



NEPC, LLC

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Vermont Pension Investment Committee

Fourth Quarter Investment Performance Analysis

February 23rd, 2016

Douglas W. Moseley, Partner
Christopher Levell, ASA, CFA, CAIA, Partner
Richard M. Charlton, Chairman
Nedelina Petkova, Analyst

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com

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NEPC Update



Highlights of Fourth Quarter Happenings at NEPC

After 30 Years NEPC's Founder has Transitioned to Chairman Emeritus

- NEPC's founder and chairman Richard "Dick" Charlton retired on January 1, 2016 after overseeing a decade-long succession process that involved a change in corporate structure and a planned approach to distributing his ownership shares. Dick had the foresight to begin distributing equity to partners 25 years ago and the formal succession process began in late 2007. Dick's vision for a client-focused organization continues to be the hallmark of NEPC and this deep-rooted culture will live on for generations to come. Mike Manning continues in his leadership role as Managing Partner with the guidance of our Partnership; a Partnership recognized throughout the industry for its depth, talent and culture. We are well positioned to lead in this increasingly competitive marketplace. NEPC has never been stronger.



Professional Staff Updates

- **New Principals:** Lenia Ascenso, Principal and Director of Discretionary Operations; Devan Dewey, Principal and Chief Technology Officer; and Matt Lombardi, Principal and Chief Financial Officer
- We are also pleased to announce that Wyatt Crumpler joined NEPC in November as a Principal and Senior Consultant from American Beacon Advisors, Inc., and Sam Pollack joined NEPC as a Senior Consultant from DiMeo Schneider and Associates. Wyatt is a member of NEPC's Corporate consulting group and Sam is a member of NEPC's Endowment & Foundation consulting group.

Upcoming/Recent Events

- 2016 Market Outlook Webinar: January 26, 2016 at 2:00 PM EST.
- NEPC's 21st Annual Client Conference: May 10-11, 2016 in Boston at the Hynes Convention Center.
 - This year we will be offering an optional pre-conference workshop on Monday, May 9th at NEPC's Boston office.
- NEPC hosted a Manager Diversity Program event at our Boston office on October 12, 2015 in an effort to continue and enhance our firm's efforts in this area. The purpose of the gathering was to provide an opportunity for diverse managers to meet NEPC and have an open discussion about our research efforts in the arena of minority- and female-owned firms.

Highlights of Fourth Quarter Happenings at NEPC - continued

NEPC Research

Recent White Papers

- *2015 Fourth Quarter Market Thoughts*
- *Governance: The Cornerstone of Successful Investment Programs* (January 2016) – Endowment & Foundation Practice Team
- *Green Bonds: An Overview* (December 2015) – NEPC Impact Investing Committee
- *Completing the Analysis: ESG Integration* (November 2015) – NEPC Impact Investing Committee
- *NEPC's Survey on Hedge Fund Operations* (November 2015) – Hedge Fund Operational Due Diligence team
- *Market Chatter: The Rise and Fall (and Rise?) of Oil Prices* (October 2015)



NEPC Recognitions

- NEPC, LLC was awarded "Best Full-Service Investment Consulting Firm - USA" by Acquisition International for the 2016 Hedge Fund Awards ¹

NEPC Client Recognitions

- Congratulations to the following NEPC clients for their nominations as Asset Owner Finalists for the 2015 CIO Industry Innovation Awards. Five NEPC clients who won awards in their categories are also highlighted below.
 - **Foundation:** Wisconsin Alumni Research Foundation (Carrie Thome) - Category Winner; Northwest Area Foundation (Amy Jensen)
 - **Endowment:** Fordham University (Eric Wood); Texas Tech University System (Tim Barrett)
 - **Public Defined Benefit Plan Below \$15B:** Orange County Employees Retirement System (Girard Miller) - Category Winner; MoDOT and Patrol Employees' Retirement System (Larry Krummen)
 - **Public Defined Benefit Plan Between \$15B and \$100B:** Massachusetts PRIM (Michael Trotsky) - Category Winner
 - **Public Defined Benefit Plan Above \$100B:** New York City Retirement System (Scott Evans); State of Wisconsin Investment Board (David Villa)
 - **Health Care Organization:** Baylor Scott and White Health (Mark Amiri) - Category Winner; Trinity Health (Dina Richards)
 - **Next Generation:** Massachusetts PRIM (Sarah Samuels) - Category Winner

2016 Observations & Actions

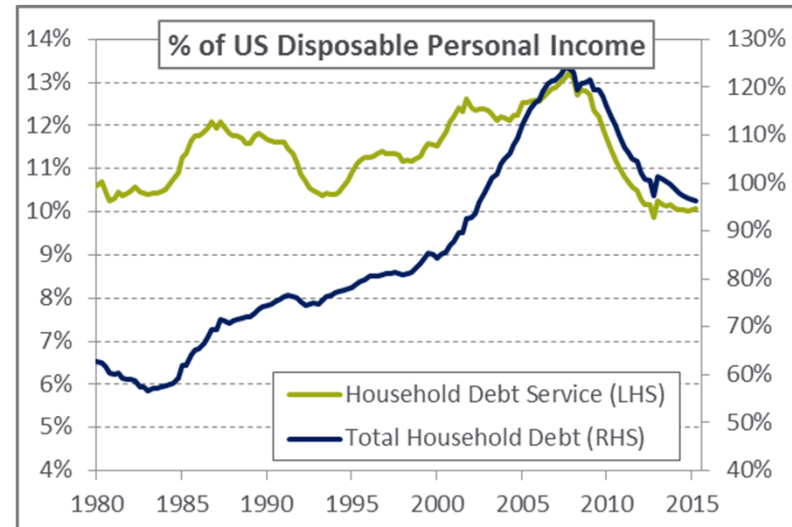


- **Continue to evaluate long-term feasibility of actuarial rate of return assumption**
 - Longer-term yields and risk premiums remain muted compared to historical (30-year) return expectations for most asset classes
- **U.S. equities still appear attractive relative to core bonds**
 - Look for opportunities to rebalance during periods of increasing volatility
- **Within the overall equity portfolio, continue to consider an overweight target allocation to developed non-U.S. equity**
 - Continued stimulative monetary policy in Europe and Japan should support an improved economic environment and offers potential for upside surprises
- **Revisit total emerging exposure (equity and debt) for your plan**
 - Determine total emerging markets exposure on a “look through” basis (including underlying EM exposure of GAA, Global Equity, Absolute Return Fixed Income, etc.)
 - Reaffirm comfort with amount of direct and indirect exposure
- **Enhance, don’t abandon, core fixed income**
 - Treasury bond and TIPS exposure in traditional core portfolios provides important downside protection in volatile “risk-off” environments
 - Use of multi-sector/unconstrained fixed income can provide a good complement to core, but should not be viewed as a stand-alone replacement
- **Evaluate total exposure in the portfolio to commodity price volatility**
 - Real assets (public and private), Risk Parity, GAA, and emerging markets allocations have varying degrees of commodity exposure
 - Return expectations for direct commodity exposure have continued to decline

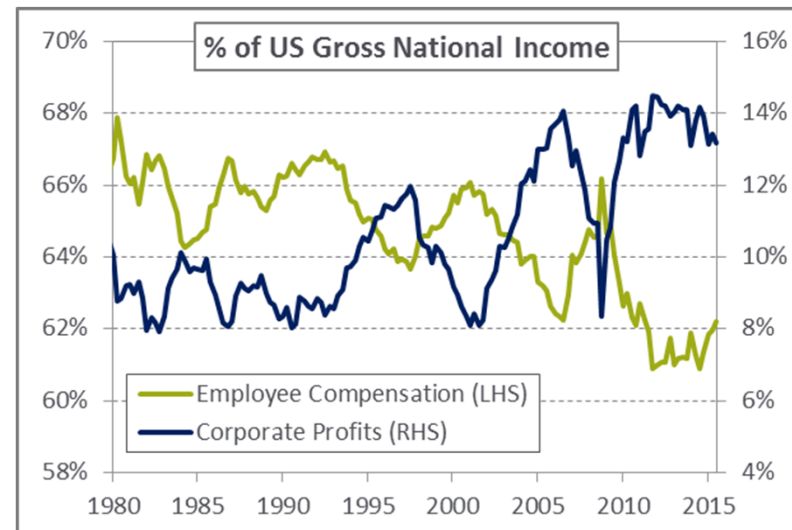
- **US economic expansion continues as Federal Reserve begins policy shift**
 - Economic conditions and health of US consumers remain supportive for growth
 - Profit margin declines and strong dollar are a challenge to corporate profitability
- **Central Banks continue to dictate the global investment outlook**
 - Path of Fed policy over next two years matters more than timing of the next Fed action
 - ECB and BoJ likely to maintain and extend accommodative policies
 - Easing in China is broadly stimulative but currency policy is unpredictable
- **Persistent strength of US dollar reveals global market weakness**
 - World economy has experienced a “dollar recession” as global output slows
 - Dollar strength tightens global monetary conditions and strains global growth
- **Weak growth should not lead to a financial crisis in emerging markets**
 - Negative asset returns reflect adjustments necessary for future economic success
 - Further political and market reforms are necessary for improved economic conditions
- **Stressed credit liquidity magnifies the scale of price movements**
 - Central bank easing and positive investor sentiment have masked deterioration in liquidity
 - Credit markets ability to absorb an exodus from crowded positions could be challenged

Slow and Steady for US Economy as Cycle Extends

- **US GDP continues to strengthen modestly**
 - Consumer spending supported by healthy balance sheets
 - Low energy prices and debt service have provided stimulation
- **US economy shows resilience against headwinds**
 - Fed support through quantitative easing has been removed
 - Dollar strength pressures profit margins of global companies
 - Subdued global growth and challenges in certain emerging markets
- **Corporate profits begin to lag from secular highs**
 - Buybacks and financial engineering have buttressed earnings per share
 - Profitability has begun to slow from rising dollar and wage pressures



Source: St. Louis Federal Reserve

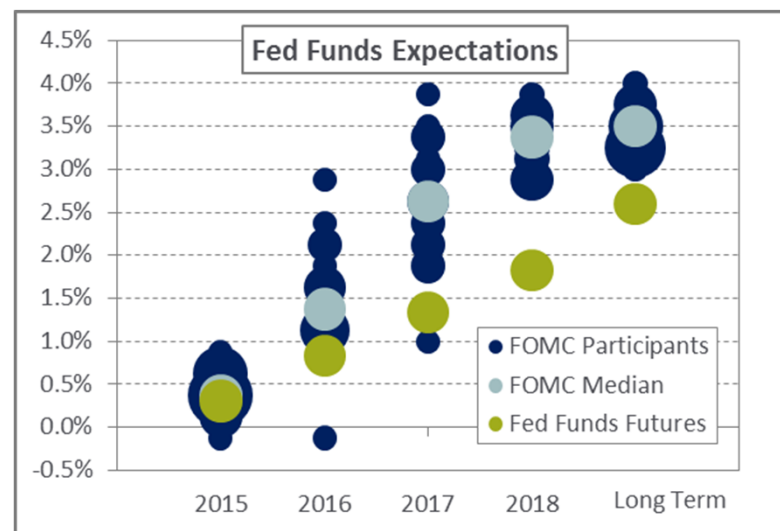


Source: St. Louis Federal Reserve

Follow The Money – Central Banks Continue to Drive Capital Market Results

- **Next steps in Fed policy closely watched but path is a bigger (and more important) unknown**

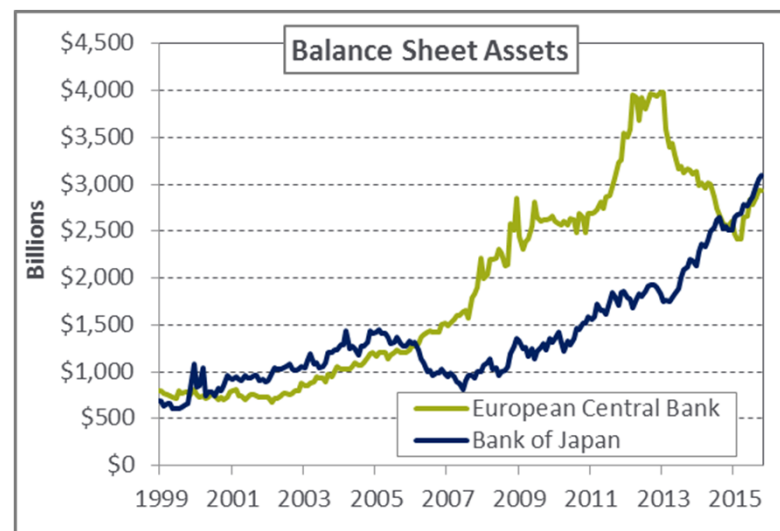
- 25 basis point increase unlikely to cause economic slowdown
- Rate increases beyond market expectations could prove challenging for asset prices
- Long-term terminal Fed Funds rate determines pricing for all assets



Source: FOMC, Bloomberg

- **Monetary stimulation in Europe and Japan has been effective**

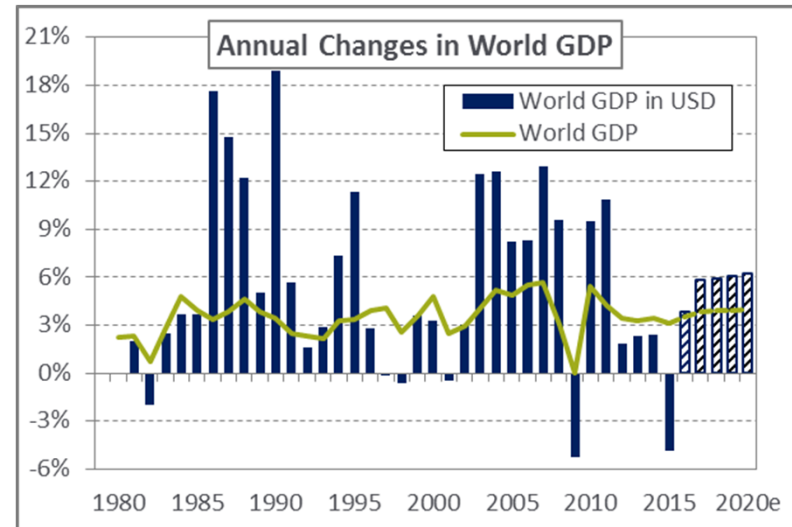
- Both regions require further accommodation to continue gradual economic recovery
- Effectiveness of easing may be challenged with bond yields and credit spreads relatively low
- However, zero interest rate bound has been broken, offering room for further easing



Source: European Central Bank, Bank of Japan, Bloomberg

Sustained US Dollar Appreciation is Globally Disruptive

- **Positive global GDP growth masks challenges of a strong dollar**
- **World economy has suffered a “dollar recession” as global GDP in USD terms has declined by nearly \$4 trillion**
 - Appreciation in US dollar strains global liquidity and reveals underlying market weakness
 - Pressures commodity markets and credit growth for international borrowers holding dollar based debt
- **Dollar strength impacts global economy in meaningful ways**
 - Improves competitiveness for countries and companies heavily reliant on exports to the US
 - Represents a headwind to US corporate earnings and exports
 - Fed is forced to balance slower interest rate increases or pushing the dollar higher



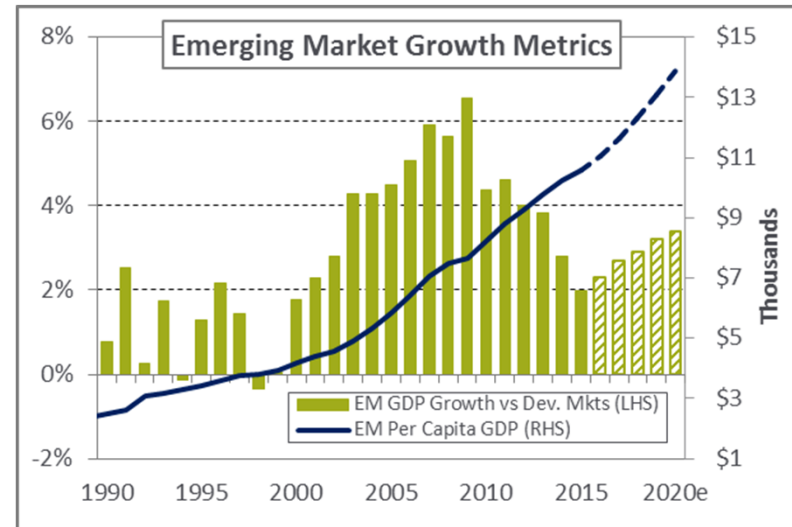
Source: IMF



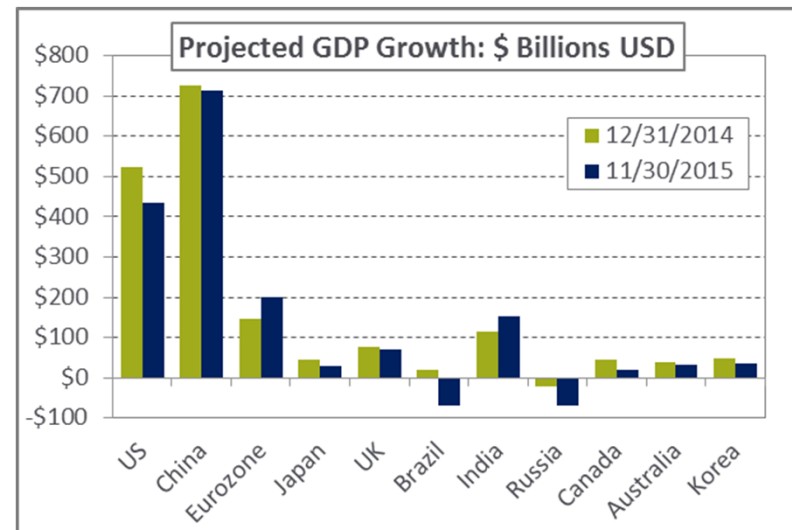
Source: St. Louis Federal Reserve

Emerging Market Growth Dependent on China and Rising Consumer Spending

- **Emerging market growth premium relative to developed world remains but is subdued**
 - Per Capita GDP continues to rise, pushing standard of living higher and supporting consumer growth
- **Initiative to reform reflects the distinct and varied outlook across countries**
 - Political challenges and commodity market distress are material risks for both Russia and Brazil
 - Reform minded countries are realizing economic adjustments necessary for sustainable growth and economic success
- **Economic conditions across emerging world are distinct but China is the focus**
 - China remains the growth engine for the world but is transitioning to a new economic model



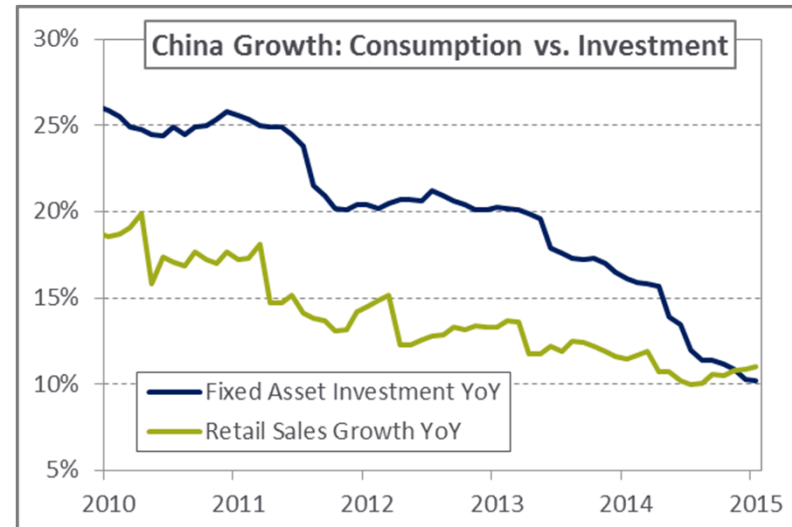
Source: IMF



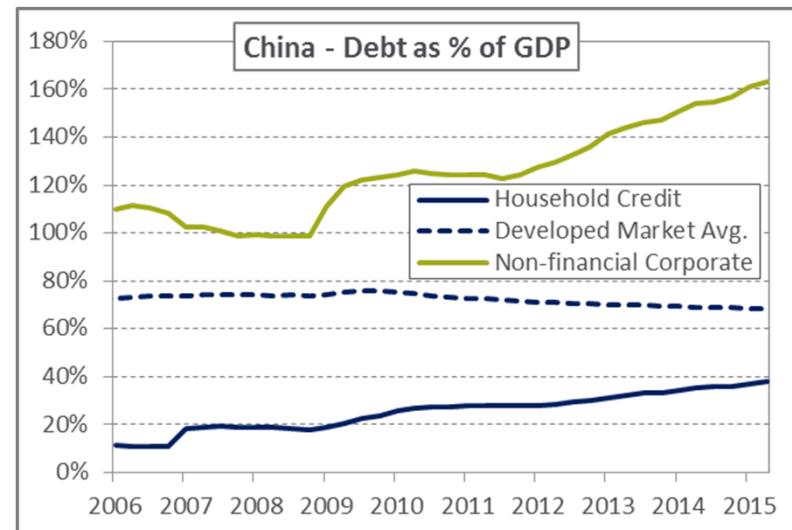
Source: Bloomberg

Structural Economic Change in China has Global Implications

- **Decline in fixed investment is lowering China's growth rate**
 - Broad implications for many emerging economies and commodity producers
- **Shift is underway from an export and investment led economy to a consumer focus**
 - Adjustment is paired with ongoing market reforms to liberalize currency and financial markets
 - Continued strength of the US dollar may force a more aggressive currency adjustment from China
- **Consumer spending likely to be the economic growth engine**
 - Retail sales have been immune to the extreme stock market volatility
 - Significant capacity for long-term credit growth among households



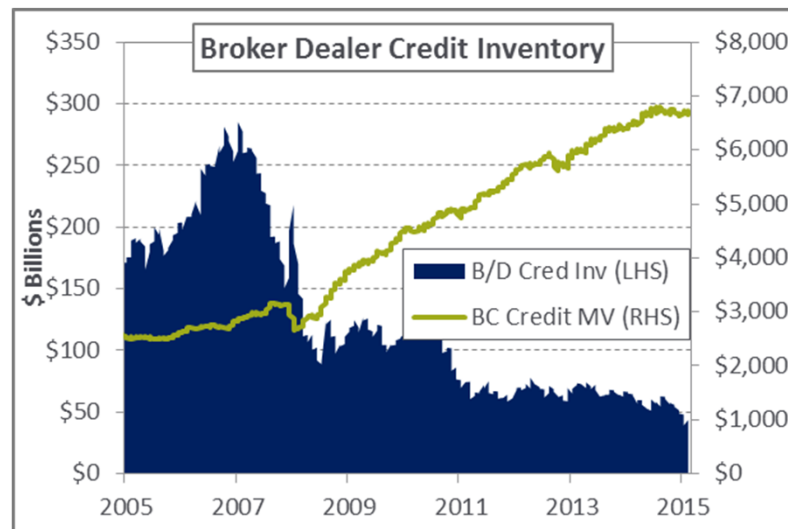
Source: Bloomberg



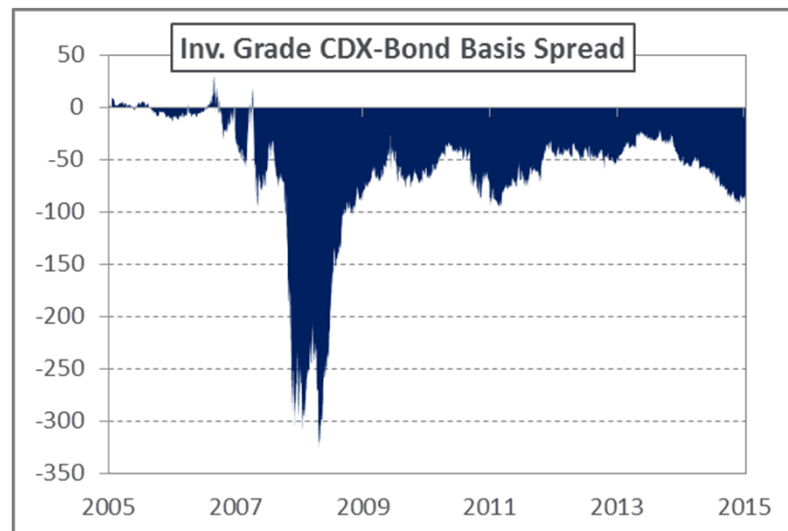
Source: Bank for International Settlements

Credit Market Liquidity Warrants Caution

- **Underlying market conditions remain fragile despite rebound from August sell-off**
 - Credit markets' could be challenged to absorb exodus from crowded positions
- **Credit inventories lower today with less bank capital at risk**
 - Liquidity provisions of new regulatory model are untested in true crisis
- **Derivative exposure less reliable**
 - Variable and negative CDX basis makes hedging unpredictable
- **Certain factors in place that can help stave off a liquidity crisis**
 - Low rate policies, bullish sentiment, positive economic results
- **Dynamic active strategies with disciplined credit approach can exploit periods of stress**



Source: NY Federal Reserve



Source: Barclays Capital

Index Performance Summary as of 1/31/2016

	2009	2010	2011	2012	2013	2014	2015	JAN
Barclays US Strips 20+ Yr	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	6.9%
Barclays US Govt/Credit Long	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	2.1%
Barclays US Agg Bond	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	1.4%
Citi WGBI	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	1.4%
Barclays US Agg Interm	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	1.3%
Barclays Municipal	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	1.2%
Barclays US Govt/Credit 1-3 Yr	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	0.5%
JPM GBI-EM Global Diversified	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	0.3%
Barclays US Long Credit	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	0.3%
JPM EMBI Global Diversified	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	-0.2%
Credit Suisse Hedge Fund	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	N/A
Credit Suisse Leveraged Loan	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	-0.7%
Barclays US Corporate High Yield	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	-1.6%
Bloomberg Commodity	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	-1.7%
FTSE NAREIT Equity REITs	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	-3.4%
S&P 500	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	-5.0%
Russell 1000	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	-5.4%
MSCI ACWI	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	-6.0%
MSCI EM	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	-6.5%
MSCI EAFE	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-7.2%
Russell 2500	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	-8.0%
Russell 2000	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	-8.8%
Alerian MLP	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	-11.1%

Source: Morningstar Direct



NEPC, LLC

State Teachers' Retirement System

Vermont State Teachers

Total Fund Performance Summary

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Teachers Composite	\$1,579,876,829	1.0%	96	-4.1%	91	-1.8%	88	3.5%	97	5.1%	92
<i>Policy Index</i>		1.3%	95	-3.2%	76	-1.4%	83	3.8%	96	4.5%	95
<i>Allocation Index</i>		1.4%	94	-3.5%	83	-1.8%	88	3.5%	97	4.4%	96
<i>InvestorForce Public DB Gross Median</i>		2.7%		-2.3%		0.1%		7.2%		6.9%	

