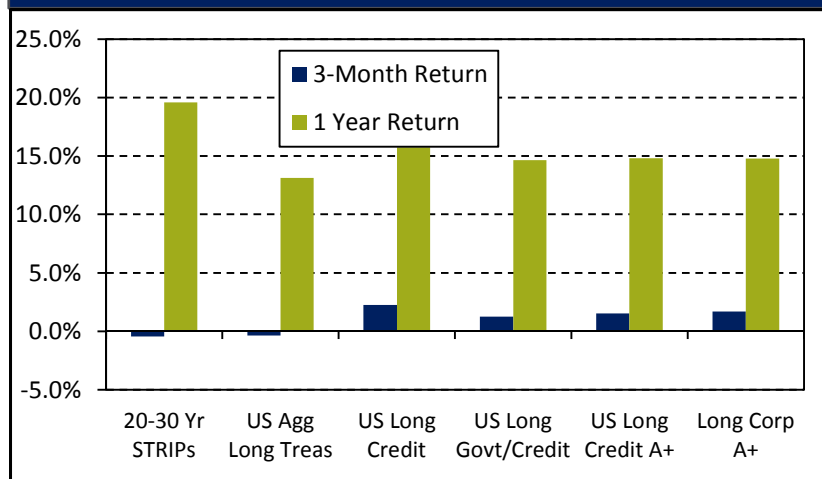
Source: Bloomberg, US Treasury, Barclays, NEPC

