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## Ventura County Employees' Retirement Association

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### Investment Performance Analysis for the period ending September 30, 2015

November 16, 2015

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# Market Environment Update and Outlook

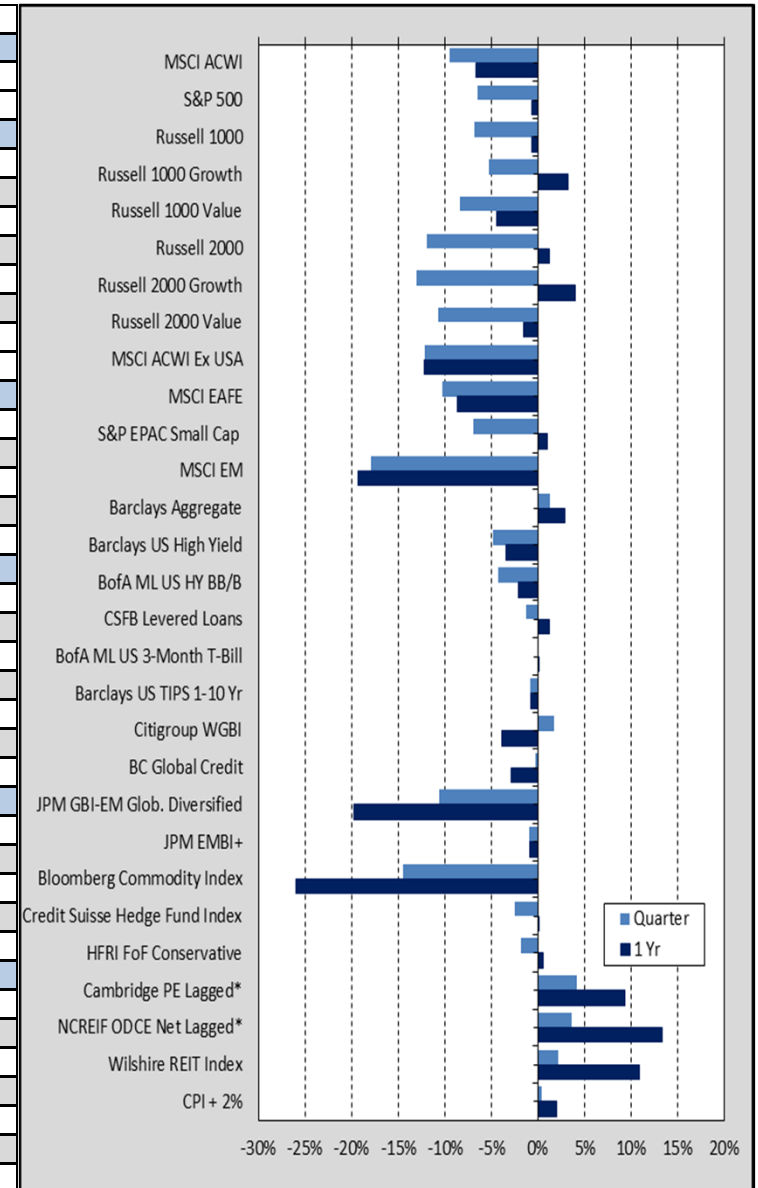


- **Third quarter 'advanced' estimate of GDP growth remains positive, but decreased to an annual rate of +1.5% after increasing by +3.9% in the second quarter.**
  - Retail sales (ended September) grew at +1.7% on a year-over-year growth rate basis. The year-over-year growth rate at this time last year was +4.0%.
  - The inventory-to-sales ratio (ended August) remained flat at 1.4, and has remained relatively flat since early 2010.
  - Corporate profits as a percent of GDP remain elevated relative to historical levels.
  - The U.S. trade deficit widened in August.
- **U.S. unemployment rate continues to steadily improve, falling to 5.1% at the end of the third quarter; U-6, a broader measure of unemployment, fell to 10.0% during the quarter.**
- **The Case-Shiller Home Price Index (ended August) increased slightly from second quarter levels (173.7) to 175.4, and is currently higher than pre-financial crisis levels.**
- **Rolling 12-month seasonally adjusted CPI decreased to -0.02% during the third quarter; Capacity Utilization remained flat during the quarter, ending September at 77.5%.**
- **Fed Funds rate remains at 0.25%, while the 10-year Treasury Yield finished Q3 at 2.2%, down approximately 20 basis points from Q2.**
- **The Fed balance sheet remained flat during the Q3, while the ECB and Japanese balance sheets increased in the same period as each is in the midst of a sizeable easing program.**
- **S&P valuations decreased in September, but remain above 10-year and long-term averages**
  - Cyclically-adjusted Shiller PE ratio (24.6x) is above the long-term average of 16.4x and above the 10-year average of 22.9x.
- **The U.S. Dollar continues its strength against a basket of major currencies as the Fed ends its quantitative easing program and the ECB and Japan continue easing.**
  - Currency volatility has seen a sustained uptick since Q1.

# Ventura County Employees' Retirement Association

## 3Q 2015 Market Environment Overview

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>World Equity Benchmarks</b>						
MSCI ACWI	World	-9.4%	-6.7%	7.0%	6.8%	4.6%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>Domestic Equity Benchmarks</b>						
S&P 500	Large Core	-6.4%	-0.6%	12.4%	13.3%	6.8%
Russell 1000	Large Core	-6.8%	-0.6%	12.7%	13.4%	7.0%
Russell 1000 Growth	Large Growth	-5.3%	3.2%	13.6%	14.5%	8.1%
Russell 1000 Value	Large Value	-8.4%	-4.4%	11.6%	12.3%	5.7%
Russell 2000	Small Core	-11.9%	1.2%	11.0%	11.7%	6.5%
Russell 2000 Growth	Small Growth	-13.1%	4.0%	12.8%	13.3%	7.7%
Russell 2000 Value	Small Value	-10.7%	-1.6%	9.2%	10.2%	5.3%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>International Equity Benchmarks</b>						
MSCI ACWI Ex USA	World ex-US	-12.2%	-12.2%	2.3%	1.8%	3.0%
MSCI EAFE	Int'l Developed	-10.2%	-8.7%	5.6%	4.0%	3.0%
S&P EPAC Small Cap	Small Cap Int'l	-6.9%	1.0%	10.7%	7.8%	5.8%
MSCI EM	Emerging Equity	-17.9%	-19.3%	-5.3%	-3.6%	4.3%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>Domestic Fixed Income Benchmarks</b>						
Barclays Aggregate	Core Bonds	1.2%	2.9%	1.7%	3.1%	4.6%
Barclays US High Yield	High Yield	-4.9%	-3.4%	3.5%	6.1%	7.3%
BofA ML US HY BB/B	High Yield	-4.3%	-2.1%	3.7%	6.0%	6.7%
CSFB Levered Loans	Bank Loans	-1.2%	1.2%	3.8%	4.8%	4.4%
BofA ML US 3-Month T-Bill	Cash	0.0%	0.0%	0.1%	0.1%	1.3%
Barclays US TIPS 1-10 Yr	Inflation	-0.9%	-0.8%	-1.4%	1.8%	3.6%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>Global Fixed Income Benchmarks</b>						
Citigroup WGBI	World Gov. Bonds	1.7%	-3.8%	-2.9%	-0.2%	3.4%
BC Global Credit	Global Bonds	-0.2%	-2.9%	0.6%	2.6%	4.3%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local)	-10.5%	-19.8%	-8.7%	-3.6%	4.5%
JPM EMBI+	Em. Mkt. Bonds	-0.9%	-0.9%	0.2%	4.2%	6.7%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>Alternative Benchmarks</b>						
Bloomberg Commodity Index	Commodity	-14.5%	-26.0%	-16.0%	-8.9%	-5.7%
Credit Suisse Hedge Fund Index	Hedge Fund	-2.5%	0.1%	5.0%	4.5%	5.2%
HFRI FoF Conservative	Fund of Funds	-1.8%	0.6%	4.2%	2.8%	2.1%
Cambridge PE Lagged*	Private Equity	4.2%	9.3%	16.0%	15.7%	13.2%
NCREIF ODCE Net Lagged*	Real Estate	3.6%	13.4%	12.1%	13.3%	5.9%
Wilshire REIT Index	REIT	2.2%	10.9%	9.8%	12.4%	6.7%
CPI + 2%	Inflation/Real Assets	0.4%	2.0%	2.9%	3.7%	3.8%



\* As of 6/30/2015

- **A wave of volatility spread across global markets during the quarter**
  - Concerns of an economic slowdown in China sparked a rapid decline in global risk assets, with commodities and emerging markets suffering the most
  - A severe global growth downturn remains a low probability tail-risk for capital markets
- **U.S. economy continues to expand, albeit at a slow pace**
  - Overall conditions are supportive for growth, but a strong U.S. dollar creates challenges
  - Benefits of low oil prices slowly compound for U.S. consumers
- **Fed Funds rate increase...**
  - Timing is less relevant; of importance is the path of Fed policy tightening relative to expectations and long-term policy (LT policy rate of 2% or 4%)
  - Current Fed willingness to tighten monetary policy balanced between disruptive effects of a stronger dollar and inflation conditions of U.S. economy
- **Accommodative global monetary policies flow through to markets**
  - QE continues to support improving economic conditions in Europe and Japan
  - China policy responses broadly simulative with plenty of dry powder for further easing
- **Cyclical weak growth is not a financial crisis for the emerging markets**
  - Negative returns in emerging markets reflect the economic rebalances and adjustments necessary to generate sustainable growth and economic success
  - Political and economic reform initiatives drive the outlook for improved economic and earnings growth for countries willing to reform

## Global Equity

- **U.S. equities posted sharp losses in the third quarter as global volatility ramped up.**
- **Small cap stocks underperformed large cap stocks during the quarter, with the Russell 2000 Index returning -11.9% and the Russell 100 Index returning 6.8%.**
- **International equities underperformed U.S. markets during the quarter, returning 12.2% as measured by the MSCI ACWI ex-U.S. Index.**
  - Developed markets returned -10.2% as measured by the MSCI EAFE Index. The Pacific Region led returns down, posting a -13.1% return, with Singapore posted the largest losses (-19.5%). Europe posted losses of -8.7%.
  - Emerging markets returned -17.9% as measured by the MSCI Emerging Markets Index. Indonesia and China were the largest detractors, returning -24.2% and -22.7%, respectively.

## Private Equity

- **New private equity commitments totaled \$74.6 billion in Q3 2015.**
  - Represents a 25% decline from the \$101.5 billion raised in Q2 2015, resulting from public equity market volatility and increased economic uncertainties.
- **Buyout and growth equity funds raised \$45.3 billion during the quarter.**
  - Annual pace is in line with the \$180-\$190 billion that was raised in each of the past two years.
- **Venture capital funds raised \$10.0 billion during the quarter.**
  - Venture capital fundraising as a percent of total new private equity funds is in line with historical post-dot com levels.
- **Energy funds raised \$7.8 billion, representing 10% of the capital raised in Q3 2015.**
  - Investors are opportunistically approaching the energy market dislocation.
- **European commitments comprised 23% of all new private equity commitments during the quarter.**
  - Fifteen pan-European buyout managers closed with more than \$1 billion in commitments, accounting for over half of the total to date.
- **Asian private equity commitments slowed to a total of 7% of total assets raised, down from 11% in 2014.**

## Fixed Income

- The U.S. Treasury yield curve flattened significantly during the quarter, with long duration yields declining 20-30 basis points.
- The spread between two- and ten-year rates decreased to 142 basis points at the end of the third quarter from 176 basis points at the end of June.
- Treasury Inflation-Protected Securities, or TIPS, returned -0.9% during the quarter, as measured by the Barclays U.S. TIPS Index.
- The Barclays Long Duration Credit Index gained +0.5%, as the long end of the curve ended the quarter 24 basis points lower.
- Long Treasuries gained +5.1% and investment grade corporate debt gained +3.8% during the quarter.
- The Barclays 1-3 Year Gov/Credit Index returned +0.3%, and U.S. high yield bonds lost -4.9%.
- **Emerging markets debt continued to slow in local and external currency terms.**
  - U.S. dollar-denominated debt, as measured by the JP Morgan EMBI Index, fell 90 basis points.
  - Local currency debt fell 10.5%, according to the JP Morgan GBI-EM Index.

## Real Assets/Inflation-Linked Assets

- **Massive energy market dislocation**
  - Oil prices trending lower.
  - Private equity and private debt opportunities attractive.
  - Potential for public stressed/distressed credit, equity and commodity plays.
- **OPEC and Saudi Arabia have indicated a willingness to allow lower oil prices to persist in efforts to cement market share and reduce marginal supply.**
- **Select infrastructure opportunities are attractive.**
  - Target opportunistic strategies in niche sub-sectors to take advantage of market dislocations.
- **NEPC continues to believe in the long-term demand drivers in agriculture.**
  - Long-term commodity prices driven by growing emerging market demand.
  - Softness in commodity prices may provide an attractive entry point.
- **Timber opportunity set limited, but warrants further review.**

## Commodities

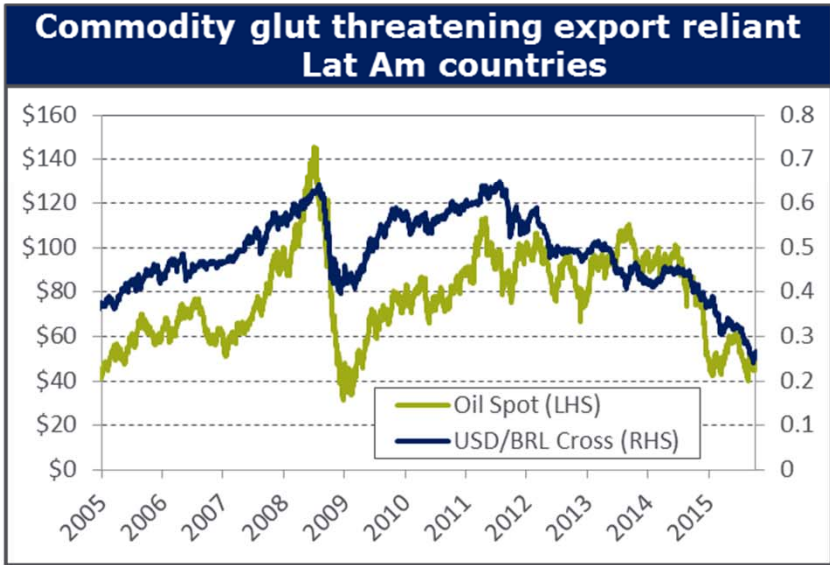
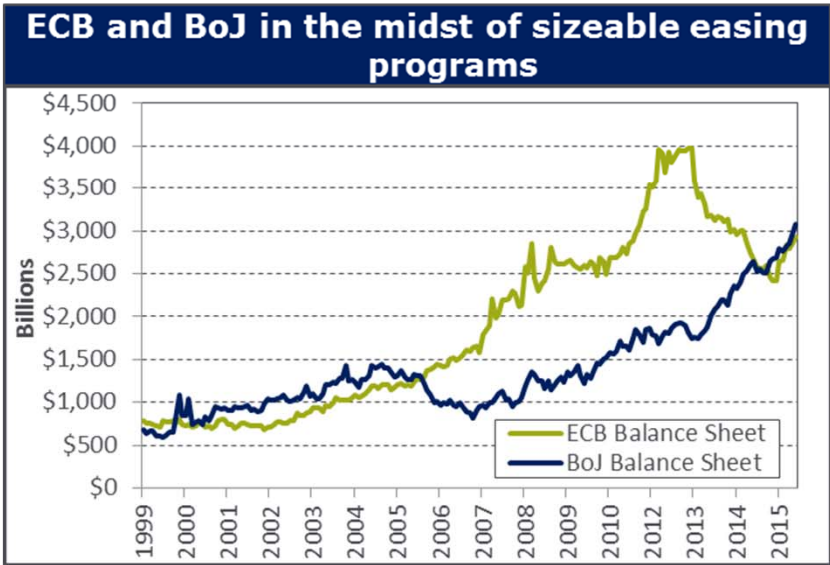
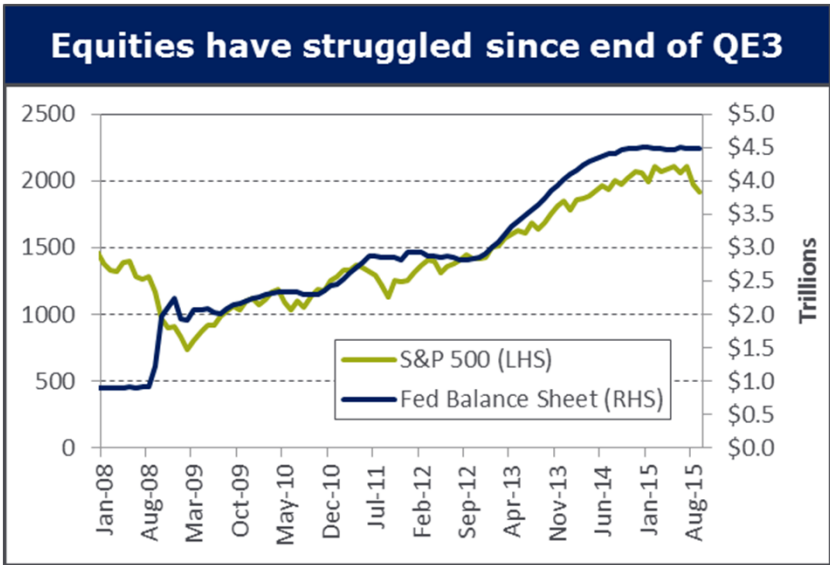
- **Commodities retracted significantly, with the Bloomberg Commodity Index posting a -14.5% decline.**
  - Energy led the way, losing -24% (WTI Oil), while industrial metals, precious metals and agriculture also experienced declines.



## Real Estate

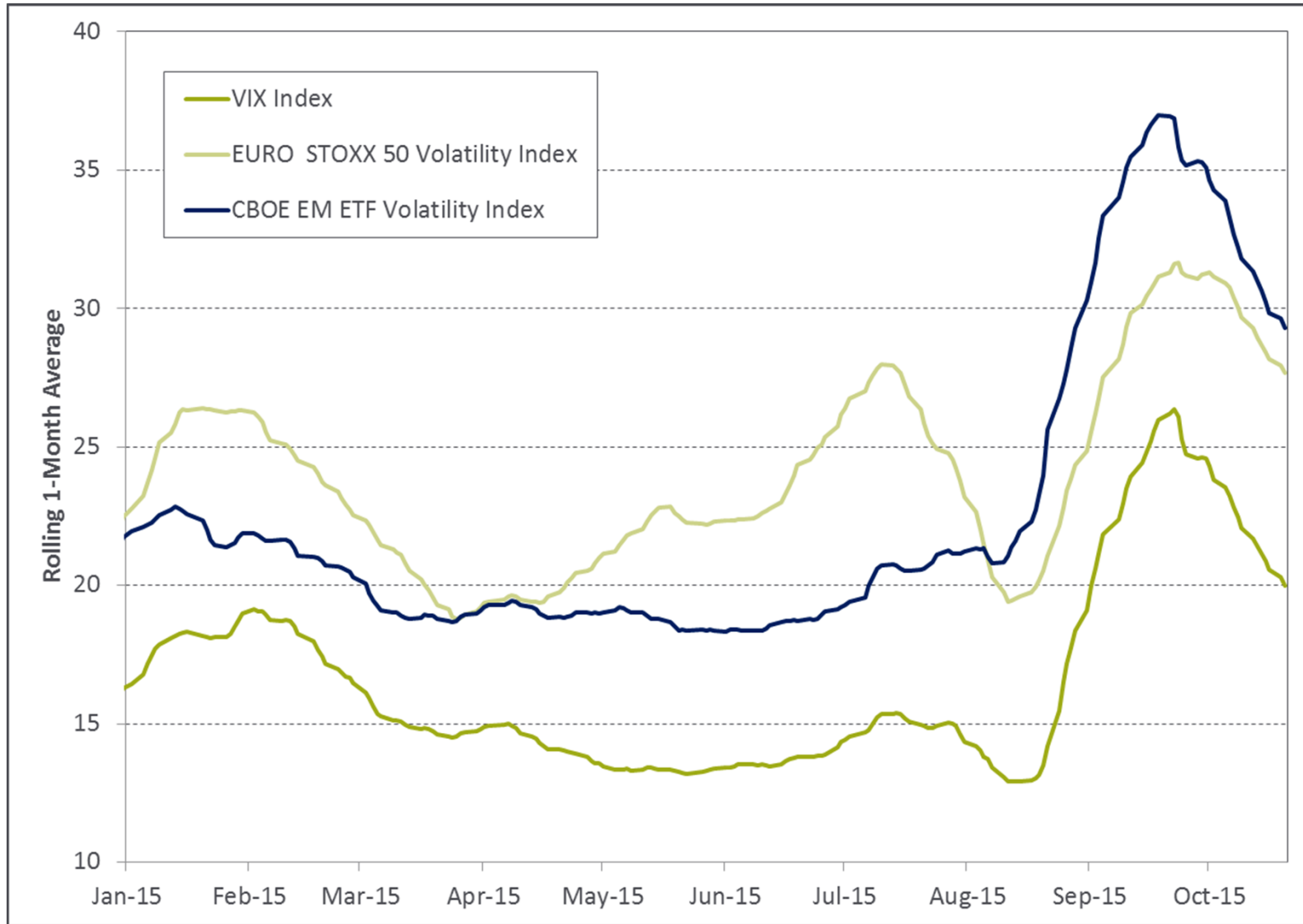
- **NEPC continues to be neutral on core real estate in the U.S. and remains positive on non-core real estate, e.g. value-add and opportunistic strategies.**
  - We are also neutral on real estate debt markets as competition among traditional lenders is keeping yields low.
- **Within U.S. core real estate, 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, with certain U.S. markets now trading above pre-recession peak values, and the possibility of rising interest rates and the impact on cap rates causes concern.
- **U.S. REITs posted modest gains with a +2.2% return.**
  - FFO multiples are high, at approximately 15x but are decreasing.
  - REITs are trading at a discount to NAV.
- **Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.**
- **Europe is viewed as the best place for a marginal dollar of non-core real estate investment.**
  - Europe is emerging from multi-year recession, but recovery is slow and uneven with global markets experiencing large capital inflows.
  - Banks in EU are still overleveraged and have significant real estate exposure to jettison.

Global Risks are Diverse and Unique



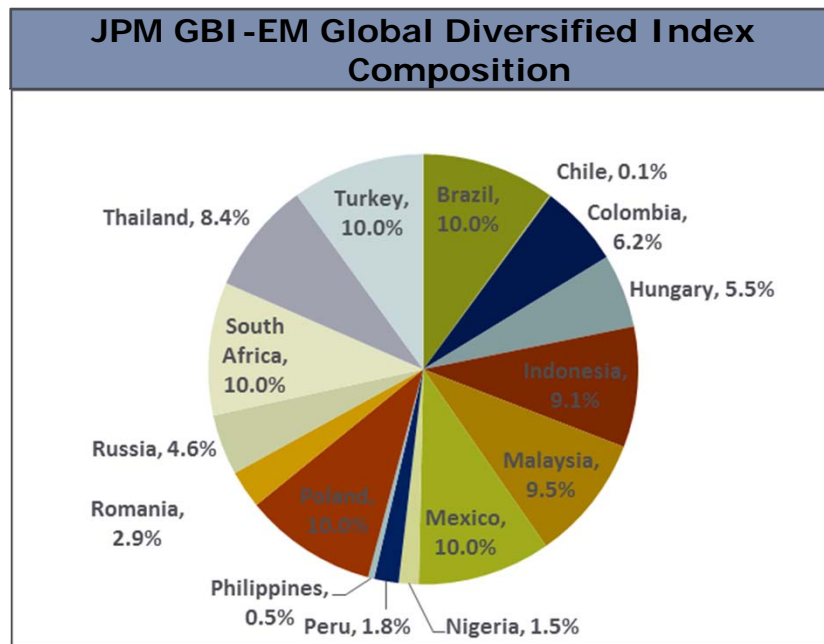
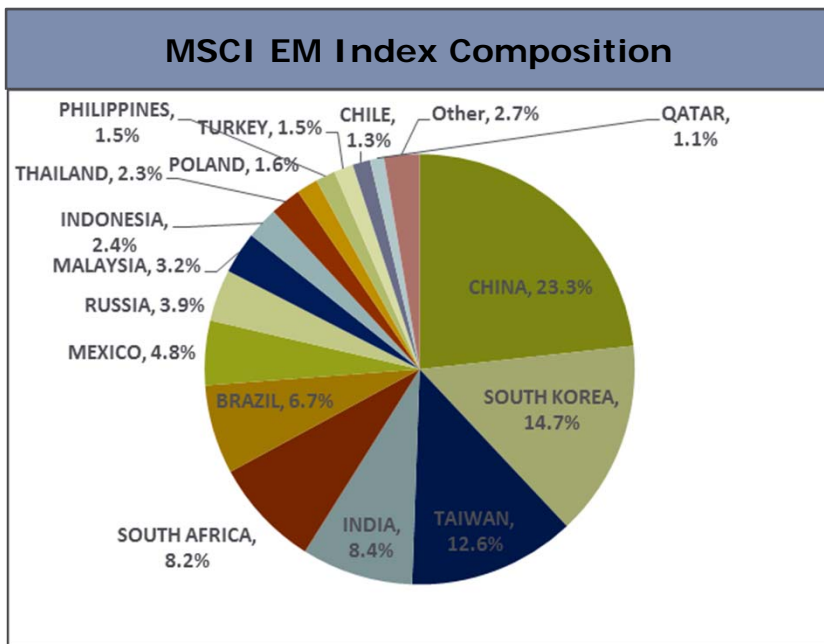
Sources: Standard & Poors, The Federal Reserve, ECB, BoJ, Bloomberg Energy, Bloomberg

# Increase in Global Volatility Finally Caught Up with Equities



Source: Deutsche Borse, Goldman Sachs, CBOE, Bloomberg

**Currency Risks are Not Only Unique by Country but also Vary Across Indices**



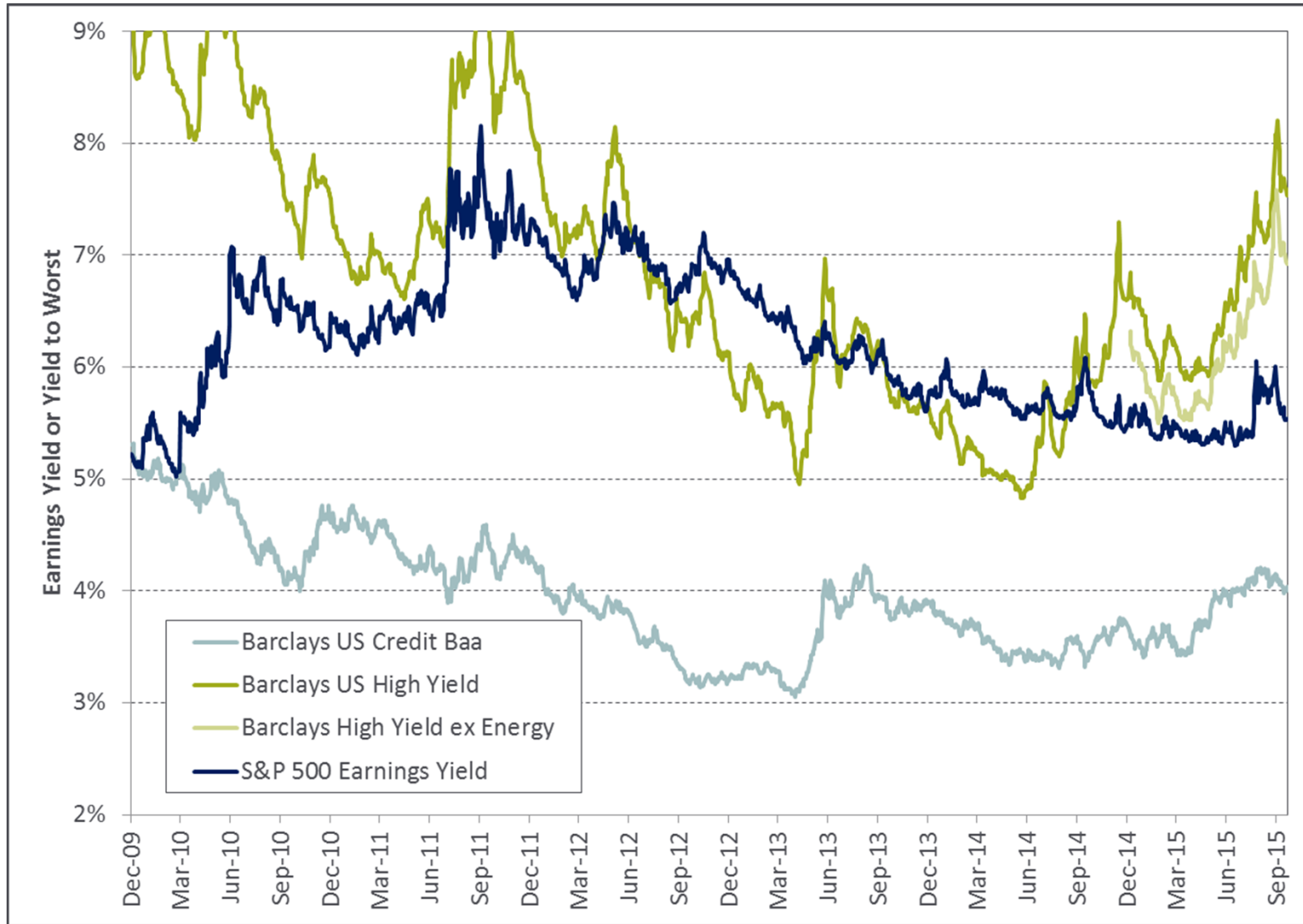
- **MSCI Emerging Markets Equity Index dominated by Asia**
  - Lots of countries with sensitivity to Chinese growth and competitiveness
  - Despite possibility for further depreciation, most currencies appear cheap or reasonably valued
  
- **Debt indices more concentrated in Latin/South America with exposure to balance of payments challenged countries**
  - Currencies of major commodity exporters are sensitive to oil and other commodity price weakness – but also stand to benefit from a rebound
  - Structural issues in Turkey and Brazil pose significant challenges, but with less contagion risk