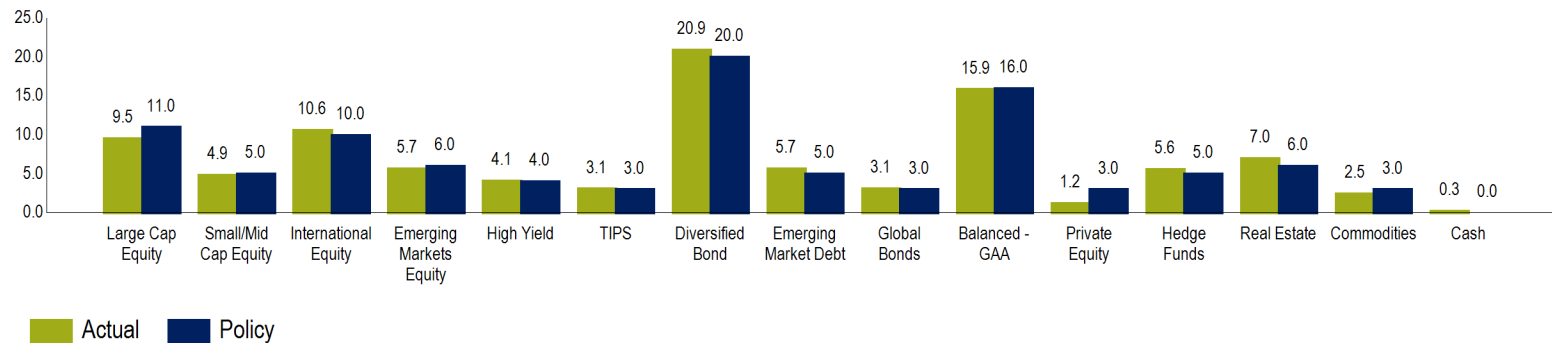
3 Years Ending December 31, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	3.52%	97	5.93%	30	0.59	98	1.12	98
Policy Index	3.76%	96	5.43%	13	0.69	93	1.37	88
Allocation Index	3.52%	97	5.53%	18	0.63	96	1.21	94

5 Years Ending December 31, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	5.12%	92	6.73%	29	0.75	86	1.17	78
Policy Index	4.51%	95	6.42%	19	0.70	89	1.06	87
Allocation Index	4.36%	96	6.57%	25	0.66	92	0.98	89

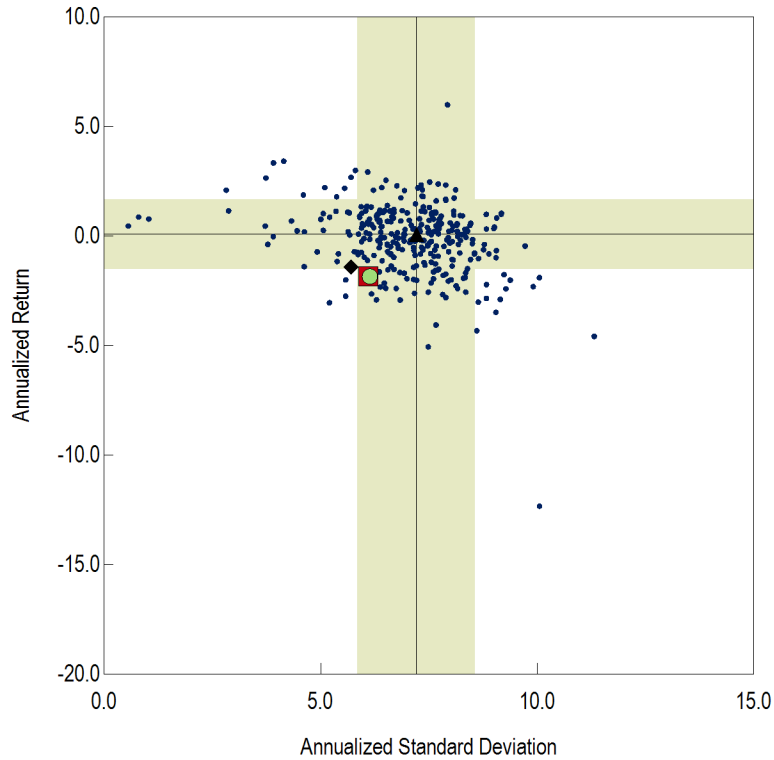
Actual vs Target Allocation (%)



Vermont State Teachers

Total Fund Risk/Return

1 Year Ending December 31, 2015



- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

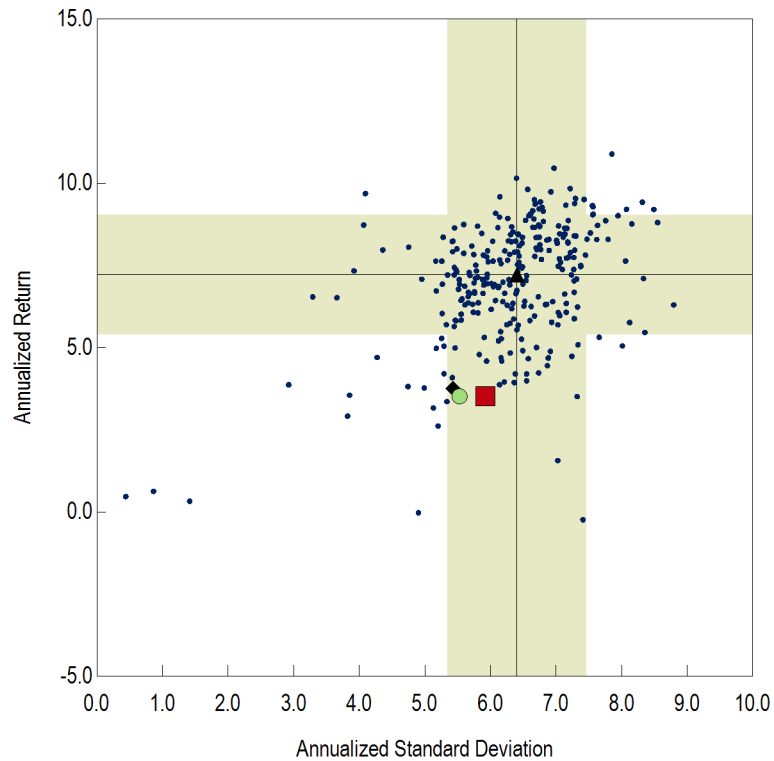
1 Year Ending December 31, 2015

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	-1.83%	88	6.10%	19	-0.31	93
Policy Index	-1.42%	83	5.70%	12	-0.26	89
S&P 500	1.38%	11	13.66%	99	0.10	30
60% MSCI ACWI (Net)/40% CITI WGBI	-2.62%	95	8.27%	86	-0.32	94
Citi WGBI	-3.57%	99	3.98%	3	-0.91	99
MSCI ACWI	-2.36%	93	13.86%	99	-0.17	80
MSCI ACWI ex USA	-5.66%	99	15.07%	99	-0.38	97
InvestorForce Public DB Gross Median	0.08%	--	7.21%	--	0.01	--

Vermont State Teachers

Total Fund Risk/Return

3 Years Ending December 31, 2015

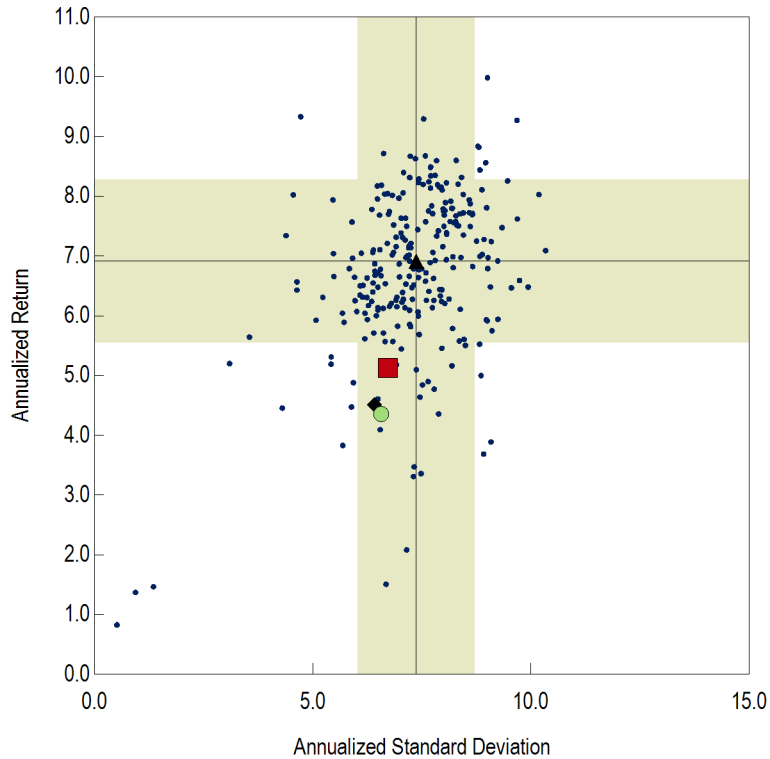


- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

3 Years Ending December 31, 2015

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	3.52%	97	5.93%	30	0.59	98
Policy Index	3.76%	96	5.43%	13	0.69	93
S&P 500	15.13%	1	10.62%	99	1.42	9
60% MSCI ACWI (Net)/40% CITI WGBI	3.56%	97	7.21%	84	0.49	99
Citi WGBI	-2.70%	99	4.45%	5	-0.61	99
MSCI ACWI	7.69%	40	10.94%	99	0.70	92
MSCI ACWI ex USA	1.50%	99	12.30%	99	0.12	99
InvestorForce Public DB Gross Median	7.22%	--	6.40%	--	1.14	--

5 Years Ending December 31, 2015



- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

5 Years Ending December 31, 2015

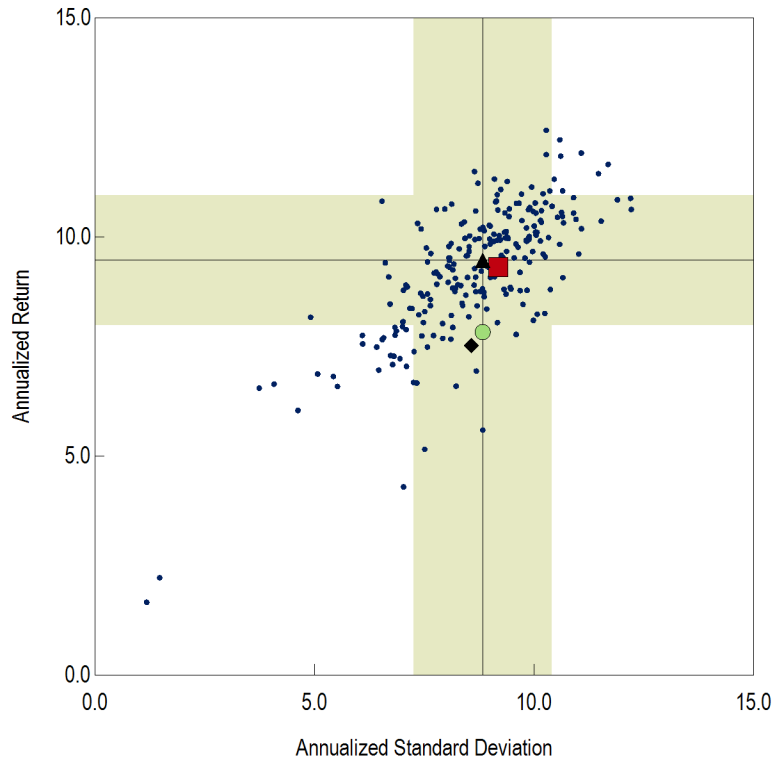
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	5.12%	92	6.73%	29	0.75	86
Policy Index	4.51%	95	6.42%	19	0.70	89
S&P 500	12.57%	1	11.70%	99	1.07	21
60% MSCI ACWI (Net)/40% CITI WGBI	3.78%	97	8.43%	83	0.44	99
Citi WGBI	-0.08%	99	4.46%	3	-0.03	99
MSCI ACWI	6.09%	78	13.06%	99	0.46	98
MSCI ACWI ex USA	1.06%	99	14.97%	99	0.07	99
InvestorForce Public DB Gross Median	6.92%	--	7.37%	--	0.94	--

259 Portfolios

Vermont State Teachers

Total Fund Risk/Return

7 Years Ending December 31, 2015



- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

7 Years Ending December 31, 2015

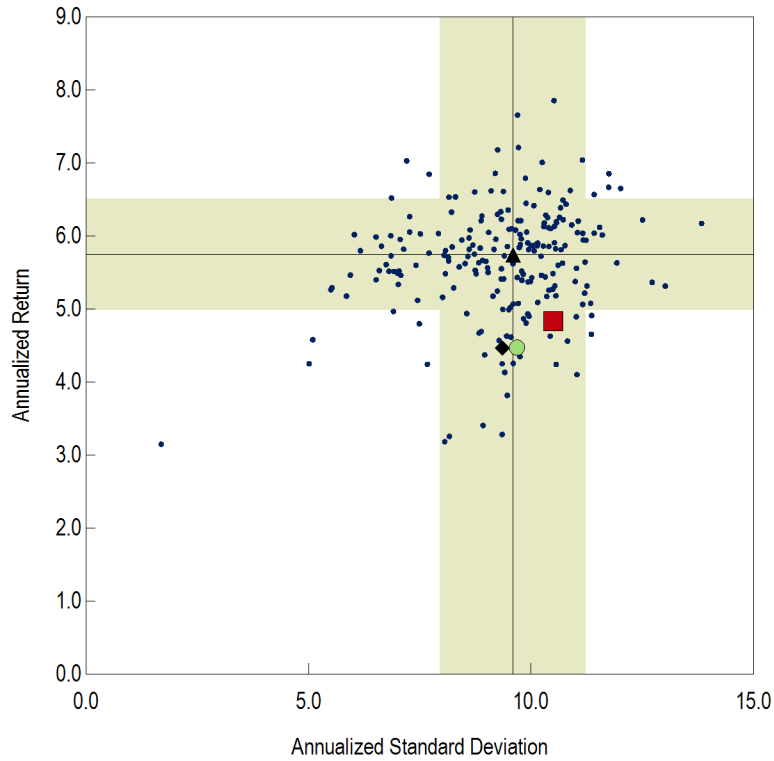
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	9.32%	56	9.18%	61	1.01	67
Policy Index	7.53%	91	8.57%	43	0.87	95
S&P 500	14.81%	1	14.63%	99	1.01	67
60% MSCI ACWI (Net)/40% CITI WGBI	7.01%	94	10.89%	96	0.64	99
Citi WGBI	1.03%	99	5.98%	4	0.16	99
MSCI ACWI	10.71%	13	16.11%	99	0.66	99
MSCI ACWI ex USA	7.48%	91	18.11%	99	0.41	99
InvestorForce Public DB Gross Median	9.47%	--	8.83%	--	1.07	--

237 Portfolios

Vermont State Teachers

Total Fund Risk/Return

10 Years Ending December 31, 2015

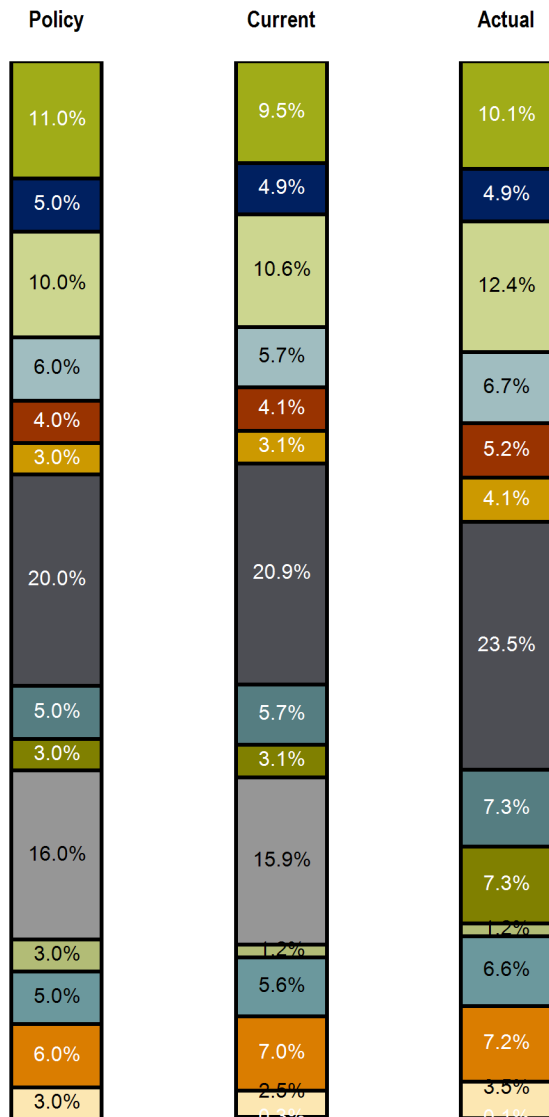


- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

10 Years Ending December 31, 2015

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	4.84%	88	10.50%	77	0.35	91
Policy Index	4.47%	94	9.36%	43	0.36	91
S&P 500	7.31%	1	15.06%	99	0.41	78
60% MSCI ACWI (Net)/40% CITI WGBI	4.57%	93	11.09%	90	0.31	97
Citi WGBI	3.44%	99	6.53%	5	0.36	91
MSCI ACWI	4.76%	89	16.86%	99	0.22	99
MSCI ACWI ex USA	2.92%	99	19.08%	99	0.10	99
InvestorForce Public DB Gross Median	5.75%	--	9.59%	--	0.49	--

Total Fund Asset Allocation vs. Policy Targets



- Large Cap Equity
- Small/Mid Cap Equity
- International Equity
- Emerging Markets Equity
- High Yield
- TIPS
- Diversified Bond
- Emerging Market Debt
- Global Bonds
- Balanced - GAA
- Private Equity
- Hedge Funds
- Real Estate
- Commodities
- Cash

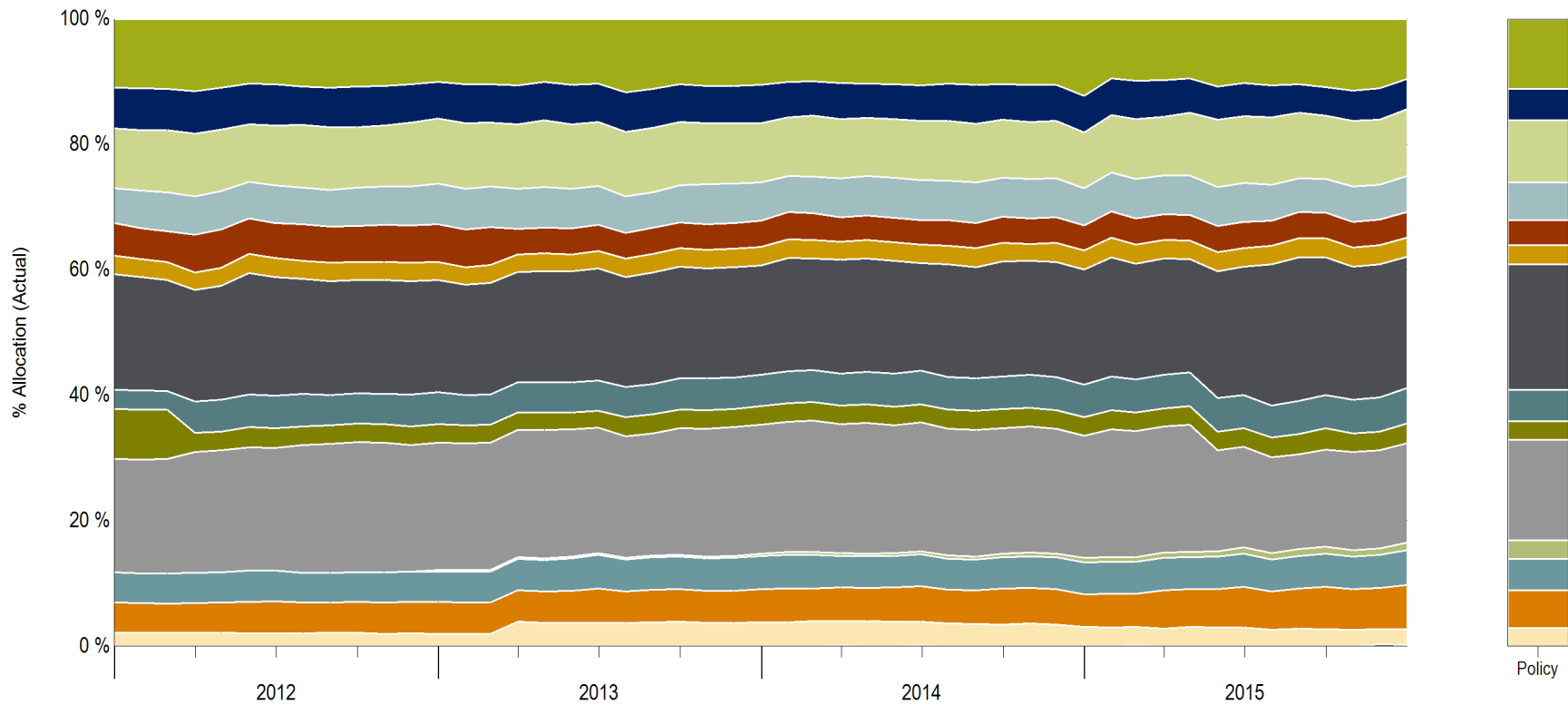
Asset Allocation vs. Target

	Current	Policy	Current	Difference*
Large Cap Equity	\$150,554,529	11.0%	9.5%	-1.5%
Small/Mid Cap Equity	\$76,841,152	5.0%	4.9%	-0.1%
International Equity	\$168,204,981	10.0%	10.6%	0.6%
Emerging Markets Equity	\$90,208,084	6.0%	5.7%	-0.3%
High Yield	\$64,789,422	4.0%	4.1%	0.1%
TIPS	\$48,753,241	3.0%	3.1%	0.1%
Diversified Bond	\$330,313,711	20.0%	20.9%	0.9%
Emerging Market Debt	\$89,790,974	5.0%	5.7%	0.7%
Global Bonds	\$48,832,193	3.0%	3.1%	0.1%
Balanced - GAA	\$250,596,300	16.0%	15.9%	-0.1%
Private Equity	\$18,886,491	3.0%	1.2%	-1.8%
Hedge Funds	\$88,087,477	5.0%	5.6%	0.6%
Real Estate	\$110,825,038	6.0%	7.0%	1.0%
Commodities	\$39,051,305	3.0%	2.5%	-0.5%
Cash	\$4,141,930	--	0.3%	0.3%
Total	\$1,579,876,829	100.0%	100.0%	

*Difference between Policy and Current Allocation

Total Fund Asset Allocation History

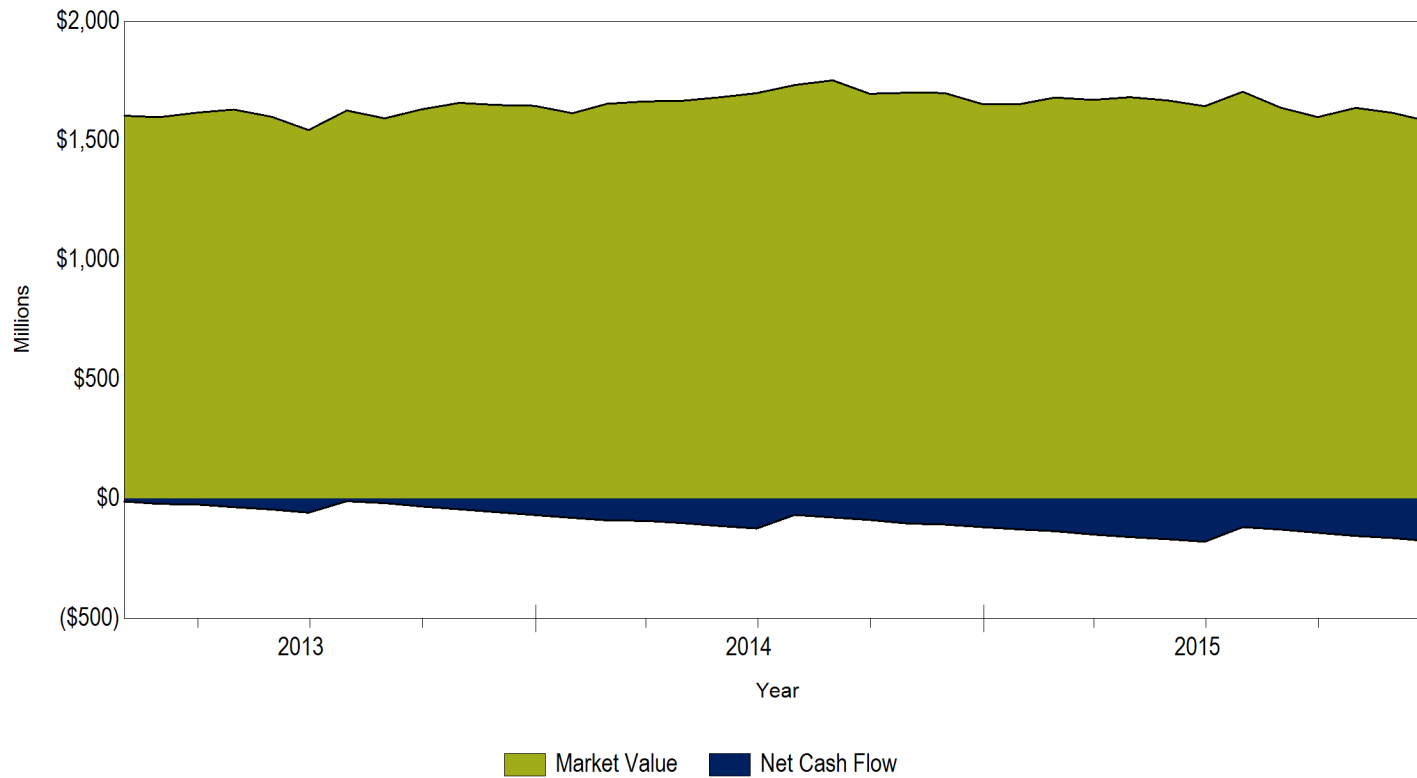
Asset Allocation History



- Large Cap Equity
- Emerging Markets Equity
- Diversified Bond
- Balanced - GAA
- Hedge Funds
- Commodities
- Small/Mid Cap Equity
- High Yield
- Emerging Market Debt
- Private Equity
- Real Estate
- Cash
- International Equity
- TIPS
- Global Bonds

Total Fund Asset Growth Summary

3 Years Ending December 31, 2015



	Last Three Months	Year-To-Date	One Year	Three Years
Beginning Market Value	\$1,599,428,905	\$1,653,682,205	\$1,653,682,205	\$1,585,232,773
- Withdrawals	-\$69,154,487	-\$394,670,282	-\$394,670,282	-\$838,523,366
+ Contributions	\$33,121,713	\$335,014,401	\$335,014,401	\$660,477,322
= Net Cash Flow	-\$36,032,774	-\$59,655,881	-\$59,655,881	-\$178,046,044
+ Net Investment Change	\$16,480,698	-\$14,149,496	-\$14,149,496	\$172,690,100
= Ending Market Value	\$1,579,876,829	\$1,579,876,829	\$1,579,876,829	\$1,579,876,829