Yield and spread components continue to offer modest returns



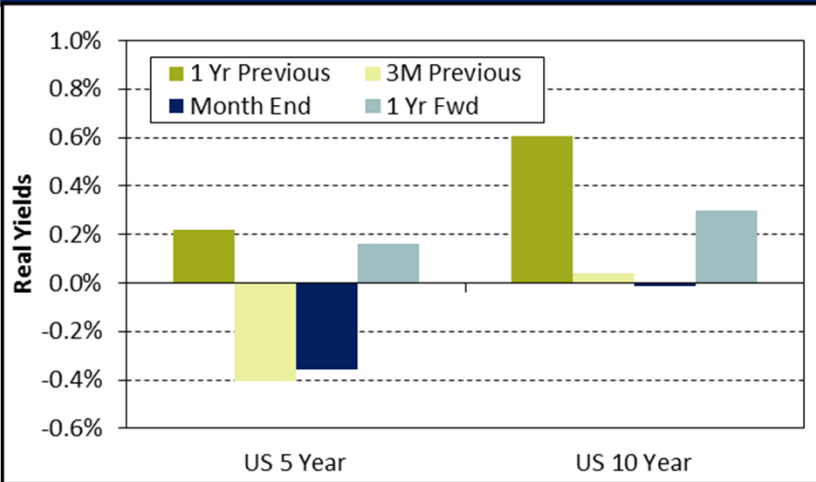
Source: Bloomberg, Barclays

Long duration short-term returns are flat



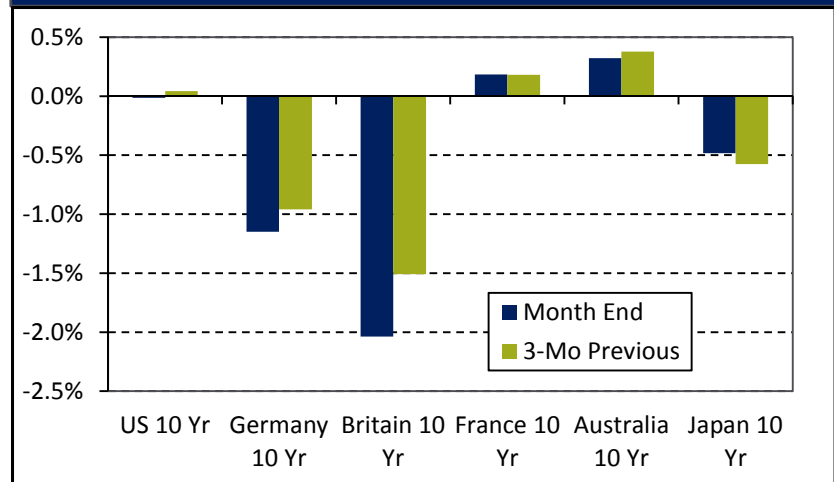
Source: Bloomberg, Barclays

US real yields have decreased



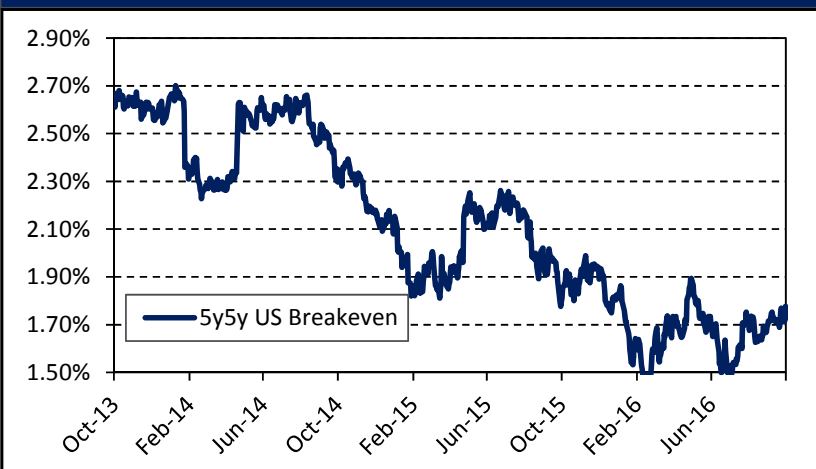
Source: Bloomberg

Global real yields dip even lower



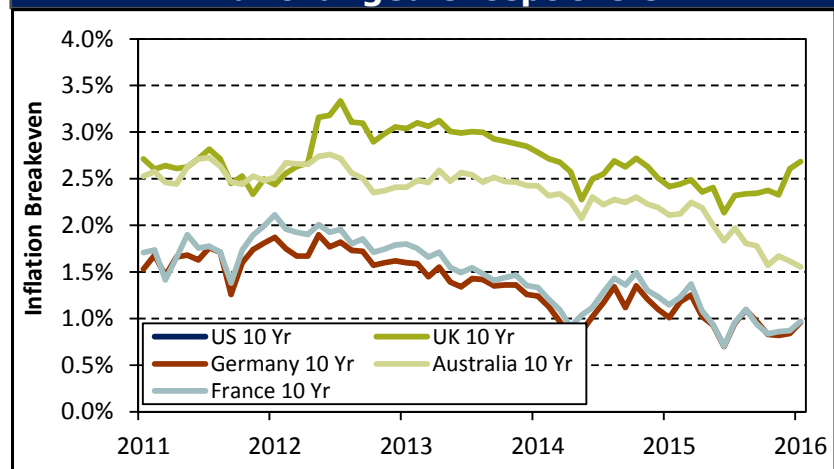