# Commodity Price Weakness Has Been Challenging for EM Currencies



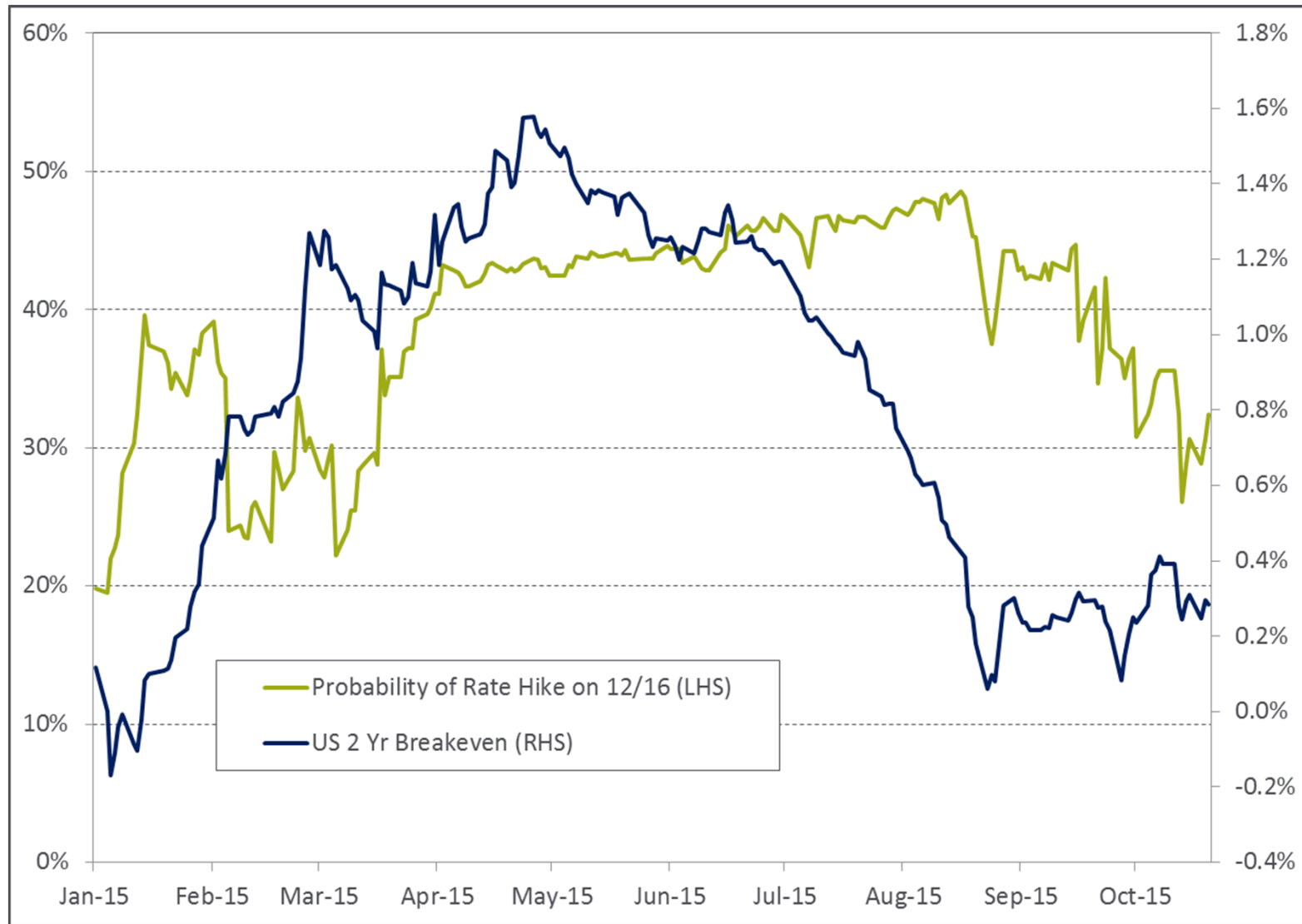
Source: MSCI, Bloomberg

High Yield Issues Now Yielding >7% in Otherwise Low Yield World



Source: Barclays, Standard & Poors, Bloomberg

Near Term Inflation Expectations Have Declined as a Rate Hike Has Been Pushed Further Out



Source: Bloomberg

- **Risk-return profile of U.S. high yield is attractive relative to U.S. equities**
  - High yield credit spreads now exceed long-term averages with yields near 2012 levels
  - Make use of dynamic credit strategies as disruptions in credit markets move rapidly
  - Dollar strength is a headwind for equity earnings growth and profit margin expansion
- **Recommend an overweight exposure to developed market equities**
  - Suggest investors opportunistically exploit potential volatility to add to the overweight
  - Long-term opportunity remains as earnings improve off cyclical lows in Europe/Japan
  - Offers a more favorable return outlook with superior valuations relative to U.S. equities
- **Recommend, at minimum, market weight exposure to emerging markets equities**
  - Reasonable equity valuations, depressed currencies, and the attractiveness of long-term fundamentals represent a solid investment foundation
  - Volatility likely to continue as falling commodity prices, trade linkages to China, and external debt levels pose idiosyncratic country risks
  - Encourage the use of benchmark agnostic strategies with a bias towards small-cap and consumer focused strategies
- **Inflation expectations at historical lows, but value opportunities can be found in inflation-sensitive assets**
  - Encourage patience as volatility and opportunities evolve in commodity markets
  - Private strategies are evolving, but provide compelling return opportunities



# NEPC Updates

## Highlights of Third Quarter Happenings at NEPC

### NEPC Recognitions



- Two of NEPC's Partners were named on the *Chief Investment Officer* magazine's (CIO) annual ranking of the world's most influential investment consultants. NEPC's Chief Investment Officer, **Tim McCusker**, was named **the most influential general consultant on the 2015** list of Knowledge Brokers. **KC Connors**, Head of NEPC's Philanthropic Practice Team, **ranked 10th on the 2015 Knowledge Brokers – Specialist list**. The lists are CIO's annual rankings of the most influential investment consultants worldwide<sup>1</sup>.



### NEPC Client Recognitions

- Two of our clients were recognized for their work in the healthcare industry by *Institutional Investor* on October 7th. Mary O'Reilly, Director, Treasury and Investments at Rochester Health, received the II Investor Intelligence Award for Asset Allocation. Joshua Rabuck, Executive Director, Investments, at Indiana University Health, was accorded the II Investor Intelligence Award for Risk Management.

### NEPC Research

#### Recent White Papers

- Best Practices: Managing Risk in Corporate VEBA and SERP Plans* (October 2015) - Mike Valchine, CAIA, CIPM, Senior Consultant
- NEPC's 2015 Defined Contribution Plan & Fee Survey: What a Difference a Decade Makes* (October 2015) - Ross Bremen, CFA, Partner
- Market Chatter – Has the China Bubble Burst?* (July 2015)
- Market Chatter – China's Devaluation of the Yuan* (August 2015)
- 2015 Third Quarter Market Thoughts*

#### Upcoming/Recent Events

- Healthcare Defined Contribution Fee Survey Results** - Tuesday, November 3, 2015, 3:00 to 4:00 p.m. (EST)
- NEPC's 2015 Defined Benefit Plan Trends Webinar** - Wednesday, October 21, 2015, 2:00 - 3:00 p.m. (EST)
- NEPC, Newton Capital Management, and the Centre for Endowment Asset Management are hosting a special event that delves into the influence of British economist John Maynard Keynes on the U.S. Endowment Model on October 15, 2015 in Boston, MA.

<sup>1</sup>CIO Magazine interviews pension and non-profit CIOs, asset managers and former consultants, to approximate what it calls "the hierarchy of today's institutional consultant industry." The results should not be considered a recommendation of any specific firm or individual consultant. For more information, please visit CIO Magazine's web site at <http://www.ai-cio.com/2015-knowledge-brokers/>. Past performance is no guarantee of future results

# Total Fund Performance

Note: All of the data shown on the following pages is as of September 30, 2015 and reflects the deduction of investment manager fees, unless otherwise noted.



# Ventura County Employees' Retirement Association

## Total Fund Performance Summary (Net)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Return	Since
<b>Total Fund</b>	<b>\$4,208,123,068</b>	<b>-5.3%</b>	<b>49</b>	<b>-3.6%</b>	<b>71</b>	<b>-2.6%</b>	<b>72</b>	<b>7.2%</b>	<b>34</b>	<b>8.2%</b>	<b>17</b>	<b>5.6%</b>	<b>34</b>	<b>7.8%</b>	<b>Apr-94</b>
<i>Policy Index</i>		-4.6%	25	-2.4%	33	-0.6%	30	7.5%	15	8.1%	19	5.8%	22	7.8%	Apr-94
<i>Allocation Index</i>		-5.6%	54	-3.7%	76	-2.2%	69	6.6%	49	7.5%	38	5.3%	49	--	Apr-94
<i>InvestorForce Public DB &gt; \$1B Net Median</i>		-5.5%		-2.8%		-1.4%		6.5%		7.3%		5.3%		7.3%	Apr-94

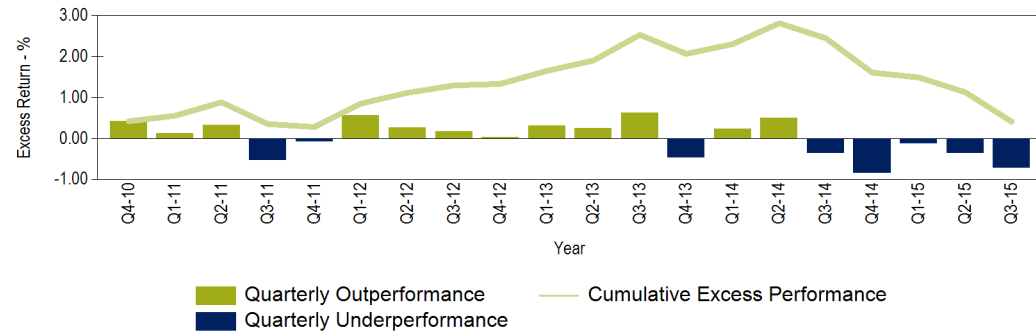
- For the five-year period ending September 30, 2015, the Fund returned 8.2%, outperforming the policy index by 0.1% and ranking in the 17th percentile of its peers. The Fund's volatility, as measured by standard deviation, ranked in the 77th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 39th percentile. This means that the Fund has earned more return per unit of risk taken than 61% of its peers.

- For the three-year period ending September 30, 2015, the Fund returned 7.2%, underperforming the policy index by 0.3% and ranking in the 34th percentile of its peers. The Fund's volatility ranks in the bottom half of its peers over this period, with the Fund's Sharpe Ratio again ranking in the 39th percentile.

- For the one-year period ending September 30, 2015, the Fund returned -2.6%, trailing the policy index by 2.0% and ranking in the 72nd percentile of the InvestorForce Public Funds > \$1 Billion Universe (Net of Fees).

- For the one-year period ending September 30, 2015, the Fund produced a net investment loss of \$92 million, which includes a net investment loss of \$232 million in the quarter. Assets decreased from \$4.33 billion one year ago to \$4.21 billion on September 30, 2015.

Quarterly and Cumulative Excess Performance



### 3 Years Ending September 30, 2015

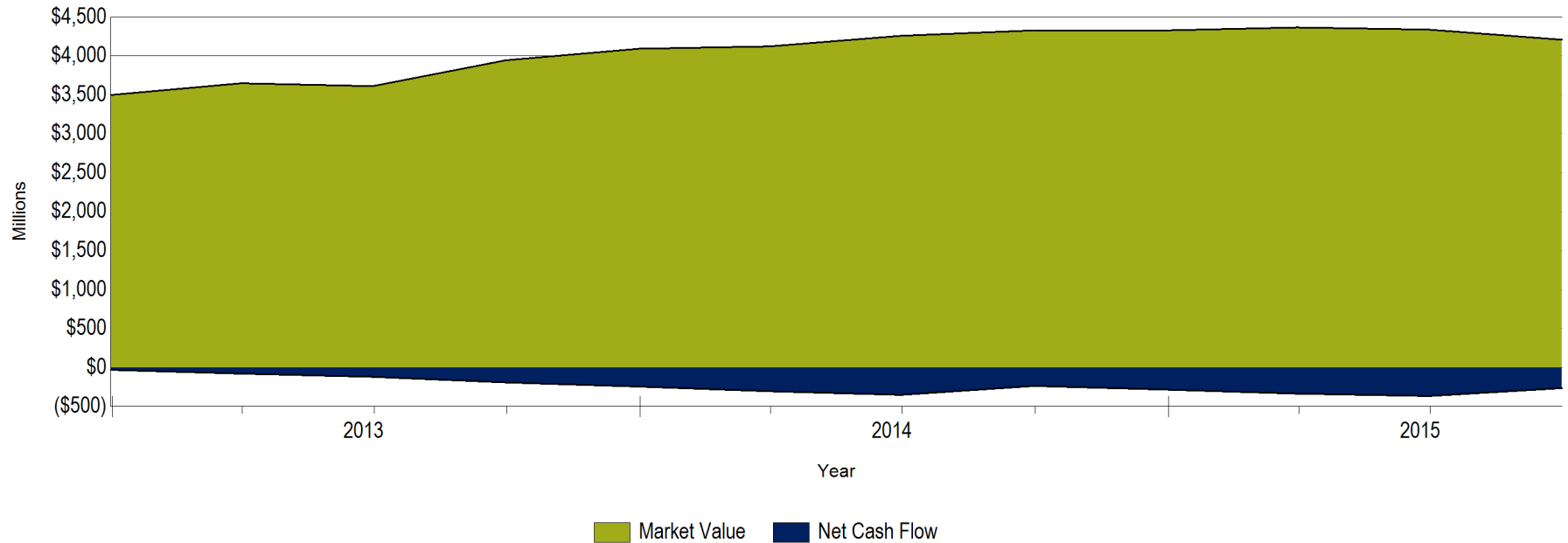
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	7.2%	34	6.4%	65	1.1	39	2.1	30
Policy Index	7.5%	15	6.1%	52	1.2	23	2.2	19
InvestorForce Public DB > \$1B Net Median	6.5%	--	6.0%	--	1.1	--	1.8	--

### 5 Years Ending September 30, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	8.2%	17	8.1%	77	1.0	39	1.5	30
Policy Index	8.1%	19	8.0%	68	1.0	32	1.5	30
InvestorForce Public DB > \$1B Net Median	7.3%	--	7.4%	--	1.0	--	1.4	--

**Total Fund Asset Growth Summary**

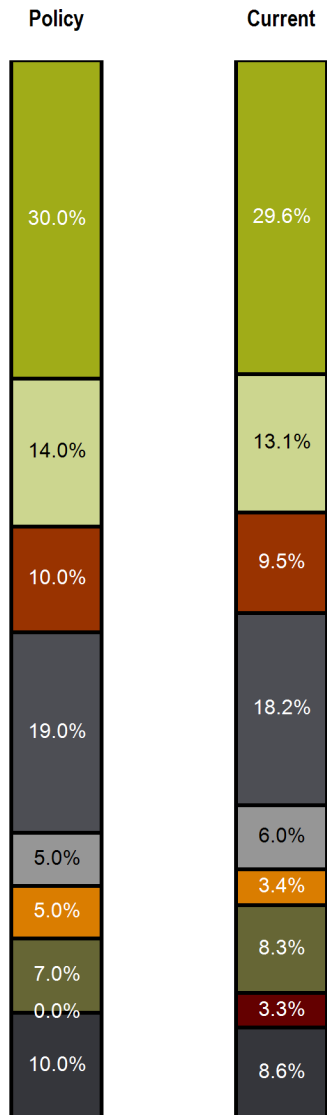
**Market Value History**  
3 Years Ending September 30, 2015



**Summary of Cash Flows**

Sources of Portfolio Growth	Third Quarter	One Year	Three Years
Beginning Market Value	\$4,338,136,581	\$4,328,104,648	\$3,483,762,393
Net Additions/Withdrawals	\$101,582,367	-\$27,557,883	-\$265,160,063
Investment Earnings	-\$231,595,881	-\$92,423,697	\$989,520,738
Ending Market Value	\$4,208,123,068	\$4,208,123,068	\$4,208,123,068

**Total Fund Asset Allocation vs. Policy Targets**



**Asset Allocation vs. Target**

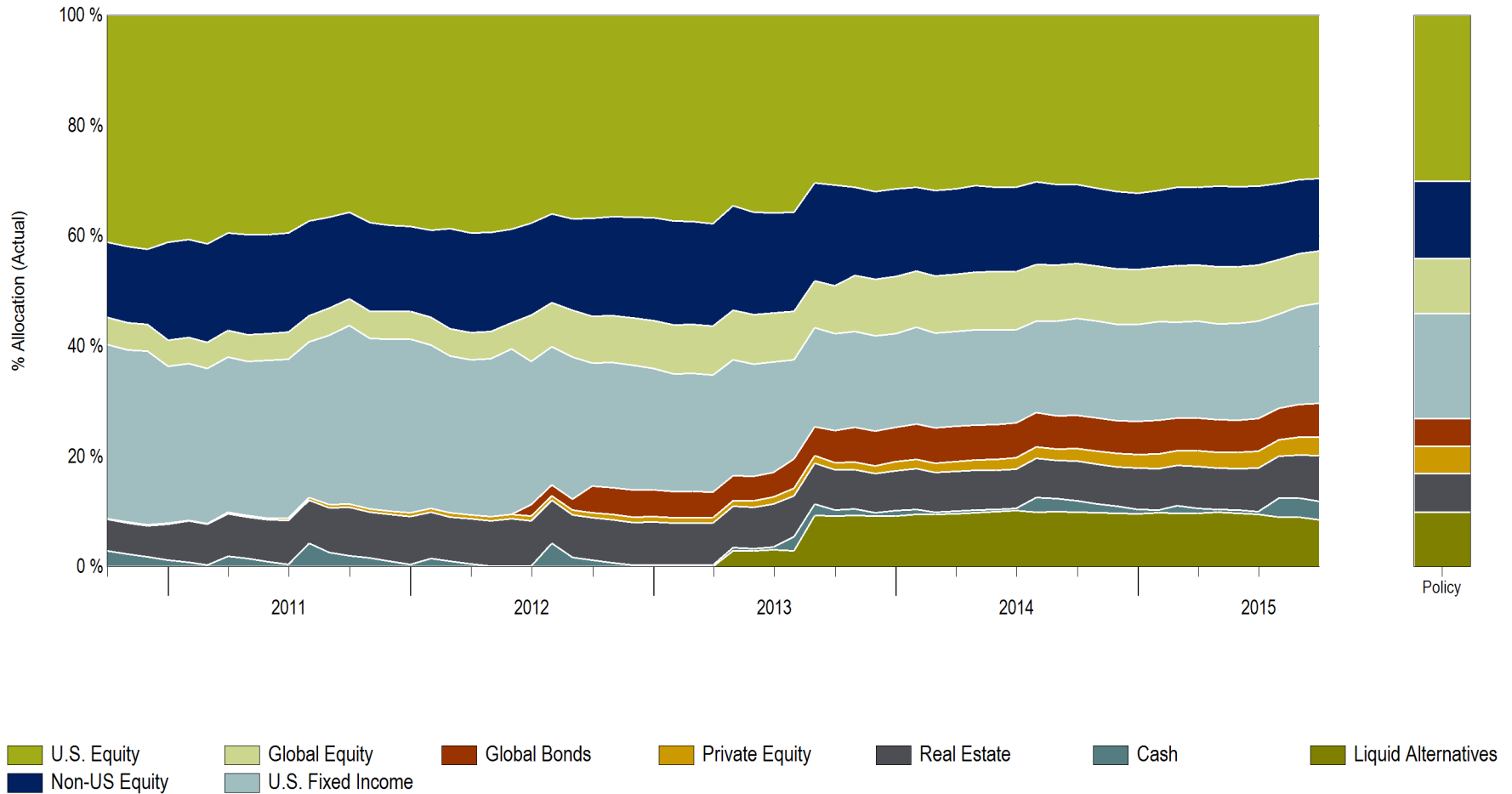
	Current	Current	Policy	Difference*	Policy Range	Within Range
U.S. Equity	\$1,245,732,873	29.6%	30.0%	-0.4%	26.0% - 34.0%	Yes
Non-US Equity	\$551,804,954	13.1%	14.0%	-0.9%	11.0% - 17.0%	Yes
Global Equity	\$397,821,094	9.5%	10.0%	-0.5%	7.0% - 13.0%	Yes
U.S. Fixed Income	\$765,965,707	18.2%	19.0%	-0.8%	15.0% - 23.0%	Yes
Global Bonds	\$254,196,806	6.0%	5.0%	1.0%	3.0% - 7.0%	Yes
Private Equity	\$144,302,186	3.4%	5.0%	-1.6%	3.0% - 7.0%	Yes
Real Estate	\$349,536,974	8.3%	7.0%	1.3%	4.0% - 10.0%	Yes
Cash	\$137,912,653	3.3%	0.0%	3.3%	0.0% - 3.0%	No
Liquid Alternatives	\$360,849,821	8.6%	10.0%	-1.4%	7.0% - 13.0%	Yes
<b>Total</b>	<b>\$4,208,123,068</b>	<b>100.0%</b>	<b>100.0%</b>			

\*Difference between Policy and Current Allocation

Cash represents assets in Parametric Overlay

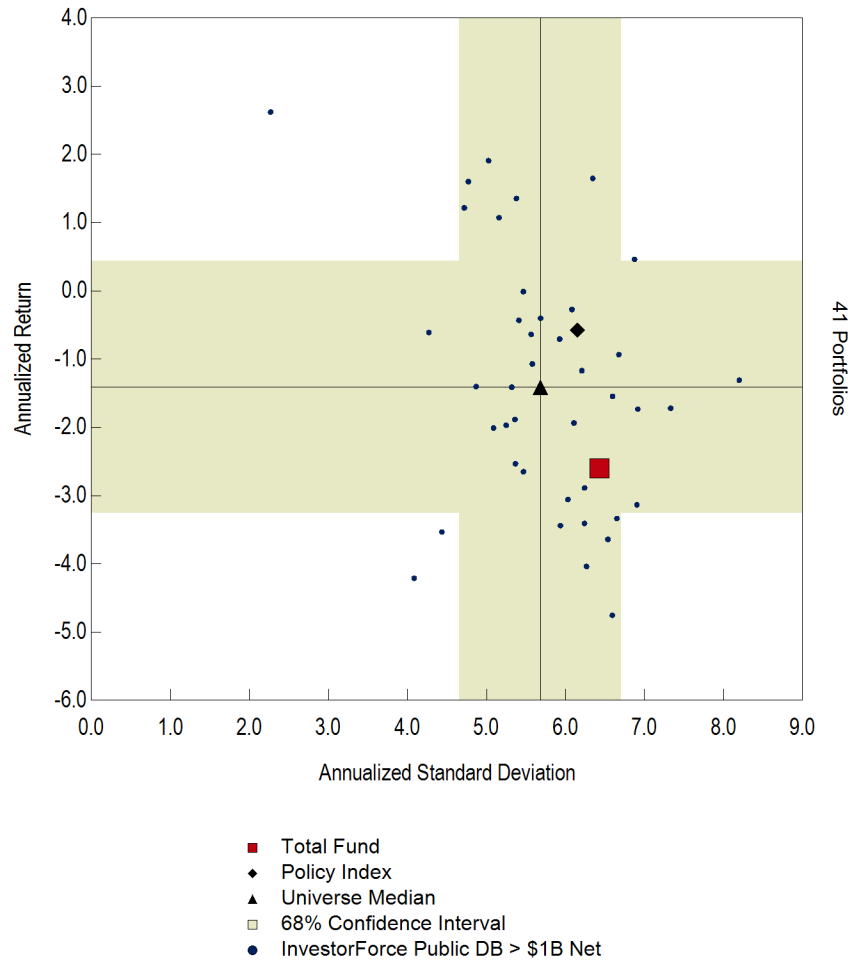
Total Fund Allocation History

Asset Allocation History  
5 Years Ending September 30, 2015



Total Fund Risk/Return

1 Years Ending September 30, 2015



1 Years Ending September 30, 2015

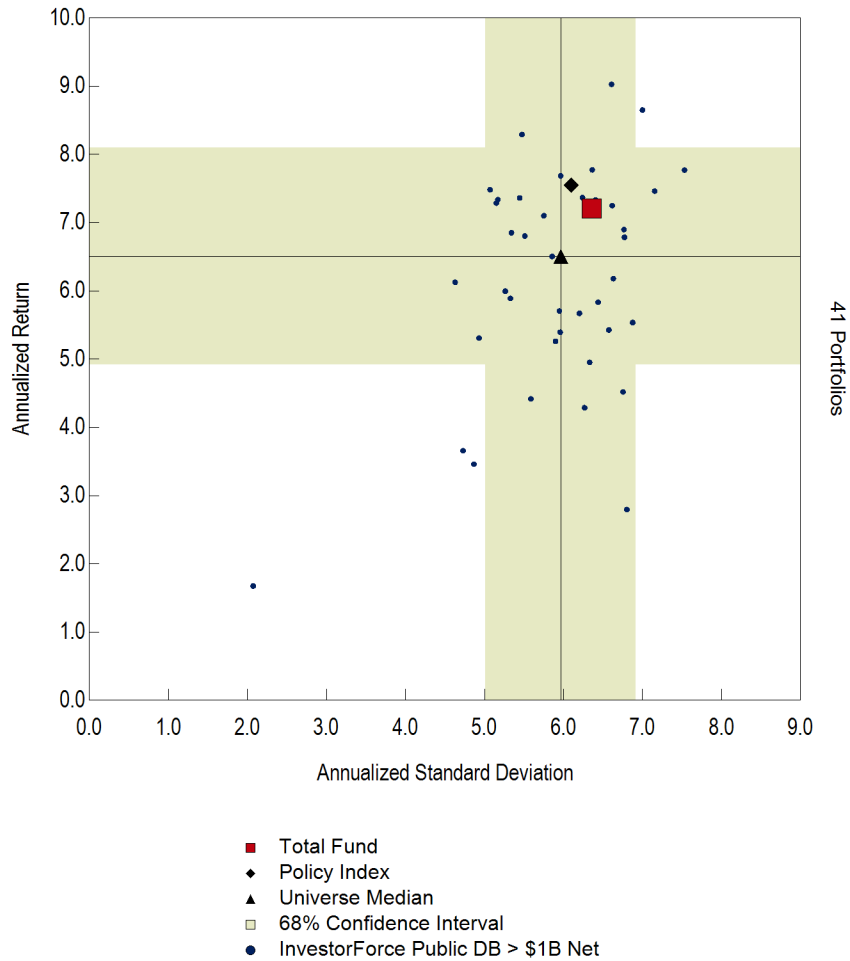
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Fund	-2.6%	72	6.4%	77
Policy Index	-0.6%	30	6.2%	64
InvestorForce Public DB > \$1B Net Median	-1.4%	--	5.7%	--

1 Years Ending September 30, 2015

	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	-0.4	68	-0.6	72
Policy Index	-0.1	29	-0.1	30
InvestorForce Public DB > \$1B Net Median	-0.2	--	-0.3	--

Total Fund Risk/Return

3 Years Ending September 30, 2015



3 Years Ending September 30, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Fund	7.2%	34	6.4%	65
Policy Index	7.5%	15	6.1%	52
InvestorForce Public DB > \$1B Net Median	6.5%	--	6.0%	--

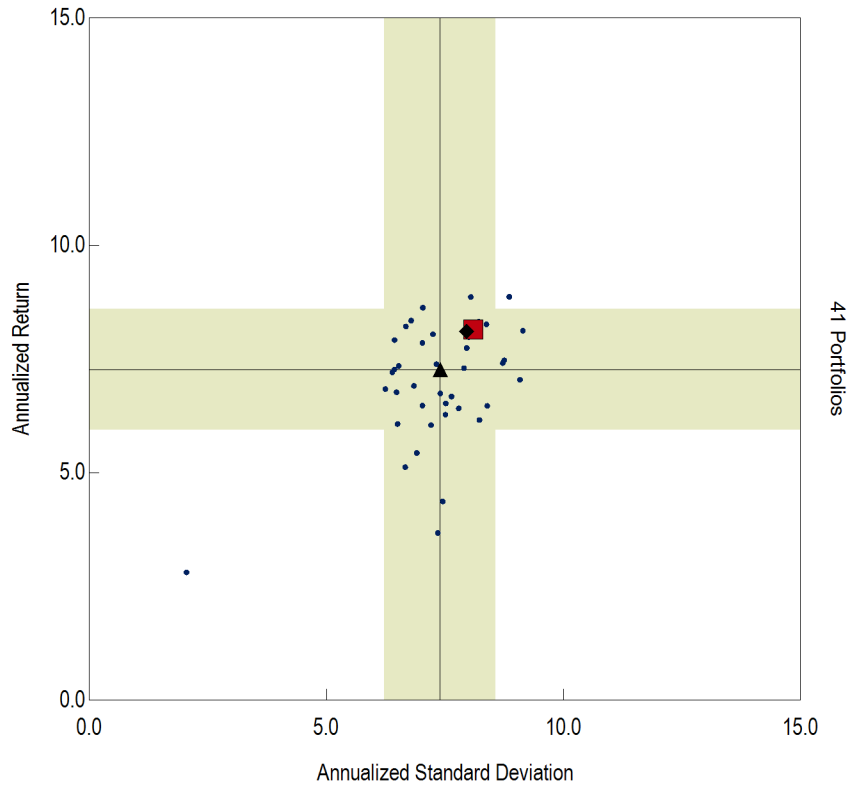
3 Years Ending September 30, 2015

	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	1.1	39	2.1	31
Policy Index	1.2	23	2.2	19
InvestorForce Public DB > \$1B Net Median	1.1	--	1.8	--



**Total Fund Risk/Return**

5 Years Ending September 30, 2015



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

5 Years Ending September 30, 2015

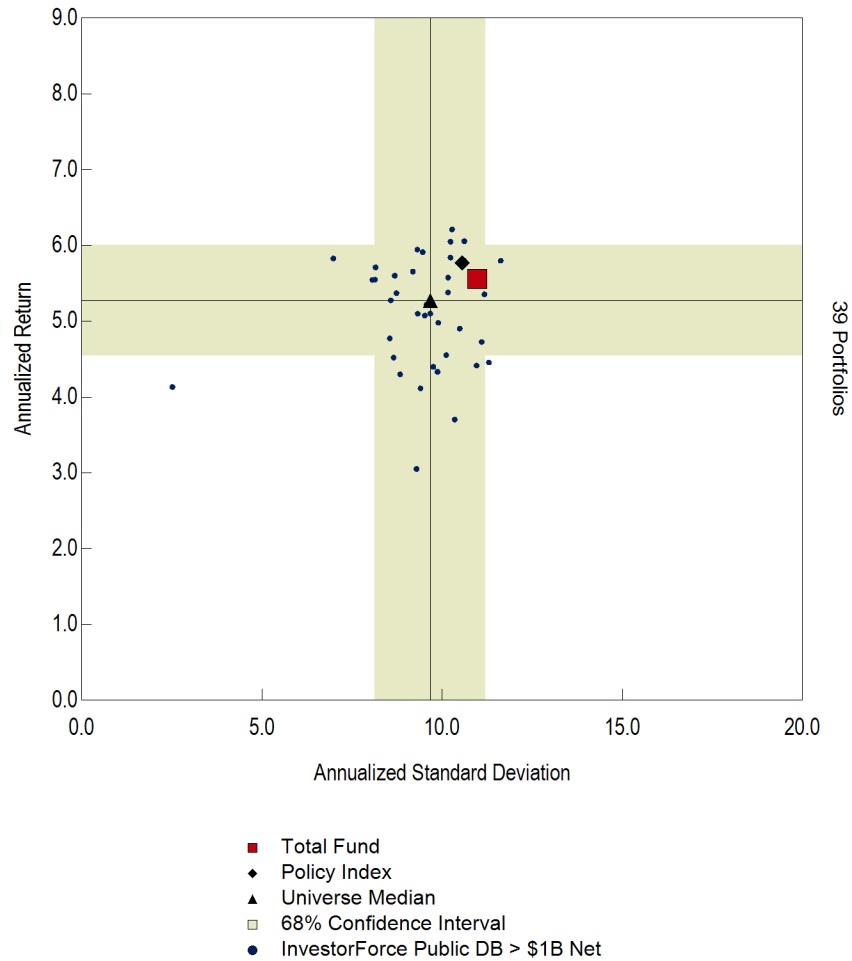
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Fund	8.2%	17	8.1%	77
Policy Index	8.1%	19	8.0%	68
InvestorForce Public DB > \$1B Net Median	7.3%	--	7.4%	--