Vermont State Teachers

Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2015					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Aberdeen	\$86,044,765	-\$171,053	\$3,621,620	\$3,450,567	\$712,752	\$90,208,084
Acadian	\$62,413,909	-\$109,666	\$78,304	-\$31,362	\$3,628,537	\$66,011,083
Allianz Structured Alpha	\$47,861,978	\$0	\$1,882,535	\$1,882,535	\$721,853	\$50,466,366
AQR Global Risk Premium	\$122,752,797	-\$122,753	\$4,817,141	\$4,694,388	-\$3,410,477	\$124,036,708
BlackRock TIPS	\$49,062,335	-\$36,264	\$9,561	-\$26,703	-\$282,391	\$48,753,241
Champlain	\$30,034,820	-\$89,544	\$56,846	-\$32,698	\$1,728,431	\$31,730,553
GAM	\$209,783	\$0	\$9,358	\$9,358	\$37,537	\$256,678
GAM Unconstrained Bond	\$73,309,462	-\$118,748	\$98,438	-\$20,310	-\$350,233	\$72,938,919
Grosvenor	\$84,495,538	\$0	\$3,211,453	\$3,211,453	\$123,807	\$87,830,799
Guggenheim	\$49,024,561	-\$71,613	\$60,278	-\$11,336	-\$1,186,595	\$47,826,630
Harbourvest Dover VIII Fund	\$7,054,555	-\$338,882	\$265,234	-\$73,647	-\$194,821	\$6,786,087
Harbourvest Partners IX Buyout Fund	\$4,648,340	-\$178,875	\$525,702	\$346,827	\$339,140	\$5,334,307
Harbourvest Partners IX Credit Opportunities	\$561,058	-\$65,857	\$219,581	\$153,723	\$75,661	\$790,442
Harbourvest Partners IX Venture Fund	\$4,162,592	\$0	\$247,499	\$247,499	\$188,653	\$4,598,744
Harbourvest Partners X Buyout Fund	--	\$0	\$383,879	\$383,879	-\$4,915	\$378,964
Harbourvest Partners X Venture Fund	--	\$0	\$230,328	\$230,328	-\$10,815	\$219,513
HIPEP VII	\$751,395	\$0	\$29,433	\$29,433	-\$2,393	\$778,435
KDP	\$17,258,278	-\$69,481	\$27,188	-\$42,293	-\$253,194	\$16,962,791
Mellon Dynamic Growth	\$31,244,315	-\$61,626	\$51,116	-\$10,510	\$1,482,345	\$32,716,150
Mondrian	\$61,335,674	-\$67,630	\$59,072	-\$8,558	\$1,542,530	\$62,869,645
Mondrian GFI	\$53,974,849	-\$4,446,878	\$42,787	-\$4,404,091	-\$738,565	\$48,832,193
Morgan Stanley Prime Property	\$50,492,929	\$0	\$2,015,240	\$2,015,240	\$0	\$52,508,169
PIMCO All Asset	\$93,907,814	-\$249,387	\$0	-\$249,387	\$185,015	\$93,843,443
PIMCO Core Plus	\$85,136,156	-\$15,964,637	\$63,219	-\$15,901,418	\$88,709	\$69,323,446
PIMCO Unconstrained	\$44,052,156	-\$3,593,916	\$66,239	-\$3,527,676	\$407,541	\$40,932,021

Vermont State Teachers

Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2015					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
RREEF America REIT III	\$5,754,629	-\$2,628,993	\$124,748	-\$2,504,244	-\$29,939	\$3,220,445
Schroder	\$42,632,245	\$0	\$1,470,380	\$1,470,380	-\$5,051,320	\$39,051,305
Siguler Guff	\$9,708,890	\$0	\$735,887	\$735,887	\$117,895	\$10,562,672
SSgA ACWI Ex US	\$36,727,494	-\$6,767	\$1,403,254	\$1,396,486	\$1,200,273	\$39,324,253
SSgA Barclays Aggregate Index	\$51,935,490	-\$5,542,326	\$6,466	-\$5,535,860	-\$299,180	\$46,100,450
SSgA Russell 2000 Growth	\$5,043,779	-\$6,262	\$1,048	-\$5,214	\$217,720	\$5,256,285
SSgA S&P 400	\$7,209,124	-\$3,261	\$1,323	-\$1,938	\$190,268	\$7,397,454
SSgA S&P 500 Cap-Wgt	\$126,127,521	-\$34,618,998	\$10,052	-\$34,608,946	\$9,371,860	\$100,890,435
SSgA S&P 500 Equal-Wgt	\$47,369,806	-\$12,216	\$5,833	-\$6,383	\$2,298,274	\$49,661,697
T. Rowe	\$2,397	\$0	\$0	\$0	\$0	\$2,397
Transwestern / Aslan III	\$153,555	\$0	\$6,129	\$6,129	\$0	\$159,684
UBS Trumbull	\$42,671,010	\$0	\$1,703,057	\$1,703,057	\$0	\$44,374,067
Vermont Cash	\$317,083	-\$486,878	\$4,311,725	\$3,824,848	\$0	\$4,141,930
Wellington	\$30,745,352	-\$91,836	\$61,318	-\$30,518	\$1,742,025	\$32,456,860
Wellington DAS	\$48,342,721	\$0	\$1,903,104	\$1,903,104	\$306,684	\$50,552,509
Wellington Opportunistic EMD	\$84,897,612	\$0	\$3,305,337	\$3,305,337	\$1,588,026	\$89,790,974
zWellington OIF	\$142	-\$142	\$0	-\$142	\$0	--
Total	\$1,599,428,905	-\$69,154,487	\$33,121,713	-\$36,032,774	\$16,480,698	\$1,579,876,829

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Teachers Composite	1,579,876,829	100.0	100.0	1.0	96	-4.1	91	-1.8	88	3.5	97	5.1	92
<i>Policy Index</i>				1.3	95	-3.2	76	-1.4	83	3.8	96	4.5	95
<i>Allocation Index</i>				1.4	94	-3.5	83	-1.8	88	3.5	97	4.4	96
<i>InvestorForce Public DB Gross Median</i>				2.7		-2.3		0.1		7.2		6.9	
US Equity	227,395,681	14.4	15.0	6.0	30	-2.2	35	0.7	38	--	--	--	--
<i>Russell 3000</i>				6.3	27	-1.4	30	0.5	41	14.7	43	12.2	42
<i>eA All US Equity Gross Median</i>				4.7		-4.1		-0.7		14.2		11.7	
Large Cap Comp	150,554,529	9.5	11.0	6.4	39	-0.7	41	0.4	52	15.2	47	12.5	43
<i>S&P 500</i>				7.0	25	0.2	31	1.4	43	15.1	48	12.6	43
<i>eA US Large Cap Equity Gross Median</i>				5.9		-1.5		0.5		14.9		12.2	
<i>SSgA S&P 500 Cap-Wgt</i>	100,890,435	6.4	8.0	7.1	25	0.2	30	1.5	43	15.2	47	12.6	42
<i>S&P 500</i>				7.0	25	0.2	31	1.4	43	15.1	48	12.6	43
<i>SSgA S&P 500 Equal-Wgt</i>	49,661,697	3.1	3.0	4.8	76	-3.2	70	-2.5	75	15.0	50	12.3	49
<i>S&P 500 Equal Weighted</i>				5.0	72	-2.9	67	-2.2	73	15.1	48	12.4	46
<i>T. Rowe</i>	2,397	0.0	0.0										
Small/Mid Cap Comp	76,841,152	4.9	5.0	5.3	14	-5.1	27	1.1	20	14.7	28	11.9	29
<i>Russell 2000</i>				3.6	37	-8.8	66	-4.4	71	11.7	72	9.2	76
<i>eA US Small-Mid Cap Equity Gross Median</i>				2.8		-7.4		-1.5		13.1		10.7	
<i>SSgA S&P 400</i>	7,397,454	0.5	0.5	2.6	63	-6.1	57	-2.2	60	12.8	70	--	--
<i>S&P 400 MidCap</i>				2.6	63	-6.1	57	-2.2	60	12.8	72	10.7	63
<i>eA US Mid Cap Equity Gross Median</i>				3.1		-5.7		-1.3		14.0		11.3	
<i>Champlain</i>	31,730,553	2.0	2.0	5.8	6	-4.2	33	2.4	18	15.9	24	12.8	26
<i>Russell 2500</i>				3.3	46	-7.4	72	-2.9	67	12.5	75	10.3	70
<i>eA US Mid Cap Equity Gross Median</i>				3.1		-5.7		-1.3		14.0		11.3	
<i>Wellington</i>	32,456,860	2.1	2.0	5.7	6	-5.2	21	0.1	10	13.4	28	11.6	20
<i>Russell 2000 Value</i>				2.9	40	-8.2	61	-7.5	74	9.1	79	7.7	80
<i>eA US Small Cap Value Equity Gross Median</i>				2.4		-7.2		-4.3		11.9		9.9	
<i>SSgA Russell 2000 Growth</i>	5,256,285	0.3	0.5	4.3	40	-9.3	54	-1.4	59	14.3	56	10.7	64
<i>Russell 2000 Growth</i>				4.3	39	-9.3	55	-1.4	59	14.3	56	10.7	64
<i>eA US Small Cap Growth Equity Gross Median</i>				3.5		-8.7		-0.6		14.6		11.5	

Fiscal Year End is 6/30

Report is Gross of manager fees, except where otherwise noted

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Int'l Equity Comp	168,204,981	10.6	10.0	4.0	71	-6.2	68	-1.2	77	6.0	58	4.3	68
MSCI EAFE				4.7	53	-6.0	66	-0.8	74	5.0	73	3.6	80
eA All EAFE Equity Gross Median				4.8		-4.7		1.4		6.7		5.3	
Acadian	66,011,083	4.2	4.0	5.8	32	-2.4	20	3.1	36	8.5	30	5.4	49
Mondrian	62,869,645	4.0	4.0	2.5	89	-7.9	85	-2.9	86	5.8	62	4.6	65
MSCI EAFE				4.7	53	-6.0	66	-0.8	74	5.0	73	3.6	80
SSgA ACWI Ex US	39,324,253	2.5	2.0	3.3	81	-9.2	90	-5.5	87	1.7	87	1.3	95
MSCI ACWI ex USA				3.2	81	-9.3	90	-5.7	87	1.5	88	1.1	95
eA ACWI ex-US All Cap Equity Gross Median				5.0		-5.8		0.2		5.5		4.4	
Emerging Market Comp	90,208,084	5.7	6.0	0.8	60	-14.1	44	-13.1	56	-6.8	79	--	--
Aberdeen	90,208,084	5.7	6.0	0.8	60	-14.1	44	-13.1	56	-6.8	79	-1.7	33
MSCI Emerging Markets				0.7	64	-17.4	80	-14.9	70	-6.8	78	-4.8	83
eA Emg Mkts Equity Gross Median				1.6		-14.7		-12.2		-4.3		-3.0	
US Fixed Income	443,856,374	28.1	27.0	-0.2	32	-0.7	76	0.6	58	--	--	--	--
Barclays Aggregate				-0.6	65	0.7	33	0.5	60	1.4	64	3.2	63
eA All US Fixed Inc Gross Median				-0.4		0.3		0.8		1.7		3.7	
Diversified Fixed	330,313,711	20.9	20.0	0.3	13	0.5	41	1.4	25	2.2	33	4.4	35
Barclays Aggregate				-0.6	65	0.7	33	0.5	60	1.4	64	3.2	63
eA All US Fixed Inc Gross Median				-0.4		0.3		0.8		1.7		3.7	
Allianz Structured Alpha	50,466,366	3.2	2.0	1.6	2	3.3	1	6.9	1	7.6	1	8.4	1
Citi 10 Year Treasury				-1.4	99	1.4	4	0.9	51	1.0	98	4.6	9
PIMCO Core Plus	69,323,446	4.4	5.0	0.1	5	0.2	86	1.2	31	1.3	89	3.8	50
Barclays Aggregate				-0.6	72	0.7	53	0.5	75	1.4	79	3.2	84
Wellington DAS	50,552,509	3.2	3.0	0.6	2	5.7	1	5.9	1	5.1	1	8.3	1
Wellington Custom Benchmark				-1.5	99	2.1	2	1.8	7	2.0	29	5.9	2
SSgA Barclays Aggregate Index	46,100,450	2.9	3.0	-0.6	72	0.7	52	--	--	--	--	--	--
Barclays Aggregate				-0.6	72	0.7	53	0.5	75	1.4	79	3.2	84
3-Month Libor Total Return USD				0.1	3	0.2	86	0.3	84	0.3	99	0.3	99
eA US Core Fixed Inc Gross Median				-0.4		0.7		0.9		1.7		3.7	

Wellington DAS is Net of Fees. Allianz is net of fees from inception to Q3 2012, and grossed up quarterly since

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Unconstrained Fixed Income	113,870,940	7.2	7.0	0.0	5	-2.6	99	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg				-0.4	43	-1.5	99	-0.5	98	1.2	94	4.2	20
Barclays Global Aggregate				-0.9	98	-0.1	93	-3.2	99	-1.7	99	0.9	99
eA US Core Fixed Inc Gross Median				-0.4		0.7		0.9		1.7		3.7	
PIMCO Unconstrained	40,932,021	2.6	2.5	0.9	2	-2.2	99	-1.9	99	-0.1	99	--	--
25% HY, 25% EMD, 50% BC Agg				-0.4	43	-1.5	99	-0.5	98	1.2	94	4.2	20
3-Month Libor Total Return USD				0.1	3	0.2	86	0.3	84	0.3	99	0.3	99
GAM Unconstrained Bond	72,938,919	4.6	4.5	-0.5	60	-2.8	99	--	--	--	--	--	--
3-Month LIBOR + 3%				0.9	2	1.7	3	3.3	1	3.3	3	3.3	81
eA US Core Fixed Inc Gross Median				-0.4		0.7		0.9		1.7		3.7	
High Yield Comp	64,789,422	4.1	4.0	-2.2	77	-6.0	63	-2.7	53	2.5	53	5.5	51
Barclays High Yield				-2.1	75	-6.8	77	-4.5	82	1.7	76	5.0	65
eA US High Yield Fixed Inc Gross Median				-1.2		-5.4		-2.4		2.6		5.5	
KDP	16,962,791	1.1	1.0	-1.5	58	-5.7	59	-3.1	61	1.6	81	4.7	79
Barclays High Yield				-2.1	75	-6.8	77	-4.5	82	1.7	76	5.0	65
BofA Merrill Lynch US High Yield BB-B Rated				-1.1	45	-5.4	51	-2.9	56	2.2	64	5.3	57
Guggenheim	47,826,630	3.0	3.0	-2.4	80	-6.1	65	-2.5	52	--	--	--	--
Barclays High Yield				-2.1	75	-6.8	77	-4.5	82	1.7	76	5.0	65
eA US High Yield Fixed Inc Gross Median				-1.2		-5.4		-2.4		2.6		5.5	
TIPS	48,753,241	3.1	3.0										
BlackRock TIPS	48,753,241	3.1	3.0	-0.6	--	-1.8	--	-1.3	--	-2.3	--	2.5	--
Barclays US TIPS				-0.6	--	-1.8	--	-1.4	--	-2.3	--	2.5	--
Global Fixed Income Comp	48,832,193	3.1	3.0	-1.5	79	-0.6	36	-2.8	55	-3.2	90	0.2	91
Citi WGBI				-1.2	74	0.5	15	-3.6	68	-2.7	87	-0.1	92
eA All Global Fixed Inc Gross Median				-0.6		-1.5		-2.4		0.6		2.9	
Mondrian GFI	48,832,193	3.1	3.0	-1.5	79	-0.6	36	-2.8	55	-3.2	90	-0.4	95
Citi WGBI				-1.2	74	0.5	15	-3.6	68	-2.7	87	-0.1	92

GAM Unconstrained Bond was funded in June 2015

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Emerging Market Debt	89,790,974	5.7	5.0										
Wellington Opportunistic EMD	89,790,974	5.7	5.0	1.9	10	-1.6	18	-1.0	39	-0.1	35	5.1	22
JP Morgan EMBI Global TR				1.5	19	-0.5	8	1.2	16	-0.1	35	5.1	23
eA All Emg Mkts Fixed Inc Gross Median				0.6		-4.1		-2.6		-1.5		2.9	
Total Real Estate	110,825,038	7.0	6.0	0.1	--	2.8	--	10.5	--	13.4	--	--	--
NCREIF Property Index				2.9	--	6.1	--	13.3	--	12.0	--	12.2	--
NCREIF ODCE				3.3	--	7.1	--	15.0	--	13.8	--	13.7	--
Morgan Stanley Prime Property	52,508,169	3.3	2.0	0.0	--	3.6	--	11.7	--	14.9	--	14.8	--
UBS Trumbull	44,374,067	2.8	2.0	0.0	--	3.4	--	9.6	--	10.6	--	11.0	--
RREEF America REIT III	3,220,445	0.2	0.5	-1.0	--	-5.7	--	6.8	--	16.9	--	25.2	--
Transwestern / Aslan III	159,684	0.0	0.5	0.0	--	2.1	--	6.0	--	12.7	--	7.6	--
Siguler Guff	10,562,672	0.7	1.0	1.2	--	0.7	--	8.2	--	--	--	--	--
Hedge Fund Comp	88,087,477	5.6	5.0	0.2	54	-2.3	40	-0.4	45	5.2	39	4.1	35
eV Alt Fund of Funds - Multi-Strategy Median				0.3		-3.2		-0.9		4.6		3.3	
Grosvenor	87,830,799	5.6	5.0	0.1	55	-2.4	40	0.0	40	6.0	24	4.5	27
GAM	256,678	0.0	0.0										
GAA Comp	250,596,300	15.9	16.0	-0.7	79	-8.4	92	-6.6	76	0.4	85	3.3	69
eA Global TAA Gross Median				1.1		-4.0		-3.4		3.8		4.6	
Mellon Dynamic Growth	32,716,150	2.1	2.0	4.7	5	-2.1	26	3.7	2	7.5	9	6.9	12
Mellon Dynamic Growth Benchmark				2.4	39	-3.3	37	-2.8	46	3.5	54	4.2	61
AQR Global Risk Premium	124,036,708	7.9	8.0	-2.8	97	-10.2	98	-9.0	92	-1.2	93	3.7	68
60% MSCI World / 40% CITI WGBI				2.9	26	-1.6	23	-1.4	37	5.0	31	5.0	45
PIMCO All Asset	93,843,443	5.9	6.0	0.2	64	-8.2	91	-7.9	84	-1.6	94	2.8	72
PIMCO All Asset Index				0.2	62	-0.8	15	0.0	23	1.7	77	4.1	63
CPI + 5% (Seasonally Adjusted)				1.3	49	2.5	1	5.7	1	6.0	18	6.6	16

Wellington Opportunistic EMD is Net of manager fees

Real Estate is as of Q3 2015. Siguler Guff/RREEF are based on preliminary data as of 12/31/2015

PIMCO All Asset Index: 40% BC Agg / 30% TIPS / 10% S&P500 / 10% BC HY / 10% JPM EMBI+

Mellon Dynamic Growth Benchmark: 60% MSCI All Country World Index IMI/ 40% Citigroup GDP Weighted

Hedge Fund Comp is net of manager Fees

Vermont State Teachers

Total Fund Performance Detail

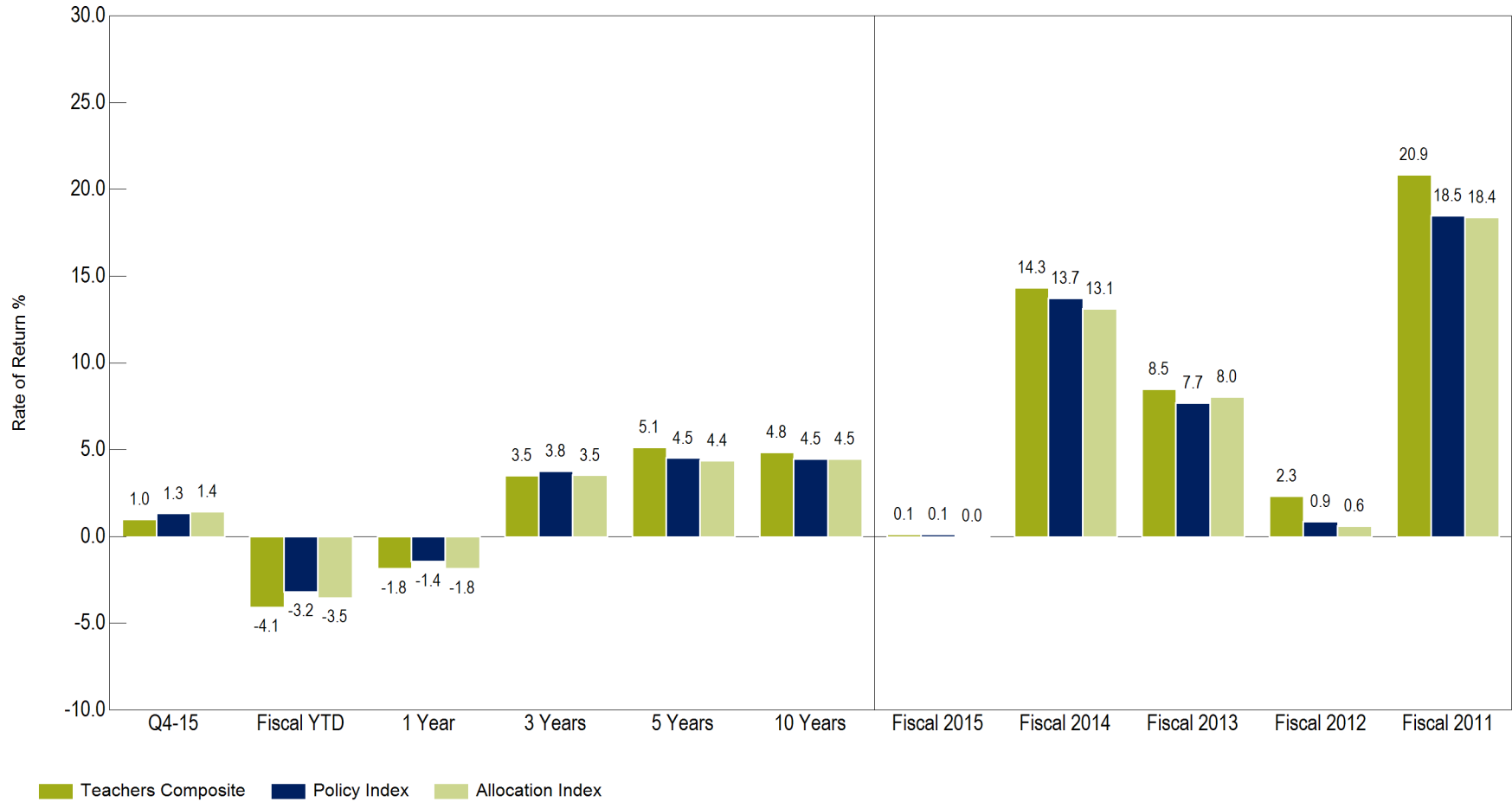
	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Commodities	39,051,305	2.5	3.0										
Schroder	39,051,305	2.5	3.0	-11.8	--	-23.9	--	-27.2	--	-20.1	--	-13.8	--
<i>Bloomberg Commodity Index</i>				-10.5	--	-23.5	--	-24.7	--	-17.3	--	-13.5	--
Cash	4,141,930	0.3	0.0										
Vermont Cash	4,141,930	0.3	0.0	0.0	--	0.0	--	0.0	--	0.0	--	0.1	--
<i>91 Day T-Bills</i>				0.0	--	0.0	--	0.0	--	0.0	--	0.0	--
Private Equity	18,886,491	1.2	3.0	2.3	--	0.9	--	16.2	--	14.0	--	--	--
<i>Cambridge Associates US All PE</i>				0.0	--	-1.4	--	5.1	--	12.3	--	12.4	--
Harbourvest Partners IX Credit Opportunities	790,442	0.1											
Harbourvest Partners IX Venture Fund	4,598,744	0.3											
Harbourvest Partners IX Buyout Fund	5,334,307	0.3											
Harbourvest Partners X Venture Fund	219,513	0.0											
Harbourvest Partners X Buyout Fund	378,964	0.0											
Harbourvest Dover VIII Fund	6,786,087	0.4											
HIPEP VII	778,435	0.0											

Harbourvest is based on estimated Capital Account Statements for Q4 2015
Commodities are Net of Manager Fees