Source: Bloomberg

US inflation expectations remain low



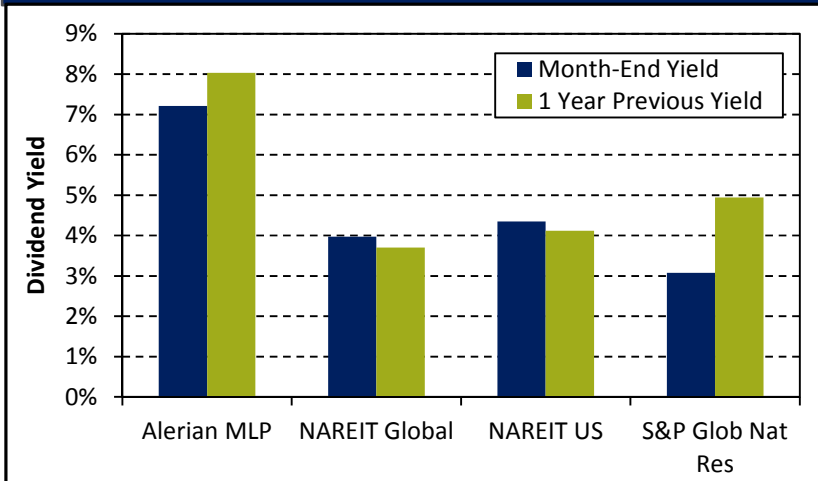
Source: Bloomberg

Global inflation expectations remain mostly unchanged except the UK



Source: Bloomberg

Yields remain similar to the previous year



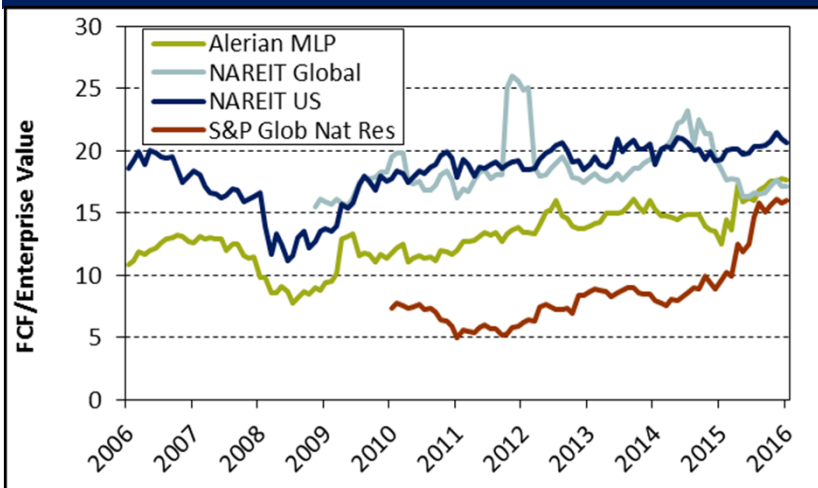
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Sustained recovery in commercial real estate occupancy rates