5 Years Ending September 30, 2015

	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	1.0	39	1.5	30
Policy Index	1.0	32	1.5	30
InvestorForce Public DB > \$1B Net Median	1.0	--	1.4	--

Total Fund Risk/Return

10 Years Ending September 30, 2015



10 Years Ending September 30, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Fund	5.6%	34	11.0%	90
Policy Index	5.8%	22	10.6%	81
InvestorForce Public DB > \$1B Net Median	5.3%	--	9.7%	--

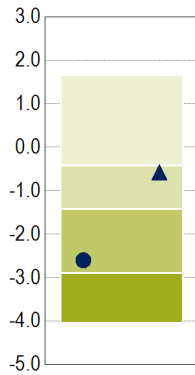
10 Years Ending September 30, 2015

	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	0.4	61	0.6	60
Policy Index	0.4	41	0.6	40
InvestorForce Public DB > \$1B Net Median	0.4	--	0.6	--

Total Fund Risk Statistics vs. Peer Universe

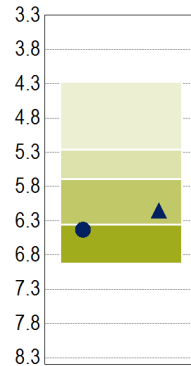
Total Fund vs. InvestorForce Public DB > \$1B Net  
1 Year

Anlzd Return



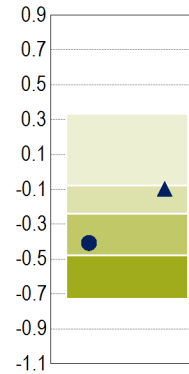
● Total Fund	
Value	-2.6
%tile	72
▲ Policy Index	
Value	-0.6
%tile	30
Universe	
5th %tile	1.6
25th %tile	-0.4
Median	-1.4
75th %tile	-2.9
95th %tile	-4.0

Anlzd Standard Deviation



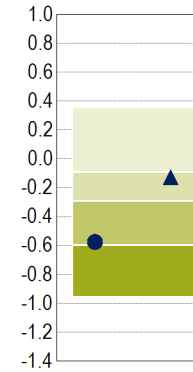
● Total Fund	
Value	6.4
%tile	77
▲ Policy Index	
Value	6.2
%tile	64
Universe	
5th %tile	4.3
25th %tile	5.2
Median	5.7
75th %tile	6.3
95th %tile	6.9

Sharpe Ratio



● Total Fund	
Value	-0.4
%tile	68
▲ Policy Index	
Value	-0.1
%tile	29
Universe	
5th %tile	0.3
25th %tile	-0.1
Median	-0.2
75th %tile	-0.5
95th %tile	-0.7

Sortino Ratio

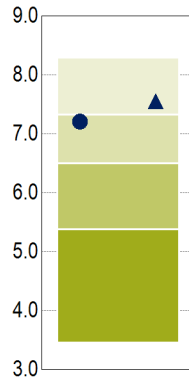


● Total Fund	
Value	-0.6
%tile	72
▲ Policy Index	
Value	-0.1
%tile	30
Universe	
5th %tile	0.4
25th %tile	-0.1
Median	-0.3
75th %tile	-0.6
95th %tile	-1.0

Total Fund Risk Statistics vs. Peer Universe

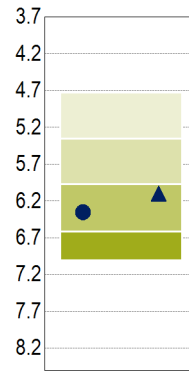
Total Fund vs. InvestorForce Public DB > \$1B Net  
3 Years

Anlzd Return



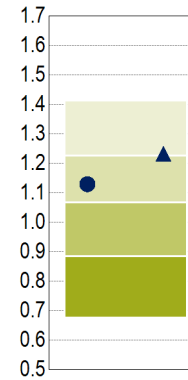
● Total Fund	
Value	7.2
%tile	34
▲ Policy Index	
Value	7.5
%tile	15
Universe	
5th %tile	8.3
25th %tile	7.3
Median	6.5
75th %tile	5.4
95th %tile	3.5

Anlzd Standard Deviation



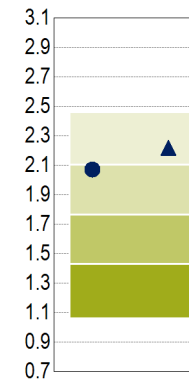
● Total Fund	
Value	6.4
%tile	65
▲ Policy Index	
Value	6.1
%tile	52
Universe	
5th %tile	4.7
25th %tile	5.3
Median	6.0
75th %tile	6.6
95th %tile	7.0

Sharpe Ratio



● Total Fund	
Value	1.1
%tile	39
▲ Policy Index	
Value	1.2
%tile	23
Universe	
5th %tile	1.4
25th %tile	1.2
Median	1.1
75th %tile	0.9
95th %tile	0.7

Sortino Ratio

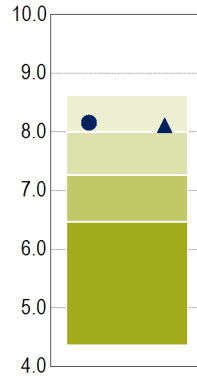


● Total Fund	
Value	2.1
%tile	31
▲ Policy Index	
Value	2.2
%tile	19
Universe	
5th %tile	2.5
25th %tile	2.1
Median	1.8
75th %tile	1.4
95th %tile	1.1

Total Fund Risk Statistics vs. Peer Universe

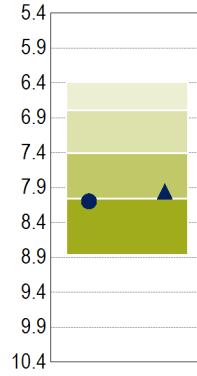
Total Fund vs. InvestorForce Public DB > \$1B Net  
5 Years

Anlzd Return



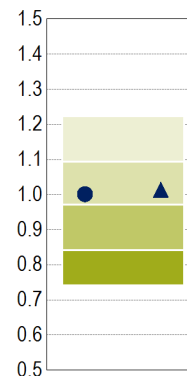
● Total Fund	
Value	8.2
%tile	17
▲ Policy Index	
Value	8.1
%tile	19
Universe	
5th %tile	8.6
25th %tile	8.0
Median	7.3
75th %tile	6.5
95th %tile	4.4

Anlzd Standard Deviation



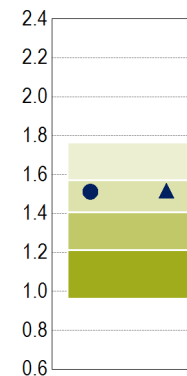
● Total Fund	
Value	8.1
%tile	77
▲ Policy Index	
Value	8.0
%tile	68
Universe	
5th %tile	6.4
25th %tile	6.8
Median	7.4
75th %tile	8.0
95th %tile	8.9

Sharpe Ratio



● Total Fund	
Value	1.0
%tile	39
▲ Policy Index	
Value	1.0
%tile	32
Universe	
5th %tile	1.2
25th %tile	1.1
Median	1.0
75th %tile	0.8
95th %tile	0.7

Sortino Ratio

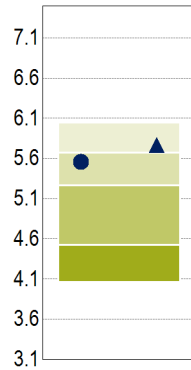


● Total Fund	
Value	1.5
%tile	30
▲ Policy Index	
Value	1.5
%tile	30
Universe	
5th %tile	1.8
25th %tile	1.6
Median	1.4
75th %tile	1.2
95th %tile	1.0

Total Fund Risk Statistics vs. Peer Universe

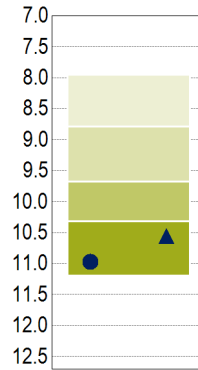
Total Fund vs. InvestorForce Public DB > \$1B Net  
10 Years

Anlzd Return



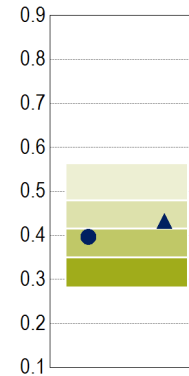
● Total Fund	
Value	5.6
%tile	34
▲ Policy Index	
Value	5.8
%tile	22
Universe	
5th %tile	6.0
25th %tile	5.7
Median	5.3
75th %tile	4.5
95th %tile	4.1

Anlzd Standard Deviation



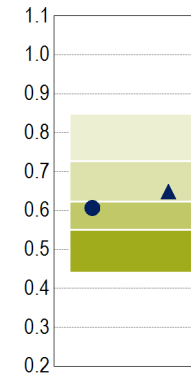
● Total Fund	
Value	11.0
%tile	90
▲ Policy Index	
Value	10.6
%tile	81
Universe	
5th %tile	8.0
25th %tile	8.8
Median	9.7
75th %tile	10.3
95th %tile	11.2

Sharpe Ratio



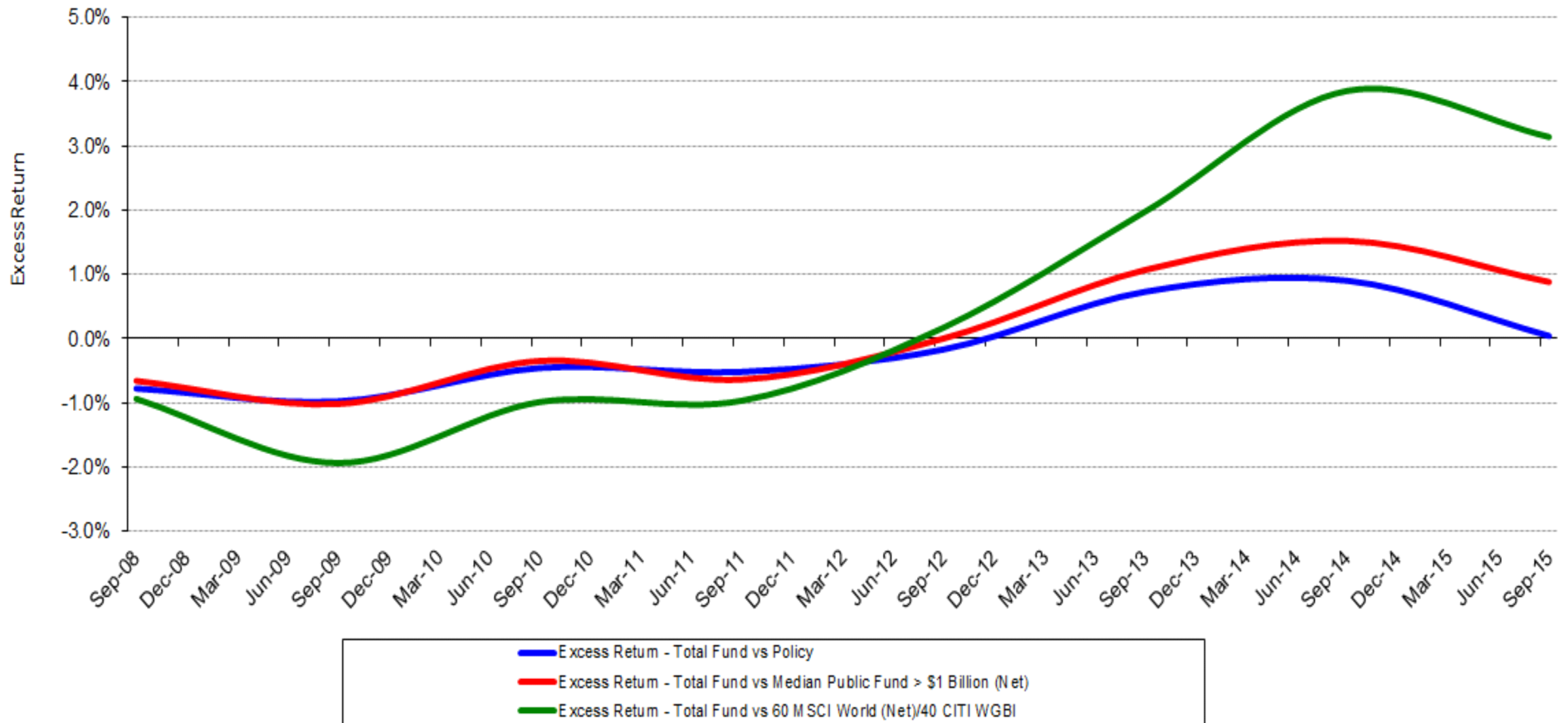
● Total Fund	
Value	0.4
%tile	61
▲ Policy Index	
Value	0.4
%tile	41
Universe	
5th %tile	0.6
25th %tile	0.5
Median	0.4
75th %tile	0.4
95th %tile	0.3

Sortino Ratio



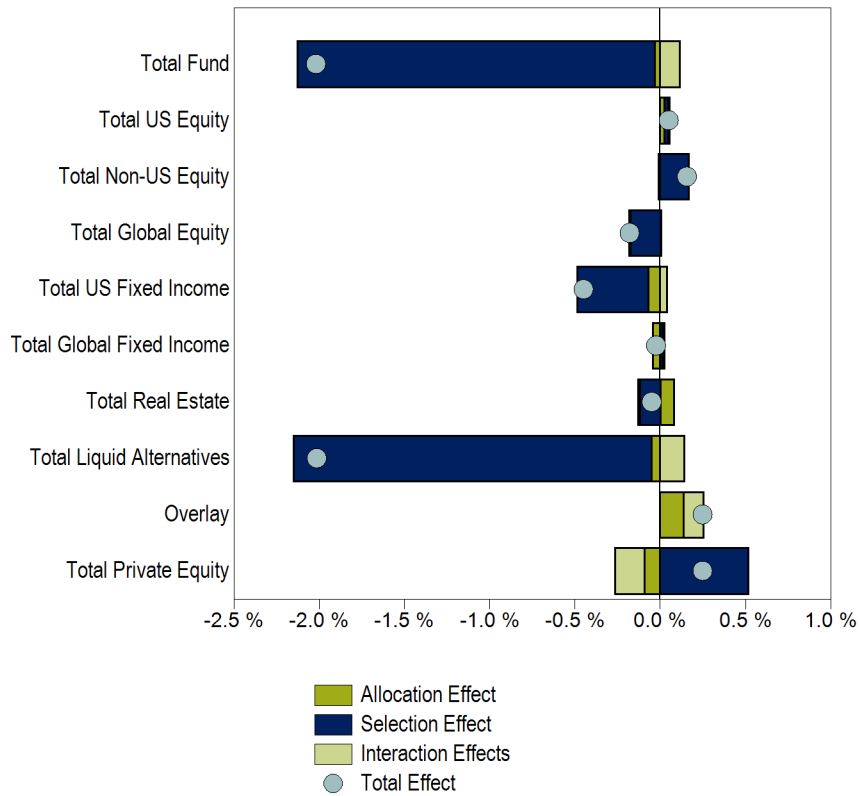
● Total Fund	
Value	0.6
%tile	60
▲ Policy Index	
Value	0.6
%tile	40
Universe	
5th %tile	0.8
25th %tile	0.7
Median	0.6
75th %tile	0.6
95th %tile	0.4

Rolling 5 Year Excess Returns- Net of Fees



**Total Fund Attribution Analysis**

**Attribution Effects**  
1 Year Ending September 30, 2015



**Attribution Summary**  
1 Year Ending September 30, 2015

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total US Equity	-0.5%	-0.5%	0.1%	0.0%	0.0%	0.0%	0.0%
Total Non-US Equity	-11.0%	-12.2%	1.2%	0.2%	0.0%	0.0%	0.2%
Total Global Equity	-8.4%	-6.7%	-1.7%	-0.2%	0.0%	0.0%	-0.2%
Total US Fixed Income	0.7%	2.9%	-2.2%	-0.4%	-0.1%	0.0%	-0.5%
Total Global Fixed Income	-3.0%	-3.3%	0.3%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	13.0%	14.9%	-1.9%	-0.1%	0.1%	0.0%	-0.1%
Total Liquid Alternatives	-16.3%	4.0%	-20.3%	-2.1%	-0.1%	0.1%	-2.0%
Overlay	9.2%	0.0%	9.2%	0.0%	0.1%	0.1%	0.2%
Total Private Equity	13.8%	2.4%	11.4%	0.5%	-0.1%	-0.2%	0.2%
<b>Total</b>	<b>-2.6%</b>	<b>-0.6%</b>	<b>-2.0%</b>	<b>-2.1%</b>	<b>0.0%</b>	<b>0.1%</b>	<b>-2.0%</b>



# Ventura County Employees' Retirement Association

## Total Fund Risk Statistics

### 1 Year Ending September 30, 2015

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Tracking Error	Rank	Info Ratio	Rank	Anlzd AJ	Rank	Beta
Total Fund	100.0%	-2.6%	72	6.4%	77	-0.4	68	0.8%	15	-2.4	--	-2.0%	86	1.0
Policy Index	--	-0.6%	30	6.2%	64	-0.1	29	0.0%	1	--	--	0.0%	43	1.0
Total Equity	52.2%	-4.7%	58	10.7%	41	-0.4	58	1.4%	1	1.4	22	1.6%	56	0.9
MSCI ACWI	--	-6.7%	71	11.2%	55	-0.6	69	0.0%	1	--	--	0.0%	68	1.0
Total US Equity	29.6%	-0.5%	55	10.9%	34	0.0	55	0.1%	1	1.5	7	0.1%	55	1.0
Total U.S. Equity Benchmark	--	-0.5%	55	10.9%	35	-0.1	56	0.0%	1	--	--	0.0%	55	1.0
Total Non-US Equity	13.1%	-11.0%	93	11.9%	54	-0.9	94	1.2%	1	1.0	75	0.3%	95	0.9
Total Non-US Equity Benchmark	--	-12.2%	95	12.8%	84	-1.0	96	0.0%	1	--	--	0.0%	95	1.0
Total Global Equity	9.5%	-8.4%	77	11.6%	67	-0.7	76	1.5%	1	-1.2	--	-1.5%	77	1.0
MSCI ACWI	--	-6.7%	71	11.2%	55	-0.6	69	0.0%	1	--	--	0.0%	68	1.0
Total Fixed Income	24.2%	-0.2%	68	1.5%	5	-0.1	70	2.3%	85	1.3	7	0.7%	7	0.3
Barclays Global Aggregate	--	-3.3%	95	2.6%	62	-1.3	96	0.0%	1	--	--	0.0%	45	1.0
Total US Fixed Income	18.2%	0.7%	70	1.6%	27	0.5	67	2.5%	57	-0.9	--	-0.1%	56	0.3
Barclays Aggregate	--	2.9%	14	3.1%	67	1.0	48	0.0%	1	--	--	0.0%	52	1.0
Total Global Fixed Income	6.0%	-3.0%	47	2.1%	7	-1.4	80	1.4%	11	0.2	43	-0.8%	41	0.7
Barclays Global Aggregate	--	-3.3%	52	2.6%	22	-1.3	72	0.0%	1	--	--	0.0%	32	1.0
Total Real Estate	8.3%	13.0%	44	5.3%	66	2.4	49							
Total Real Estate Benchmark	--	14.9%	24	6.1%	73	2.5	48							
Total Liquid Alternatives	8.6%	-16.3%	--	9.7%	--	-1.7	--							
CPI + 4% (Unadjusted)	--	4.0%	--	1.4%	--	2.7	--							

# Ventura County Employees' Retirement Association

## Total Fund Risk Statistics

### 3 Years Ending September 30, 2015

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Tracking Error	Rank	Info Ratio	Rank	Anlzd AJ	Rank	Beta
Total Fund	100.0%	7.2%	34	6.4%	65	1.1	39	0.8%	16	-0.4	--	-0.6%	65	1.0
Policy Index	--	7.5%	15	6.1%	52	1.2	23	0.0%	1	--	--	0.0%	47	1.0
Total Equity	52.2%	8.7%	46	9.7%	19	0.9	39	1.4%	2	1.2	12	2.0%	50	1.0
MSCI ACWI	--	7.0%	69	10.0%	33	0.7	65	0.0%	1	--	--	0.0%	72	1.0
Total US Equity	29.6%	12.7%	44	10.0%	18	1.3	24	0.3%	1	0.8	7	0.2%	38	1.0
Total U.S. Equity Benchmark	--	12.4%	47	9.9%	17	1.2	26	0.0%	1	--	--	0.0%	42	1.0
Total Non-US Equity	13.1%	2.8%	96	10.9%	21	0.3	96	1.2%	1	0.4	88	0.6%	96	0.9
Total Non-US Equity Benchmark	--	2.3%	97	11.6%	69	0.2	97	0.0%	1	--	--	0.0%	97	1.0
Total Global Equity	9.5%	5.7%	78	10.3%	42	0.6	78	1.2%	1	-1.0	--	-1.3%	81	1.0
MSCI ACWI	--	7.0%	69	10.0%	33	0.7	65	0.0%	1	--	--	0.0%	72	1.0
Total Fixed Income	24.2%	1.0%	78	2.3%	22	0.4	72	2.5%	89	1.1	9	1.8%	9	0.5
Barclays Global Aggregate	--	-1.6%	99	3.8%	88	-0.4	99	0.0%	1	--	--	0.0%	66	1.0
Total US Fixed Income	18.2%	1.5%	63	2.1%	35	0.7	55	1.8%	43	-0.1	--	0.5%	43	0.6
Barclays Aggregate	--	1.7%	55	2.9%	56	0.6	67	0.0%	1	--	--	0.0%	74	1.0
Total Global Fixed Income	6.0%	-1.1%	75	3.7%	26	-0.3	78	1.2%	11	0.4	63	0.3%	72	0.9
Barclays Global Aggregate	--	-1.6%	80	3.8%	29	-0.4	83	0.0%	1	--	--	0.0%	79	1.0
Total Real Estate	8.3%	11.2%	61	4.6%	53	2.4	47							
Total Real Estate Benchmark	--	13.4%	16	5.4%	73	2.5	45							
Total Liquid Alternatives	8.6%	--	--	--	--	--	--							
CPI + 4% (Unadjusted)	--	5.0%	--	1.2%	--	4.2	--							

# Ventura County Employees' Retirement Association

## Total Fund Risk Statistics

### 5 Years Ending September 30, 2015

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Tracking Error	Rank	Info Ratio	Rank	Anlzd AJ	Rank	Beta
Total Fund	100.0%	8.2%	17	8.1%	77	1.0	39	0.8%	10	0.1	52	-0.1%	45	1.0
Policy Index	--	8.1%	19	8.0%	68	1.0	32	0.0%	1	--	--	0.0%	38	1.0
Total Equity	52.2%	--	--	--	--	--	--	--	--	--	--	--	--	--
MSCI ACWI	--	6.8%	73	13.1%	43	0.5	69	0.0%	1	--	--	0.0%	72	1.0
Total US Equity	29.6%	13.5%	33	12.0%	22	1.1	19	0.3%	1	0.8	2	0.1%	30	1.0
Total U.S. Equity Benchmark	--	13.3%	37	12.0%	21	1.1	20	0.0%	1	--	--	0.0%	32	1.0
Total Non-US Equity	13.1%	2.6%	91	14.3%	22	0.2	91	1.4%	1	0.6	75	0.9%	91	0.9
Total Non-US Equity Benchmark	--	1.8%	94	15.1%	63	0.1	94	0.0%	1	--	--	0.0%	94	1.0
Total Global Equity	9.5%	6.4%	76	12.1%	20	0.5	68	2.2%	7	-0.2	--	0.1%	71	0.9
MSCI ACWI	--	6.8%	73	13.1%	43	0.5	69	0.0%	1	--	--	0.0%	72	1.0
Total Fixed Income	24.2%	3.6%	41	2.6%	22	1.4	18	3.0%	90	0.9	13	3.3%	6	0.4
Barclays Global Aggregate	--	0.8%	99	4.4%	95	0.2	99	0.0%	1	--	--	0.0%	93	1.0
Total US Fixed Income	18.2%	4.0%	42	2.5%	39	1.5	20	2.0%	42	0.4	39	1.9%	24	0.7
Barclays Aggregate	--	3.1%	57	2.8%	49	1.1	62	0.0%	1	--	--	0.0%	80	1.0
Total Global Fixed Income	6.0%	--	--	--	--	--	--	--	--	--	--	--	--	--
Barclays Global Aggregate	--	0.8%	83	4.4%	28	0.2	78	0.0%	1	--	--	0.0%	80	1.0
Total Real Estate	8.3%	12.0%	67	5.0%	31	2.4	28							
Total Real Estate Benchmark	--	14.0%	11	5.7%	48	2.5	25							
Total Liquid Alternatives	8.6%	--	--	--	--	--	--							
CPI + 4% (Unadjusted)	--	5.8%	--	1.2%	--	4.8	--							

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Fund</b>	<b>4,208,123,068</b>	<b>100.0</b>	<b>100.0</b>	<b>-5.3</b>	<b>49</b>	<b>-3.6</b>	<b>71</b>	<b>-2.6</b>	<b>72</b>	<b>7.2</b>	<b>34</b>	<b>8.2</b>	<b>17</b>	<b>5.6</b>	<b>34</b>	<b>7.8</b>	<b>Apr-94</b>
Policy Index				-4.6	25	-2.4	33	-0.6	30	7.5	15	8.1	19	5.8	22	7.8	Apr-94
Over/Under				-0.7		-1.2		-2.0		-0.3		0.1		-0.2		0.0	
Allocation Index				-5.6	54	-3.7	76	-2.2	69	6.6	49	7.5	38	5.3	49	--	Apr-94
InvestorForce Public DB > \$1B Net Median				-5.5		-2.8		-1.4		6.5		7.3		5.3		7.3	Apr-94
<b>Total Fund ex Parametric</b>	<b>4,059,742,319</b>	<b>96.5</b>	<b>--</b>	<b>-5.4</b>	<b>--</b>	<b>-3.6</b>	<b>--</b>	<b>-2.7</b>	<b>--</b>	<b>7.1</b>	<b>--</b>	<b>8.1</b>	<b>--</b>	<b>5.5</b>	<b>--</b>	<b>7.8</b>	<b>Apr-94</b>
<b>Total Fund ex Private Equity</b>	<b>4,063,820,882</b>	<b>96.6</b>	<b>--</b>	<b>-5.7</b>	<b>69</b>	<b>-4.0</b>	<b>91</b>	<b>-3.1</b>	<b>79</b>	<b>6.3</b>	<b>52</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>8.1</b>	<b>Jan-12</b>
Policy Index				-4.6	25	-2.4	33	-0.6	30	7.5	15	8.1	19	5.8	22	9.0	Jan-12
Over/Under				-1.1		-1.6		-2.5		-1.2						-0.9	
InvestorForce Public DB > \$1B Net Median				-5.5		-2.8		-1.4		6.5		7.3		5.3		8.1	Jan-12
<b>Total US Equity</b>	<b>1,245,732,873</b>	<b>29.6</b>	<b>30.0</b>	<b>-7.3</b>	<b>35</b>	<b>-5.4</b>	<b>50</b>	<b>-0.5</b>	<b>55</b>	<b>12.7</b>	<b>44</b>	<b>13.5</b>	<b>33</b>	<b>6.6</b>	<b>66</b>	<b>8.5</b>	<b>Dec-93</b>
Total U.S. Equity Benchmark				-7.3	35	-5.5	51	-0.5	55	12.4	47	13.3	37	7.0	54	8.9	Dec-93
Over/Under				0.0		0.1		0.0		0.3		0.2		-0.4		-0.4	
eA All US Equity Net Median				-8.4		-5.5		0.0		12.3		12.6		7.1		9.9	Dec-93
BlackRock Equity Market Fund	1,070,309,612	25.4		-7.2	34	-5.4	49	-0.4	54	12.5	46	13.3	36	--	--	6.1	Dec-07
Dow Jones U.S. Total Stock Market				-7.3	35	-5.5	51	-0.5	56	12.4	47	13.3	37	7.1	52	6.1	Dec-07
Over/Under				0.1		0.1		0.1		0.1		0.0				0.0	
eA All US Equity Net Median				-8.4		-5.5		0.0		12.3		12.6		7.1		6.3	Dec-07
Western U.S. Index Plus	131,690,258	3.1		-6.7	28	-5.5	51	-1.0	60	12.8	42	14.3	21	--	--	2.5	May-07
S&P 500				-6.4	24	-5.3	48	-0.6	56	12.4	48	13.3	35	6.8	60	5.0	May-07
Over/Under				-0.3		-0.2		-0.4		0.4		1.0				-2.5	
eA All US Equity Net Median				-8.4		-5.5		0.0		12.3		12.6		7.1		5.4	May-07
BlackRock Extended Equity Index	43,733,003	1.0		-10.5	56	-6.2	62	-0.2	55	12.8	36	13.0	35	7.9	46	11.3	Oct-02
Dow Jones U.S. Completion Total Stock Market				-10.6	56	-6.3	63	-0.2	55	12.7	38	12.8	38	7.8	47	11.2	Oct-02
Over/Under				0.1		0.1		0.0		0.1		0.2		0.1		0.1	
eA US Small-Mid Cap Equity Net Median				-10.1		-5.2		0.3		12.2		12.3		7.6		10.8	Oct-02

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance / Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result

Policy Index: Currently, 30% Total U.S. Equity Benchmark, 19% Barclays Aggregate, 14% MSCI ACWI ex U.S., 10% MSCI ACWI, 5% Barclays Global Aggregate, 5% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index