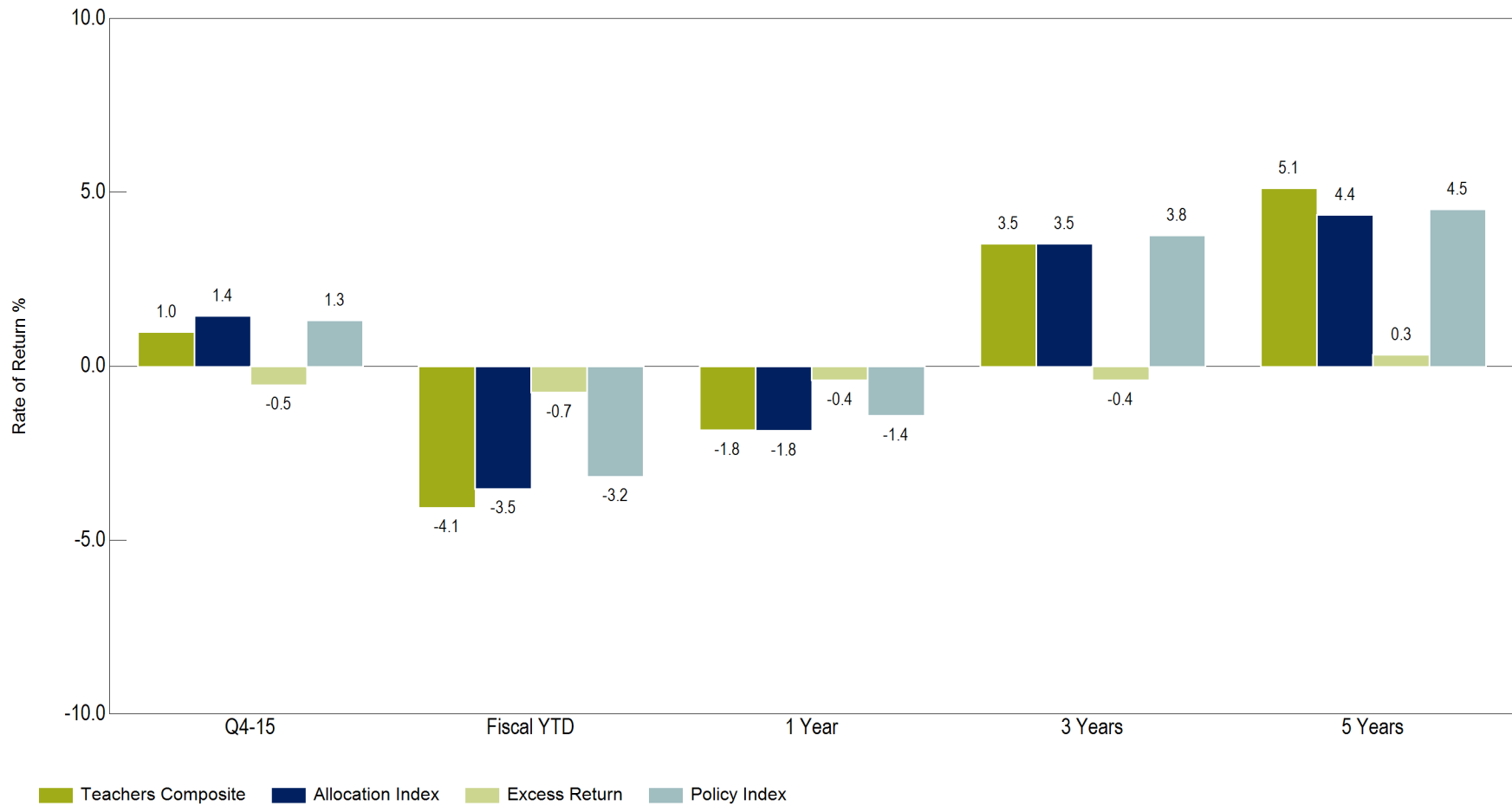
Vermont State Teachers

Total Fund Return Summary

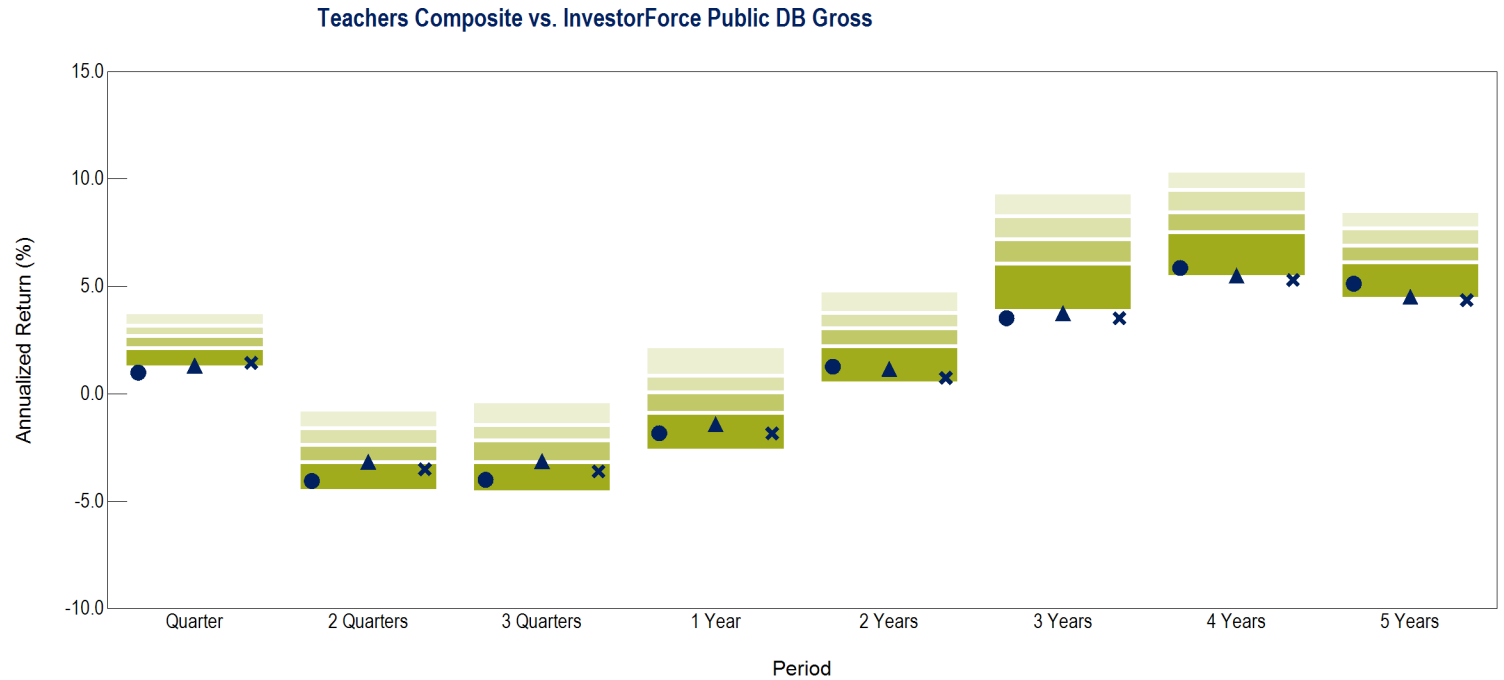
Return Summary Gross



Return Summary Gross

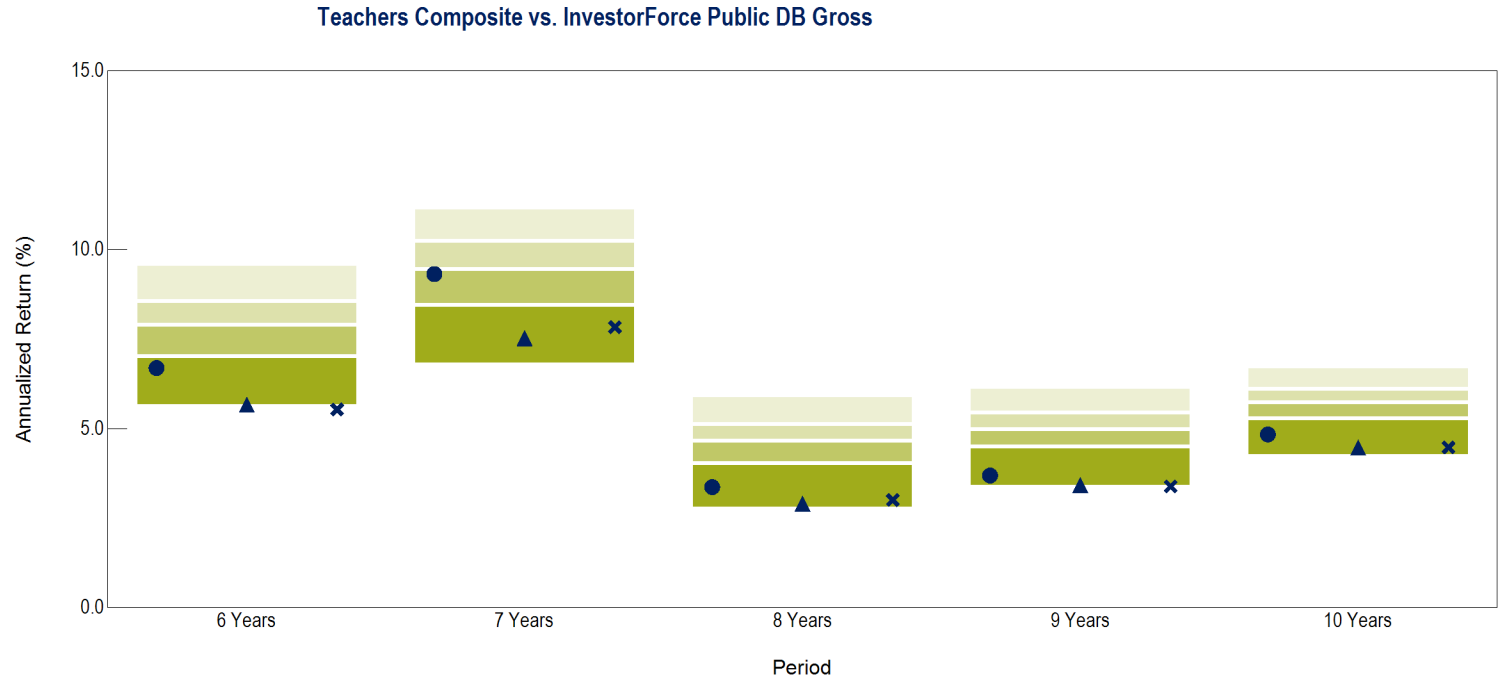


Total Fund Return Summary vs. Peer Universe



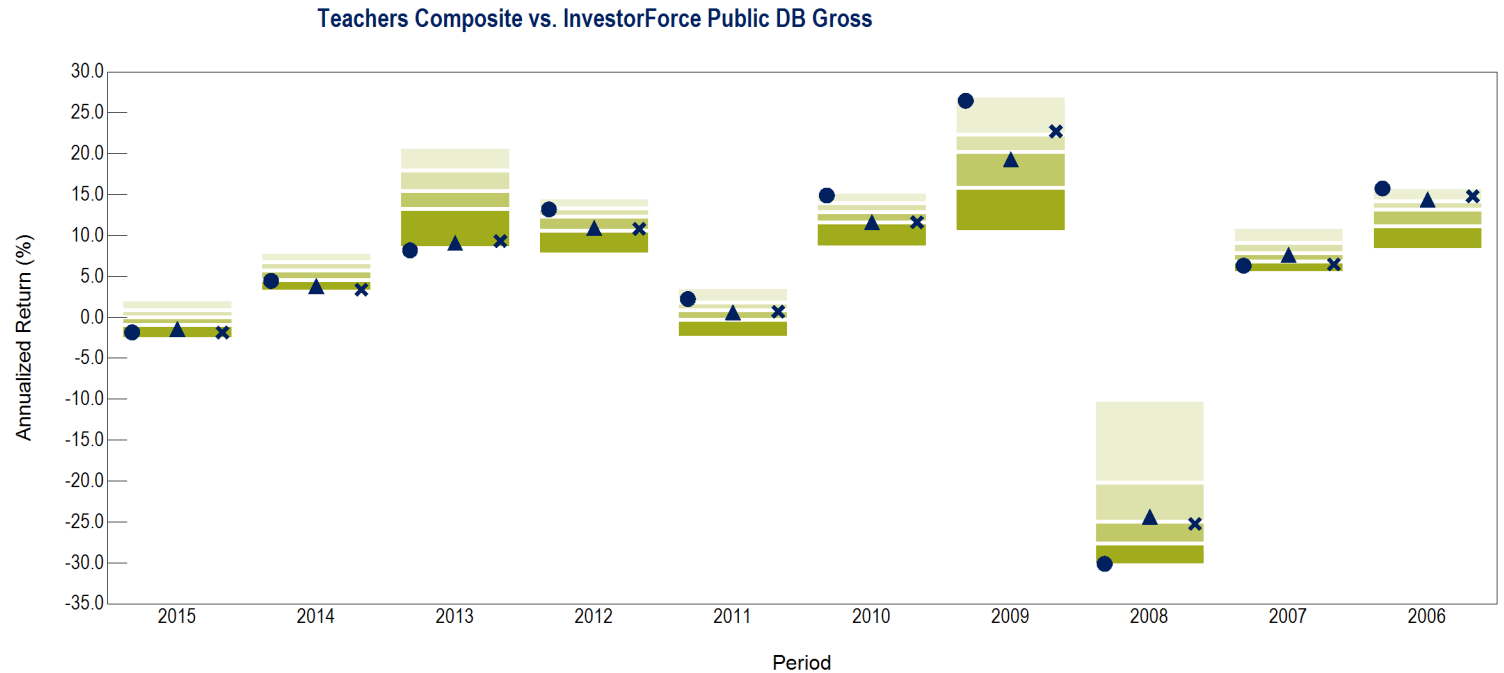
	Return (Rank)															
5th Percentile	3.8	-0.7	-0.4	2.2	4.8	9.4	10.4	8.5								
25th Percentile	3.2	-1.6	-1.4	0.9	3.8	8.3	9.5	7.7								
Median	2.7	-2.3	-2.2	0.1	3.1	7.2	8.5	6.9								
75th Percentile	2.1	-3.2	-3.2	-0.9	2.2	6.1	7.5	6.1								
95th Percentile	1.2	-4.5	-4.6	-2.6	0.5	3.9	5.5	4.4								
# of Portfolios	325	325	325	316	299	290	278	259								
● Teachers Composite	1.0	(96)	-4.1	(91)	-4.0	(89)	-1.8	(88)	1.3	(87)	3.5	(97)	5.9	(95)	5.1	(92)
▲ Policy Index	1.3	(95)	-3.2	(76)	-3.1	(75)	-1.4	(83)	1.2	(88)	3.8	(96)	5.5	(95)	4.5	(95)
× Allocation Index	1.4	(94)	-3.5	(83)	-3.6	(83)	-1.8	(88)	0.7	(93)	3.5	(97)	5.3	(96)	4.4	(96)

Total Fund Return Summary vs. Peer Universe



	Return (Rank)									
5th Percentile	9.6		11.2		5.9		6.2		6.7	
25th Percentile	8.6		10.3		5.1		5.5		6.1	
Median	7.9		9.5		4.7		5.0		5.7	
75th Percentile	7.0		8.5		4.1		4.5		5.3	
95th Percentile	5.6		6.8		2.8		3.4		4.3	
# of Portfolios	240		237		232		219		212	
● Teachers Composite	6.7	(86)	9.3	(56)	3.4	(88)	3.7	(91)	4.8	(88)
▲ Policy Index	5.7	(95)	7.5	(91)	2.9	(94)	3.4	(95)	4.5	(94)
× Allocation Index	5.5	(96)	7.8	(86)	3.0	(93)	3.4	(96)	4.5	(94)

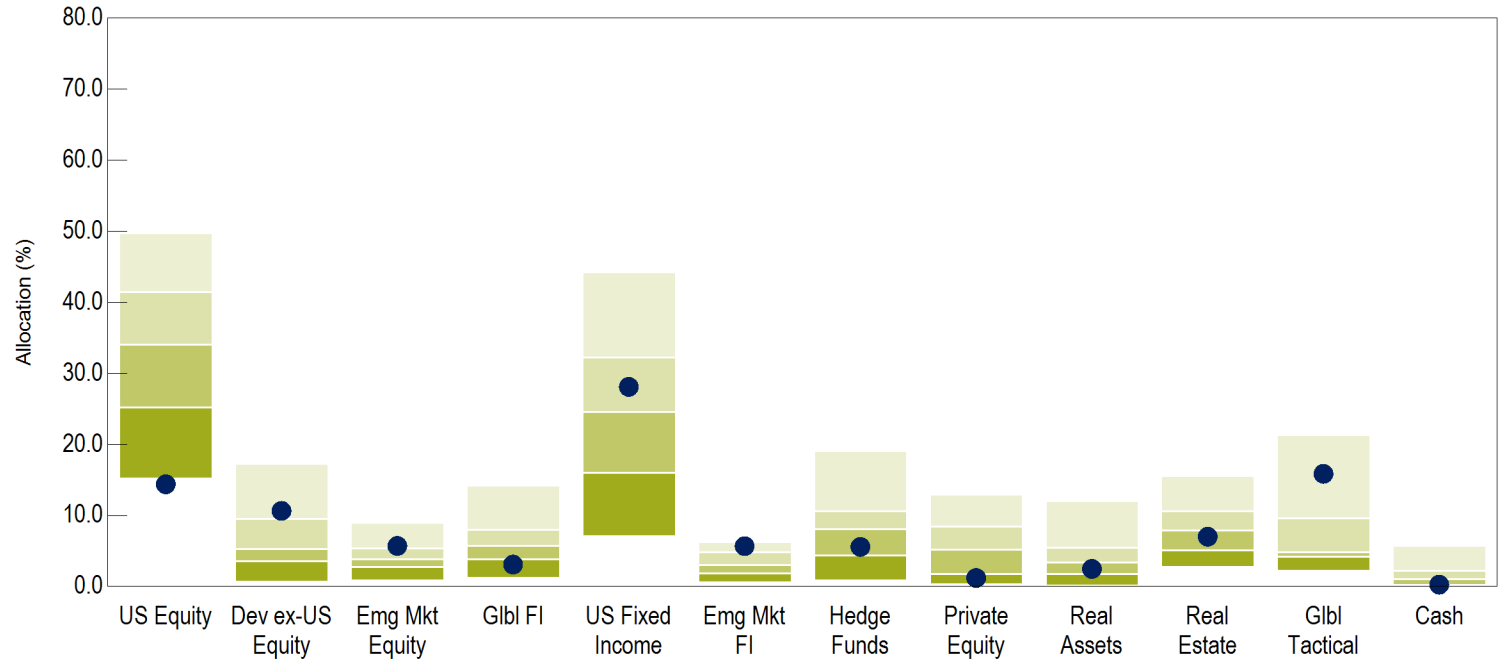
Total Fund Return Summary vs. Peer Universe



	Return (Rank)											
	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006		
5th Percentile	2.2	8.0	20.8	14.6	3.6	15.4	27.0	-10.1	11.0	15.9		
25th Percentile	0.9	6.8	18.0	13.4	1.9	14.0	22.4	-20.1	9.1	14.2		
Median	0.1	5.8	15.5	12.4	0.9	12.9	20.2	-24.9	7.9	13.2		
75th Percentile	-0.9	4.6	13.3	10.7	-0.3	11.7	15.9	-27.6	6.9	11.2		
95th Percentile	-2.6	3.2	8.5	7.8	-2.5	8.6	10.5	-30.3	5.4	8.3		
# of Portfolios	316	248	231	236	206	188	184	181	177	171		
● Teachers Composite	-1.8 (88)	4.5 (80)	8.2 (96)	13.2 (27)	2.2 (17)	14.9 (12)	26.5 (7)	-30.1 (93)	6.3 (84)	15.7 (7)		
▲ Policy Index	-1.4 (83)	3.8 (91)	9.1 (93)	10.9 (73)	0.6 (60)	11.7 (75)	19.3 (55)	-24.3 (45)	7.6 (54)	14.4 (23)		
× Allocation Index	-1.8 (88)	3.4 (94)	9.3 (93)	10.8 (74)	0.7 (60)	11.6 (77)	22.7 (24)	-25.2 (55)	6.5 (82)	14.8 (18)		

Total Fund Allocation vs. Peer Universe

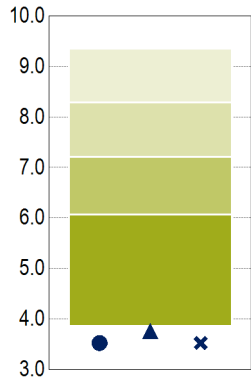
Total Plan Allocation vs. InvestorForce Public DB Gross
As of December 31, 2015



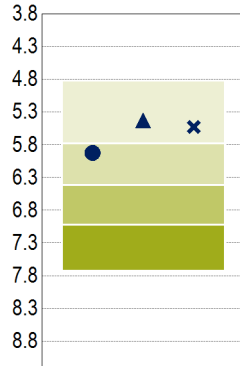
	Allocation (Rank)												
5th Percentile	49.7	17.3	9.0	14.2	44.2	6.3	19.1	12.9	12.0	15.6	21.4	5.7	--
25th Percentile	41.5	9.6	5.4	8.1	32.3	4.9	10.7	8.5	5.5	10.7	9.7	2.3	--
Median	34.1	5.4	4.0	5.8	24.7	3.1	8.1	5.3	3.4	8.0	4.9	1.2	--
75th Percentile	25.3	3.7	2.8	3.9	16.1	1.9	4.5	1.9	1.9	5.2	4.3	0.4	--
95th Percentile	15.3	0.8	1.0	1.3	7.2	0.6	0.9	0.4	0.2	2.9	2.3	0.0	--
# of Portfolios	276	42	113	46	233	44	81	83	66	196	64	259	--
● Teachers Composite	14.4 (96)	10.6 (21)	5.7 (23)	3.1 (82)	28.1 (41)	5.7 (13)	5.6 (61)	1.2 (84)	2.5 (65)	7.0 (59)	15.9 (12)	0.3 (81)	--

Teachers Composite vs. IFX Public DB Gross
3 Years

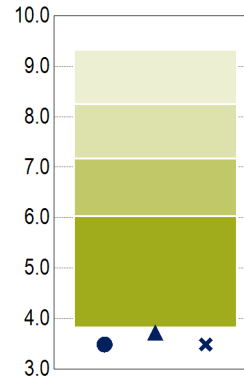
Anlzd Return



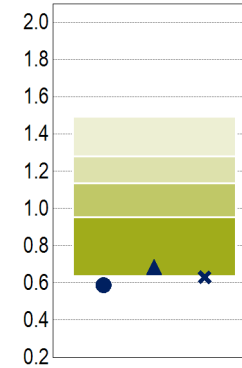
Anlzd Standard Deviation



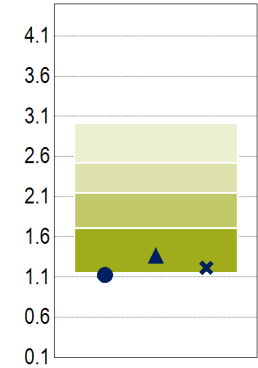
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	3.52
%tile	97
▲ Policy Index	
Value	3.76
%tile	96
✕ Allocation Index	
Value	3.52
%tile	97
Universe	
5th %tile	9.36
25th %tile	8.29
Median	7.22
75th %tile	6.08
95th %tile	3.87

● Teachers Composite	
Value	5.93
%tile	30
▲ Policy Index	
Value	5.43
%tile	13
✕ Allocation Index	
Value	5.53
%tile	18
Universe	
5th %tile	4.82
25th %tile	5.77
Median	6.40
75th %tile	7.02
95th %tile	7.71

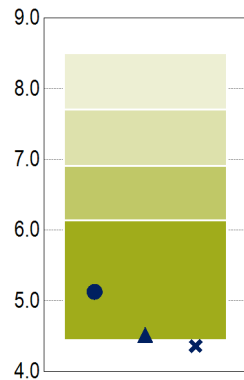
● Teachers Composite	
Value	3.48
%tile	97
▲ Policy Index	
Value	3.72
%tile	96
✕ Allocation Index	
Value	3.48
%tile	97
Universe	
5th %tile	9.32
25th %tile	8.26
Median	7.19
75th %tile	6.04
95th %tile	3.83

● Teachers Composite	
Value	0.59
%tile	98
▲ Policy Index	
Value	0.69
%tile	93
✕ Allocation Index	
Value	0.63
%tile	96
Universe	
5th %tile	1.49
25th %tile	1.28
Median	1.14
75th %tile	0.96
95th %tile	0.64

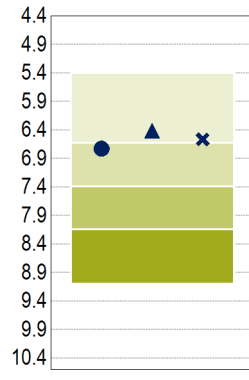
● Teachers Composite	
Value	1.12
%tile	98
▲ Policy Index	
Value	1.37
%tile	88
✕ Allocation Index	
Value	1.21
%tile	94
Universe	
5th %tile	3.01
25th %tile	2.53
Median	2.16
75th %tile	1.71
95th %tile	1.16

Teachers Composite vs. IFlx Public DB Gross
5 Years

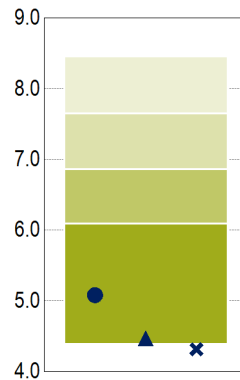
Anlzd Return



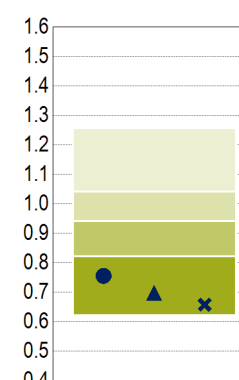
Anlzd Standard Deviation



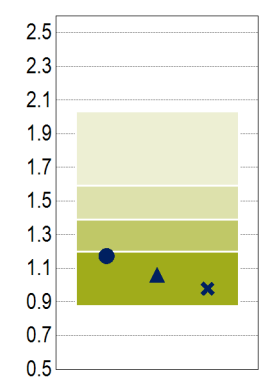
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	5.12
%tile	92
▲ Policy Index	
Value	4.51
%tile	95
✕ Allocation Index	
Value	4.36
%tile	96
Universe	
5th %tile	8.50
25th %tile	7.71
Median	6.92
75th %tile	6.15
95th %tile	4.45

● Teachers Composite	
Value	6.73
%tile	29
▲ Policy Index	
Value	6.42
%tile	19
✕ Allocation Index	
Value	6.57
%tile	25
Universe	
5th %tile	5.40
25th %tile	6.62
Median	7.37
75th %tile	8.14
95th %tile	9.09

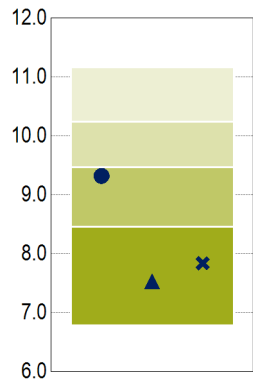
● Teachers Composite	
Value	5.08
%tile	92
▲ Policy Index	
Value	4.47
%tile	95
✕ Allocation Index	
Value	4.31
%tile	96
Universe	
5th %tile	8.45
25th %tile	7.66
Median	6.87
75th %tile	6.10
95th %tile	4.40

● Teachers Composite	
Value	0.75
%tile	86
▲ Policy Index	
Value	0.70
%tile	89
✕ Allocation Index	
Value	0.66
%tile	92
Universe	
5th %tile	1.26
25th %tile	1.04
Median	0.94
75th %tile	0.82
95th %tile	0.62

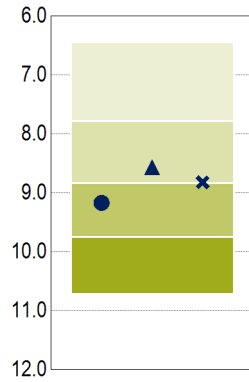
● Teachers Composite	
Value	1.17
%tile	78
▲ Policy Index	
Value	1.06
%tile	87
✕ Allocation Index	
Value	0.98
%tile	89
Universe	
5th %tile	2.03
25th %tile	1.59
Median	1.39
75th %tile	1.20
95th %tile	0.88

Teachers Composite vs. IFx Public DB Gross
7 Years

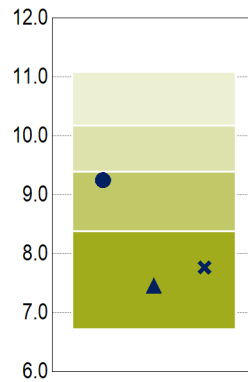
Anlzd Return



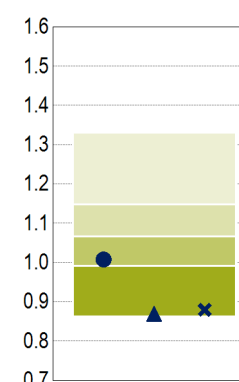
Anlzd Standard Deviation



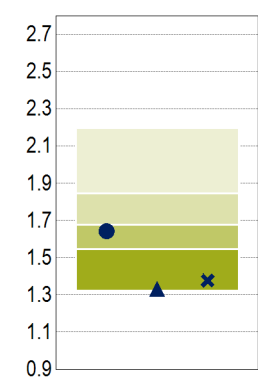
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	9.32
%tile	56
▲ Policy Index	
Value	7.53
%tile	91
✕ Allocation Index	
Value	7.83
%tile	86
Universe	
5th %tile	11.16
25th %tile	10.25
Median	9.47
75th %tile	8.46
95th %tile	6.79