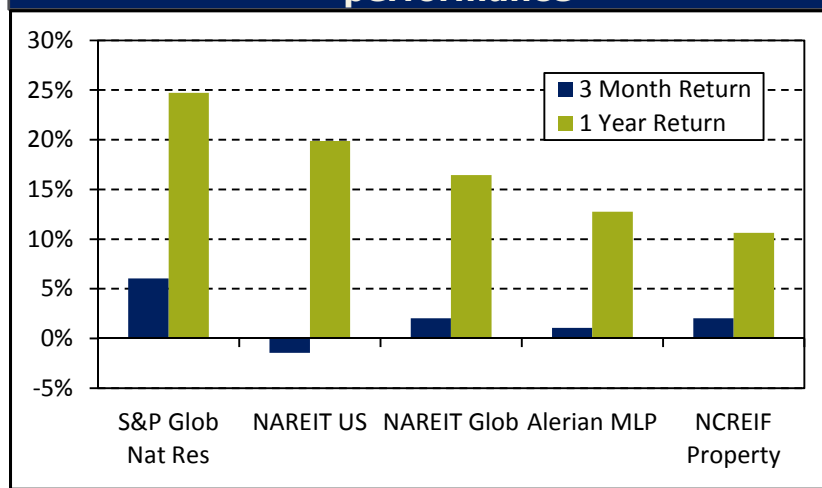
Source: NCREIF

Valuations remain steady



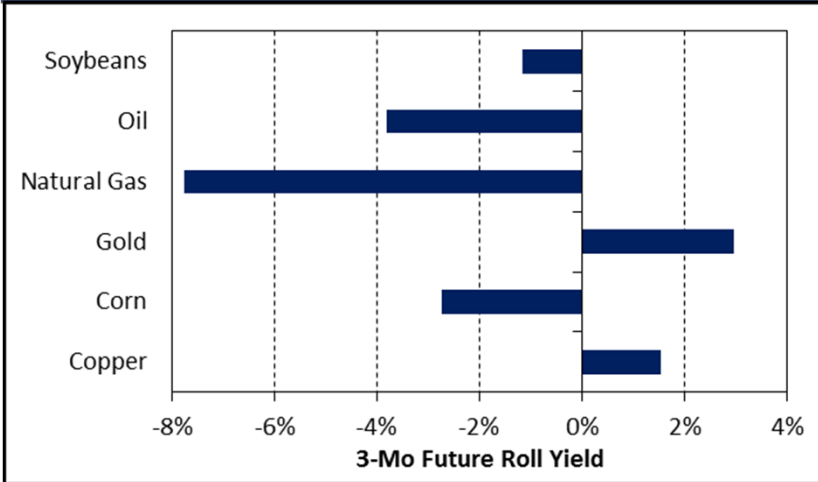
Source: Bloomberg, US Census Bureau

REITs exhibit mixed short-term performance



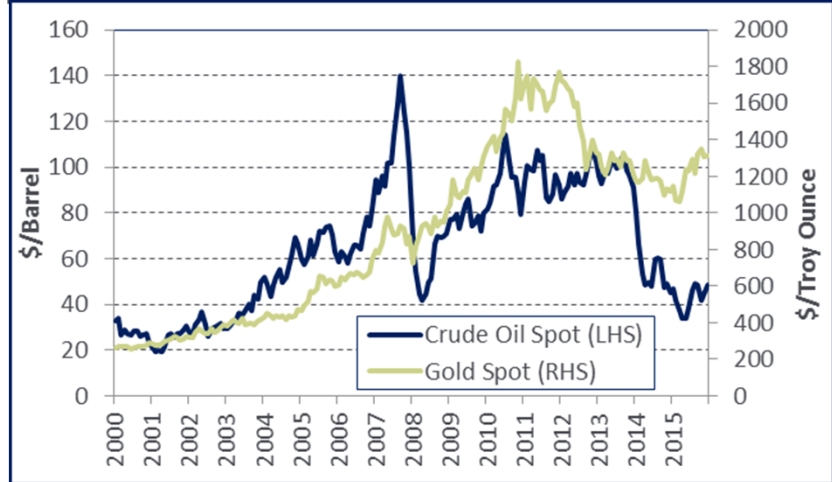
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Negative roll yields remain a hurdle for investing directly in oil and natural gas



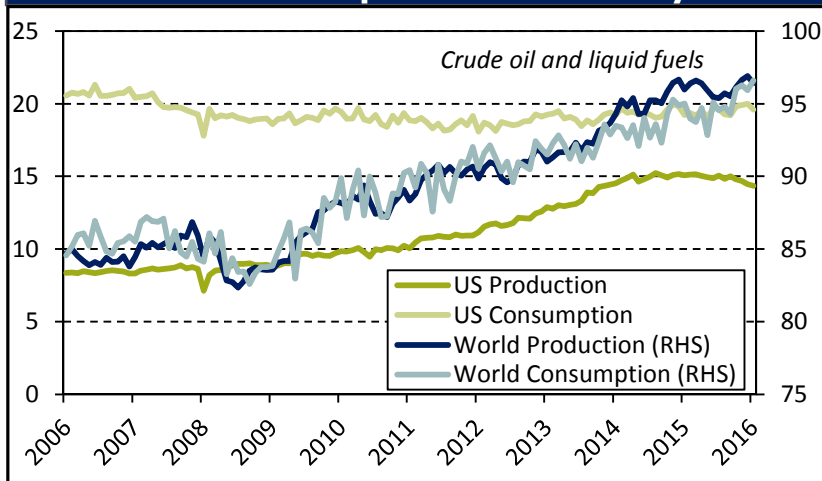
Source: Bloomberg

Recent spike in gold and decline in oil as oversupply concerns continue



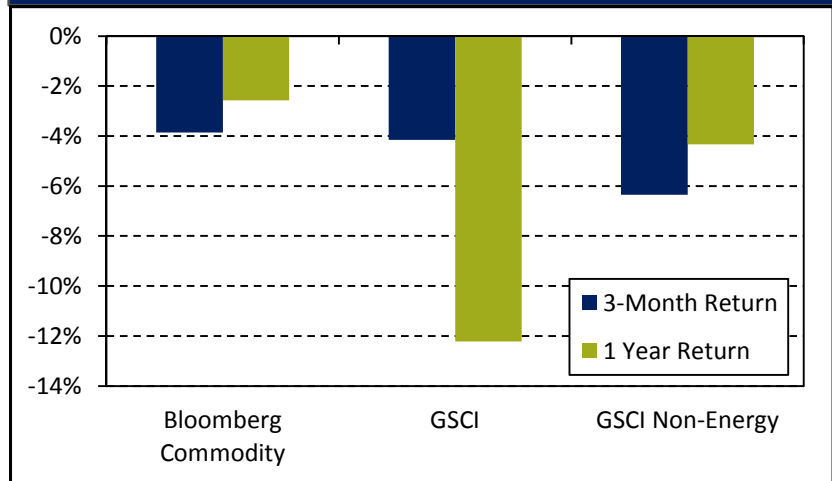
Source: Bloomberg

Recent decline in world production as consumption holds steady



Source: Bloomberg, US Department of Energy *Crude oil and liquid fuels

Commodity indices continue to decline



Source: Bloomberg, Standard and Poors

Information Disclaimer and Reporting Methodology

Information Disclaimer

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- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.