Total U.S. Equity Benchmark: The Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Non-US Equity</b>	<b>551,804,954</b>	<b>13.1</b>	<b>14.0</b>	<b>-11.1</b>	<b>83</b>	<b>-8.0</b>	<b>92</b>	<b>-11.0</b>	<b>93</b>	<b>2.8</b>	<b>96</b>	<b>2.6</b>	<b>91</b>	<b>3.2</b>	<b>67</b>	<b>5.9</b>	<b>Mar-94</b>
<i>Total Non-US Equity Benchmark</i>				<u>-12.2</u>	90	<u>-8.6</u>	95	<u>-12.2</u>	95	<u>2.3</u>	97	<u>1.8</u>	94	<u>3.0</u>	75	<u>4.6</u>	<i>Mar-94</i>
Over/Under				1.1		0.6		1.2		0.5		0.8		0.2		1.3	
<i>eA All EAFE Equity Net Median</i>				-9.0		-2.9		-5.7		6.4		5.4		3.8		6.1	<i>Mar-94</i>
BlackRock ACWI ex-U.S. Index	230,128,039	5.5		<b>-11.9</b>	<b>75</b>	<b>-7.7</b>	<b>80</b>	<b>-11.3</b>	<b>83</b>	<b>2.9</b>	<b>79</b>	<b>2.3</b>	<b>84</b>	--	--	<b>0.3</b>	<b>Mar-07</b>
<i>MSCI ACWI ex USA</i>				<u>-12.2</u>	82	<u>-8.6</u>	83	<u>-12.2</u>	87	<u>2.3</u>	81	<u>1.8</u>	87	<u>3.0</u>	74	<u>-0.2</u>	<i>Mar-07</i>
Over/Under				0.3		0.9		0.9		0.6		0.5				0.5	
<i>eA ACWI ex-US All Cap Equity Net Median</i>				-10.6		-5.1		-6.6		5.4		4.7		3.9		1.4	<i>Mar-07</i>
Sprucegrove	161,094,129	3.8		<b>-12.2</b>	<b>90</b>	<b>-10.9</b>	<b>99</b>	<b>-13.4</b>	<b>99</b>	<b>2.2</b>	<b>98</b>	<b>2.9</b>	<b>84</b>	<b>3.5</b>	<b>53</b>	<b>6.6</b>	<b>Mar-02</b>
<i>MSCI EAFE</i>				<u>-10.2</u>	72	<u>-5.3</u>	80	<u>-8.7</u>	80	<u>5.6</u>	65	<u>4.0</u>	76	<u>3.0</u>	68	<u>5.4</u>	<i>Mar-02</i>
Over/Under				-2.0		-5.6		-4.7		-3.4		-1.1		0.5		1.2	
<i>MSCI ACWI ex USA</i>				-12.2	90	-8.6	91	-12.2	97	2.3	98	1.8	93	3.0	66	5.8	<i>Mar-02</i>
<i>eA EAFE All Cap Equity Net Median</i>				-9.1		-2.9		-5.7		6.3		5.2		3.5		6.6	<i>Mar-02</i>
Hexavest	74,816,577	1.8		<b>-7.1</b>	<b>12</b>	<b>-3.7</b>	<b>62</b>	<b>-7.6</b>	<b>70</b>	<b>4.2</b>	<b>85</b>	--	--	--	--	<b>2.8</b>	<b>Dec-10</b>
<i>MSCI EAFE</i>				<u>-10.2</u>	72	<u>-5.3</u>	80	<u>-8.7</u>	80	<u>5.6</u>	65	<u>4.0</u>	76	<u>3.0</u>	68	<u>2.8</u>	<i>Dec-10</i>
Over/Under				3.1		1.6		1.1		-1.4						0.0	
<i>eA EAFE All Cap Equity Net Median</i>				-9.1		-2.9		-5.7		6.3		5.2		3.5		4.0	<i>Dec-10</i>
Walter Scott	85,766,209	2.0		<b>-10.2</b>	<b>48</b>	<b>-6.6</b>	<b>70</b>	<b>-8.5</b>	<b>73</b>	<b>1.8</b>	<b>88</b>	--	--	--	--	<b>2.0</b>	<b>Dec-10</b>
<i>MSCI ACWI ex USA</i>				<u>-12.2</u>	82	<u>-8.6</u>	83	<u>-12.2</u>	87	<u>2.3</u>	81	<u>1.8</u>	87	<u>3.0</u>	74	<u>0.4</u>	<i>Dec-10</i>
Over/Under				2.0		2.0		3.7		-0.5						1.6	
<i>eA ACWI ex-US All Cap Equity Net Median</i>				-10.6		-5.1		-6.6		5.4		4.7		3.9		2.9	<i>Dec-10</i>

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Global Equity</b>	<b>397,821,094</b>	<b>9.5</b>	<b>10.0</b>	<b>-10.2</b>	<b>69</b>	<b>-7.6</b>	<b>73</b>	<b>-8.4</b>	<b>77</b>	<b>5.7</b>	<b>78</b>	<b>6.4</b>	<b>76</b>	<b>3.5</b>	<b>81</b>	<b>4.3</b>	<b>May-05</b>
MSCI ACWI				-9.4	62	-7.0	71	-6.7	71	7.0	69	6.8	73	4.6	67	5.4	May-05
Over/Under				-0.8		-0.6		-1.7		-1.3		-0.4		-1.1		-1.1	
eA All Global Equity Net Median				-8.5		-5.1		-4.1		8.4		8.5		5.4		6.5	May-05
BlackRock MSCI ACWI Equity Index	207,477,250	4.9		-9.4	61	-6.7	68	-6.3	68	7.3	67	--	--	--	--	9.0	Jul-12
MSCI ACWI				-9.4	62	-7.0	71	-6.7	71	7.0	69	6.8	73	4.6	67	8.6	Jul-12
Over/Under				0.0		0.3		0.4		0.3					0.4		
eA All Global Equity Net Median				-8.5		-5.1		-4.1		8.4		8.5		5.4		9.8	Jul-12
GMO Global Equity	190,343,844	4.5		-11.1	79	-8.4	79	-10.5	84	4.1	86	5.8	79	4.4	72	5.3	Apr-05
MSCI ACWI				-9.4	62	-7.0	71	-6.7	71	7.0	69	6.8	73	4.6	67	5.4	Apr-05
Over/Under				-1.7		-1.4		-3.8		-2.9		-1.0		-0.2		-0.1	
eA All Global Equity Net Median				-8.5		-5.1		-4.1		8.4		8.5		5.4		6.5	Apr-05

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Private Equity</b>	<b>144,302,186</b>	<b>3.4</b>	<b>5.0</b>	<b>6.1</b>	<b>3</b>	<b>12.1</b>	<b>13</b>	<b>13.8</b>	<b>23</b>	<b>17.4</b>	<b>6</b>	--	--	--	--	<b>15.8</b>	<b>Jan-12</b>
<i>DJ U.S. Total Stock Market Index + 3%</i>				-6.6	99	-3.4	97	2.4	91	15.8	21	16.6	1	--	--	17.7	Jan-12
Over/Under				12.7		15.5		11.4		1.6						-1.9	
<i>InvestorForce Public DB Private Eq Net Median</i>				0.0		6.9		10.1		13.0		12.1		9.5		12.2	Jan-12
<b>Adams Street Partners</b>	<b>87,461,015</b>	<b>2.1</b>		<b>2.9</b>	--	<b>7.4</b>	--	<b>10.3</b>	--	<b>15.2</b>	--	--	--	--	--	<b>14.2</b>	<b>Jan-12</b>
<i>DJ U.S. Total Stock Market Index + 3%</i>				-6.6	--	-3.4	--	2.4	--	15.8	--	16.6	--	--	--	17.7	Jan-12
Over/Under				9.5		10.8		7.9		-0.6						-3.5	
<b>Harbourvest</b>	<b>43,198,185</b>	<b>1.0</b>		<b>10.7</b>	--	<b>25.1</b>	--	<b>24.8</b>	--	--	--	--	--	--	--	<b>23.8</b>	<b>Jul-13</b>
<i>DJ U.S. Total Stock Market Index + 3%</i>				-6.6	--	-3.4	--	2.4	--	15.8	--	16.6	--	--	--	13.4	Jul-13
Over/Under				17.3		28.5		22.4								10.4	
<b>Pantheon Global Secondary Fund IV</b>	<b>13,642,986</b>	<b>0.3</b>		<b>13.1</b>	--	<b>7.9</b>	--	<b>5.3</b>	--	<b>14.8</b>	--	--	--	--	--	<b>10.6</b>	<b>Jan-12</b>
<i>DJ U.S. Total Stock Market Index + 3%</i>				-6.6	--	-3.4	--	2.4	--	15.8	--	16.6	--	--	--	17.7	Jan-12
Over/Under				19.7		11.3		2.9		-1.0						-7.1	

Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current quarter cash flows.

# Ventura County Employees' Retirement Association

## Private Equity Limited Partnership Performance

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Interest Paid/(Rec'd)	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
													Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$26,690,000	\$15,810,000	63%	\$15,213	\$8,147,483	\$30,489,272	\$38,636,755	\$11,931,542	15.7%	0.31x	1.45x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$16,434,750	\$9,065,250	64%	\$1,589	\$4,669,887	\$14,278,525	\$18,948,412	\$2,512,073	6.9%	0.28x	1.15x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$5,729,000	\$2,771,000	67%	\$0	\$314,436	\$6,799,942	\$7,114,378	\$1,385,378	11.2%	0.05x	1.24x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$7,837,000	\$663,000	92%	\$6,697	\$3,071,561	\$8,404,458	\$11,476,019	\$3,632,322	13.5%	0.39x	1.46x
<b>Total Adams Street 2010</b>	<b>2010</b>	<b>5/21/2010</b>	<b>\$85,000,000</b>	<b>\$56,690,750</b>	<b>\$28,309,250</b>	<b>67%</b>	<b>\$23,499</b>	<b>\$16,203,367</b>	<b>\$59,972,197</b>	<b>\$76,175,564</b>	<b>\$19,461,315</b>	<b>12.9%</b>	<b>0.29x</b>	<b>1.34x</b>
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$27,337,500	\$47,662,500	36%	\$10,728	\$222,166	\$27,488,824	\$27,710,990	\$362,762	1.3%	0.01x	1.01x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$40,500,000	\$27,000,000	60%	\$84,954	\$13,605,665	\$43,380,457	\$56,986,122	\$16,401,168	38.0%	0.34x	1.4x
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	\$0	\$7,830,001	\$6,920,072	\$14,750,073	\$4,790,073	17.1%	0.79x	1.48x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$6,201,371	\$43,798,629	12%	\$29,922	\$75,205	\$6,726,156	\$6,801,361	\$570,069	8.2%	0.01x	1.09x
<b>Total VCERA Private Equity Program</b>	<b>--</b>	<b>5/21/2010</b>	<b>\$292,500,000</b>	<b>\$140,689,621</b>	<b>\$151,810,379</b>	<b>48%</b>	<b>\$149,103</b>	<b>\$37,936,404</b>	<b>\$144,487,706</b>	<b>\$182,424,110</b>	<b>\$41,585,387</b>	<b>16.0%</b>	<b>0.27x</b>	<b>1.3x</b>

1. Includes recycled/recallable distributions received to date.

Note: Private equity performance data is reported net of fees.

Distributions to Date shown for Pantheon Global Secondary Fund V includes management fee rebates paid to VCERA.

Performance shown is based on cash-adjusted market values as of 9/30/2015.



# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total US Fixed Income</b>	<b>765,965,707</b>	<b>18.2</b>	<b>19.0</b>	<b>0.0</b>	<b>71</b>	<b>0.7</b>	<b>55</b>	<b>0.7</b>	<b>70</b>	<b>1.5</b>	<b>63</b>	<b>4.0</b>	<b>42</b>	<b>5.7</b>	<b>25</b>	<b>6.1</b>	<b>Feb-94</b>
Barclays Aggregate				1.2	18	1.1	35	2.9	14	1.7	55	3.1	57	4.6	50	5.7	Feb-94
Over/Under				-1.2		-0.4		-2.2		-0.2		0.9		1.1		0.4	
eA All US Fixed Inc Net Median				0.5		0.8		1.6		1.8		3.4		4.6		5.5	Feb-94
BlackRock U.S. Debt Fund	140,941,338	3.3		1.3	17	1.2	33	3.0	13	1.8	51	3.2	55	4.7	47	5.5	Nov-95
Barclays Aggregate				1.2	18	1.1	35	2.9	14	1.7	55	3.1	57	4.6	50	5.5	Nov-95
Over/Under				0.1		0.1		0.1		0.1		0.1		0.1		0.0	
eA All US Fixed Inc Net Median				0.5		0.8		1.6		1.8		3.4		4.6		5.4	Nov-95
Western	269,528,505	6.4		0.7	43	1.0	40	2.5	27	2.7	27	4.7	31	5.4	31	6.4	Dec-96
Barclays Aggregate				1.2	18	1.1	35	2.9	14	1.7	55	3.1	57	4.6	50	5.5	Dec-96
Over/Under				-0.5		-0.1		-0.4		1.0		1.6		0.8		0.9	
eA All US Fixed Inc Net Median				0.5		0.8		1.6		1.8		3.4		4.6		5.5	Dec-96
Reams	284,432,025	6.8		-0.5	79	0.6	57	-1.4	89	0.2	94	3.3	52	5.9	22	5.7	Sep-01
Reams Custom Index				0.1	68	0.2	68	0.3	78	0.1	96	2.1	79	4.1	64	4.4	Sep-01
Over/Under				-0.6		0.4		-1.7		0.1		1.2		1.8		1.3	
Barclays Aggregate				1.2	18	1.1	35	2.9	14	1.7	55	3.1	57	4.6	50	4.8	Sep-01
eA All US Fixed Inc Net Median				0.5		0.8		1.6		1.8		3.4		4.6		4.9	Sep-01
Loomis Sayles Multi Strategy	71,063,839	1.7		-2.7	89	-1.3	82	-1.3	89	3.4	15	5.6	21	6.6	13	6.5	Jul-05
Loomis Custom Index				-0.9	82	-0.1	73	0.7	71	2.1	40	3.9	43	5.4	31	5.3	Jul-05
Over/Under				-1.8		-1.2		-2.0		1.3		1.7		1.2		1.2	
Barclays Govt/Credit				1.2	19	0.9	47	2.7	20	1.6	61	3.1	57	4.6	51	4.5	Jul-05
eA All US Fixed Inc Net Median				0.5		0.8		1.6		1.8		3.4		4.6		4.6	Jul-05

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate

Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Global Fixed Income</b>	<b>254,196,806</b>	<b>6.0</b>	<b>5.0</b>	<b>-0.3</b>	<b>34</b>	<b>-2.5</b>	<b>58</b>	<b>-3.0</b>	<b>47</b>	<b>-1.1</b>	<b>75</b>	--	--	--	--	<b>0.0</b>	<b>Jun-12</b>
<i>Barclays Global Aggregate</i>				<u>0.9</u>	15	<u>-2.3</u>	51	<u>-3.3</u>	52	<u>-1.6</u>	80	<u>0.8</u>	83	<u>3.7</u>	80	<u>-0.5</u>	<i>Jun-12</i>
<i>Over/Under</i>				<u>-1.2</u>		<u>-0.2</u>		0.3		0.5						0.5	
<i>eA All Global Fixed Inc Net Median</i>				-1.5		-2.2		-3.2		1.1		2.8		4.4		2.2	<i>Jun-12</i>
<b>Loomis Sayles Global Fixed Income</b>	<b>89,092,585</b>	<b>2.1</b>		<b>-0.4</b>	<b>41</b>	<b>-3.5</b>	<b>81</b>	<b>-4.9</b>	<b>75</b>	<b>-1.8</b>	<b>75</b>	--	--	--	--	<b>-0.6</b>	<b>Jun-12</b>
<i>Barclays Global Aggregate</i>				<u>0.9</u>	16	<u>-2.3</u>	44	<u>-3.3</u>	49	<u>-1.6</u>	73	<u>0.8</u>	77	<u>3.7</u>	70	<u>-0.5</u>	<i>Jun-12</i>
<i>Over/Under</i>				<u>-1.3</u>		<u>-1.2</u>		<u>-1.6</u>		<u>-0.2</u>						<u>-0.1</u>	
<i>eA Global Fixed Inc Unhedged Net Median</i>				-1.0		-2.4		-3.3		-0.2		2.3		4.1		1.1	<i>Jun-12</i>
<b>PIMCO Global Fixed Income</b>	<b>123,090,088</b>	<b>2.9</b>		<b>0.2</b>	<b>27</b>	<b>-2.4</b>	<b>53</b>	<b>-2.5</b>	<b>34</b>	<b>-1.4</b>	<b>69</b>	--	--	--	--	<b>-1.4</b>	<b>Sep-12</b>
<i>Barclays Global Aggregate</i>				<u>0.9</u>	16	<u>-2.3</u>	44	<u>-3.3</u>	49	<u>-1.6</u>	73	<u>0.8</u>	77	<u>3.7</u>	70	<u>-1.6</u>	<i>Sep-12</i>
<i>Over/Under</i>				<u>-0.7</u>		<u>-0.1</u>		0.8		0.2						0.2	
<i>eA Global Fixed Inc Unhedged Net Median</i>				-1.0		-2.4		-3.3		-0.2		2.3		4.1		-0.2	<i>Sep-12</i>
<b>Loomis Strategic Alpha</b>	<b>42,014,133</b>	<b>1.0</b>		<b>-1.5</b>	<b>53</b>	<b>-0.2</b>	<b>16</b>	<b>-0.2</b>	<b>12</b>	--	--	--	--	--	--	<b>1.6</b>	<b>Jul-13</b>
<i>Barclays Global Aggregate</i>				<u>0.9</u>	16	<u>-2.3</u>	44	<u>-3.3</u>	49	<u>-1.6</u>	73	<u>0.8</u>	77	<u>3.7</u>	70	<u>-0.3</u>	<i>Jul-13</i>
<i>Over/Under</i>				<u>-2.4</u>		2.1		3.1								1.9	
<i>eA Global Fixed Inc Unhedged Net Median</i>				-1.0		-2.4		-3.3		-0.2		2.3		4.1		0.4	<i>Jul-13</i>

# Ventura County Employees' Retirement Association

## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Real Estate</b>	<b>349,536,974</b>	<b>8.3</b>	<b>7.0</b>	<b>3.6</b>	<b>21</b>	<b>9.7</b>	<b>30</b>	<b>13.0</b>	<b>44</b>	<b>11.2</b>	<b>61</b>	<b>12.0</b>	<b>67</b>	<b>4.9</b>	<b>50</b>	<b>7.9</b>	<b>Mar-94</b>
<i>Total Real Estate Benchmark</i>				<u>3.7</u>	17	<u>11.3</u>	3	<u>14.9</u>	24	<u>13.4</u>	16	<u>14.0</u>	11	<u>6.7</u>	23	<u>9.0</u>	<i>Mar-94</i>
Over/Under				-0.1		-1.6		-1.9		-2.2		-2.0		-1.8		-1.1	
<i>InvestorForce Public DB Real Estate Pub+Priv Net Median</i>				2.6		6.1		11.7		11.7		12.8		4.8		6.2	<i>Mar-94</i>
Prudential Real Estate	120,621,253	2.9		<b>4.7</b>	--	<b>11.2</b>	--	<b>15.2</b>	--	<b>13.1</b>	--	<b>14.2</b>	--	<b>5.5</b>	--	<b>5.8</b>	Jun-04
<i>NCREIF ODCE</i>				<u>3.7</u>	--	<u>11.3</u>	--	<u>14.9</u>	--	<u>13.4</u>	--	<u>14.0</u>	--	<u>6.7</u>	--	<u>8.0</u>	<i>Jun-04</i>
Over/Under				1.0		-0.1		0.3		-0.3		0.2		-1.2		-2.2	
UBS Real Estate	226,635,760	5.4		<b>3.2</b>	--	<b>8.8</b>	--	<b>11.9</b>	--	<b>10.2</b>	--	<b>10.7</b>	--	<b>6.0</b>	--	<b>7.6</b>	Mar-03
<i>NCREIF ODCE</i>				<u>3.7</u>	--	<u>11.3</u>	--	<u>14.9</u>	--	<u>13.4</u>	--	<u>14.0</u>	--	<u>6.7</u>	--	<u>8.2</u>	<i>Mar-03</i>
Over/Under				-0.5		-2.5		-3.0		-3.2		-3.3		-0.7		-0.6	
RREEF	2,279,961	0.1		<b>-5.3</b>	--	<b>8.5</b>	--	<b>10.5</b>	--	<b>17.1</b>	--	<b>24.3</b>	--	--	--	<b>-5.0</b>	Sep-07
<i>NCREIF ODCE</i>				<u>3.7</u>	--	<u>11.3</u>	--	<u>14.9</u>	--	<u>13.4</u>	--	<u>14.0</u>	--	<u>6.7</u>	--	<u>4.1</u>	<i>Sep-07</i>
Over/Under				-9.0		-2.8		-4.4		3.7		10.3				-9.1	

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index

# Ventura County Employees' Retirement Association

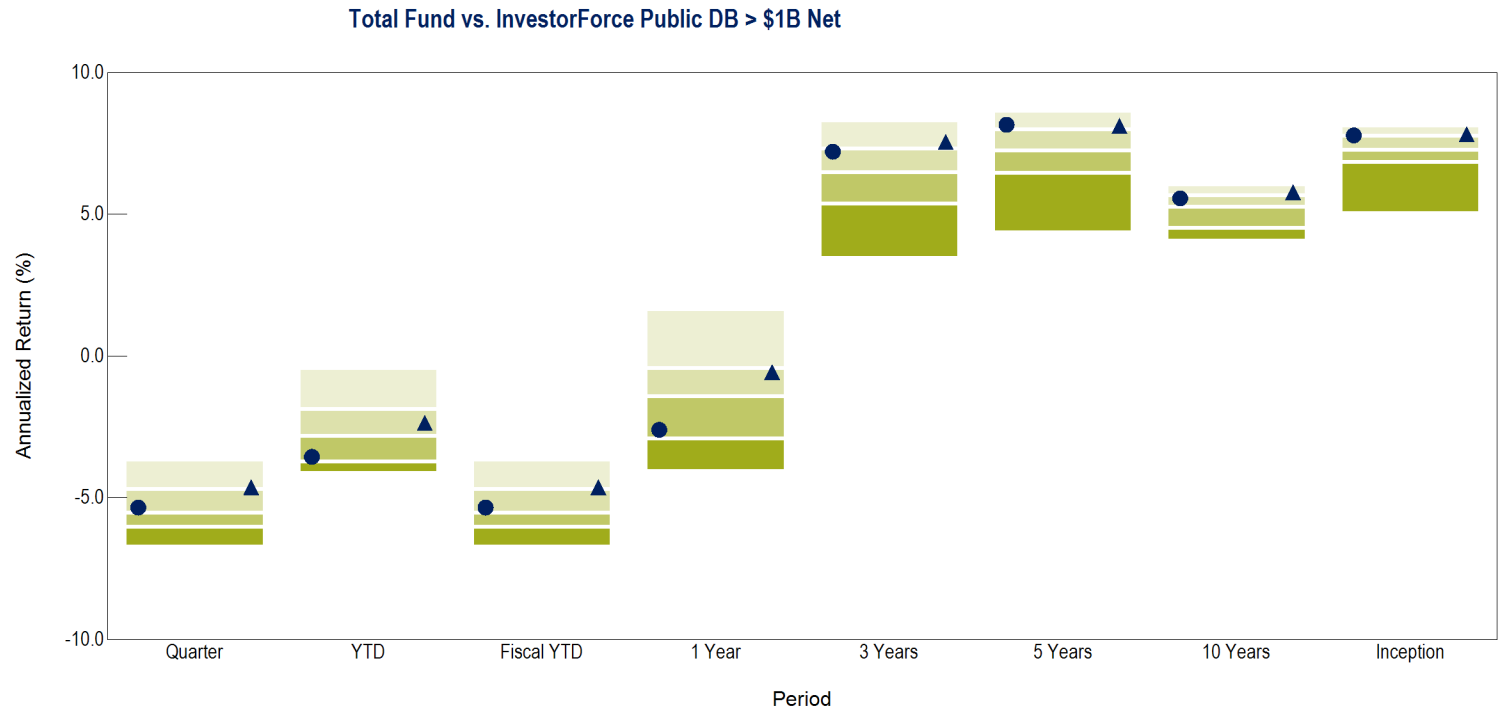
## Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Liquid Alternatives</b>	<b>360,849,821</b>	<b>8.6</b>	<b>10.0</b>	<b>-12.4</b>	--	<b>-13.7</b>	--	<b>-16.3</b>	--	--	--	--	--	--	--	<b>2.2</b>	<b>Apr-13</b>
<i>CPI + 4% (Unadjusted)</i>				<i>0.7</i>	--	<i>4.4</i>	--	<i>4.0</i>	--	<i>5.0</i>	--	<i>5.8</i>	--	<i>5.9</i>	--	<i>5.0</i>	<i>Apr-13</i>
Over/Under				<i>-13.1</i>		<i>-18.1</i>		<i>-20.3</i>								<i>-2.8</i>	
Bridgewater All Weather Fund	258,151,446	6.1		<b>-6.4</b>	--	<b>-5.9</b>	--	<b>-5.8</b>	--	--	--	--	--	--	--	<b>2.2</b>	Aug-13
<i>CPI + 5% (Unadjusted)</i>				<i>1.1</i>	--	<i>5.3</i>	--	<i>5.1</i>	--	--	--	--	--	--	--	<i>5.9</i>	<i>Aug-13</i>
Over/Under				<i>-7.5</i>		<i>-11.2</i>		<i>-10.9</i>								<i>-3.7</i>	
Tortoise Energy Infrastructure	102,698,375	2.4		<b>-24.5</b>	--	<b>-28.7</b>	--	<b>-34.6</b>	--	--	--	--	--	--	--	<b>-3.1</b>	Apr-13
<i>Wells Fargo MLP Index</i>				<i>-24.8</i>	--	<i>-29.9</i>	--	<i>-37.9</i>	--	<i>-2.4</i>	--	--	--	--	--	<i>-9.0</i>	<i>Apr-13</i>
Over/Under				<i>0.3</i>		<i>1.2</i>		<i>3.3</i>								<i>5.9</i>	
<b>Overlay</b>	<b>137,912,653</b>	<b>3.3</b>	<b>0.0</b>														
Parametric	137,912,653	3.3															

Overlay performance is not applicable on an individual account level

# Ventura County Employees' Retirement Association

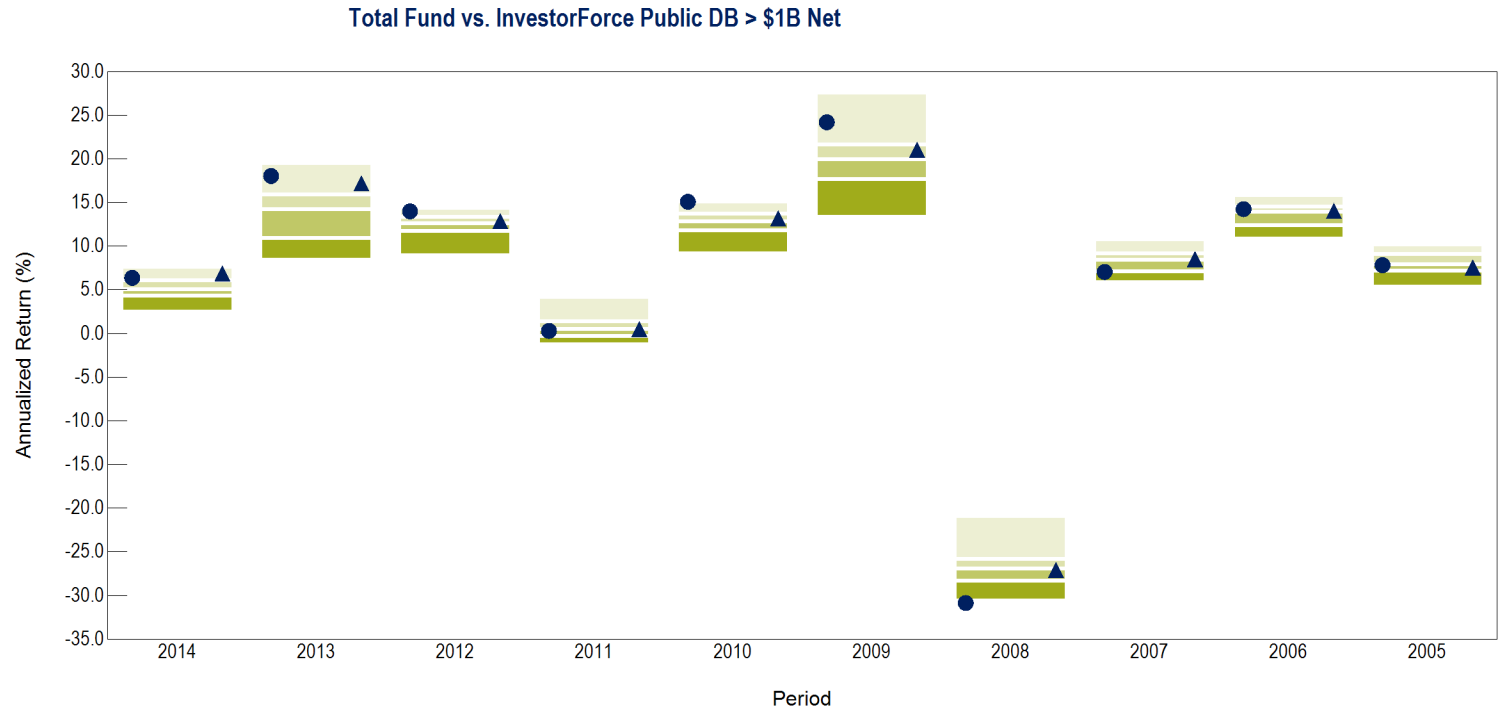
## Total Fund Return Summary vs. Peer Universe



	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)			
5th Percentile	-3.7	(49)	-0.4	(71)	-3.7	(49)	1.6	(72)	8.3	(34)	8.6	(17)	6.0	(34)	8.1	(25)
25th Percentile	-4.7	(25)	-1.8	(33)	-4.7	(25)	-0.4	(30)	7.3	(15)	8.0	(19)	5.7	(22)	7.8	(22)
Median	-5.5		-2.8		-5.5		-1.4		6.5		7.3		5.3		7.3	
75th Percentile	-6.0		-3.7		-6.0		-2.9		5.4		6.5		4.5		6.9	
95th Percentile	-6.7		-4.1		-6.7		-4.0		3.5		4.4		4.1		5.0	
# of Portfolios	41		41		41		41		41		41		39		23	
● Total Fund	-5.3	(49)	-3.6	(71)	-5.3	(49)	-2.6	(72)	7.2	(34)	8.2	(17)	5.6	(34)	7.8	(25)
▲ Policy Index	-4.6	(25)	-2.4	(33)	-4.6	(25)	-0.6	(30)	7.5	(15)	8.1	(19)	5.8	(22)	7.8	(22)