● Teachers Composite	
Value	9.18
%tile	61
▲ Policy Index	
Value	8.57
%tile	43
✕ Allocation Index	
Value	8.83
%tile	50
Universe	
5th %tile	6.45
25th %tile	7.77
Median	8.83
75th %tile	9.74
95th %tile	10.71

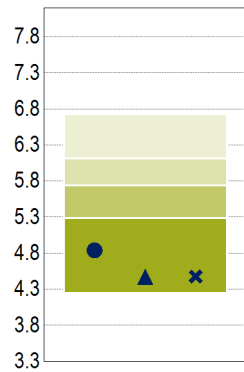
● Teachers Composite	
Value	9.24
%tile	56
▲ Policy Index	
Value	7.45
%tile	91
✕ Allocation Index	
Value	7.76
%tile	86
Universe	
5th %tile	11.09
25th %tile	10.18
Median	9.40
75th %tile	8.39
95th %tile	6.72

● Teachers Composite	
Value	1.01
%tile	67
▲ Policy Index	
Value	0.87
%tile	95
✕ Allocation Index	
Value	0.88
%tile	94
Universe	
5th %tile	1.33
25th %tile	1.15
Median	1.07
75th %tile	0.99
95th %tile	0.86

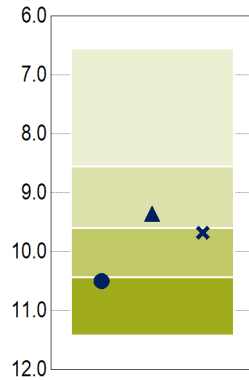
● Teachers Composite	
Value	1.64
%tile	57
▲ Policy Index	
Value	1.33
%tile	95
✕ Allocation Index	
Value	1.38
%tile	93
Universe	
5th %tile	2.20
25th %tile	1.85
Median	1.68
75th %tile	1.55
95th %tile	1.33

Teachers Composite vs. IFx Public DB Gross
10 Years

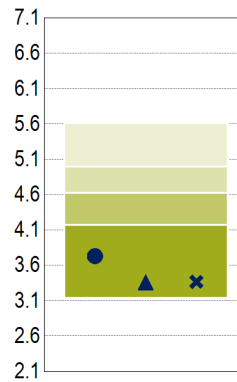
Anlzd Return



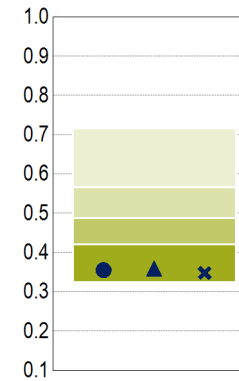
Anlzd Standard Deviation



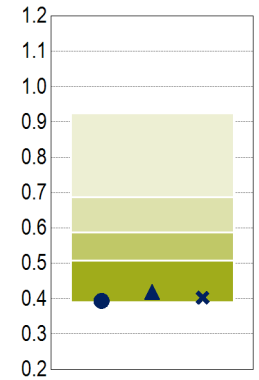
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	4.84
%tile	88
▲ Policy Index	
Value	4.47
%tile	94
✕ Allocation Index	
Value	4.47
%tile	94
Universe	
5th %tile	6.72
25th %tile	6.12
Median	5.75
75th %tile	5.29
95th %tile	4.25

● Teachers Composite	
Value	10.50
%tile	77
▲ Policy Index	
Value	9.36
%tile	43
✕ Allocation Index	
Value	9.68
%tile	52
Universe	
5th %tile	6.56
25th %tile	8.54
Median	9.59
75th %tile	10.43
95th %tile	11.41

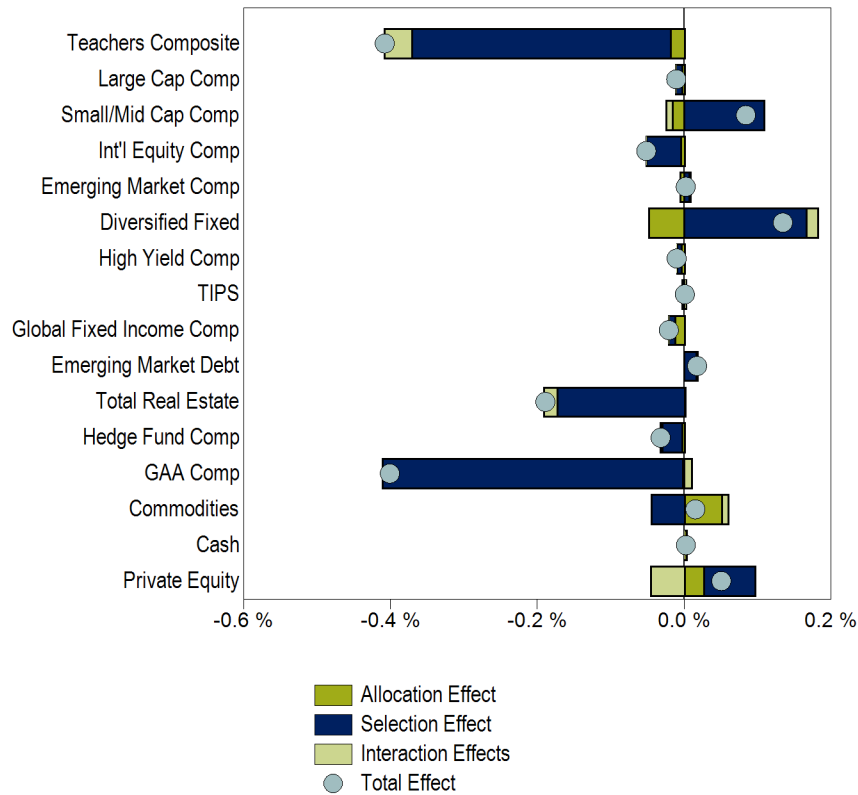
● Teachers Composite	
Value	3.73
%tile	88
▲ Policy Index	
Value	3.36
%tile	94
✕ Allocation Index	
Value	3.36
%tile	94
Universe	
5th %tile	5.62
25th %tile	5.01
Median	4.64
75th %tile	4.18
95th %tile	3.14

● Teachers Composite	
Value	0.35
%tile	91
▲ Policy Index	
Value	0.36
%tile	91
✕ Allocation Index	
Value	0.35
%tile	92
Universe	
5th %tile	0.72
25th %tile	0.57
Median	0.49
75th %tile	0.42
95th %tile	0.33

● Teachers Composite	
Value	0.39
%tile	95
▲ Policy Index	
Value	0.42
%tile	92
✕ Allocation Index	
Value	0.40
%tile	94
Universe	
5th %tile	0.92
25th %tile	0.69
Median	0.59
75th %tile	0.51
95th %tile	0.39

Total Fund Attribution Analysis

**Attribution Effects Relative to Policy Index
3 Months Ending December 31, 2015**



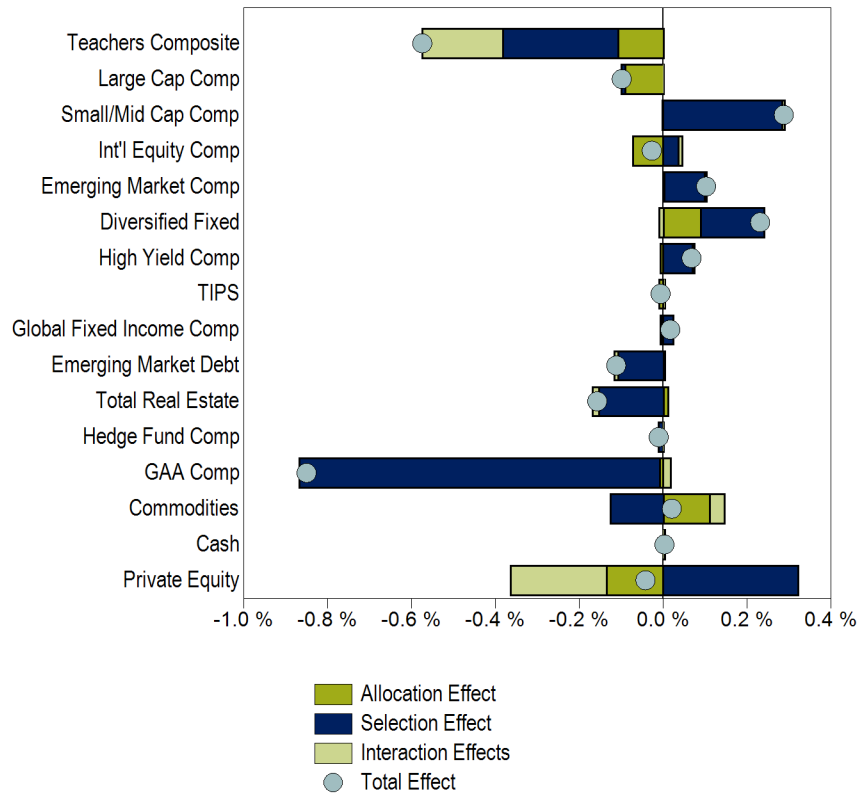
**Attribution Summary
3 Months Ending December 31, 2015**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	6.4%	6.5%	-0.1%	0.0%	0.0%	0.0%	0.0%
Small/Mid Cap Comp	5.3%	3.2%	2.1%	0.1%	0.0%	0.0%	0.1%
Int'l Equity Comp	4.0%	4.4%	-0.4%	0.0%	0.0%	0.0%	-0.1%
Emerging Market Comp	0.8%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%
Diversified Fixed	0.3%	-0.6%	0.8%	0.2%	0.0%	0.0%	0.1%
High Yield Comp	-2.2%	-2.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
TIPS	-0.6%	-0.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-1.5%	-1.2%	-0.3%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	1.9%	1.5%	0.3%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	0.1%	2.9%	-2.8%	-0.2%	0.0%	0.0%	-0.2%
Hedge Fund Comp	0.2%	0.7%	-0.5%	0.0%	0.0%	0.0%	0.0%
GAA Comp	-0.7%	1.8%	-2.6%	-0.4%	0.0%	0.0%	-0.4%
Commodities	-11.8%	-10.5%	-1.3%	0.0%	0.1%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Equity	2.3%	0.0%	2.3%	0.1%	0.0%	0.0%	0.1%
Total	1.0%	1.4%	-0.4%	-0.4%	0.0%	0.0%	-0.4%

Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated returns shown on the performance report. The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index asset weights the underlying policy indices of each option in the plan and the respective benchmark. The allocation, selection, and interaction effects are calculated using the custom index described above along with the policy or target weight of each composite. May not add up due to rounding.

Total Fund Attribution Analysis

Attribution Effects Relative to Policy Index
1 Year Ending December 31, 2015



Attribution Summary
1 Year Ending December 31, 2015

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	0.4%	0.4%	-0.1%	0.0%	-0.1%	0.0%	-0.1%
Small/Mid Cap Comp	1.1%	-4.5%	5.6%	0.3%	0.0%	0.0%	0.3%
Int'l Equity Comp	-1.2%	-1.7%	0.5%	0.0%	-0.1%	0.0%	0.0%
Emerging Market Comp	-13.1%	-14.9%	1.8%	0.1%	0.0%	0.0%	0.1%
Diversified Fixed	1.4%	0.5%	0.9%	0.2%	0.1%	0.0%	0.2%
High Yield Comp	-2.7%	-4.5%	1.8%	0.1%	0.0%	0.0%	0.1%
TIPS	-1.3%	-1.4%	0.1%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-2.8%	-3.6%	0.8%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	-1.0%	1.2%	-2.2%	-0.1%	0.0%	0.0%	-0.1%
Total Real Estate	10.5%	13.3%	-2.9%	-0.2%	0.0%	0.0%	-0.2%
Hedge Fund Comp	-0.4%	-0.3%	-0.2%	0.0%	0.0%	0.0%	0.0%
GAA Comp	-6.6%	-0.8%	-5.8%	-0.9%	0.0%	0.0%	-0.9%
Commodities	-27.2%	-24.7%	-2.5%	-0.1%	0.1%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Equity	16.2%	5.1%	11.1%	0.3%	-0.1%	-0.2%	0.0%
Total	-2.0%	-1.4%	-0.6%	-0.3%	-0.1%	-0.2%	-0.6%

Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated returns shown on the performance report. The target return shown for each composite is a custom index, based on aggregated policy indices. This policyindex asset weights the underlying policy indices of each option in the plan and the respective benchmark. The allocation, selection, and interaction effects are calculated using the custom index described above along with the policy or target weight of each composite. May not add up due to rounding.

Vermont State Teachers

Total Fund Risk Statistics - 3 Years Ending December 31, 2015

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Teachers Composite	100.00%	3.52%	97	5.93%	30	-0.54%	75	0.59	98	1.12	98	0.88%	33
Policy Index	--	3.76%	96	5.43%	13	0.00%	63	0.69	93	1.37	88	0.00%	1
US Equity	14.39%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	14.74%	43	10.73%	22	0.00%	44	1.37	31	2.87	27	0.00%	1
Large Cap Comp	9.53%	15.17%	47	10.66%	32	0.02%	50	1.42	41	3.12	24	0.70%	1
S&P 500	--	15.13%	48	10.62%	30	0.00%	50	1.42	41	2.94	33	0.00%	1
Small/Mid Cap Comp	4.86%	14.67%	28	12.61%	49	4.47%	33	1.16	30	2.82	10	2.99%	1
Russell 2000	--	11.65%	72	14.16%	83	0.00%	81	0.82	77	1.58	77	0.00%	1
Int'l Equity Comp	10.65%	6.03%	58	12.36%	72	1.17%	63	0.48	62	1.06	50	1.82%	8
MSCI EAFE	--	5.01%	73	12.64%	86	0.00%	76	0.39	74	0.78	73	0.00%	1
Emerging Market Comp	5.71%	-6.81%	79	14.05%	57	-0.61%	85	-0.49	80	-0.79	80	5.27%	68
MSCI Emerging Markets	--	-6.76%	78	14.25%	63	0.00%	78	-0.48	79	-0.79	81	0.00%	1
US Fixed Income	28.09%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays Aggregate	--	1.44%	64	2.92%	58	0.00%	81	0.48	76	0.83	70	0.00%	1
Diversified Fixed	20.91%	2.16%	33	3.40%	69	0.57%	50	0.63	58	1.02	55	1.12%	25
Barclays Aggregate	--	1.44%	64	2.92%	58	0.00%	81	0.48	76	0.83	70	0.00%	1
Unconstrained Fixed Income	7.21%	--	--	--	--	--	--	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg	--	1.17%	94	3.83%	98	0.00%	99	0.30	99	0.46	98	0.00%	1
High Yield Comp	4.10%	2.51%	53	4.41%	20	1.13%	47	0.56	44	0.91	51	1.32%	53
Barclays High Yield	--	1.69%	76	5.34%	68	0.00%	78	0.31	78	0.59	73	0.00%	1
TIPS	3.09%	-2.28%	70	5.11%	78	0.00%	53	-0.45	48	-0.58	50	0.19%	9
Barclays US TIPS	--	-2.27%	68	5.07%	73	0.00%	54	-0.45	49	-0.58	53	0.00%	1
Global Fixed Income Comp	3.09%	-3.24%	90	4.47%	55	-0.70%	91	-0.73	95	-1.04	95	1.58%	9
Citi WGBI	--	-2.70%	87	4.45%	55	0.00%	86	-0.61	92	-0.81	89	0.00%	1
Emerging Market Debt	5.68%	-0.12%	35	6.83%	34	-0.05%	35	-0.02	35	-0.03	35	1.31%	8
JP Morgan EMBI Global TR	--	-0.07%	35	7.08%	40	0.00%	35	-0.01	35	-0.02	35	0.00%	1
Total Real Estate	7.01%	13.42%	--	5.80%	--	0.23%	--	2.31	--	1,823.54	--	2.46%	--
NCREIF Property Index	--	12.04%	--	4.81%	--	0.00%	--	2.49	--	1,634.46	--	0.00%	--
Hedge Fund Comp	5.58%	5.16%	39	3.68%	37	1.28%	37	1.39	31	3.17	19	1.39%	5
HFRI Fund of Funds Composite Index	--	3.95%	60	3.46%	27	0.00%	53	1.13	42	1.92	44	0.00%	1
GAA Comp	15.86%	0.36%	85	7.91%	59	-3.10%	87	0.04	85	0.06	85	3.66%	39
60% MSCI ACWI (Net)/40% CITI WGBI	--	3.56%	54	7.21%	38	0.00%	60	0.49	54	1.16	35	0.00%	1
Commodities	2.47%	-20.12%	--	14.30%	--	-1.62%	--	-1.41	--	-2.01	--	4.58%	--

Vermont State Teachers

Total Fund Risk Statistics - 5 Years Ending December 31, 2015

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Teachers Composite	100.00%	5.12%	92	6.73%	29	0.42%	32	0.75	86	1.17	78	0.82%	11
Policy Index	--	4.51%	95	6.42%	19	0.00%	52	0.70	89	1.06	87	0.00%	1
US Equity	14.39%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	12.18%	42	12.08%	24	0.00%	38	1.00	29	1.66	28	0.00%	1
Large Cap Comp	9.53%	12.54%	43	12.16%	42	-0.48%	50	1.03	43	1.72	40	0.99%	1
S&P 500	--	12.57%	43	11.70%	29	0.00%	44	1.07	36	1.83	29	0.00%	1
Small/Mid Cap Comp	4.86%	11.87%	29	14.32%	35	3.72%	31	0.83	29	1.41	19	2.87%	1
Russell 2000	--	9.19%	76	15.95%	77	0.00%	84	0.57	81	0.94	74	0.00%	1
Int'l Equity Comp	10.65%	4.30%	68	14.03%	27	0.95%	67	0.30	65	0.45	62	2.10%	10
MSCI EAFE	--	3.60%	80	14.99%	70	0.00%	84	0.24	82	0.35	79	0.00%	1
Emerging Market Comp	5.71%	--	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets	--	-4.80%	83	17.79%	62	0.00%	81	-0.27	82	-0.41	84	0.00%	1
US Fixed Income	28.09%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays Aggregate	--	3.25%	63	2.71%	49	0.00%	86	1.18	71	1.97	64	0.00%	1
Diversified Fixed	20.91%	4.42%	35	3.13%	63	1.09%	42	1.40	48	2.25	47	1.45%	31
Barclays Aggregate	--	3.25%	63	2.71%	49	0.00%	86	1.18	71	1.97	64	0.00%	1
Unconstrained Fixed Income	7.21%	--	--	--	--	--	--	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg	--	4.22%	20	3.76%	98	0.00%	99	1.11	95	1.79	96	0.00%	1
High Yield Comp	4.10%	5.51%	51	5.26%	22	1.31%	36	1.04	32	1.67	43	1.36%	51
Barclays High Yield	--	5.04%	65	6.25%	66	0.00%	73	0.80	72	1.40	68	0.00%	1
TIPS	3.09%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays US TIPS	--	2.55%	55	4.97%	74	0.00%	61	0.50	58	0.69	51	0.00%	1
Global Fixed Income Comp	3.09%	0.16%	91	4.95%	54	0.25%	90	0.02	90	0.04	90	1.78%	10
Citi WGBI	--	-0.08%	92	4.46%	38	0.00%	93	-0.03	93	-0.04	93	0.00%	1
Emerging Market Debt	5.68%	--	--	--	--	--	--	--	--	--	--	--	--
JP Morgan EMBI Global TR	--	5.11%	23	7.05%	18	0.00%	24	0.72	21	1.05	17	0.00%	1
Total Real Estate	7.01%	--	--	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index	--	12.18%	--	4.86%	--	0.00%	--	2.49	--	1,170.99	--	0.00%	--
Hedge Fund Comp	5.58%	4.10%	35	4.00%	39	2.02%	35	1.01	31	1.52	32	1.32%	1
HFRI Fund of Funds Composite Index	--	2.10%	71	3.81%	35	0.00%	70	0.54	65	0.77	66	0.00%	1
GAA Comp	15.86%	3.27%	69	8.41%	48	-0.20%	73	0.38	69	0.57	68	3.38%	25
60% MSCI ACWI (Net)/40% CITI WGBI	--	3.78%	67	8.43%	48	0.00%	72	0.44	64	0.68	64	0.00%	1
Commodities	2.47%	--	--	--	--	--	--	--	--	--	--	--	--



Appendix

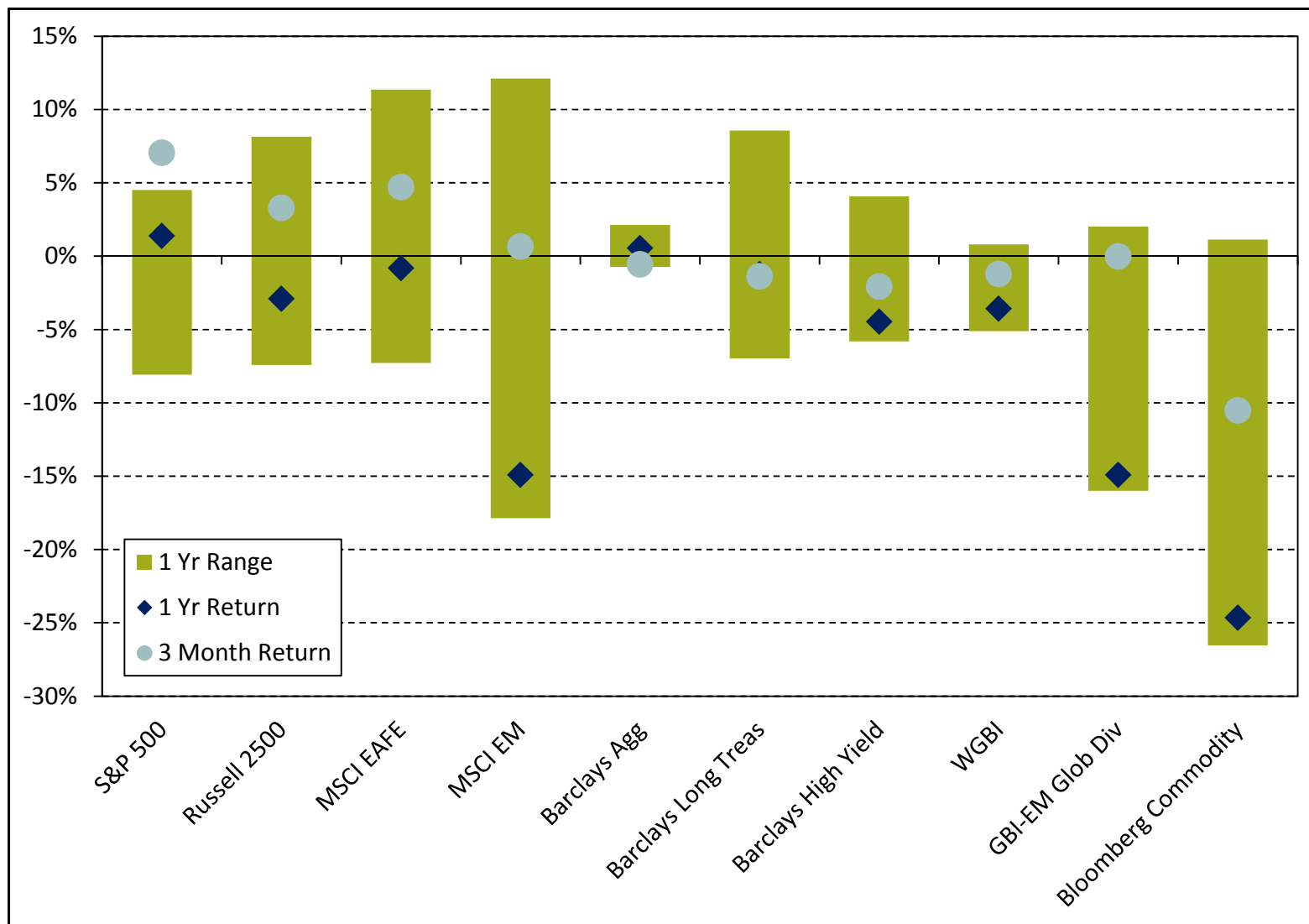


Index Performance Summary as of 12/31/2015

	2008	2009	2010	2011	2012	2013	2014	Q1	Q2	Q3	OCT	NOV	DEC	Q4	1 YR
Barclays Municipal	-2.5%	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	1.0%	-0.9%	1.7%	0.4%	0.4%	0.7%	1.5%	3.3%
FTSE NAREIT Eqty REITs	-37.7%	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	4.8%	-10.0%	2.0%	5.9%	-0.5%	1.8%	7.3%	3.2%
S&P 500	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.0%	0.3%	-6.4%	8.4%	0.3%	-1.6%	7.0%	1.4%
Barclays US Agg Interm	4.9%	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.3%	-0.7%	1.1%	0.0%	-0.2%	-0.2%	-0.5%	1.2%
JPM EMBI Global Div	-12.0%	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	2.0%	-0.3%	-1.7%	2.7%	-0.1%	-1.4%	1.3%	1.2%
Russell 1000	-37.6%	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	1.6%	0.1%	-6.8%	8.1%	0.3%	-1.8%	6.5%	0.9%
Barc US Gov/Cred 1-3 Y	5.0%	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.6%	0.1%	0.3%	0.0%	-0.2%	-0.1%	-0.4%	0.7%
Barclays US Agg Bond	5.2%	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	1.6%	-1.7%	1.2%	0.0%	-0.3%	-0.3%	-0.6%	0.5%
Credit Suisse Hedge Fnd	-19.1%	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	2.5%	-0.5%	-2.5%	0.5%	0.2%	N/A	-2.5%	0.1%
Credit Suisse Lev Loan	-28.8%	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	2.1%	0.8%	-1.2%	-0.1%	-0.9%	-0.9%	-2.0%	-0.4%
MSCI EAFE	-43.4%	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	4.9%	0.6%	-10.2%	7.8%	-1.6%	-1.3%	4.7%	-0.8%
MSCI ACWI	-42.2%	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	2.3%	0.3%	-9.4%	7.8%	-0.8%	-1.8%	5.0%	-2.4%
Russell 2500	-36.8%	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	5.2%	-0.3%	-10.3%	5.6%	2.0%	-4.1%	3.3%	-2.9%
Barc US Gov/Cred Long	8.4%	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	3.4%	-7.6%	2.2%	0.4%	-0.6%	-0.8%	-0.9%	-3.3%
Citi WGBI	10.9%	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-2.5%	-1.5%	1.7%	0.0%	-2.1%	0.9%	-1.2%	-3.6%
Barc US Strips 20+ Yr	59.5%	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	5.5%	-14.3%	7.6%	-0.3%	-1.1%	0.4%	-1.1%	-3.7%
Russell 2000	-33.8%	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	4.3%	0.4%	-11.9%	5.6%	3.3%	-5.0%	3.6%	-4.4%
Barclays US Corp HY	-26.2%	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	2.5%	0.0%	-4.9%	2.7%	-2.2%	-2.5%	-2.1%	-4.5%
Barclays US Long Credit	-3.9%	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	3.1%	-7.3%	0.5%	1.0%	-0.4%	-1.2%	-0.7%	-4.6%
MSCI EM	-53.3%	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	2.2%	0.7%	-17.9%	7.1%	-3.9%	-2.2%	0.7%	-14.9%
JPM GBI-EM Global Div	-5.2%	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-4.0%	-1.0%	-10.5%	4.5%	-2.2%	-2.2%	0.0%	-14.9%
Bloomberg Commodity	-35.6%	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-5.9%	4.7%	-14.5%	-0.4%	-7.3%	-3.1%	-10.5%	-24.7%
Alerian MLP	-36.9%	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-5.2%	-6.1%	-22.1%	9.7%	-8.1%	-3.6%	-2.8%	-32.6%