# Ventura County Employees' Retirement Association

## Total Fund Return Summary vs. Peer Universe

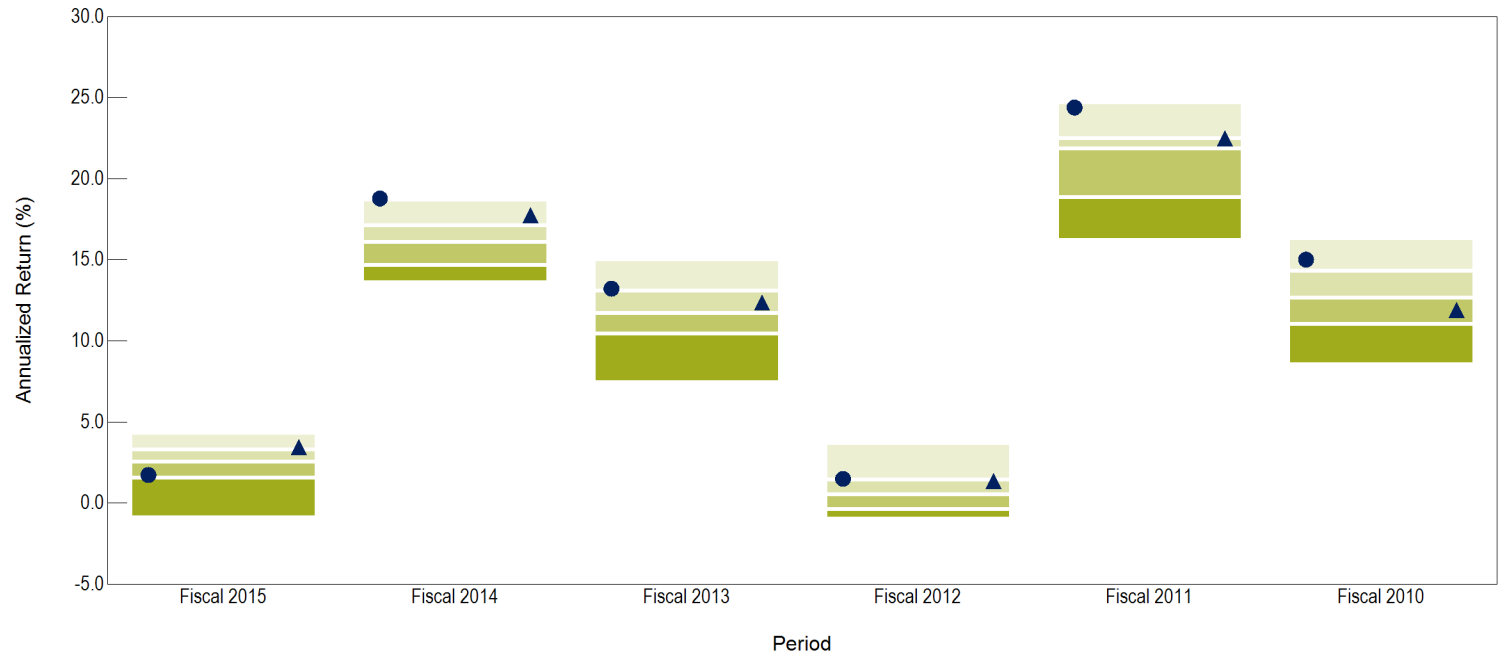


	Return (Rank)																				
5th Percentile	7.6	19.5	14.3	4.2	15.1	27.5	-20.9	10.7	15.8	10.2											
25th Percentile	6.1	16.0	13.4	1.5	13.8	21.7	-25.7	9.2	14.6	9.1											
Median	5.1	14.3	12.7	0.6	12.8	20.0	-26.9	8.5	14.0	8.0											
75th Percentile	4.4	11.0	11.8	-0.3	11.8	17.7	-28.3	7.1	12.5	7.2											
95th Percentile	2.6	8.5	9.0	-1.2	9.3	13.4	-30.5	5.9	10.9	5.4											
# of Portfolios	55	48	44	42	41	40	39	39	38	37											
● Total Fund	6.4	(19)	18.0	(10)	14.0	(15)	0.3	(61)	15.1	(6)	24.2	(16)	-30.9	(98)	7.0	(77)	14.2	(41)	7.8	(56)	
▲ Policy Index	6.9	(11)	17.2	(14)	12.9	(41)	0.5	(55)	13.2	(44)	21.0	(33)	-27.1	(54)	8.5	(50)	14.0	(50)	7.6	(67)	

# Ventura County Employees' Retirement Association

## Total Fund Return Summary vs. Peer Universe

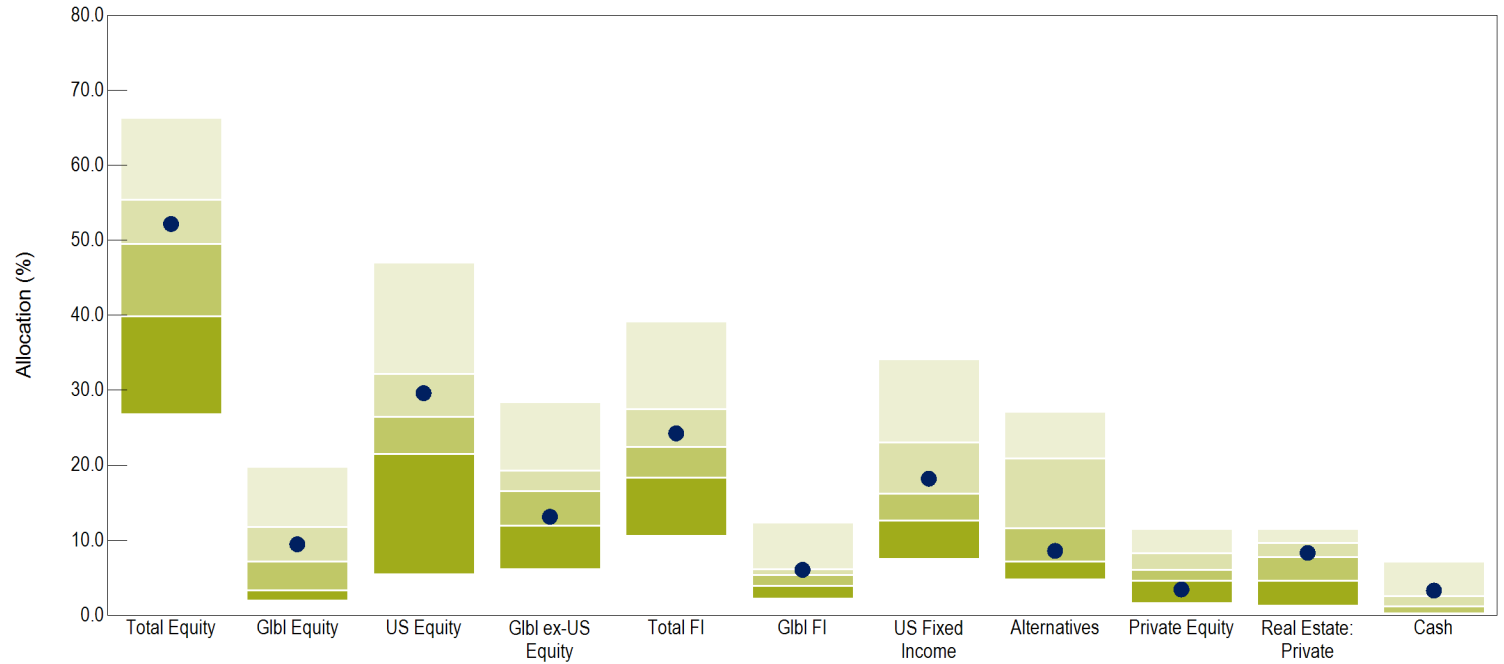
Total Fund vs. InvestorForce Public DB > \$1B Net



	Fiscal 2015		Fiscal 2014		Fiscal 2013		Fiscal 2012		Fiscal 2011		Fiscal 2010	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
5th Percentile	4.3		18.7		15.0		3.7		24.7		16.3	
25th Percentile	3.3		17.2		13.1		1.5		22.5		14.4	
Median	2.6		16.1		11.8		0.5		21.9		12.7	
75th Percentile	1.6		14.7		10.5		-0.3		18.9		11.1	
95th Percentile	-0.9		13.6		7.5		-0.9		16.3		8.6	
# of Portfolios	53		43		56		41		42		41	
● Total Fund	1.7	(70)	18.8	(5)	13.2	(22)	1.5	(25)	24.4	(10)	15.0	(15)
▲ Policy Index	3.4	(24)	17.7	(19)	12.4	(39)	1.4	(27)	22.5	(30)	11.9	(64)

Total Fund Allocations vs. Peer Universe

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



	Allocation (Rank)																							
5th Percentile	66.3	19.7	47.1	28.4	39.1	12.4	34.1	27.1	11.5	11.5	7.1	--	66.3	19.7	47.1	28.4	39.1	12.4	34.1	27.1	11.5	11.5	7.1	--
25th Percentile	55.5	11.8	32.3	19.4	27.6	6.3	23.2	21.0	8.4	9.7	2.6	--	55.5	11.8	32.3	19.4	27.6	6.3	23.2	21.0	8.4	9.7	2.6	--
Median	49.6	7.2	26.6	16.6	22.5	5.5	16.3	11.7	6.2	7.8	1.3	--	49.6	7.2	26.6	16.6	22.5	5.5	16.3	11.7	6.2	7.8	1.3	--
75th Percentile	39.9	3.4	21.6	12.0	18.4	4.0	12.7	7.3	4.7	4.6	0.3	--	39.9	3.4	21.6	12.0	18.4	4.0	12.7	7.3	4.7	4.6	0.3	--
95th Percentile	26.8	2.0	5.5	6.2	10.7	2.3	7.6	4.8	1.7	1.3	0.1	--	26.8	2.0	5.5	6.2	10.7	2.3	7.6	4.8	1.7	1.3	0.1	--
# of Portfolios	37	18	35	35	39	18	32	34	32	29	34	--	37	18	35	35	39	18	32	34	32	29	34	--
● Total Fund	52.2	(48)	9.5	(36)	29.6	(34)	13.1	(68)	24.2	(45)	6.0	(42)	18.2	(43)	8.6	(70)	3.4	(85)	8.3	(39)	3.3	(18)	--	



# Manager Due Diligence



# Ventura County Employees' Retirement Association

## Due Diligence Monitor

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

Investment Options	Performance (Recent Quarter)	Changes/Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments
BlackRock Equity Market Index	-	-	-	-	
Western U.S. Index Plus	-	-	-	-	
BlackRock Extended Equity Index	-	-	-	-	
BlackRock MSCI ACWI ex-U.S. Index	Bottom Quartile	-	-	-	
Sprucegrove	Bottom Decile	No	Hold	No Action	3Q 2014 Departure
Hexavest	Top Quartile	-	-	-	
Walter Scott	-	-	-	-	
BlackRock MSCI ACWI Index	-	-	-	-	
GMO	Bottom Quartile	-	-	-	
Adams Street	N/A	-	-	-	
HarbourVest	N/A	-	-	-	
Pantheon	N/A	-	-	-	
BlackRock U.S. Debt Fund	Top Quartile	-	-	-	
Western	-	-	-	-	
Reams	Bottom Quartile	-	-	-	
Loomis Sayles Multi-Sector Full Discretion	Bottom Quartile	-	-	-	
Loomis Sayles Global Fixed Income	-	-	-	-	
PIMCO Global Fixed Income	-	Yes	Watch	No Action	Bill Gross Lawsuit

Due Diligence Monitor Continued

Investment Options	Performance (Recent Quarter)	Changes/Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments
Loomis Sayles Strategic Alpha	-	-	-	-	
Prudential	N/A	-	-	-	
RREEF	N/A	-	-	-	
UBS	N/A	-	-	-	
Bridgewater	N/A	-	-	-	
Tortoise	N/A	-	-	-	
Parametric/Clifton	N/A	-	-	-	

NEPC Due Diligence Committee Recommendation Key

<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
<b>Hold</b>	Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
<b>Client Review</b>	Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager.
<b>Terminate</b>	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager.

### Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

#### Manager Changes/Announcements

##### PIMCO

On October 8<sup>th</sup>, Bill Gross filed a lawsuit against PIMCO claiming wrongful termination. The lawsuit has a number of claims but the general basis of Gross's case is that the managing directors at PIMCO plotted against him in order to gain greater access to PIMCO's bonus pool. The lawsuit also makes a number of claims against certain individuals but Andrew Balls, Dan Ivascyn and Mohamed El-Erian seem to be Gross's main targets. PIMCO believes that these claims have no merit and announced that their legal team and executive committee will be taking the matter to court.

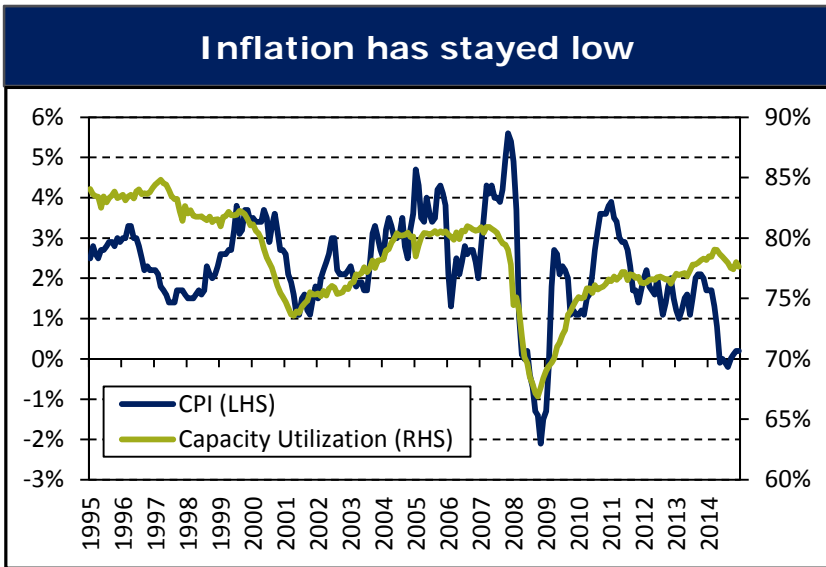
NEPC research was onsite the day that this lawsuit was announced and had a conversation with a member of their executive committee to discuss the filing. Given the timing of the suit and this conversation, there really wasn't much to be shared but this conversation was helpful to gauge any initial reactions from PIMCO. NEPC research is not concerned with this lawsuit and believe it is more of a publicity driven event than anything that will impact PIMCO's business operations. PIMCO was surprised by this lawsuit. Part of this surprise is due to the fact that the press broke this story before the court systems were even open, indicating that they were most likely tipped off about the story prior to it actually being filed with the courts. This speaks to Bill's incentives of the case which is centered on pride and vindication rather than monetary compensation. Gross has even stated that if he does win the case, he will be donating all the proceeds to charity. Another reason for PIMCO's surprise stems from the fact that the records support that Gross had resigned and was not actually fired. All in all, Bill's story has continually changed over the past year, it started off as one of him leaving to get a fresh start at a small firm and now it is a story of wrongful termination. In a hypothetical situation where Gross does win the case, PIMCO has insurance for these types of situations and would not payout from their reserves; thereby limiting any impact on the business. PIMCO really just wants to move past this, having tried and will continue to try to take the high road and avoid media confrontation throughout this case.

***NEPC recommends maintaining the current due diligence status of WATCH for PIMCO as a firm and for the Global Fixed Income portfolio in which VCERA currently invests.***

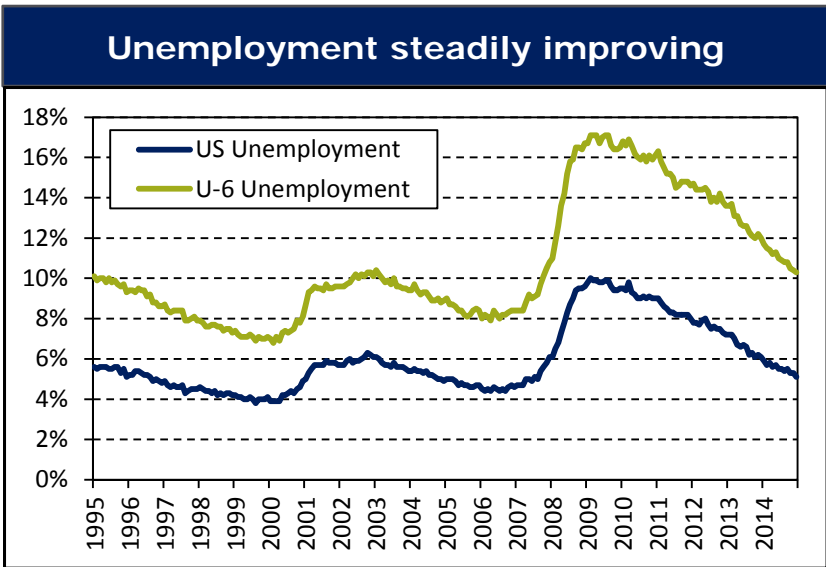
# Appendix: Market Environment



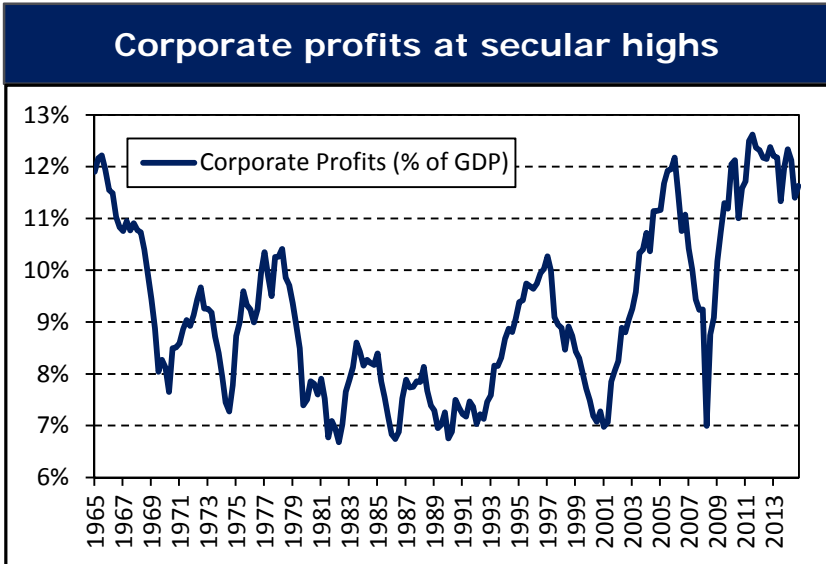
US Economic Indicators



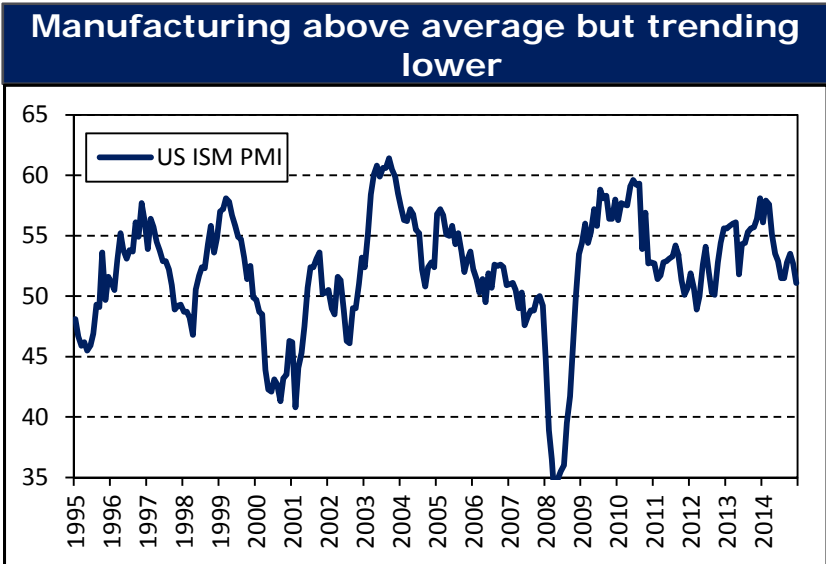
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics



Source: Bloomberg, Bureau of Labor Statistics

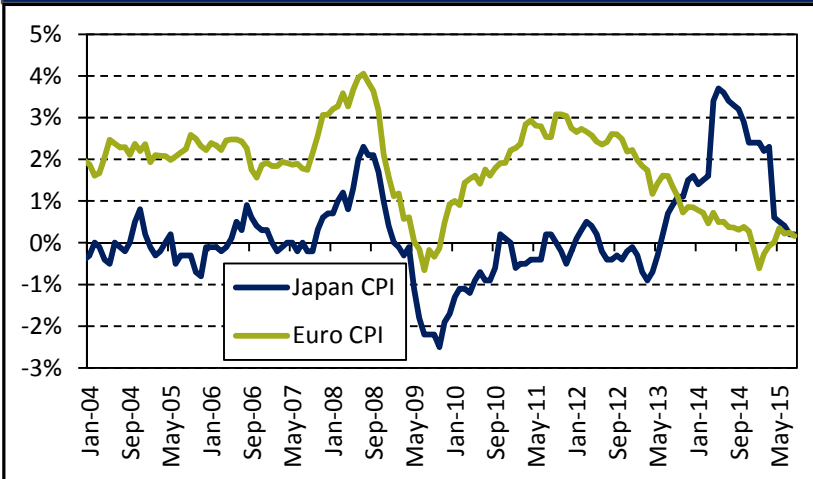


Source: Bloomberg, Bureau of Economic Analysis



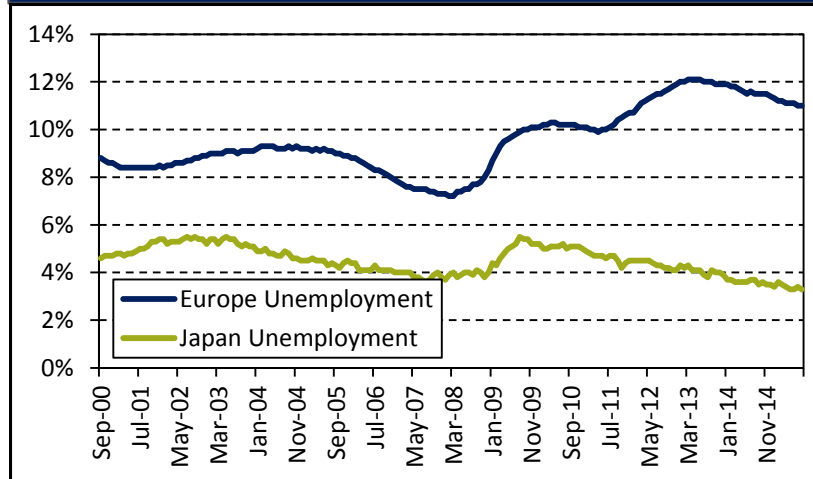
Source: Bloomberg, Institute for Supply Management

**Inflation remains muted**



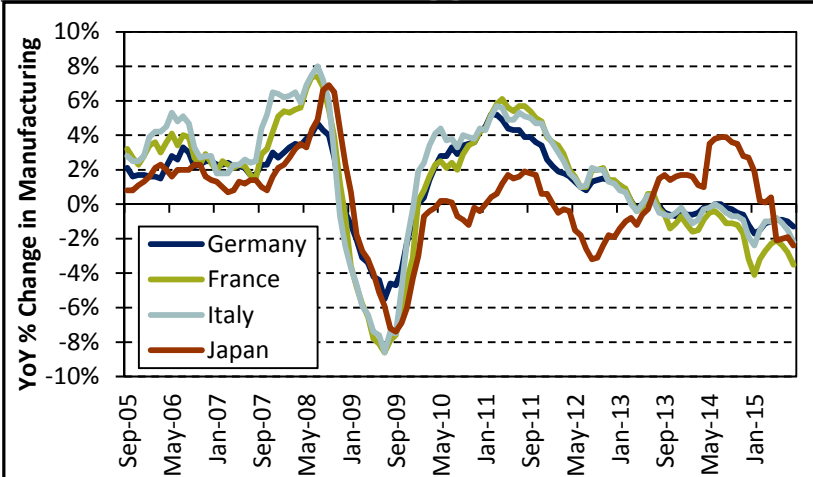
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

**Europe employment recovery lagging**



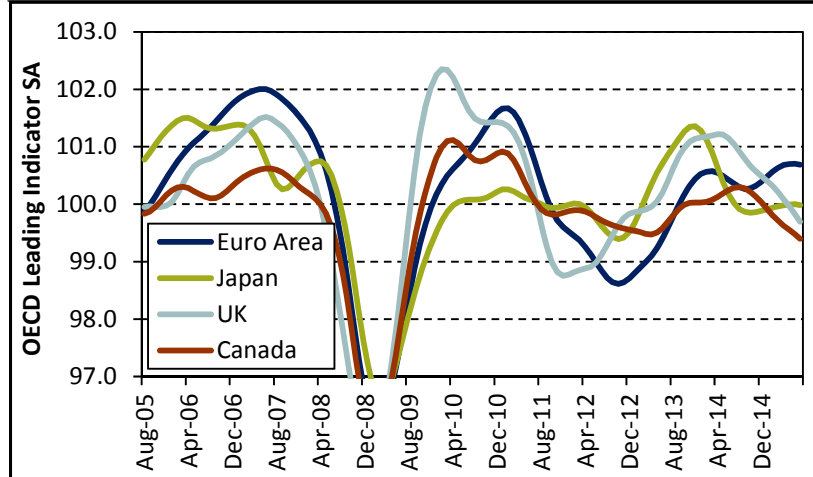
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

**Manufacturing in developed economies has lagged**



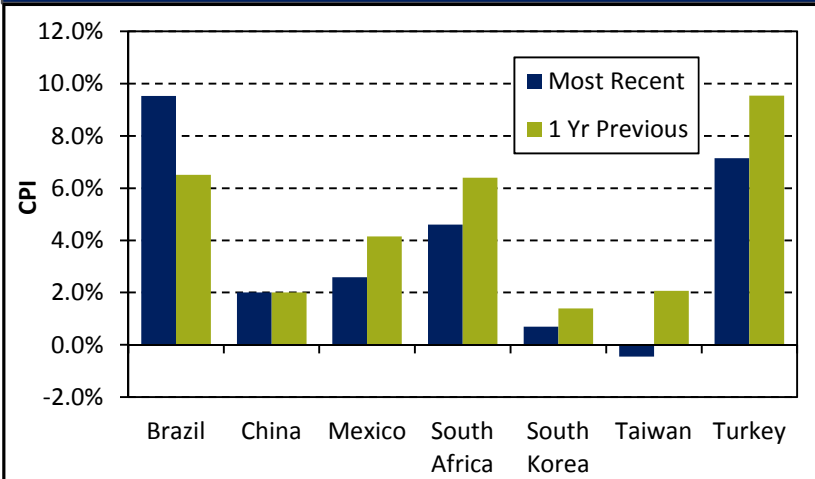
Source: Bloomberg, OECD, Eurostat

**Leading indicators mostly neutral**



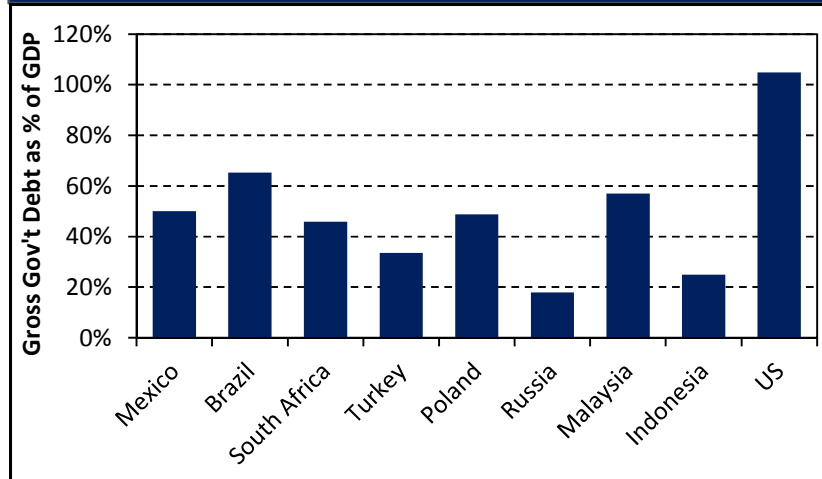
Source: Bloomberg, OECD

**EM inflation is varied by country**



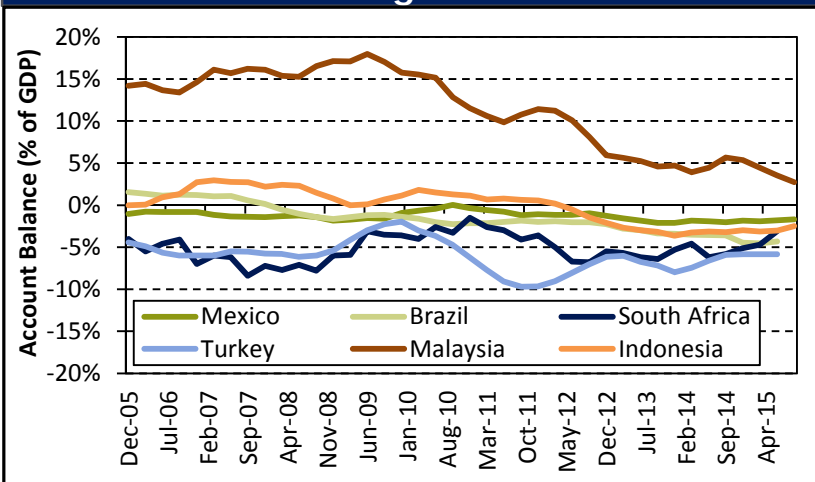
Source: Bloomberg

**Relatively healthy Debt/GDP ratios**



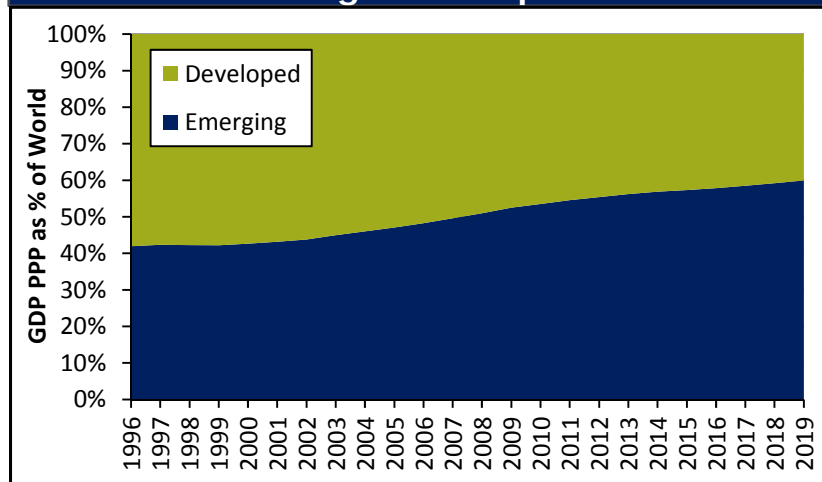
Source: Bloomberg, IMF

**Some improvement in account balance challenged countries**



Source: Bloomberg

**Emerging economies make up >50% of global output**

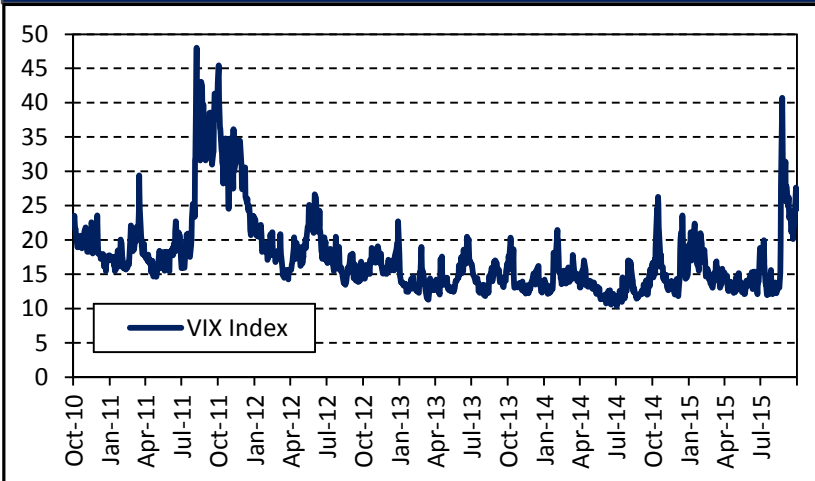


Source: Bloomberg, IMF



Volatility

Equity volatility has seen recent spike



Source: Bloomberg, CBOE

Treasury rates experiencing periods of higher volatility



Source: Bloomberg, Merrill Lynch

Sustained uptick in currency volatilities



Source: Bloomberg, Deutsche Bank

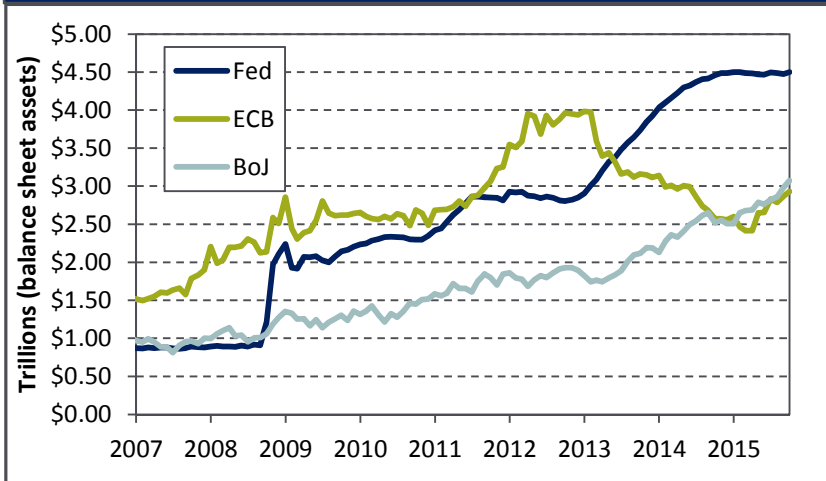
Commodity pricing volatility has increased



Source: Bloomberg, Merrill Lynch

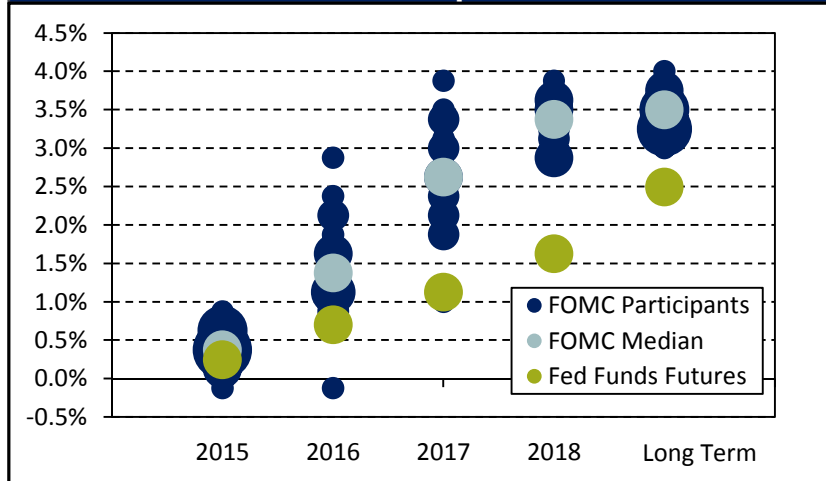
Central Banks

Major central bank policy divergence



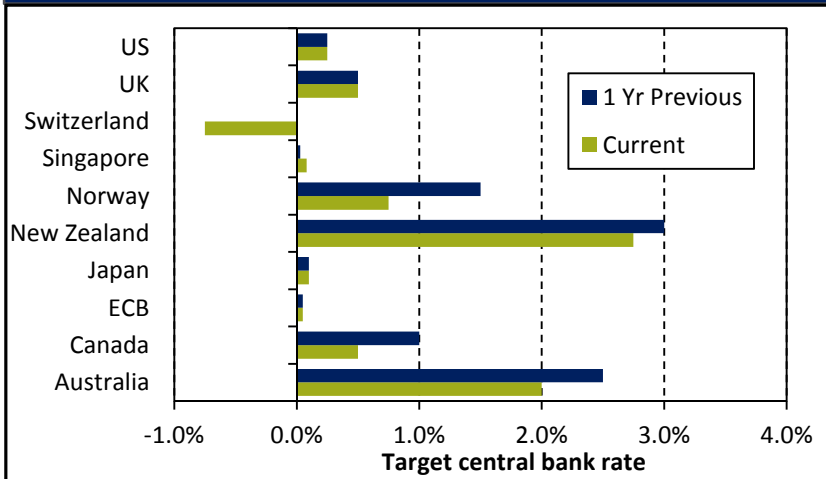
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

Fed's ideal rate of policy firming above market expectations



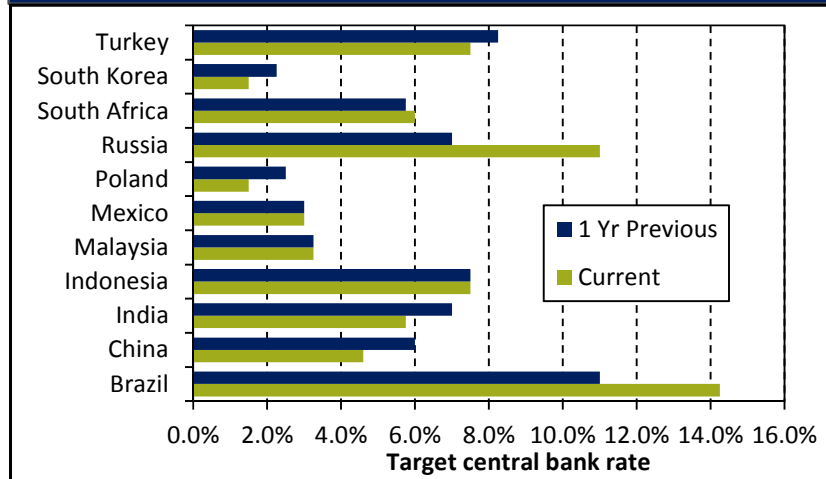
Source: Bloomberg, Federal Reserve, NEPC

Many developed central banks have maintained low interest rates



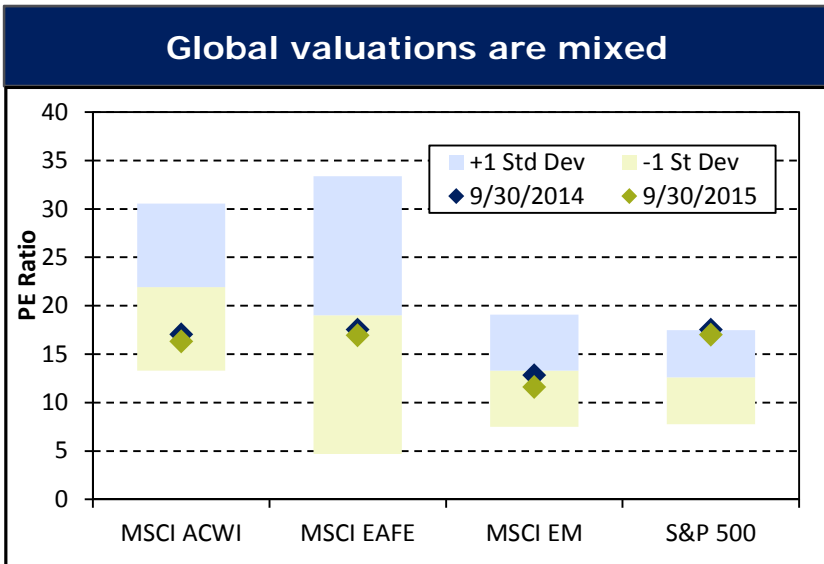
Source: Bloomberg

EM central bank policies have varied by circumstance

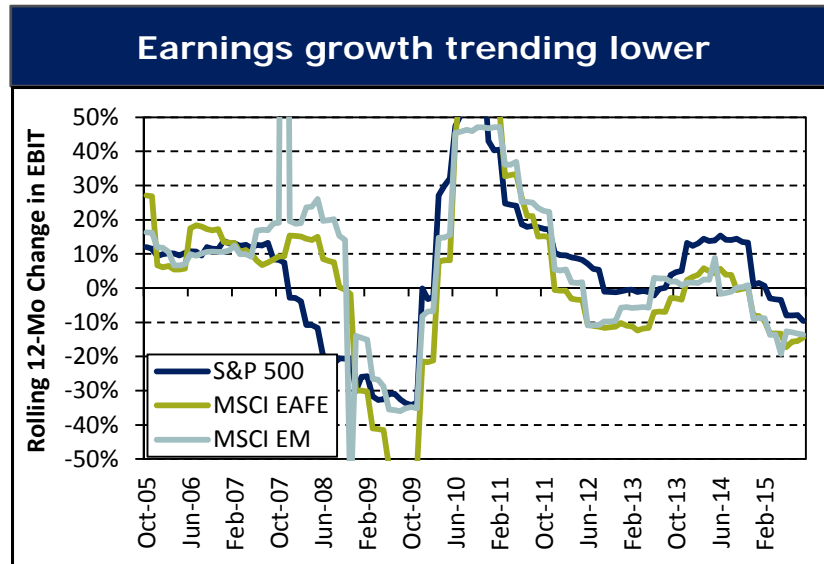


Source: Bloomberg

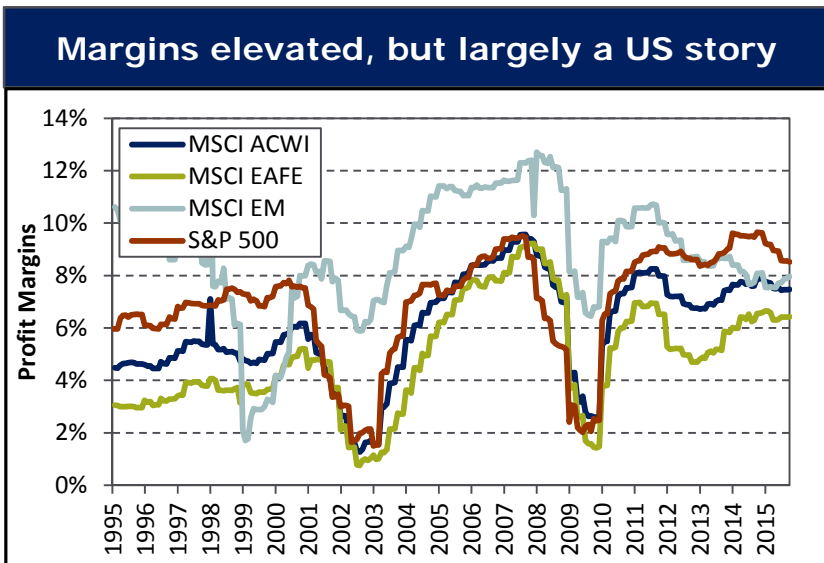
Global Equity



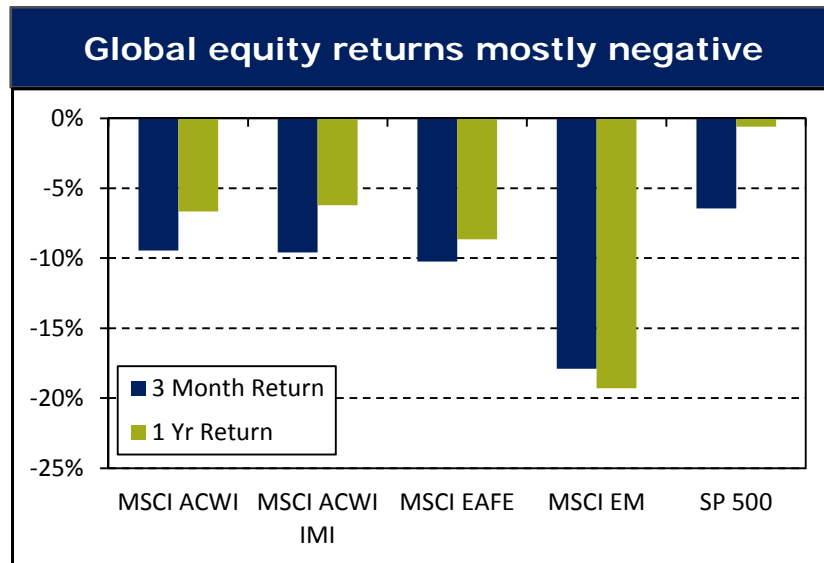
Source: Bloomberg, Standard and Poors, MSCI \*MSCI EAFE is ex UK Telecom



Source: Bloomberg, Standard and Poors, MSCI

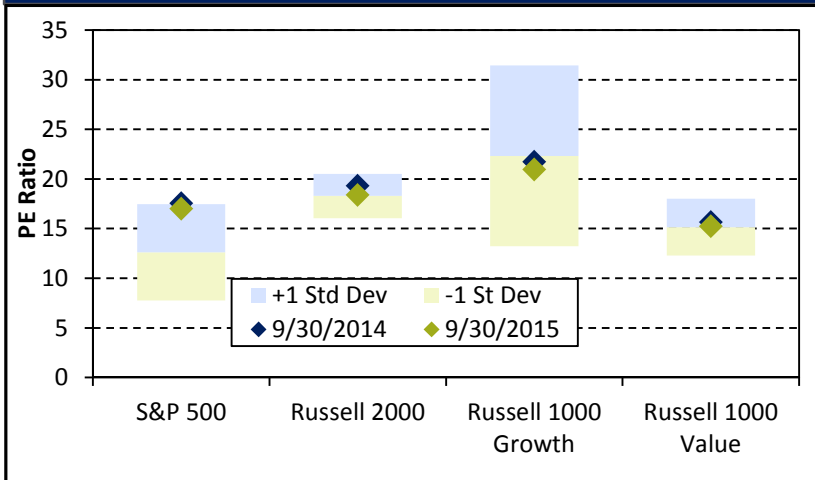


Source: Bloomberg, MSCI



Source: Bloomberg, MSCI

Valuations near or above historical norms



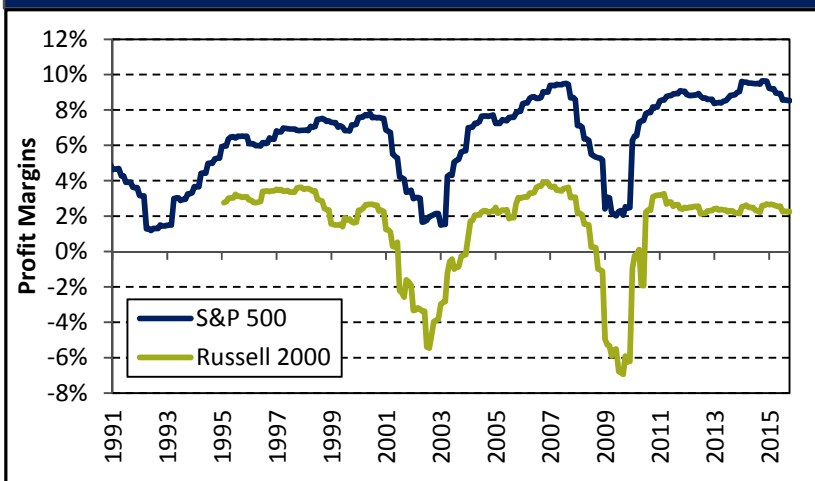
Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive

Growth recovery marked by inconsistency



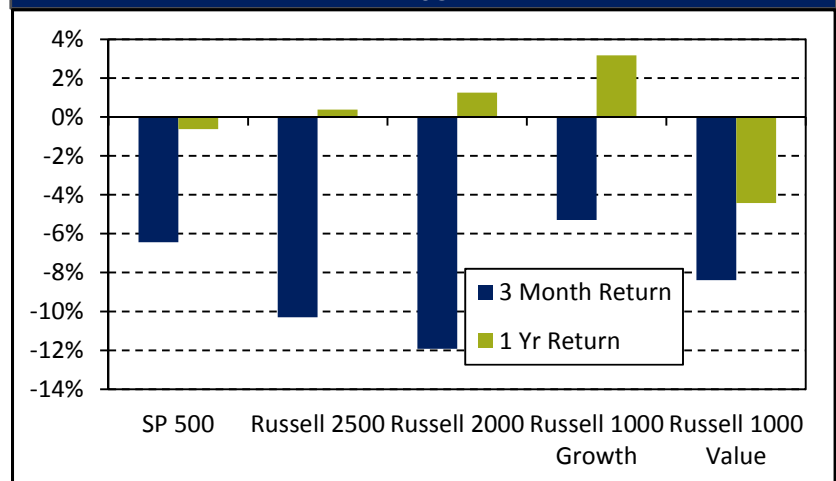
Source: Bloomberg, Bureau of Economic Analysis

Profit margins remain elevated

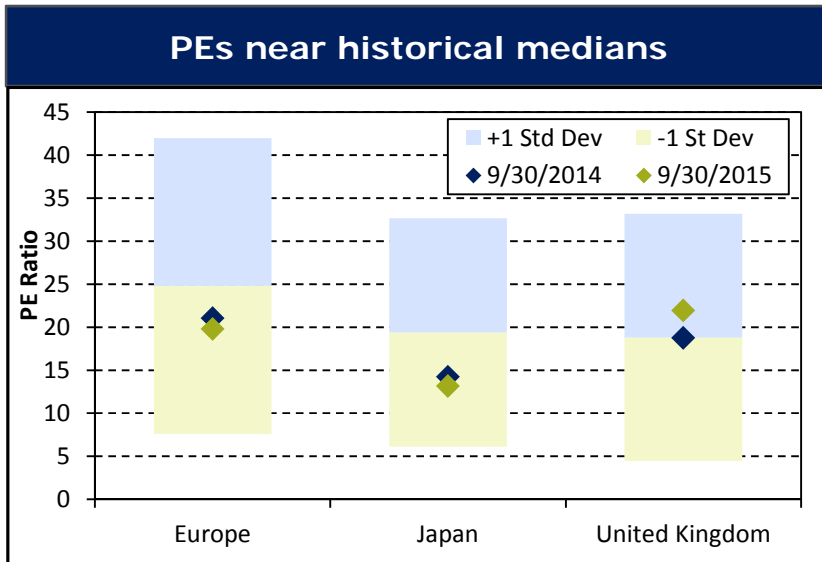


Source: Bloomberg, Standard and Poors, Russell

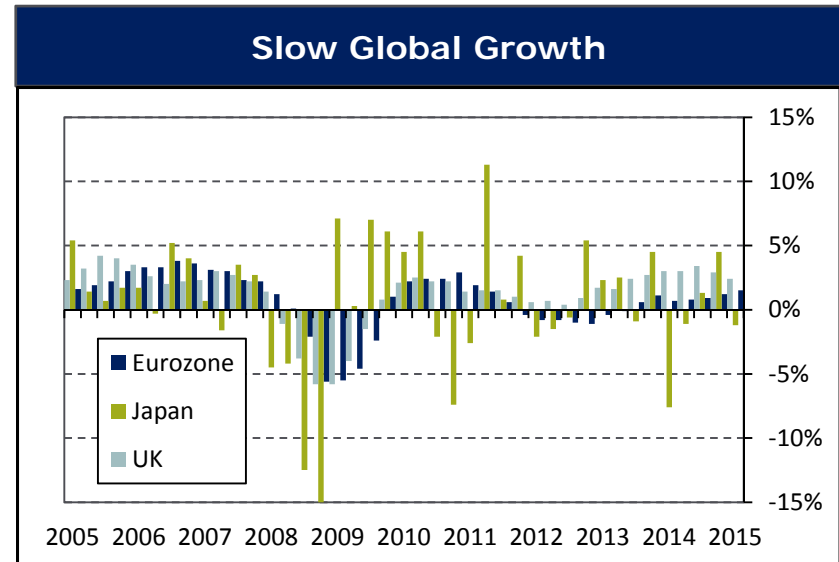
Trailing performance is negative in near term



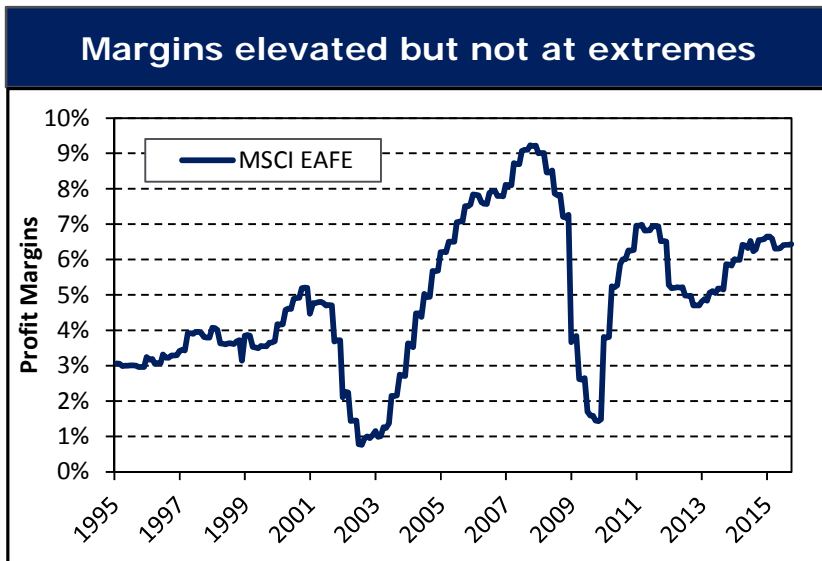
Source: Bloomberg, Standard and Poors, Russell



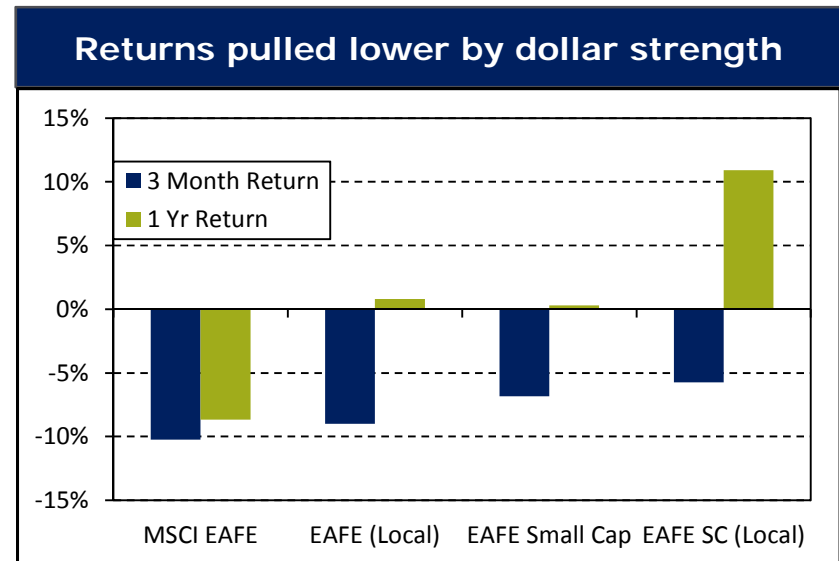
Source: Bloomberg, MSCI, FTSE \*UK represented by FTSE 100 Index