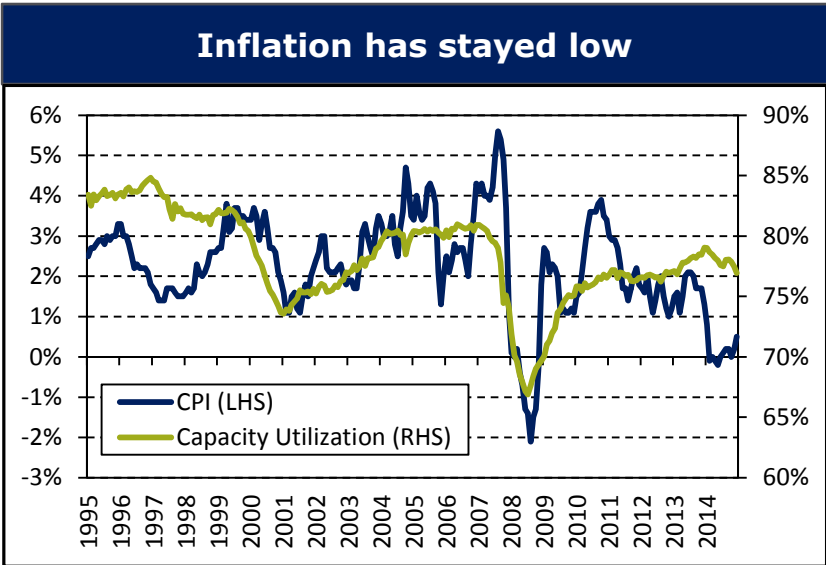
Source: Morningstar Direct

Broad Market Performance Summary as of 12/31/2015

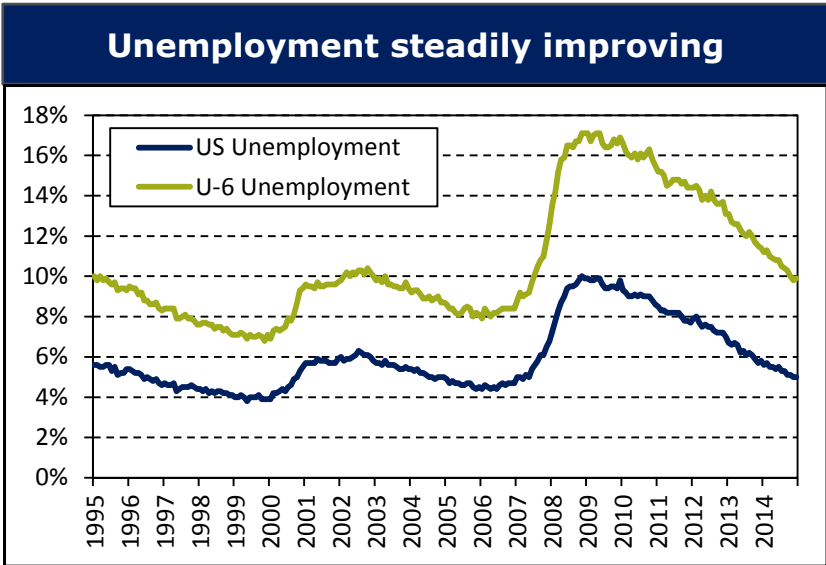


Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, JP Morgan
 *1 Yr Range: Represents range of cumulative high/low daily index returns for an investment made one year ago

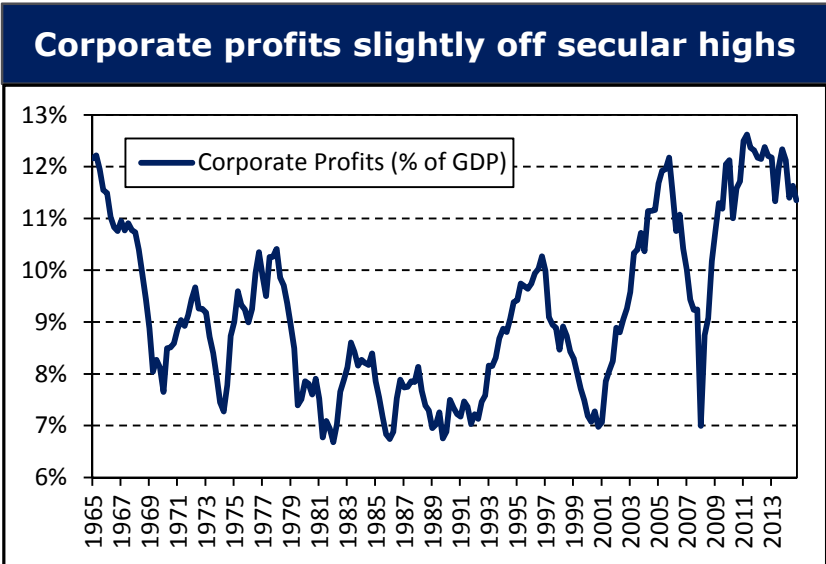
US Economic Indicators



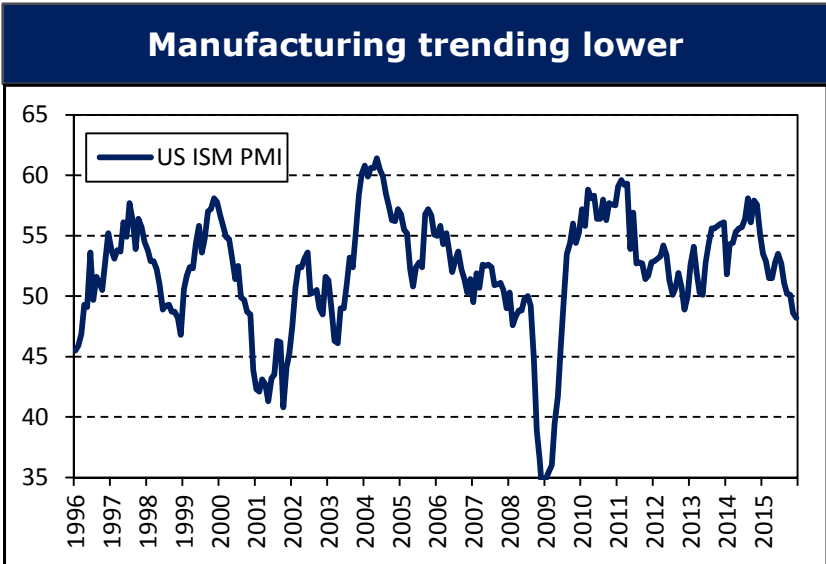
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics



Source: Bloomberg, Bureau of Labor Statistics



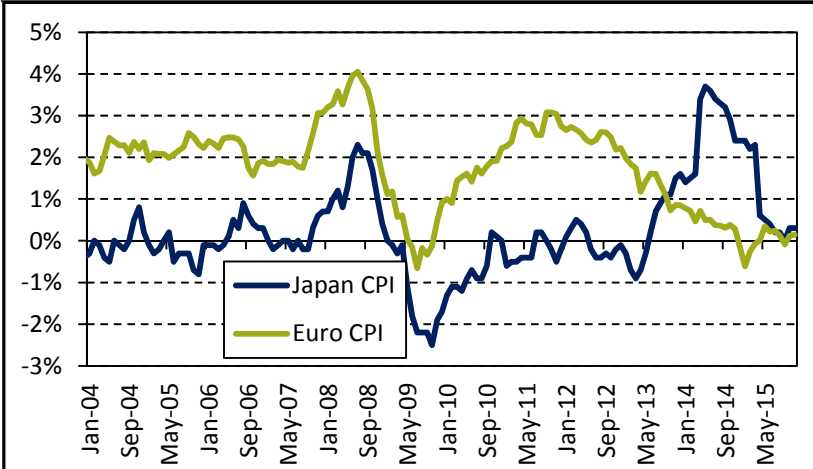
Source: Bloomberg, Bureau of Economic Analysis



Source: Bloomberg, Institute for Supply Management

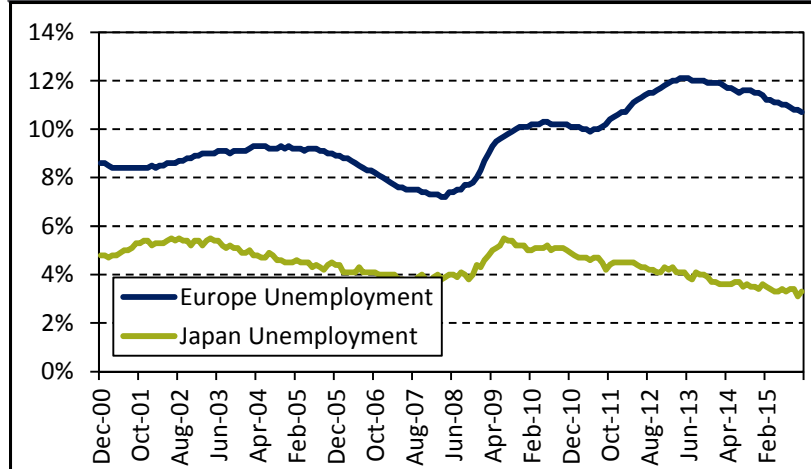
International Economic Indicators

Inflation remains muted



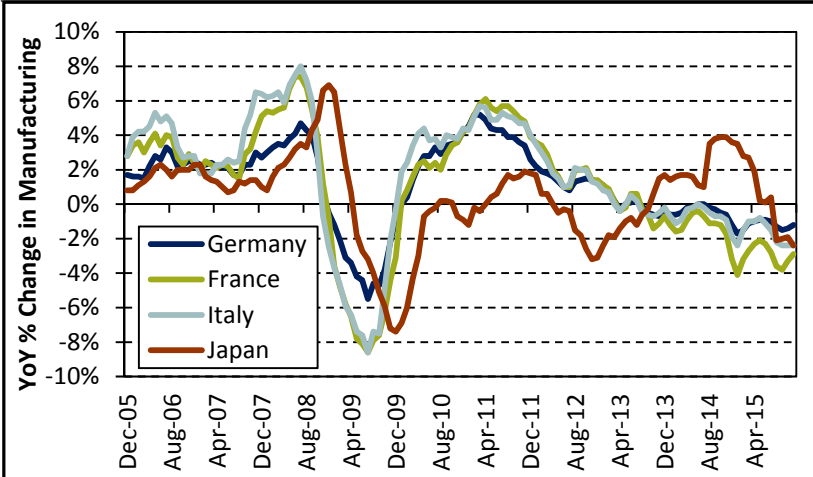
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Europe employment recovery lagging



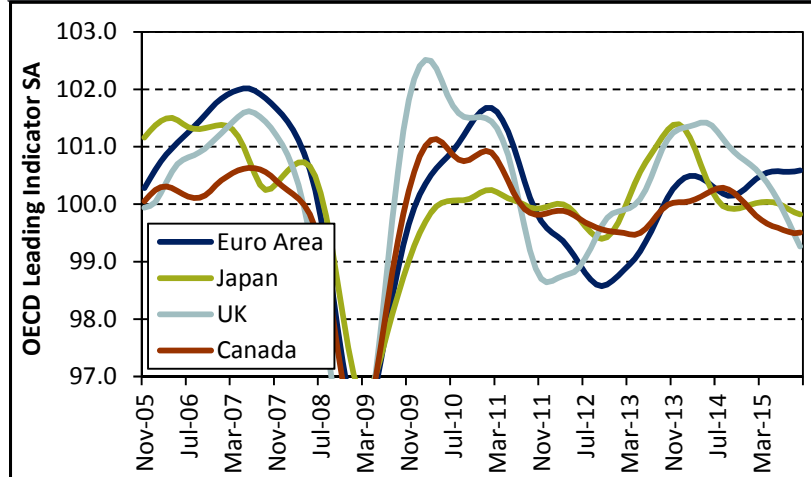
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing in developed economies has lagged



Source: Bloomberg, OECD, Eurostat

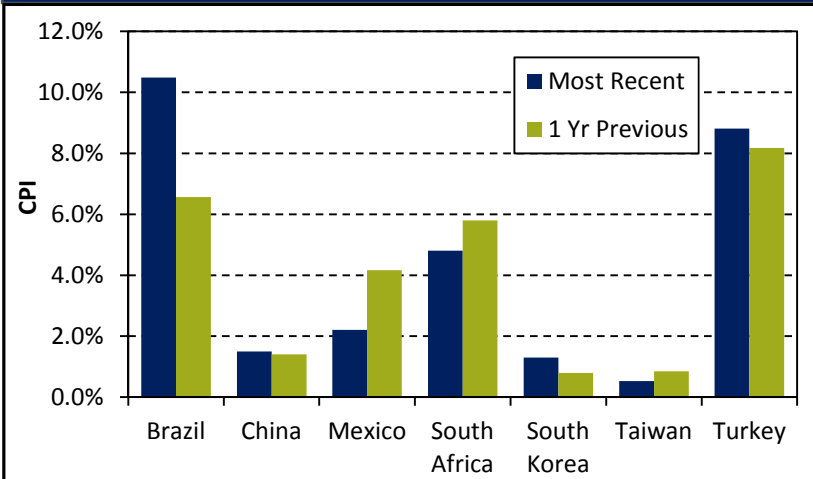
Leading indicators mostly neutral



Source: Bloomberg, OECD

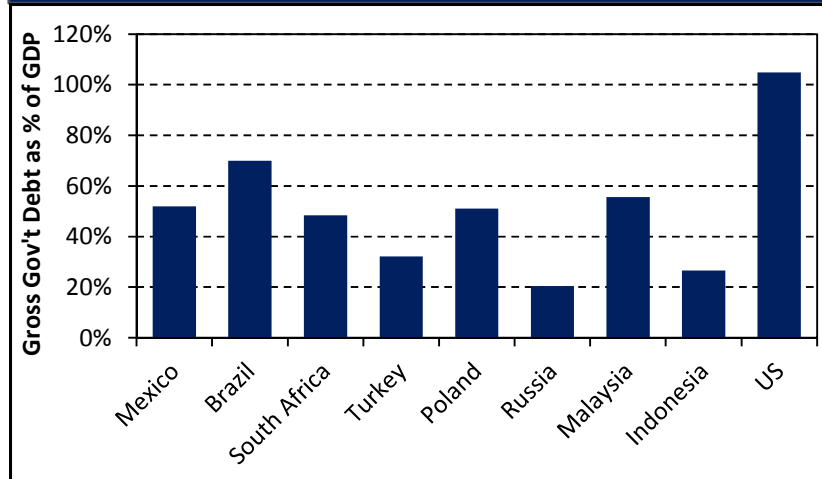
Emerging Market Economic Indicators

EM inflation is varied by country



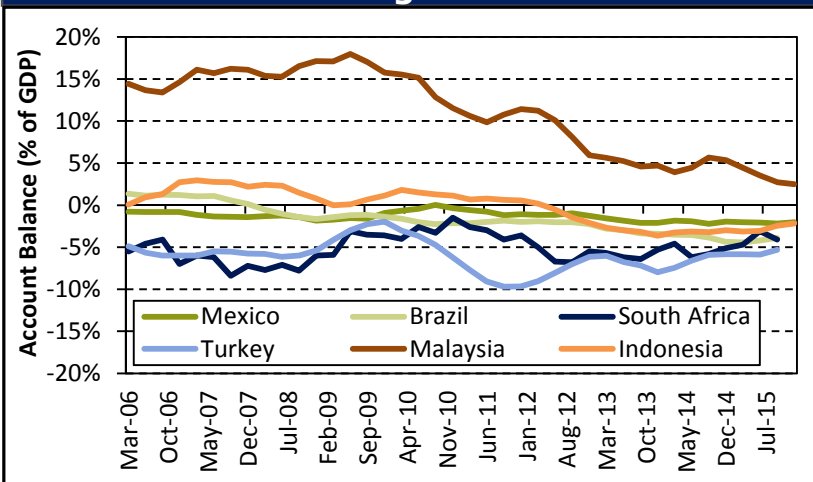
Source: Bloomberg

Relatively healthy Debt/GDP ratios



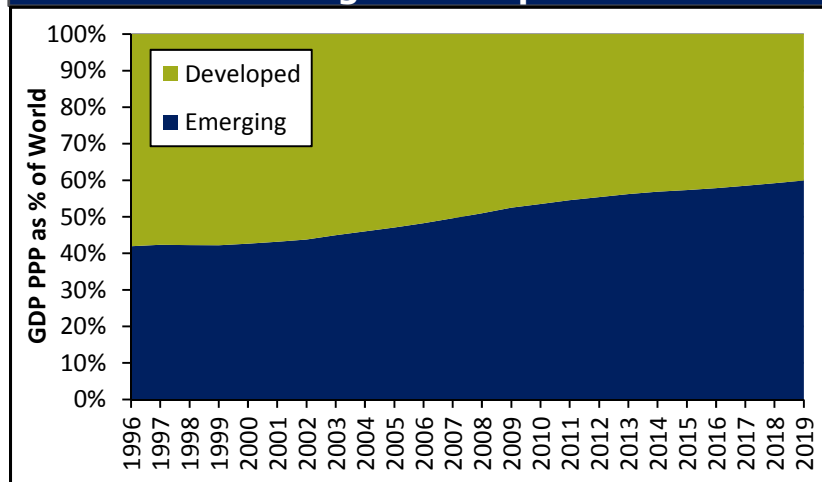
Source: Bloomberg, IMF

Little improvement in account balance challenged countries



Source: Bloomberg

Emerging economies make up >50% of global output

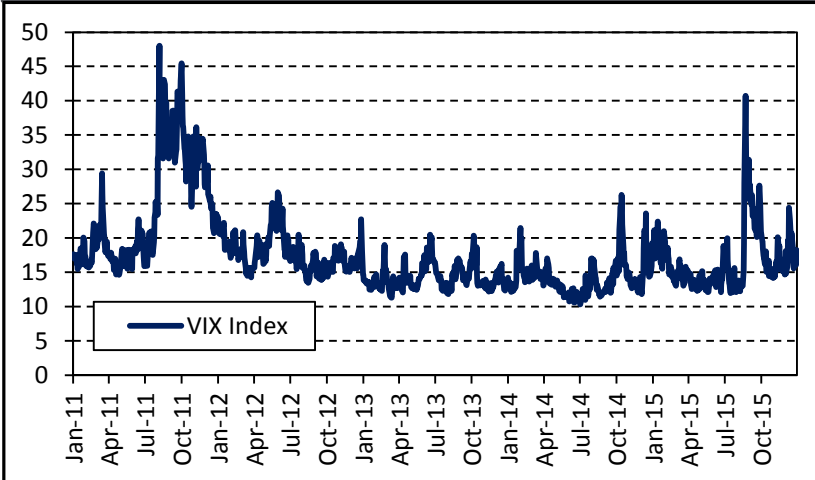


Source: Bloomberg, IMF



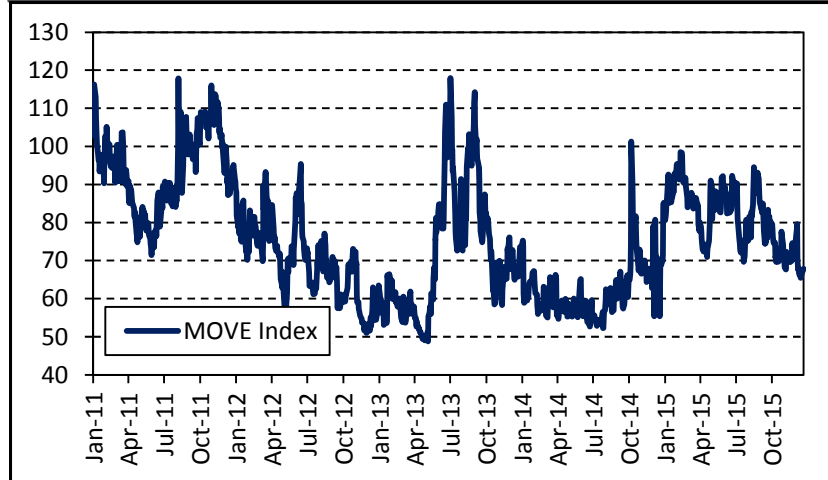
Volatility

Equity volatility has seen recent spike and decline



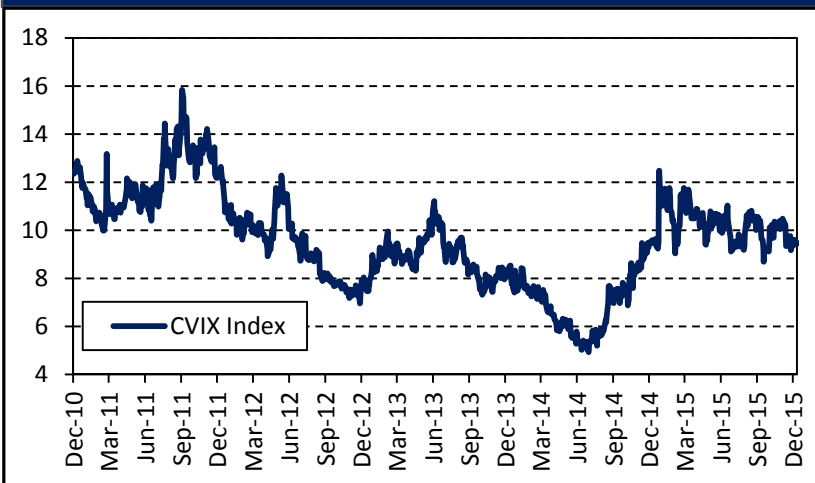
Source: Bloomberg, CBOE

Treasury rates experiencing periods of higher volatility



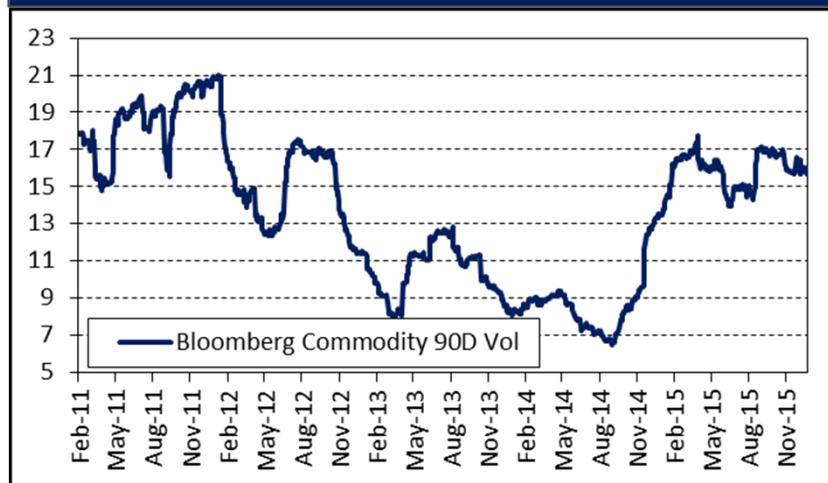
Source: Bloomberg, Merrill Lynch

Sustained uptick in currency volatilities



Source: Bloomberg, Deutsche Bank

Commodity pricing volatility remains elevated

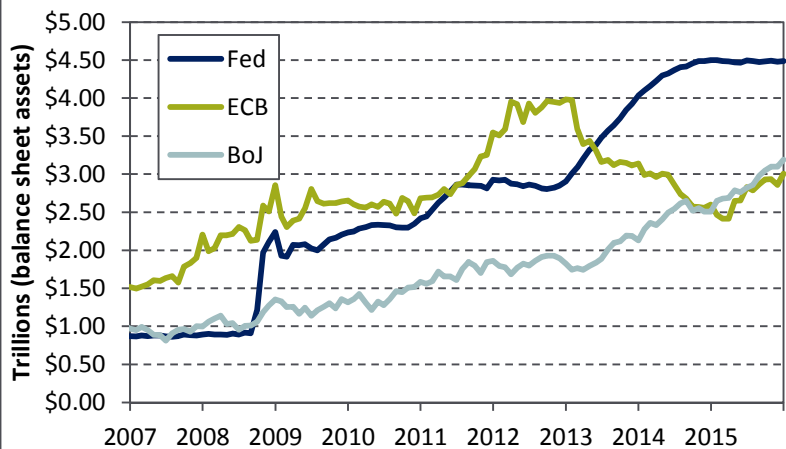


Source: Bloomberg, Merrill Lynch



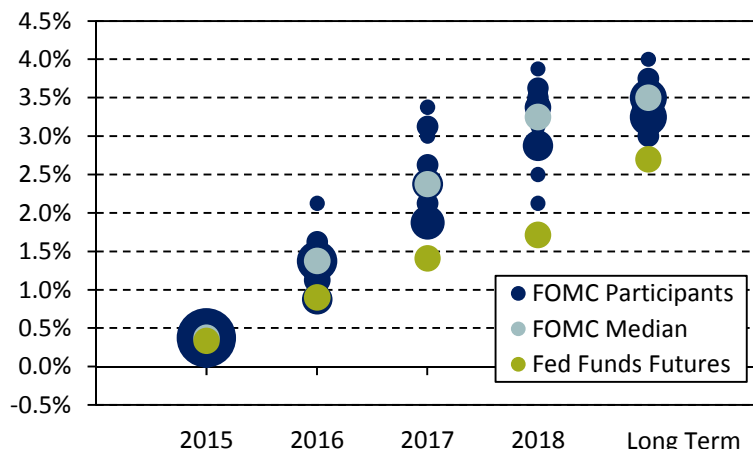
Central Banks

Major central bank policy divergence



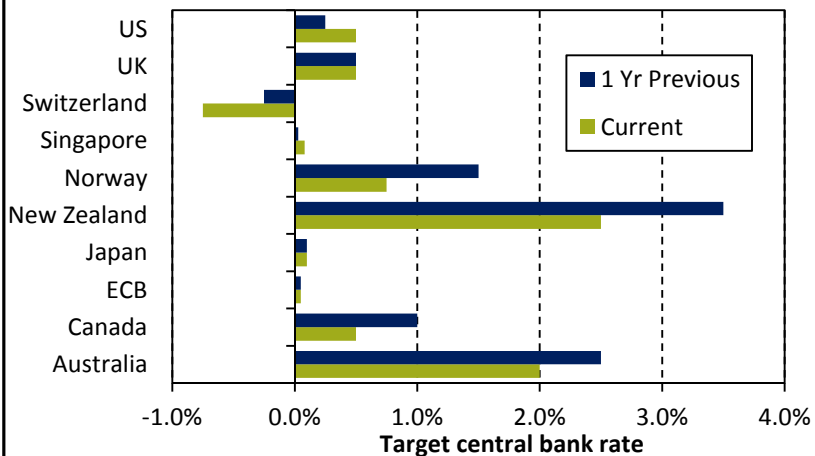
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

Fed's ideal rate of policy firming above market expectations



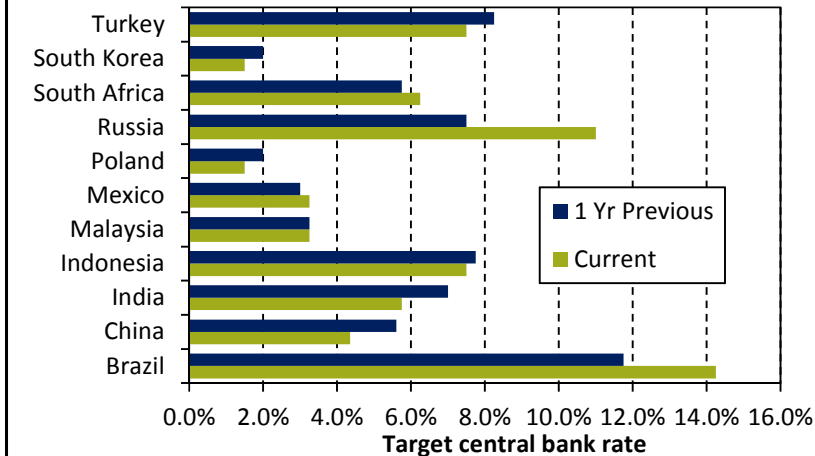
Source: Bloomberg, Federal Reserve, NEPC

Many developed central banks have maintained low interest rates



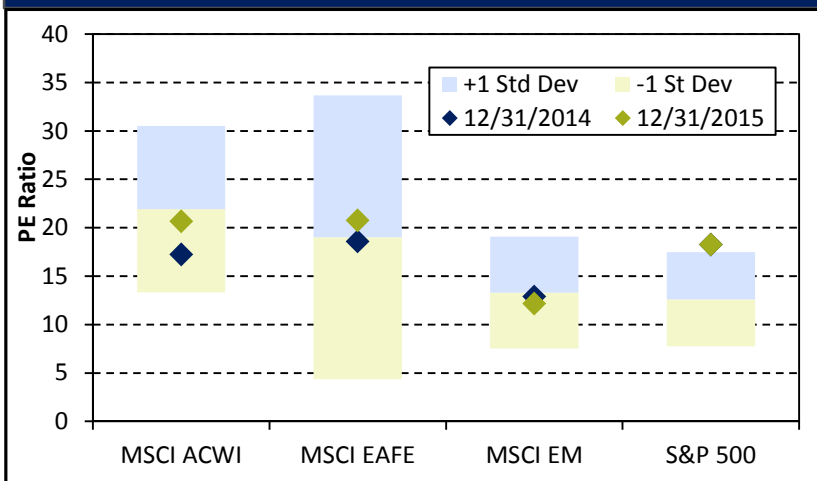
Source: Bloomberg

EM central bank policies have varied by circumstance



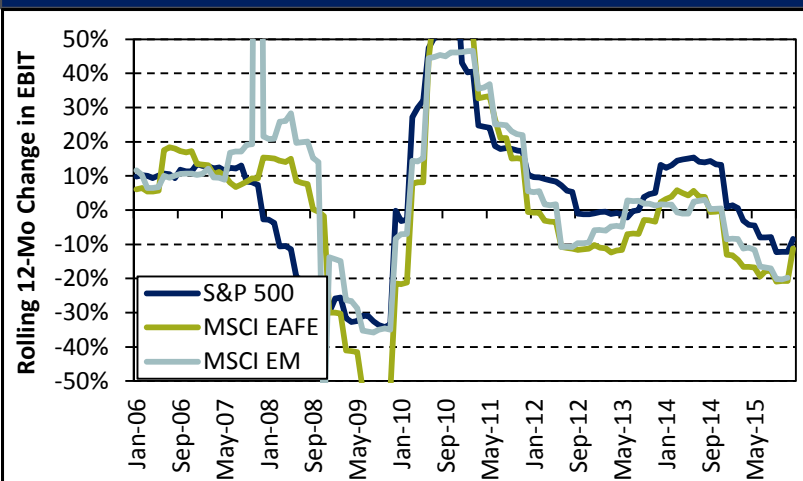
Source: Bloomberg

Global valuations are mixed



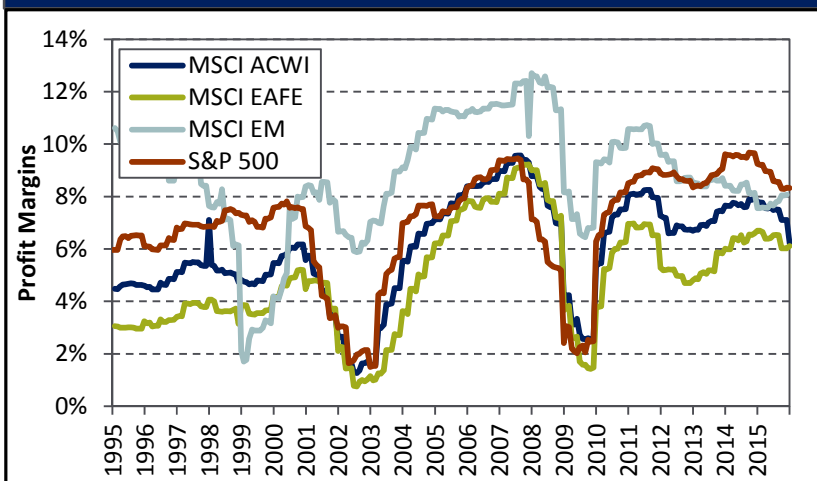
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom

Earnings growth trending lower



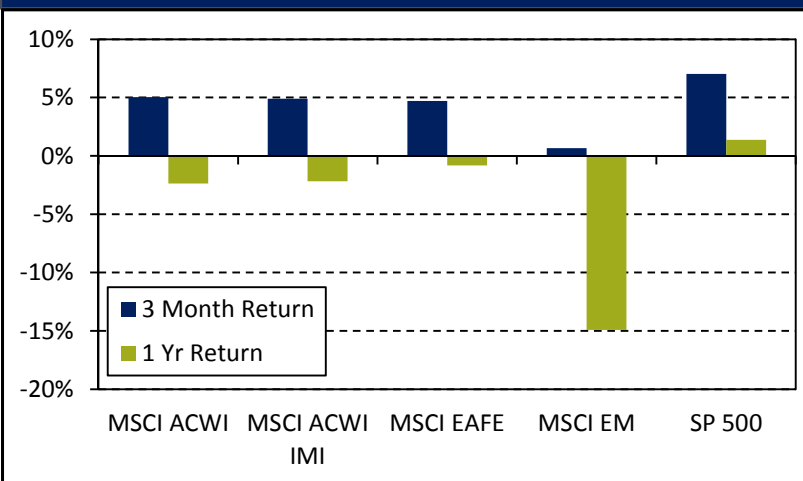
Source: Bloomberg, Standard and Poors, MSCI

Margins elevated, but largely a US story



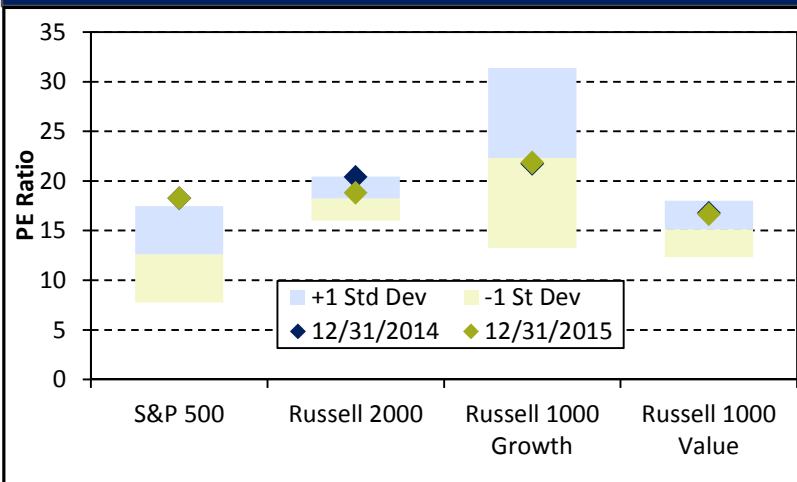
Source: Bloomberg, MSCI

Global equity returns have been mixed



Source: Bloomberg, MSCI

Valuations near or above historical norms



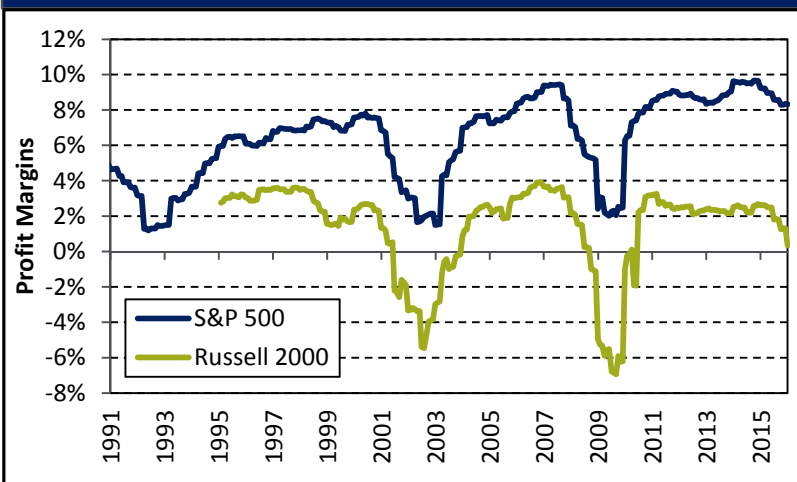
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive

Growth recovery marked by inconsistency



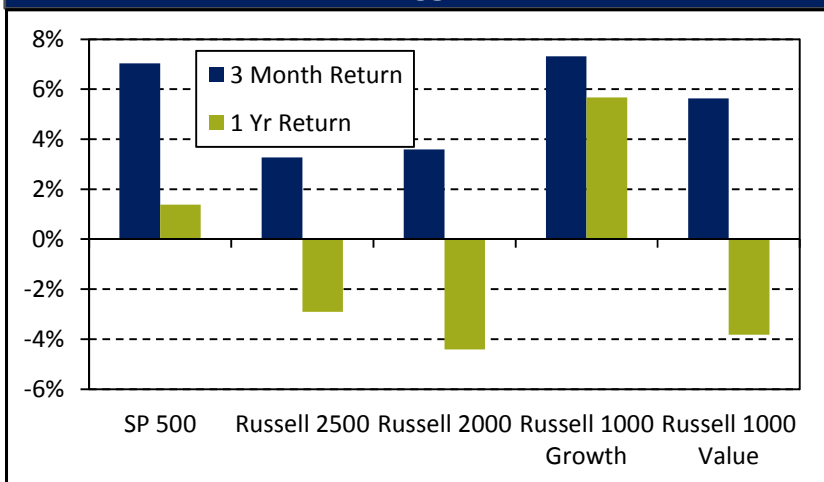
Source: Bloomberg, Bureau of Economic Analysis

Profit margins remain elevated



Source: Bloomberg, Standard and Poors, Russell

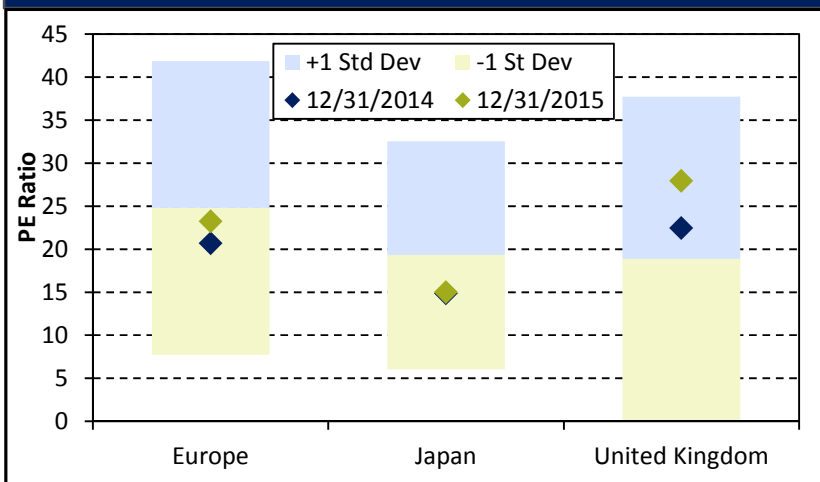
Trailing performance is positive in near term



Source: Bloomberg, Standard and Poors, Russell

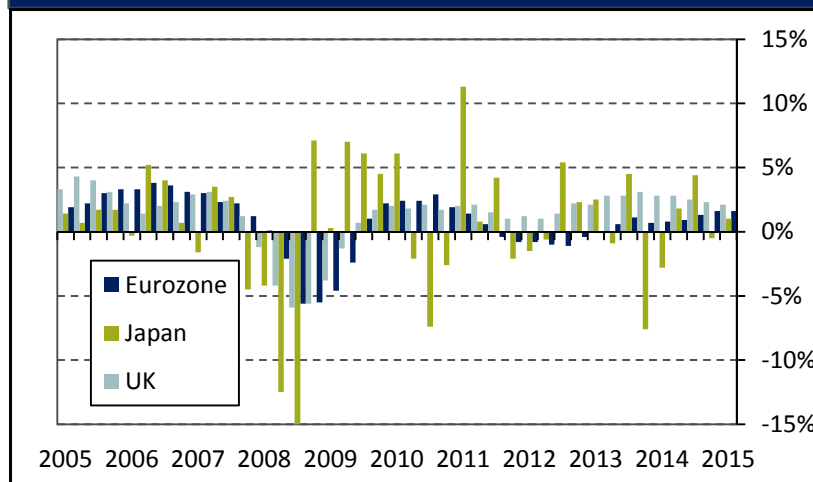
International Equity

PEs near historical medians



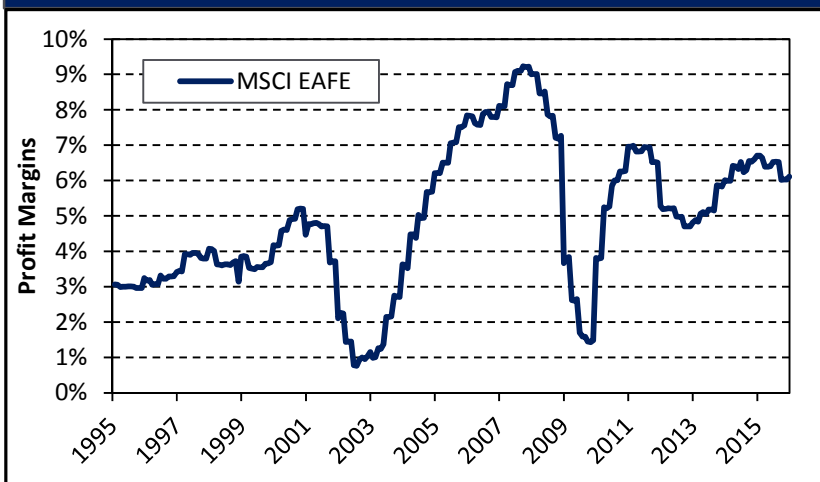
Source: Bloomberg, MSCI, FTSE *UK represented by FTSE 100 Index