Source: Bloomberg

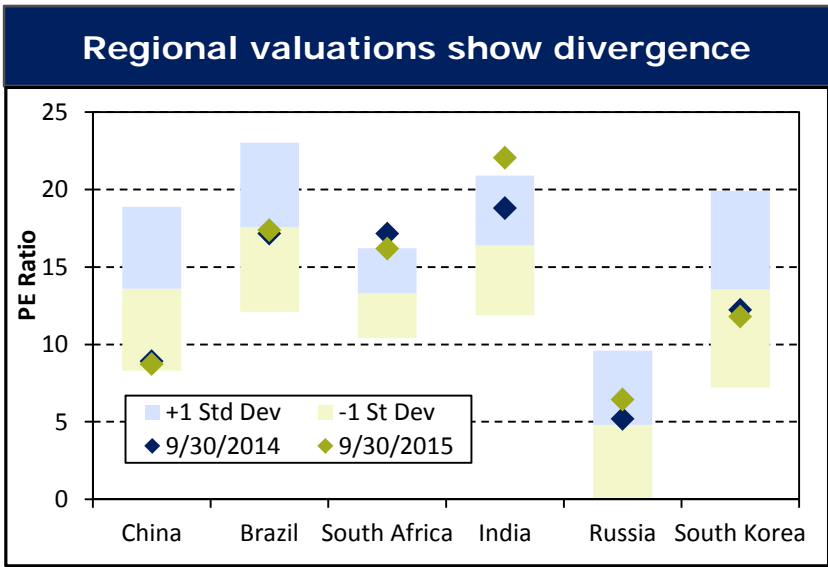


Source: Bloomberg, MSCI

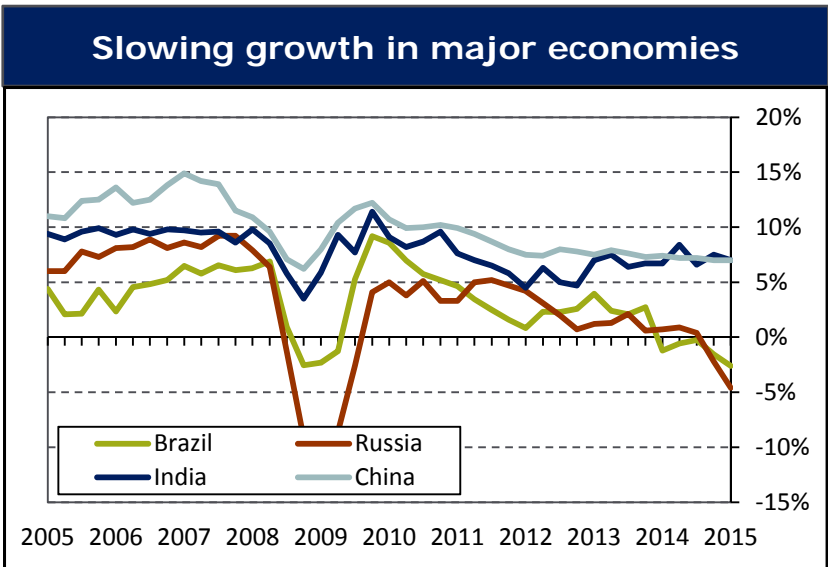


Source: Bloomberg, MSCI

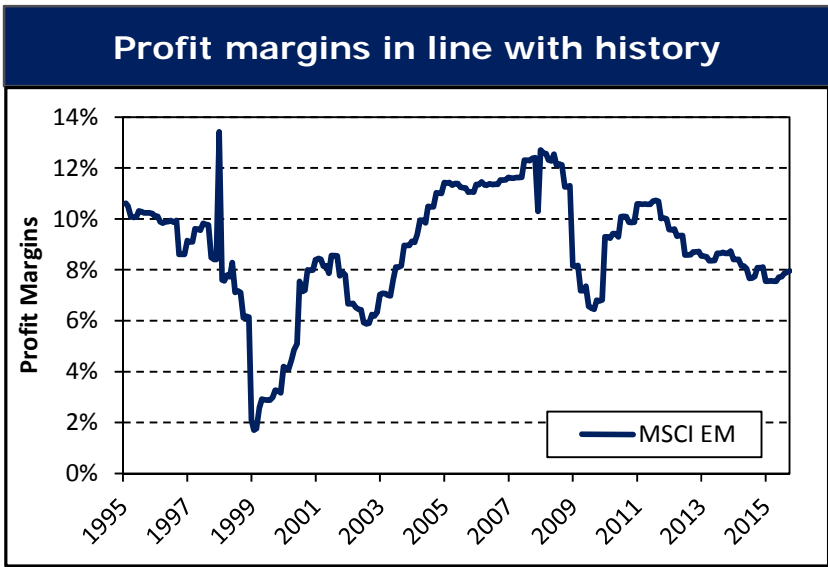
Emerging Markets Equity



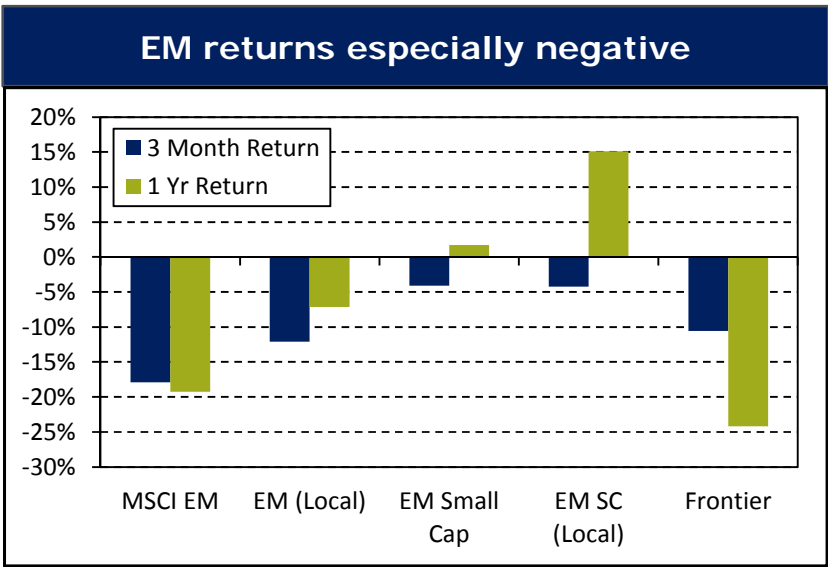
Source: Bloomberg, MSCI



Source: Bloomberg

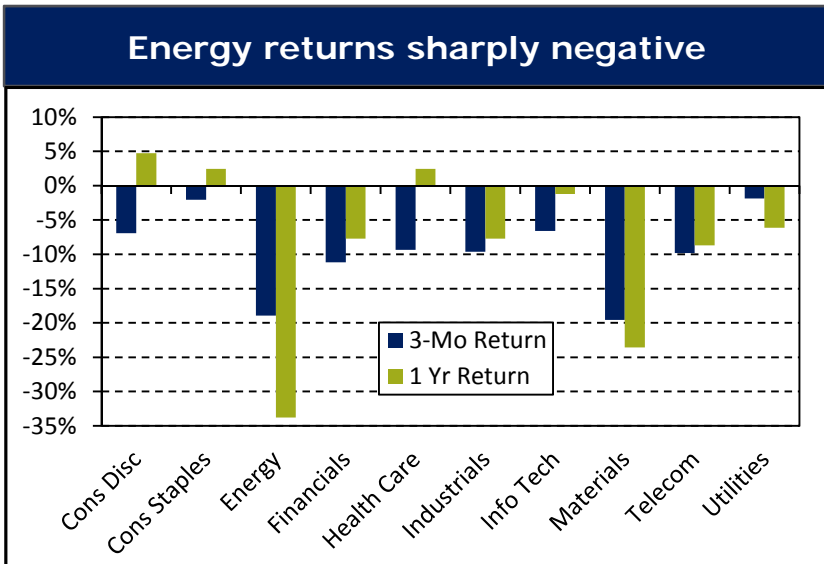


Source: Bloomberg, MSCI

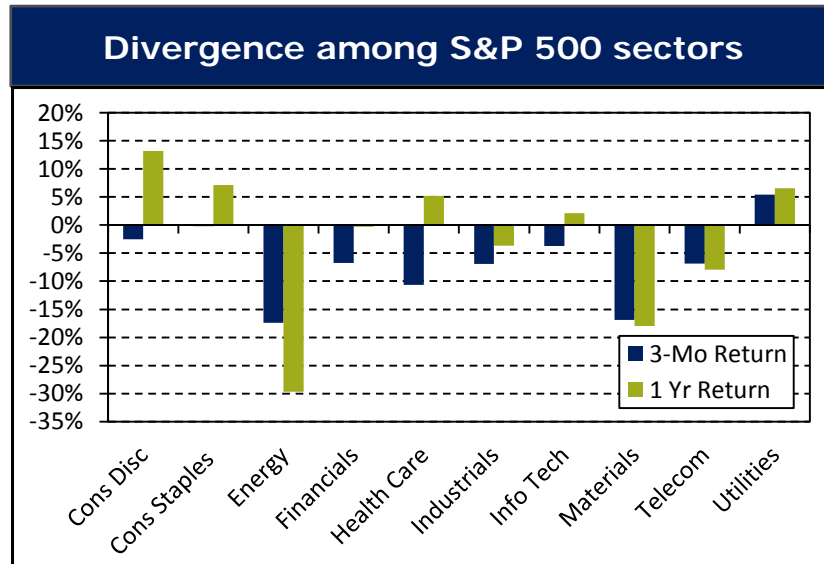


Source: Bloomberg, MSCI

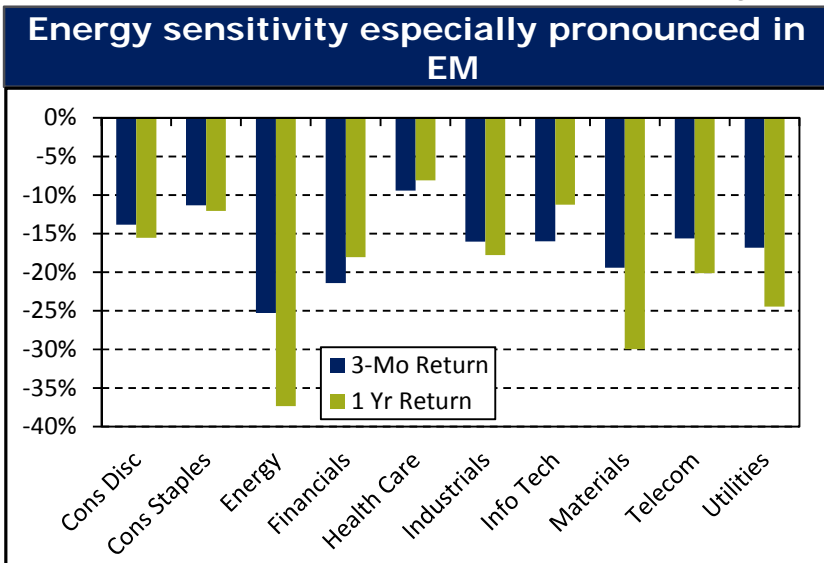
Global Equity by Sector



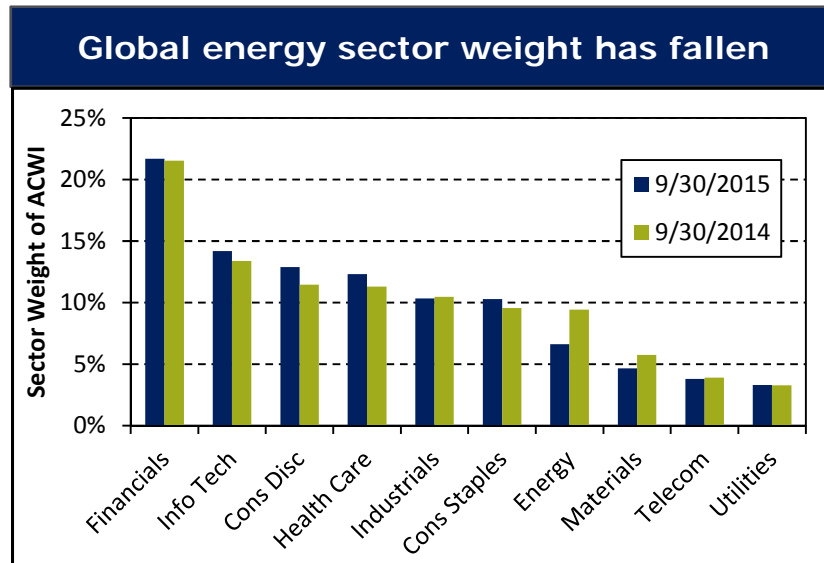
Source: Bloomberg, MSCI



Source: Bloomberg, Standard and Poors

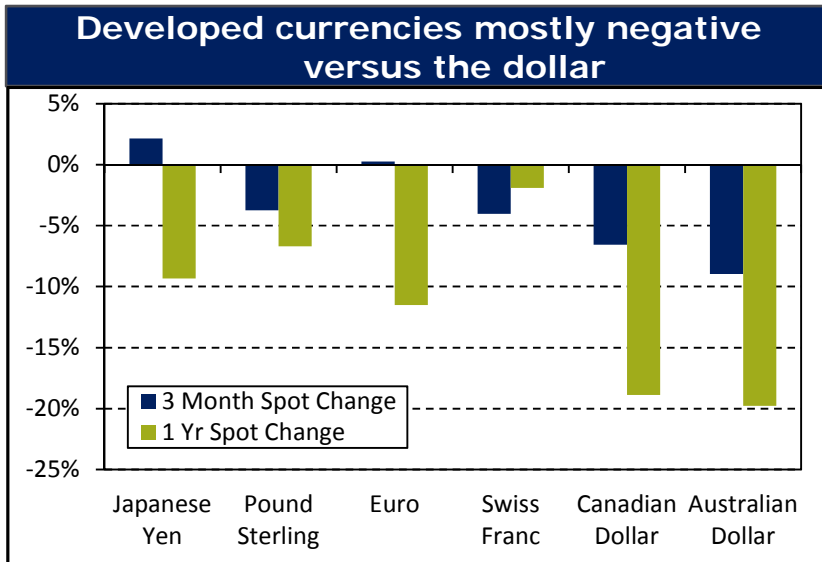


Source: Bloomberg, MSCI

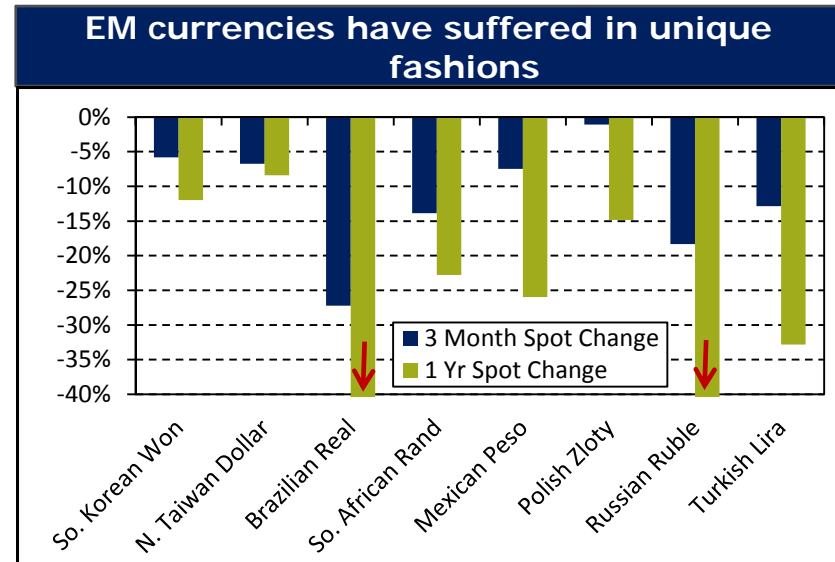


Source: Bloomberg, MSCI

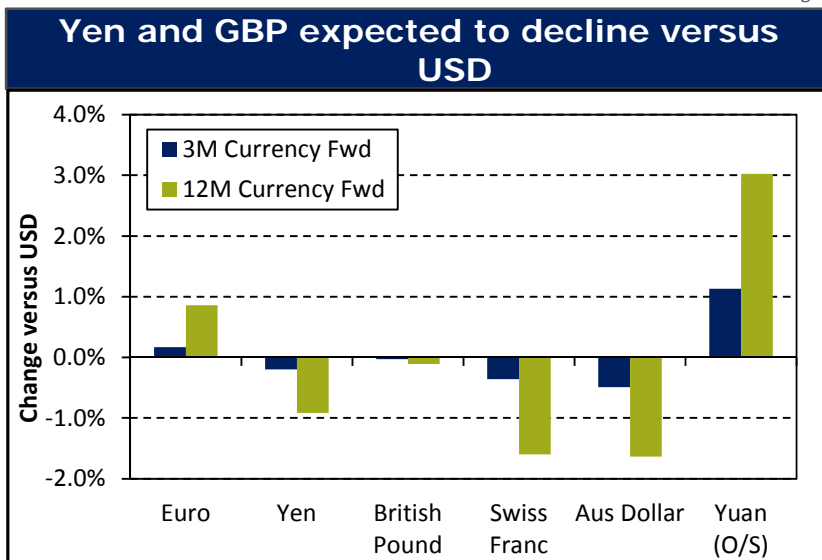
Currencies



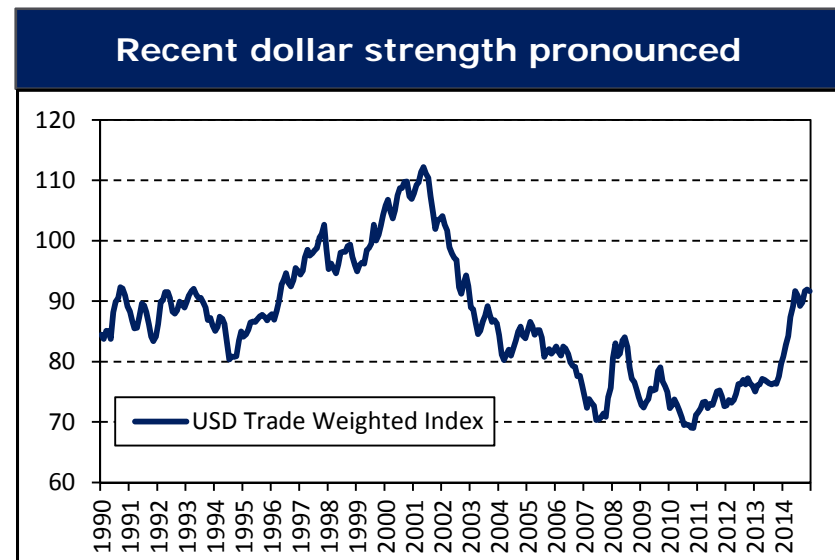
Source: Bloomberg



Source: Bloomberg

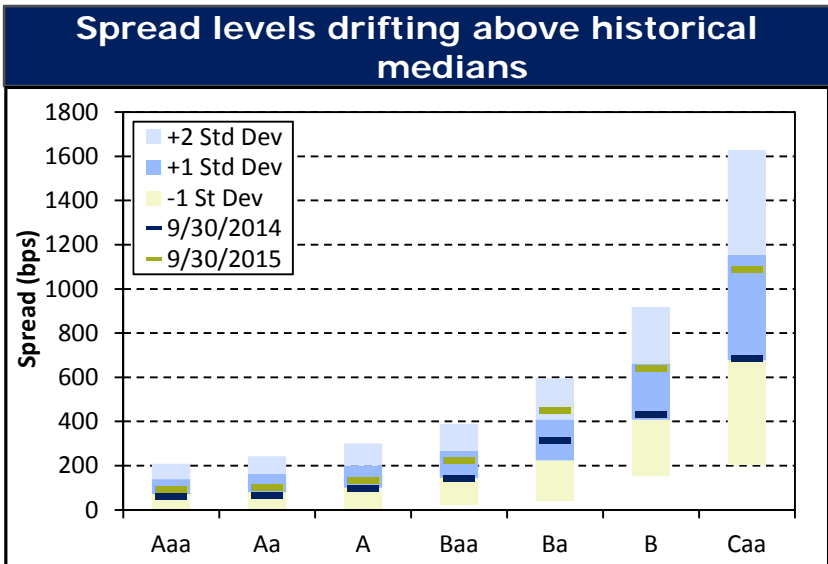


Source: Bloomberg

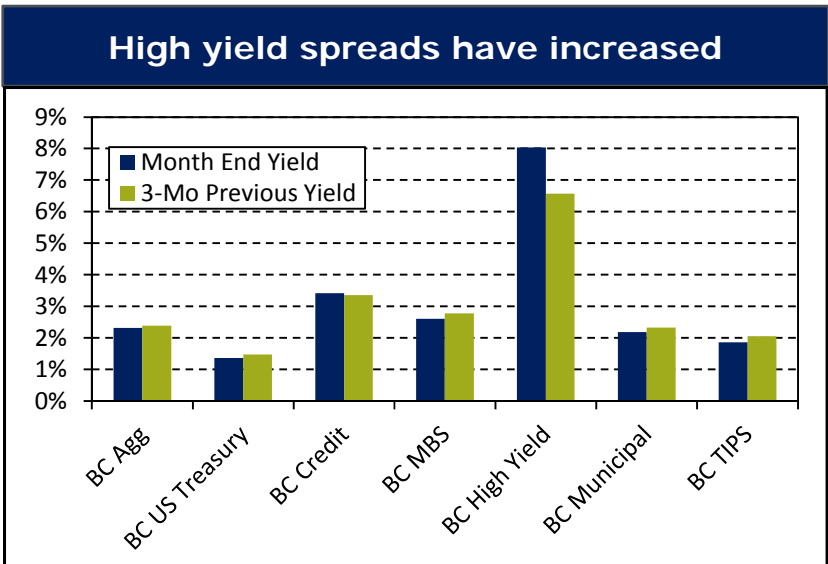


Source: Bloomberg, Federal Reserve

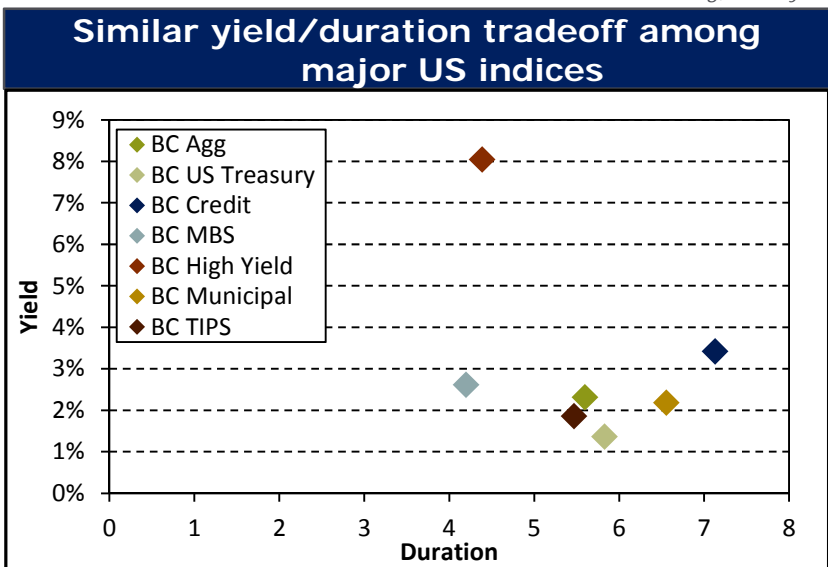




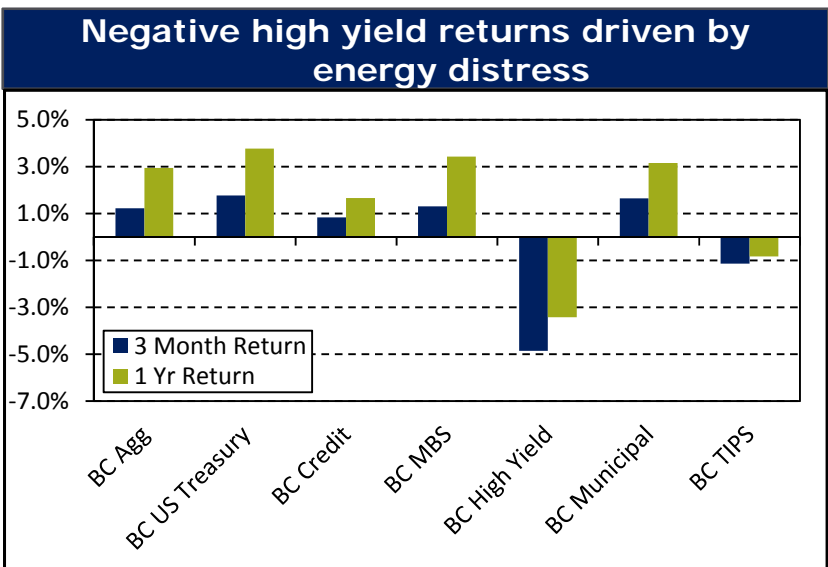
Source: Bloomberg, Barclays



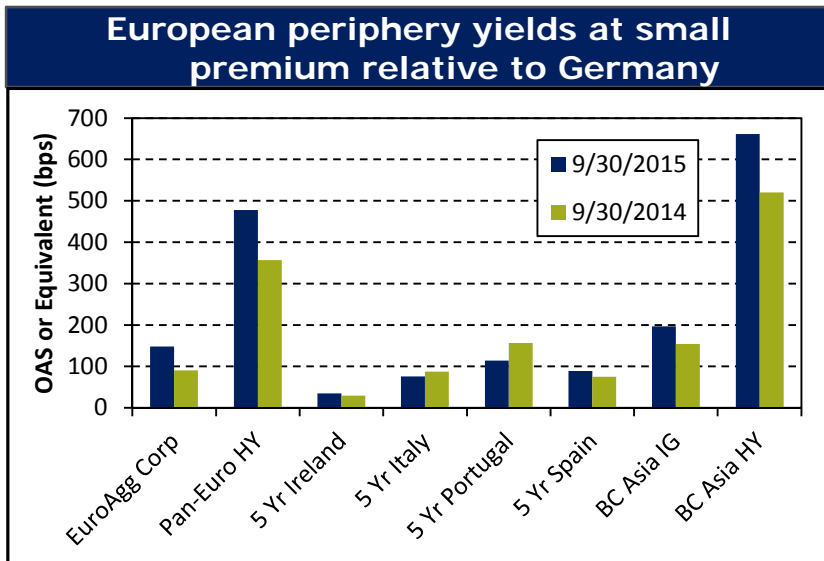
Source: Bloomberg, Barclays



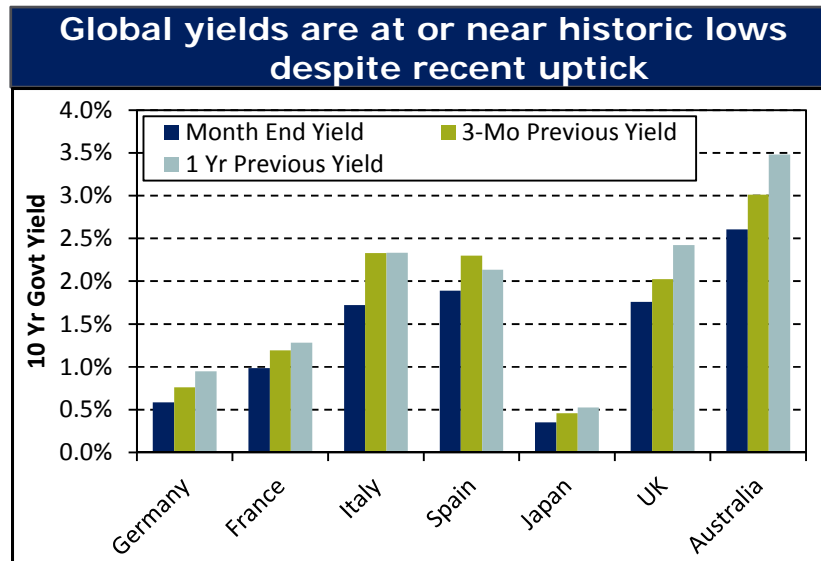
Source: Bloomberg, Barclays



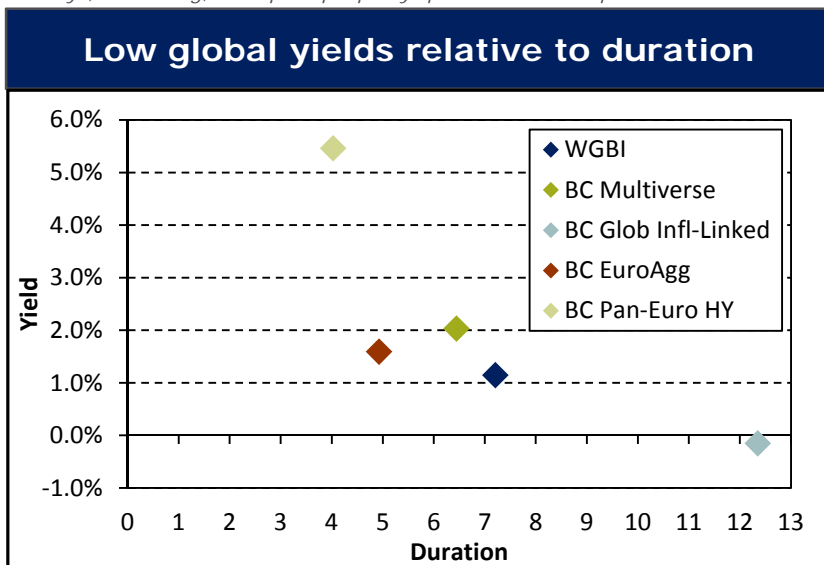
Source: Bloomberg, Barclays



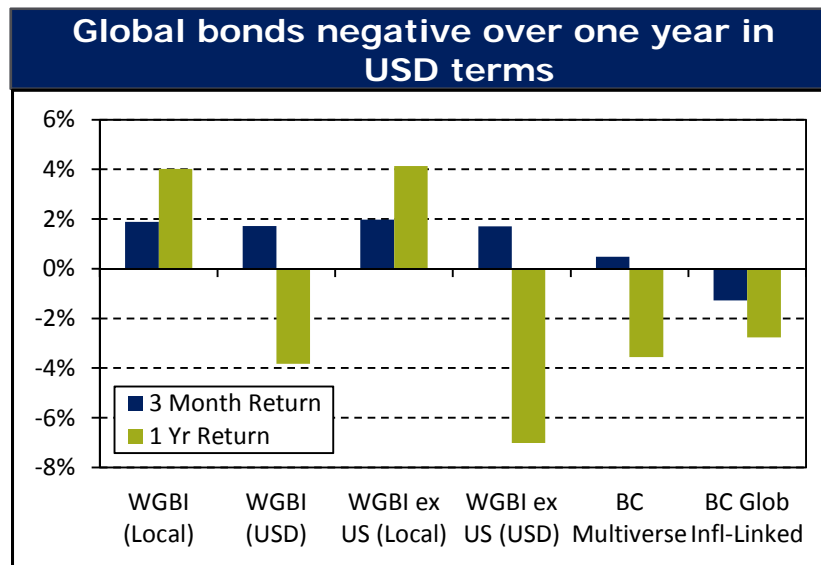
Source: Barclays, Bloomberg, \*European periphery spreads are over equivalent German Bund



Source: Bloomberg

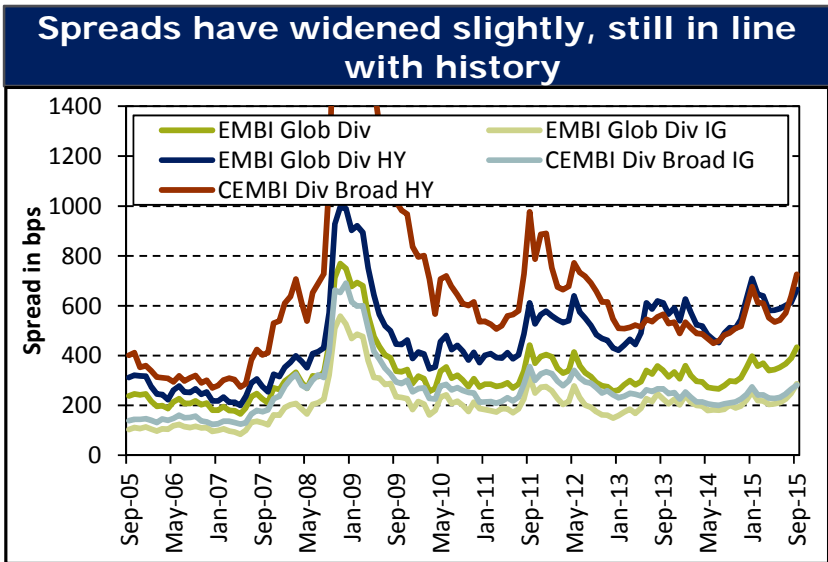


Source: Bloomberg, Citigroup, Barclays

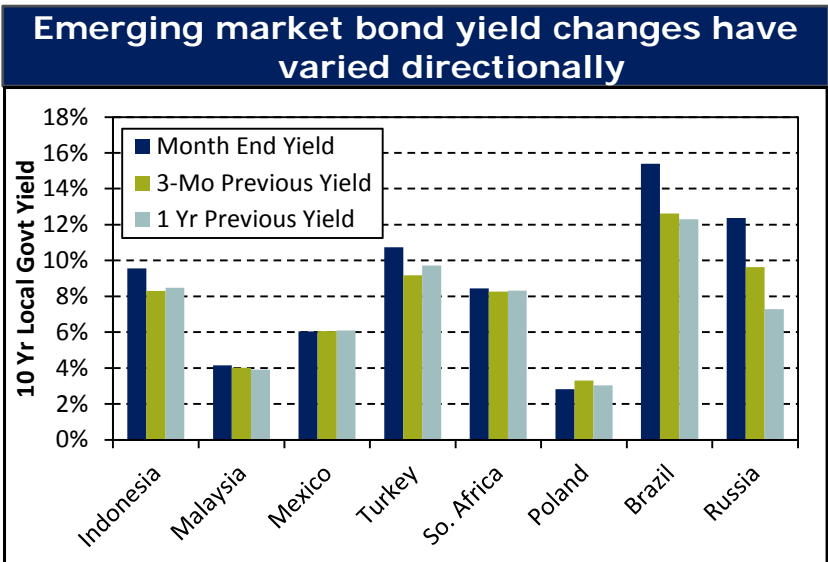


Source: Bloomberg, Citigroup, Barclays

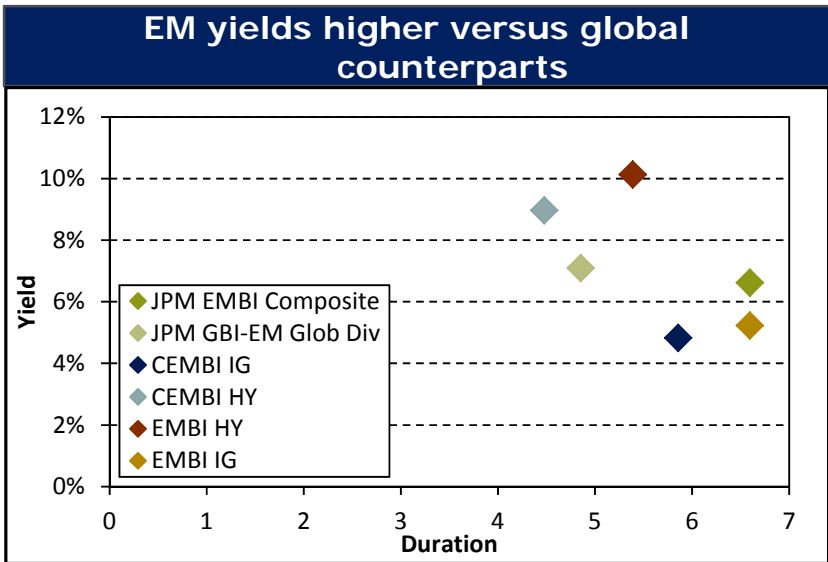
Emerging Markets Fixed Income



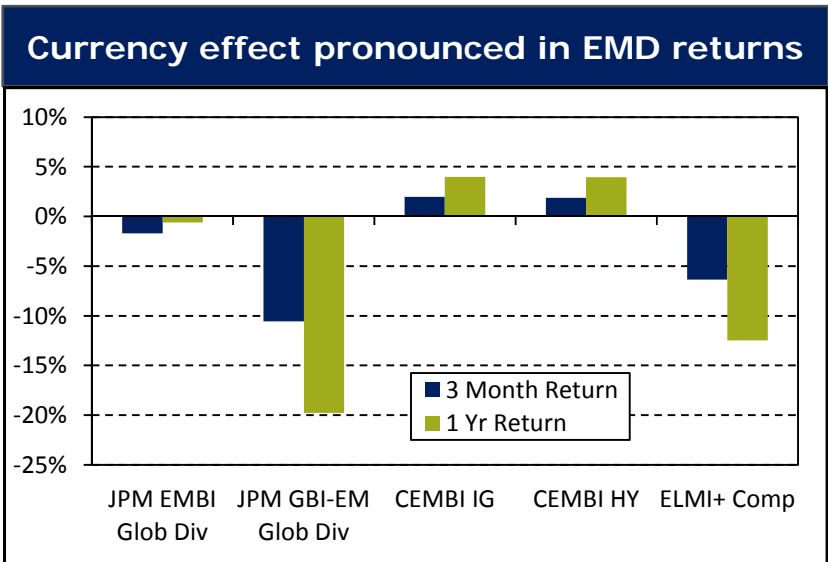
Source: Bloomberg, JP Morgan



Source: Bloomberg

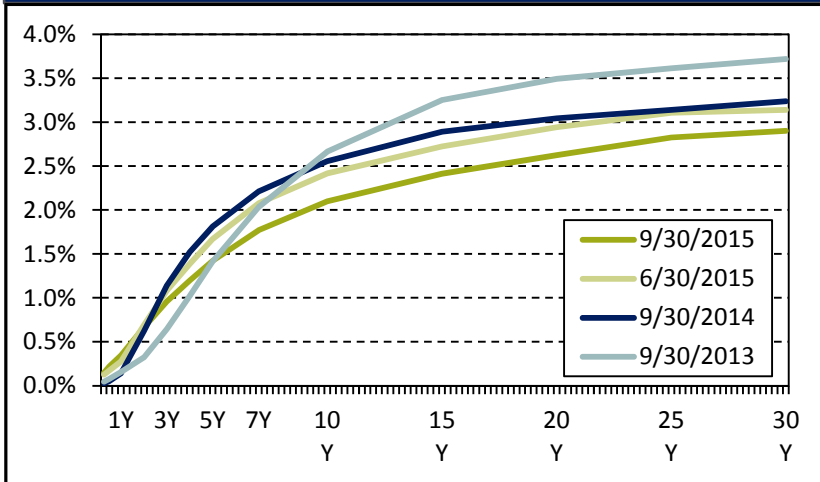


Source: Bloomberg, JP Morgan



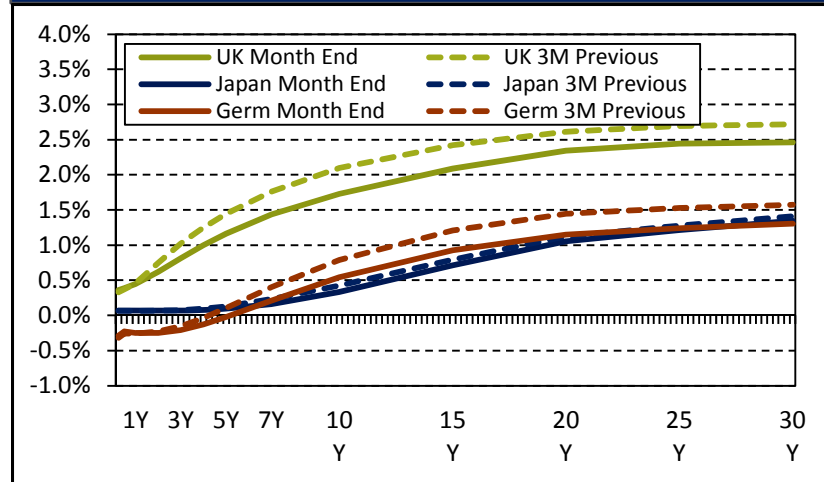
Source: Bloomberg, JP Morgan

**Treasury yield curve moderately lower versus Q2**



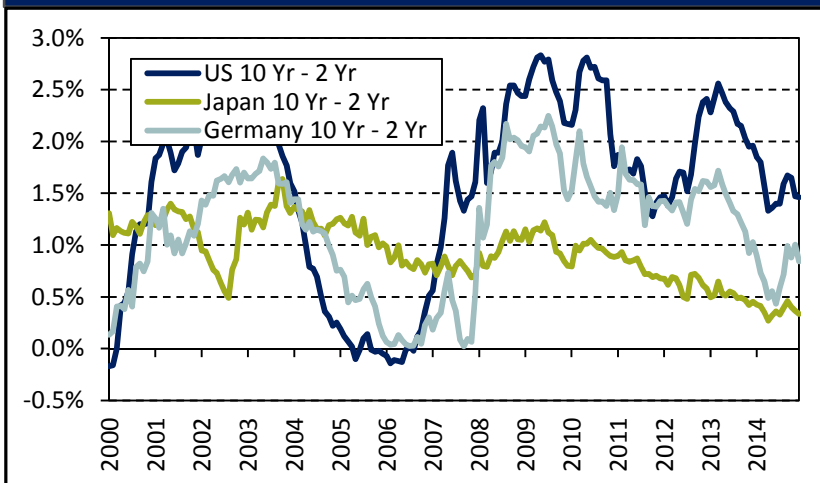
Source: Bloomberg

**German and UK curves have shifted downwards**



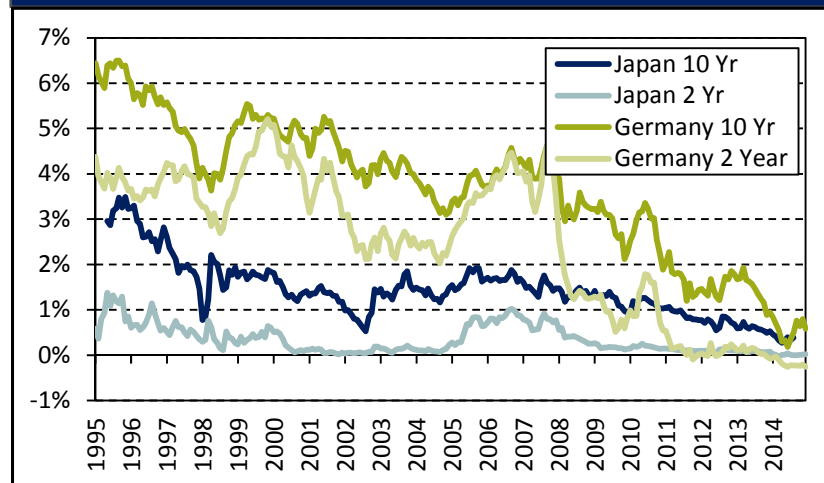
Source: Bloomberg

**Global yield curves have flattened**



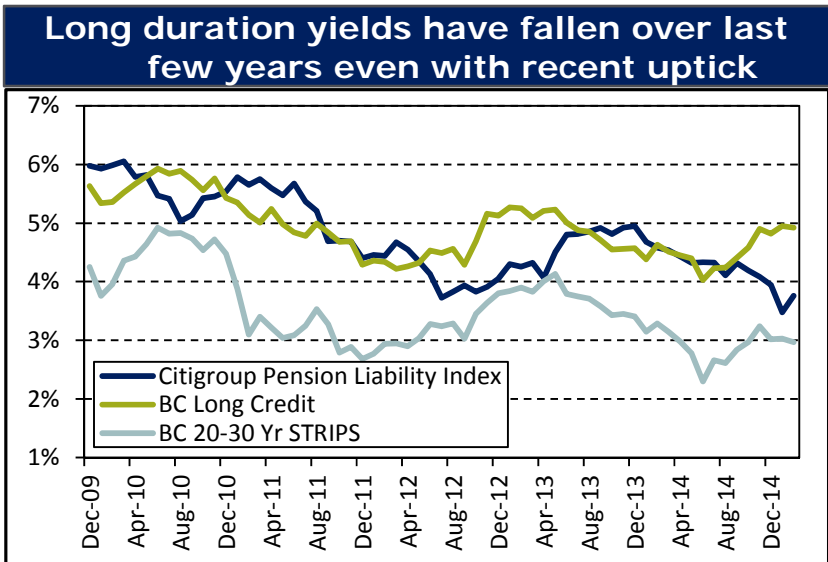
Source: Bloomberg

**Global yields have trended lower over long term**

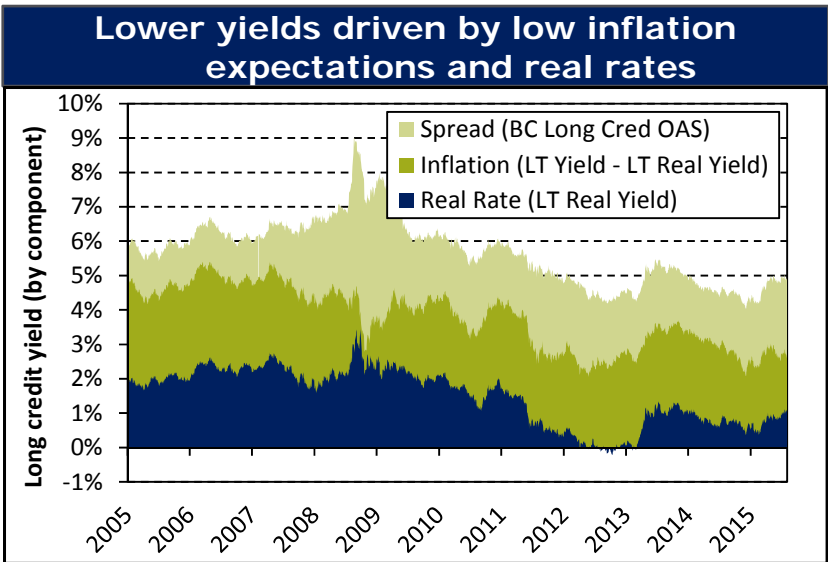


Source: Bloomberg

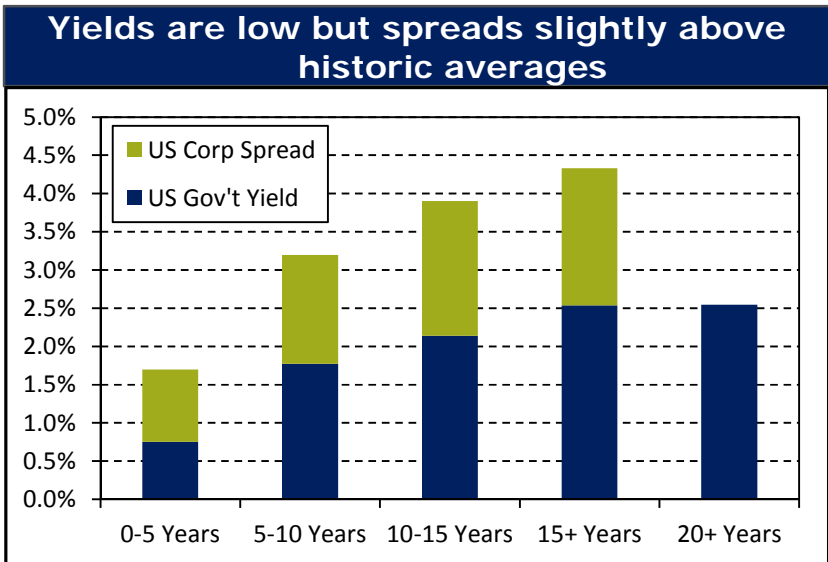
Long Rates and Liability



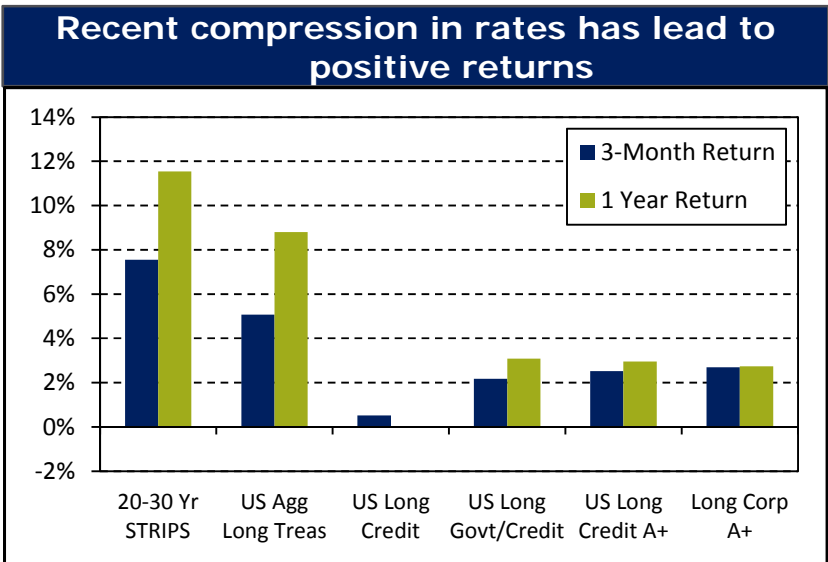
Source: Bloomberg, Citigroup, Barclays



Source: Bloomberg, US Treasury, Barclays, NEPC

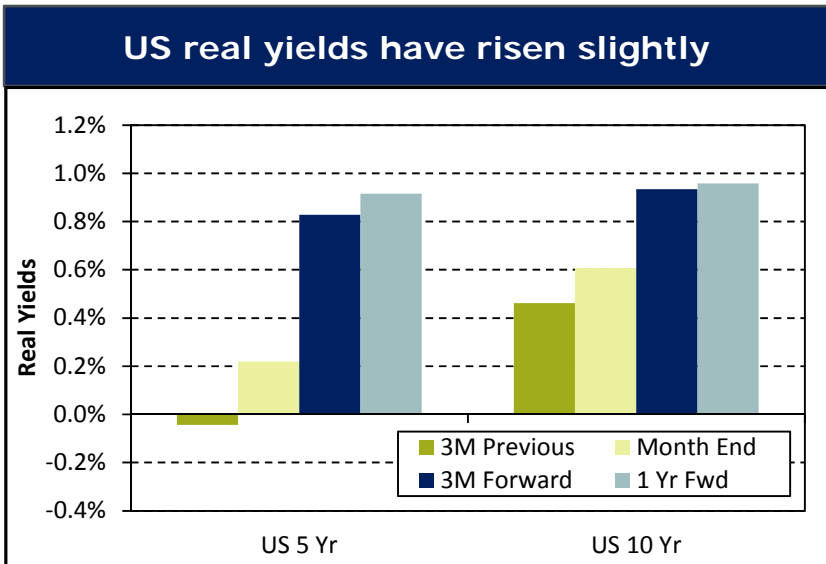


Source: Bloomberg, BofA Merrill Lynch, Barclays \*No index for 20+ year corporate

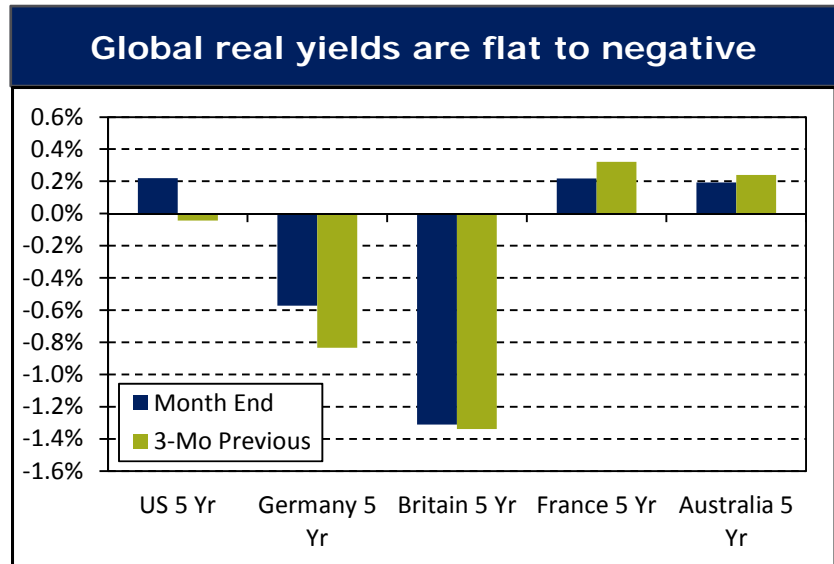


Source: Bloomberg, Barclays

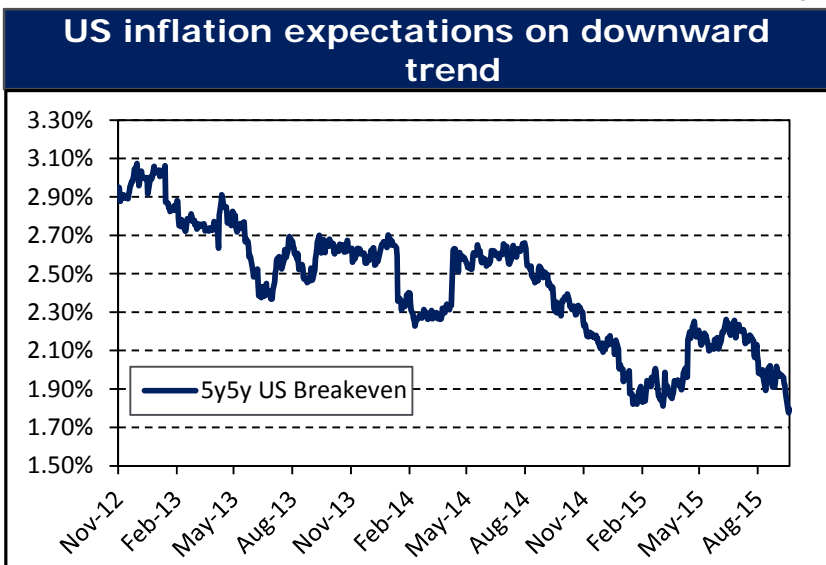
**Inflation and Real Rates**



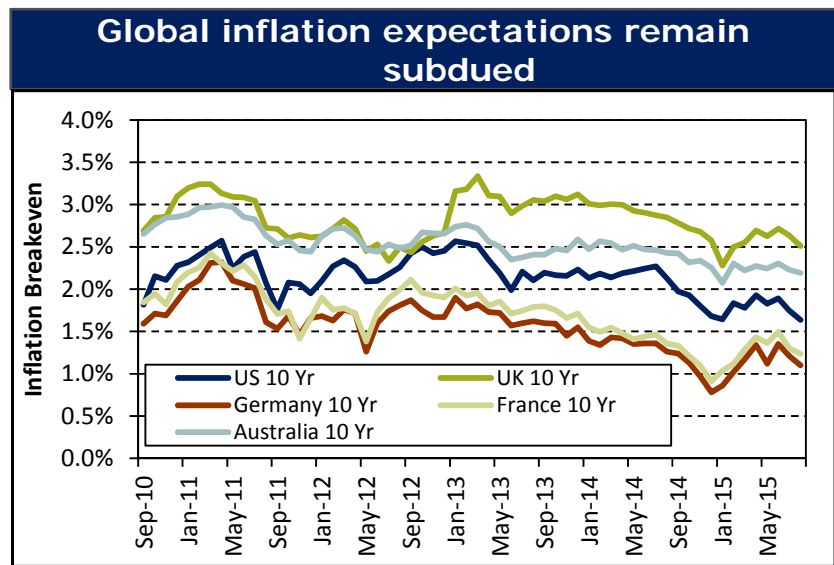
Source: Bloomberg



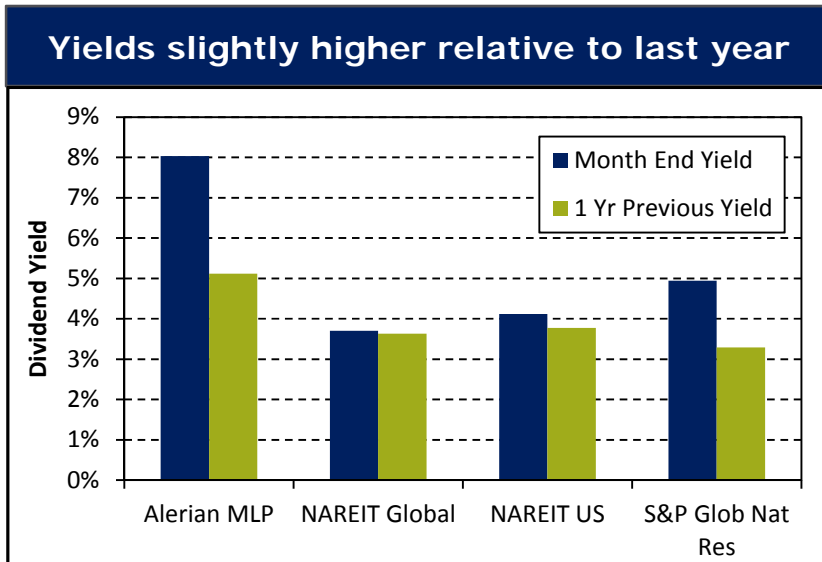
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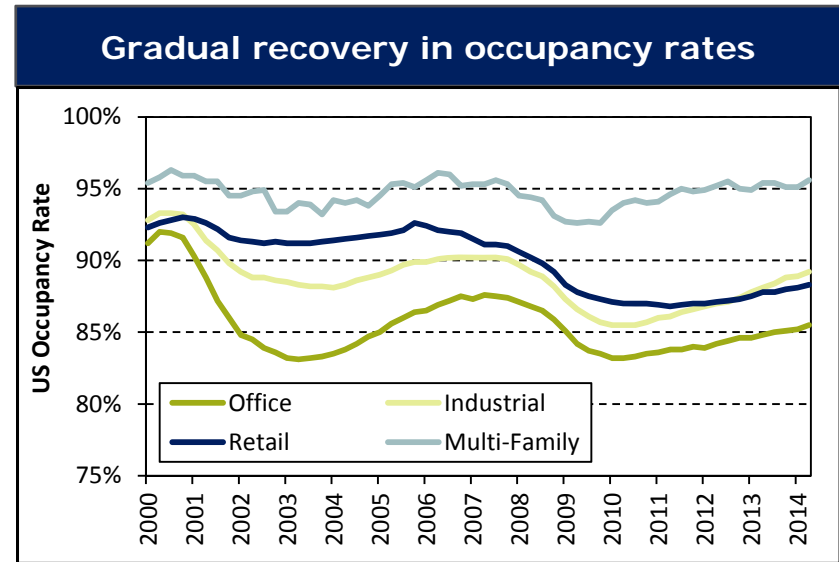
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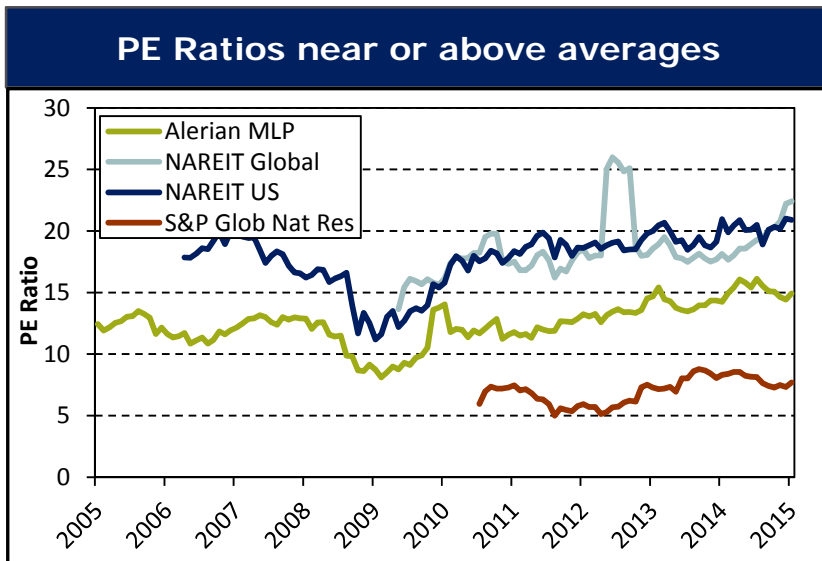
Source: Bloomberg



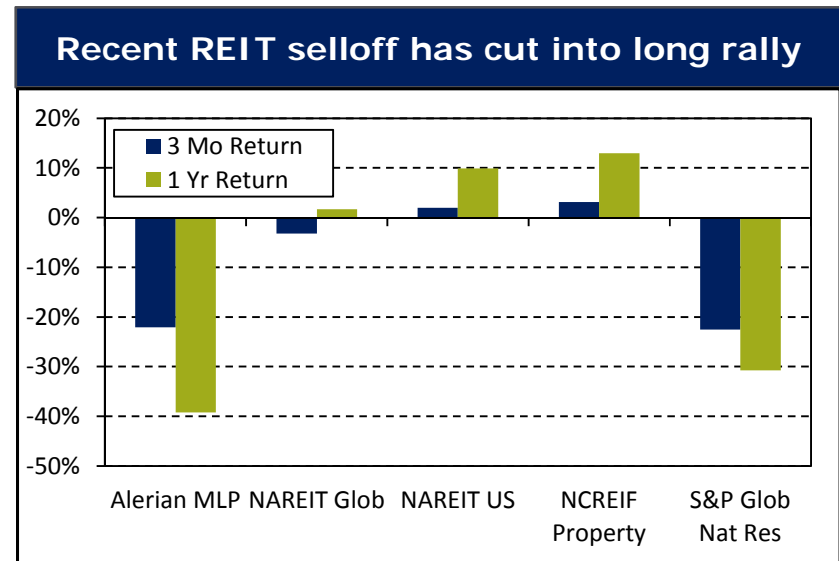
Source: Bloomberg, Alerian, Nareit, Standard and Poors



Source: Bloomberg, CB Richard Ellis

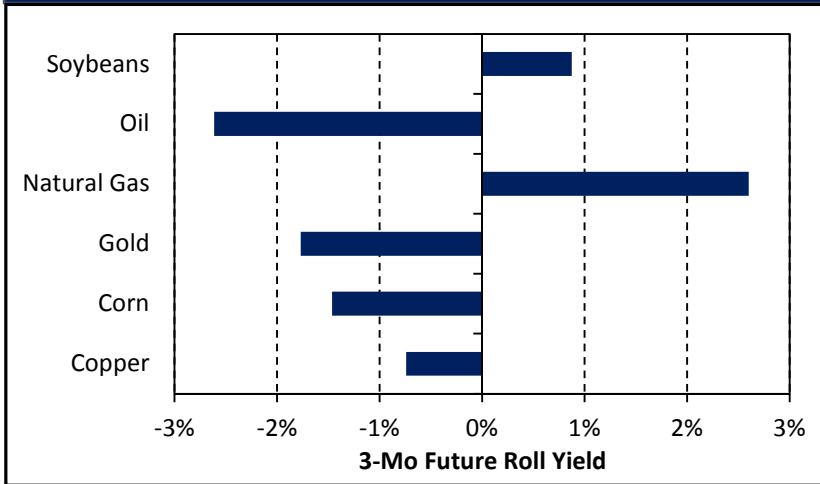


Source: Bloomberg, US Census Bureau



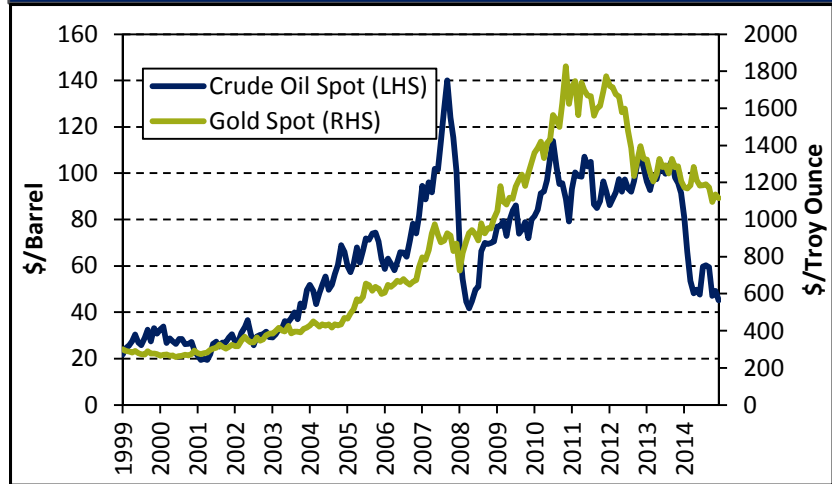
Source: Bloomberg, Alerian, Nareit, Standard and Poors

### Negative roll yields in major commodity futures



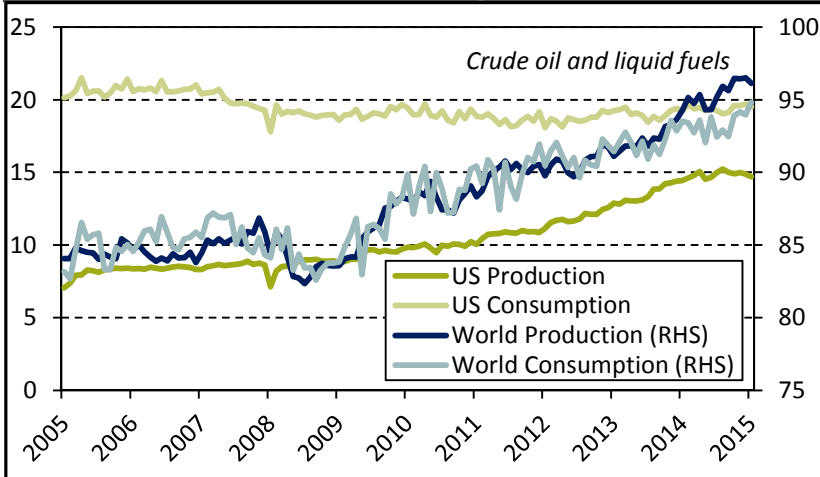
Source: Bloomberg

### Precipitous fall in oil prices



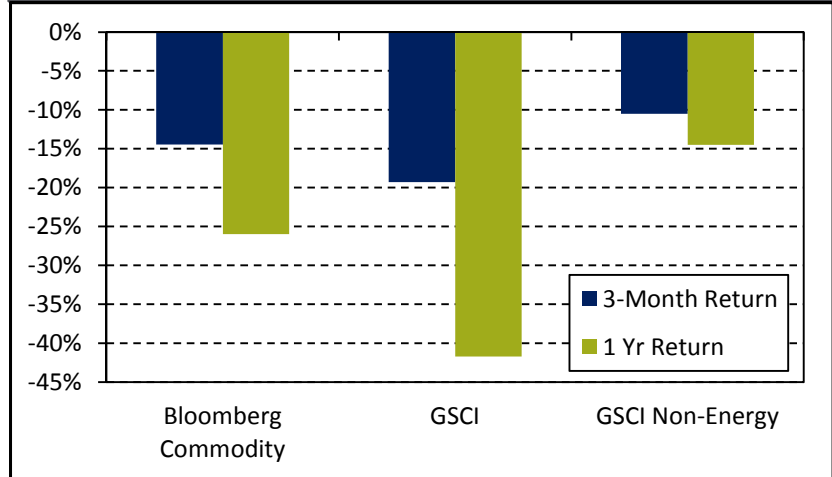
Source: Bloomberg

### US fuel production closing gap with consumption



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

### Commodity indices negative after oil-induced decline



Source: Bloomberg, Standard and Poors



## Information Disclaimer and Reporting Methodology

### Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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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.