Slow Global Growth



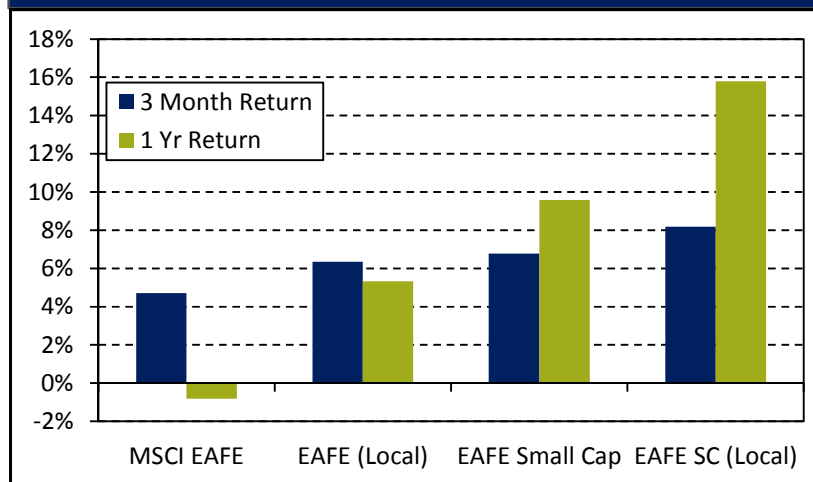
Source: Bloomberg

Margins elevated but not at extremes



Source: Bloomberg, MSCI

Returns pulled lower by dollar strength

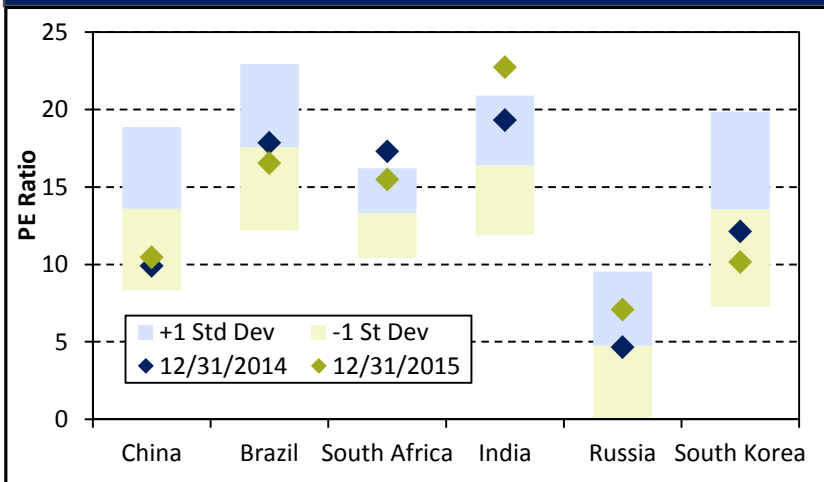


Source: Bloomberg, MSCI



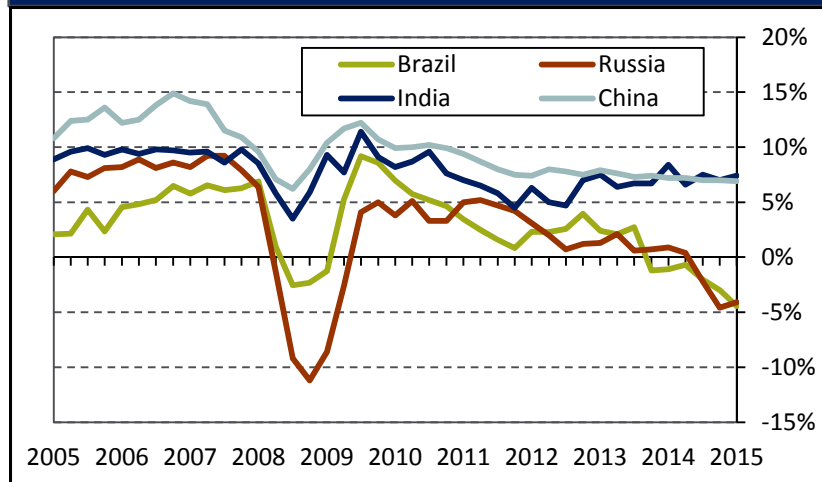
Emerging Markets Equity

Regional valuations show divergence



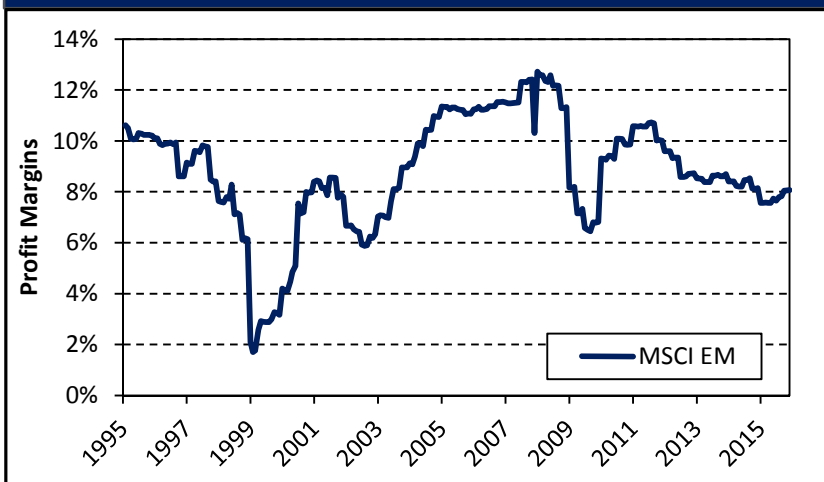
Source: Bloomberg, MSCI

Slowing growth in major economies



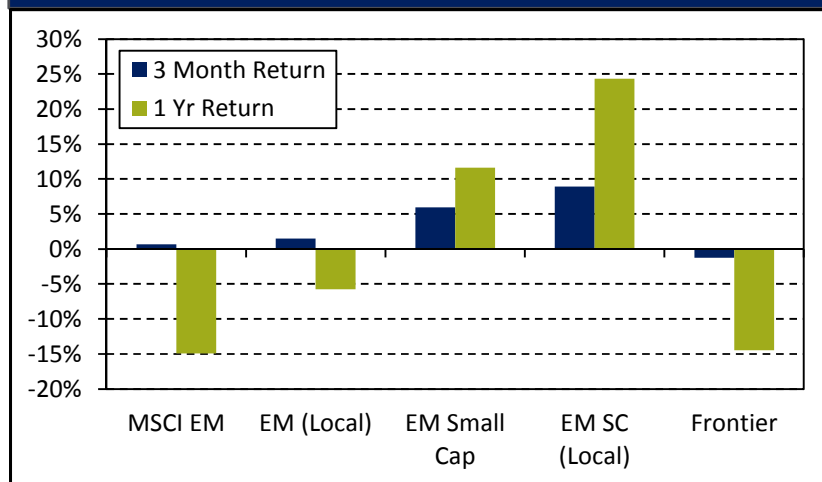
Source: Bloomberg

Profit margins in line with history



Source: Bloomberg, MSCI

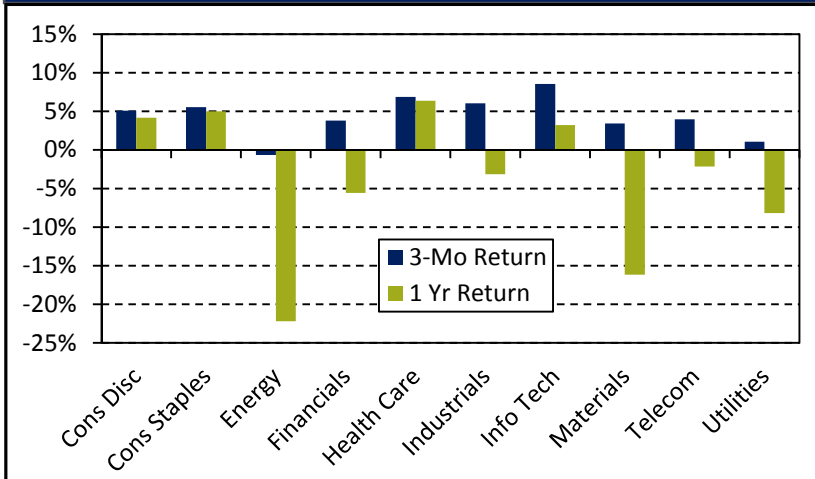
Small cap EM issues have outperformed



Source: Bloomberg, MSCI

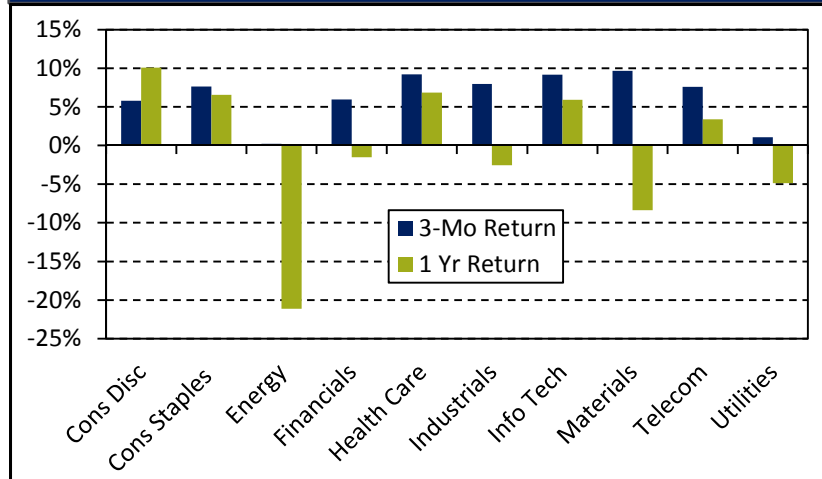
Global Equity by Sector

Energy returns sharply negative



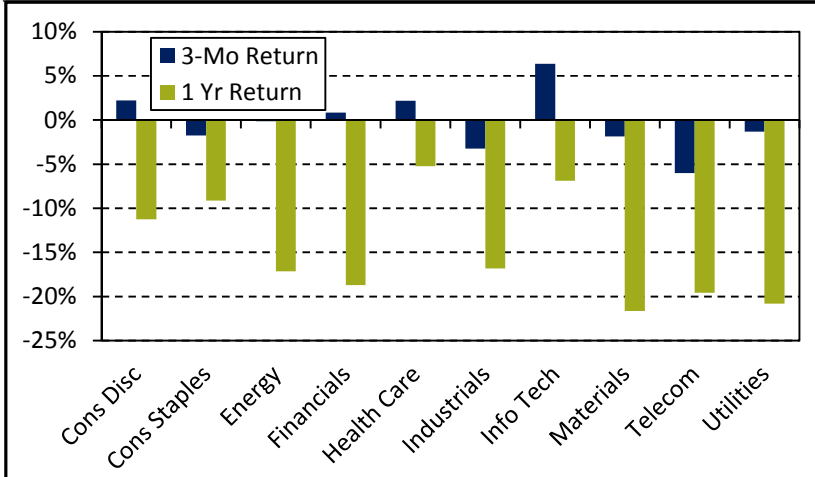
Source: Bloomberg, MSCI

S&P 500 sectors mostly positive in near term



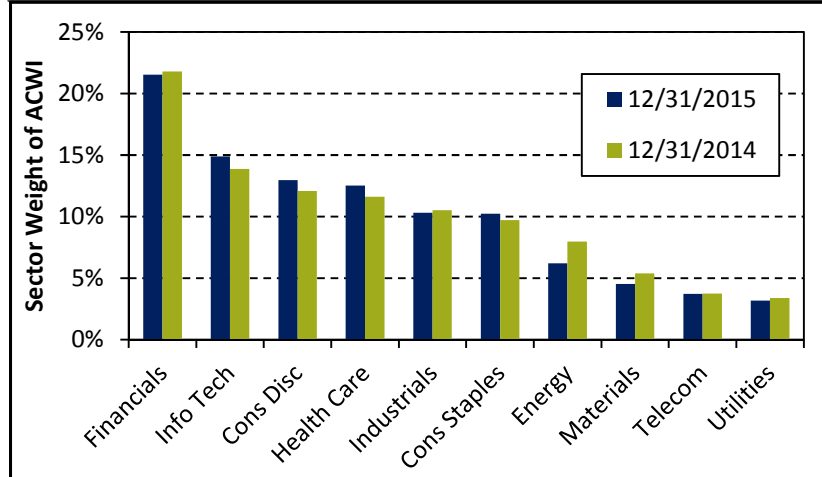
Source: Bloomberg, Standard and Poors

Returns negative across sectors over one year



Source: Bloomberg, MSCI

Global energy sector weight has fallen

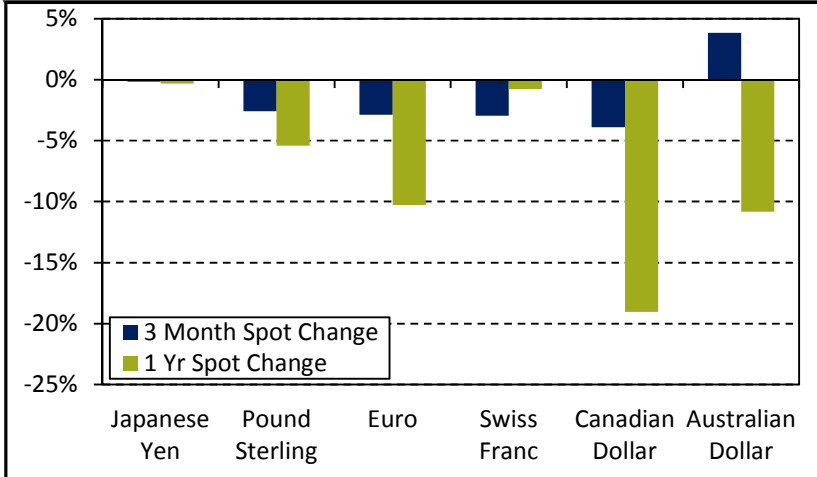


Source: Bloomberg, MSCI



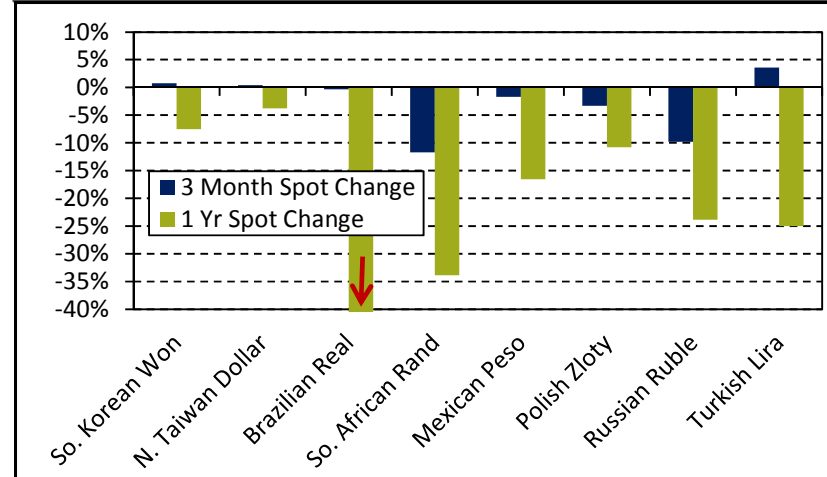
Currencies

Developed currencies mostly negative versus the dollar



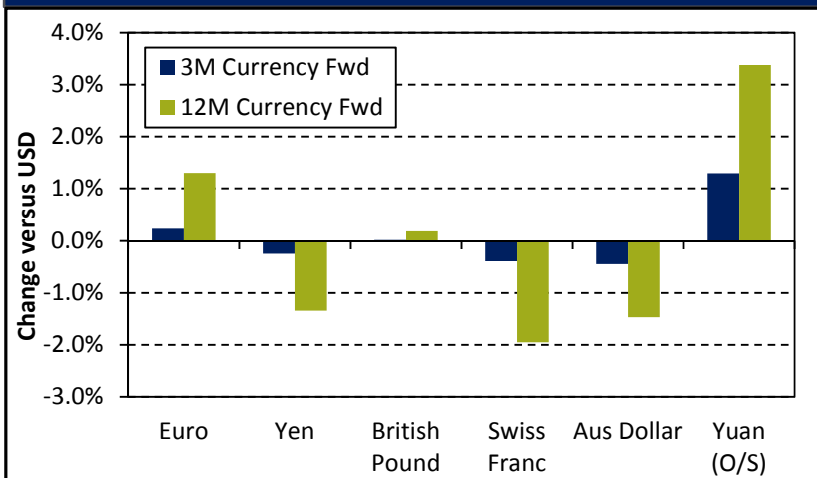
Source: Bloomberg

EM currencies have suffered in unique fashions



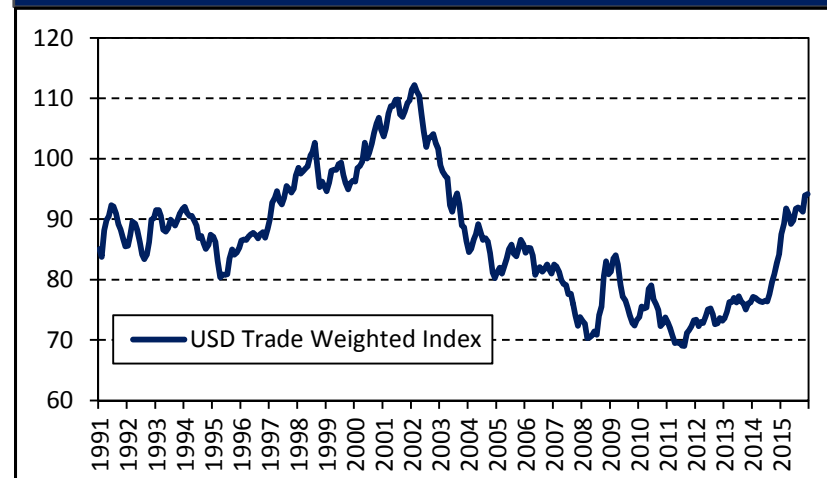
Source: Bloomberg

Yen expected to decline versus USD



Source: Bloomberg

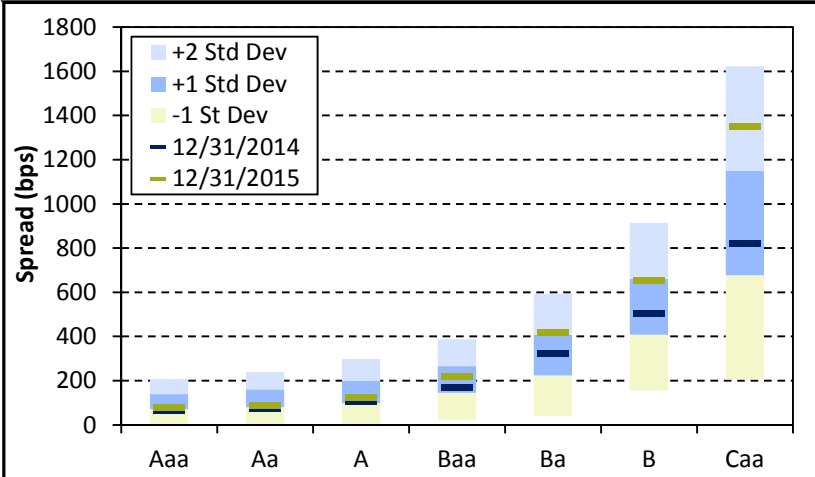
Recent dollar strength pronounced



Source: Bloomberg, Federal Reserve

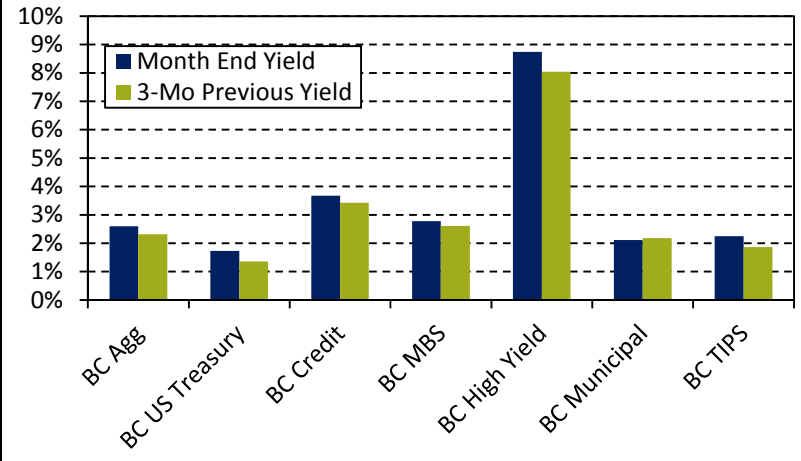


Spread levels above historical medians



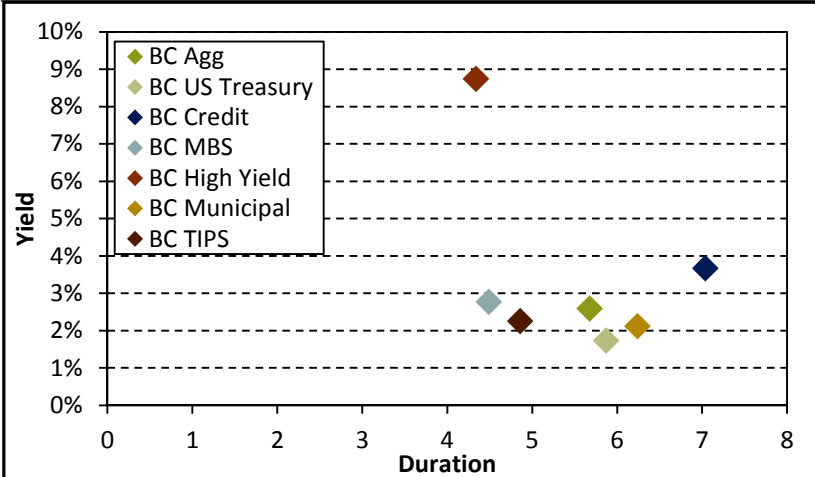
Source: Bloomberg, Barclays

Most yields have increased



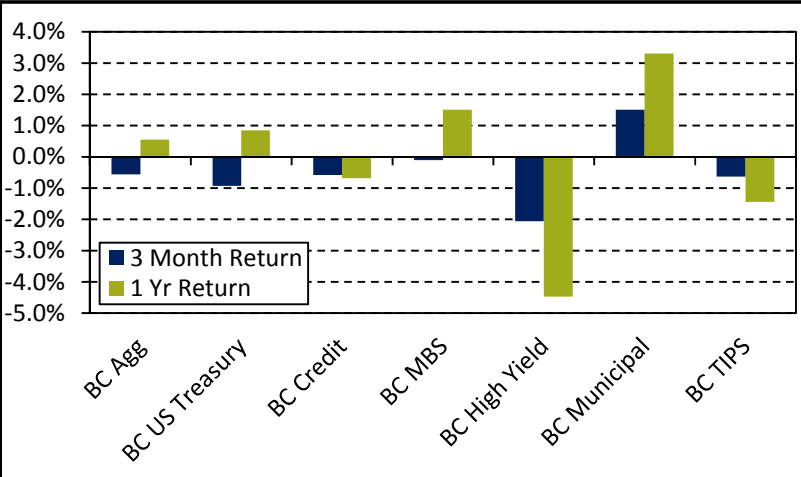
Source: Bloomberg, Barclays

Similar yield/duration tradeoff among major US indices



Source: Bloomberg, Barclays

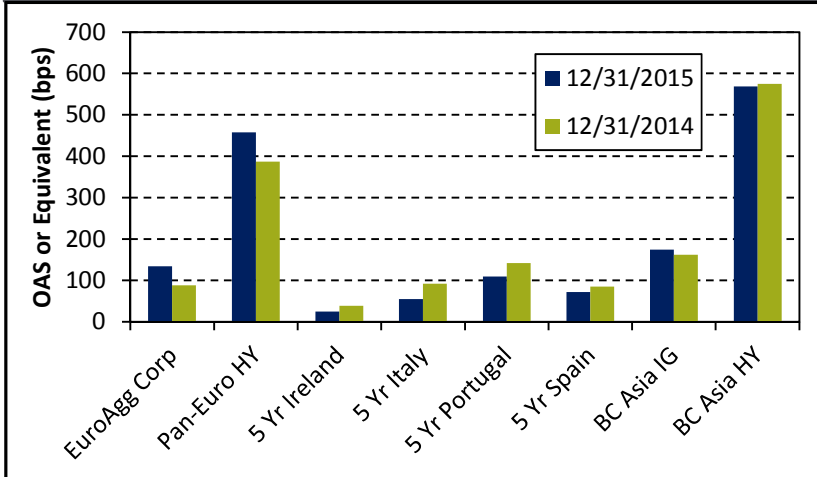
Negative high yield returns driven by energy distress



Source: Bloomberg, Barclays

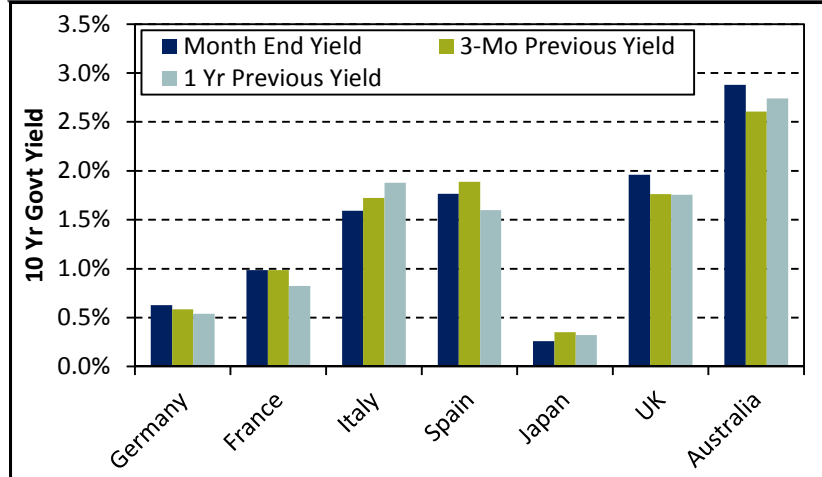
International Developed Fixed Income

European periphery yields at small premium relative to Germany



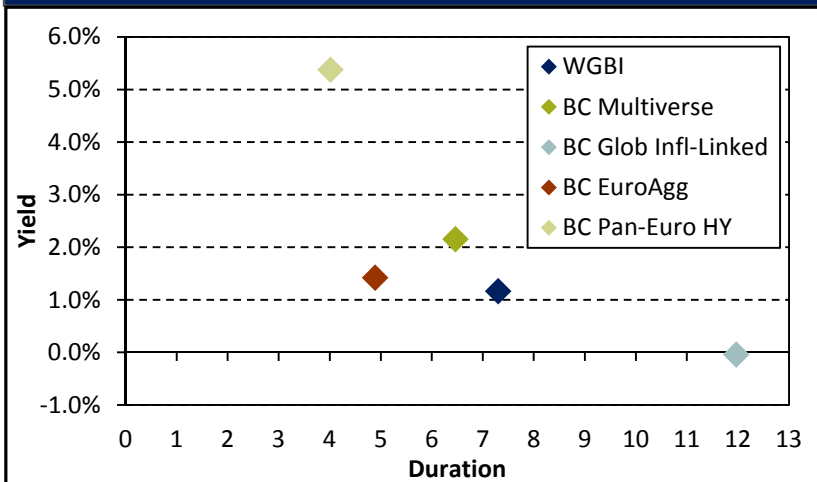
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund

Global yields are at or near historic lows



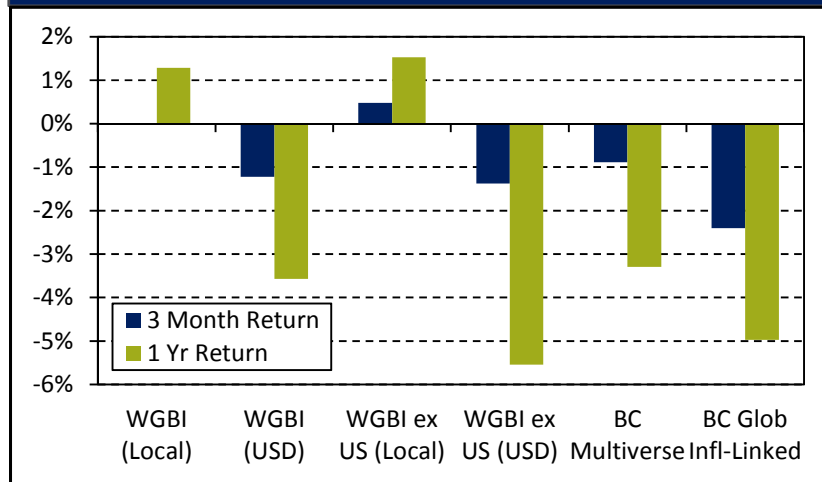
Source: Bloomberg

Low global yields relative to duration



Source: Bloomberg, Citigroup, Barclays

Global bonds negative over one year in USD terms

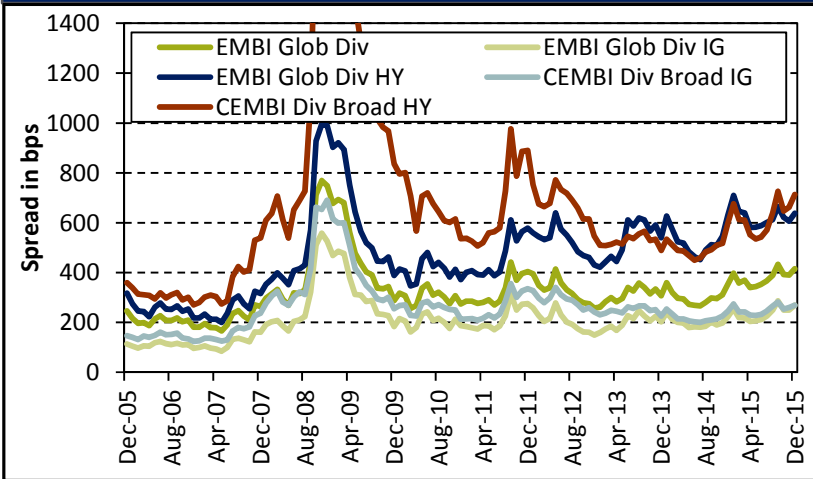


Source: Bloomberg, Citigroup, Barclays



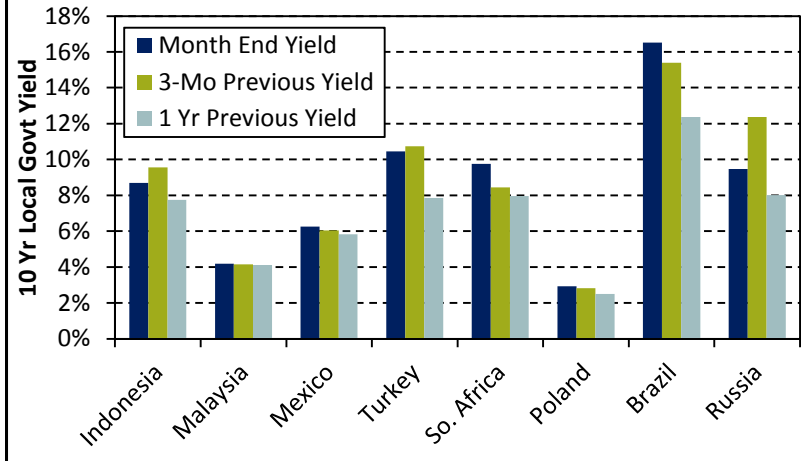
Emerging Markets Fixed Income

Spreads have widened recently



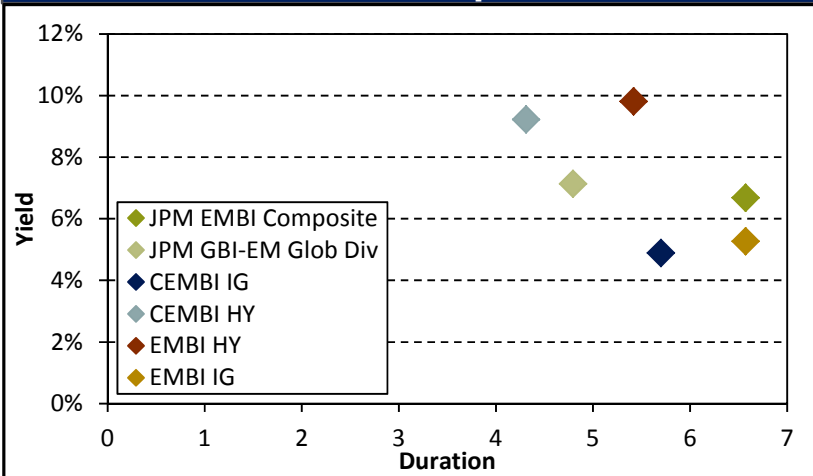
Source: Bloomberg, JP Morgan

Emerging market bond yield changes have varied directionally



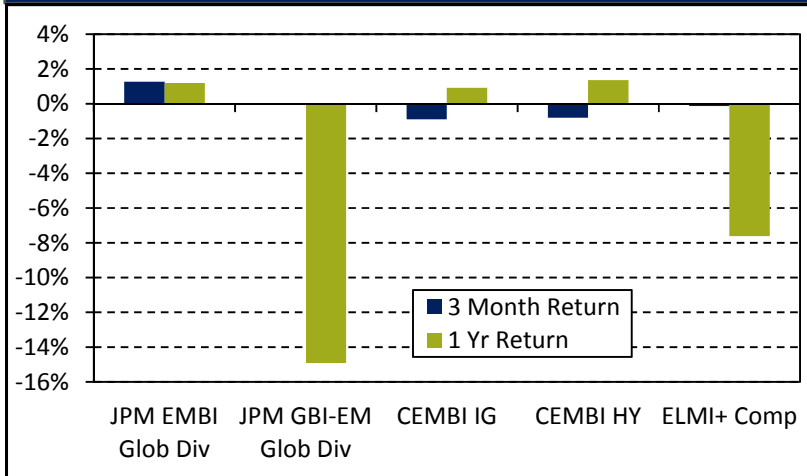
Source: Bloomberg

EM yields higher versus global counterparts



Source: Bloomberg, JP Morgan

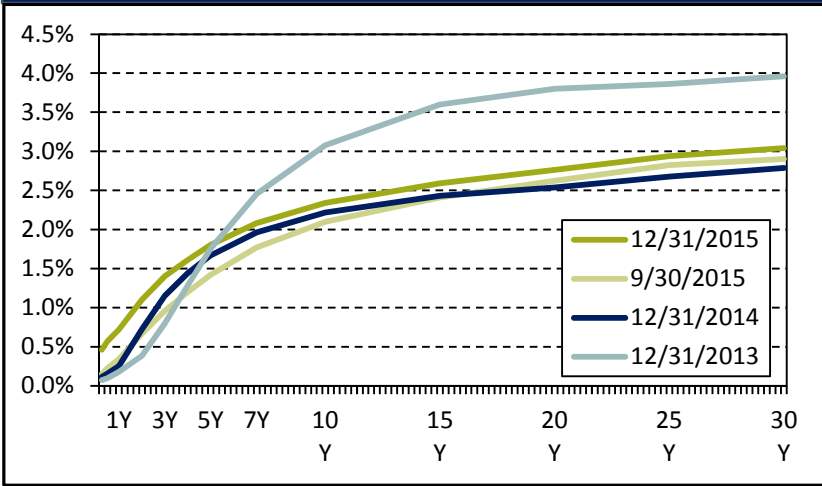
Currency effect pronounced in EMD returns



Source: Bloomberg, JP Morgan

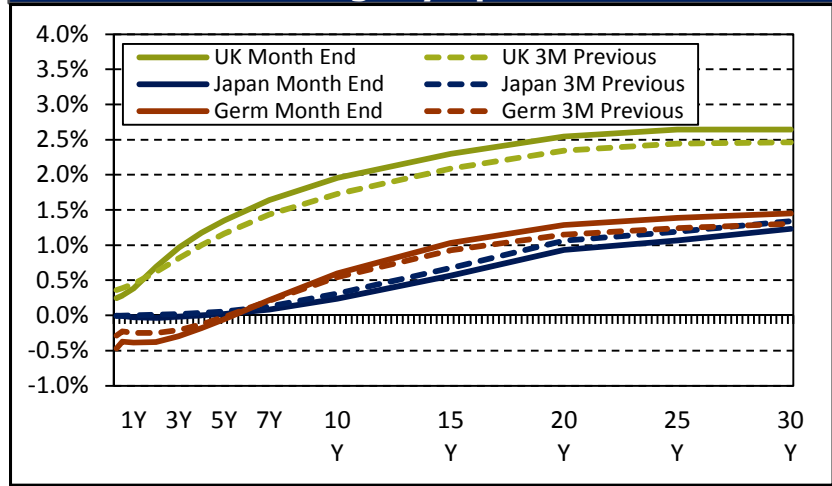


Treasury yield curve moderately rising



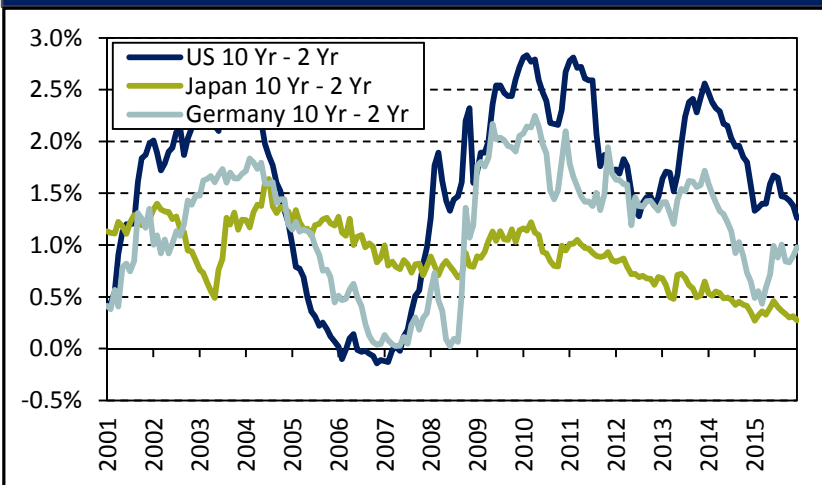
Source: Bloomberg

UK and German yield curves have shifted slightly upwards



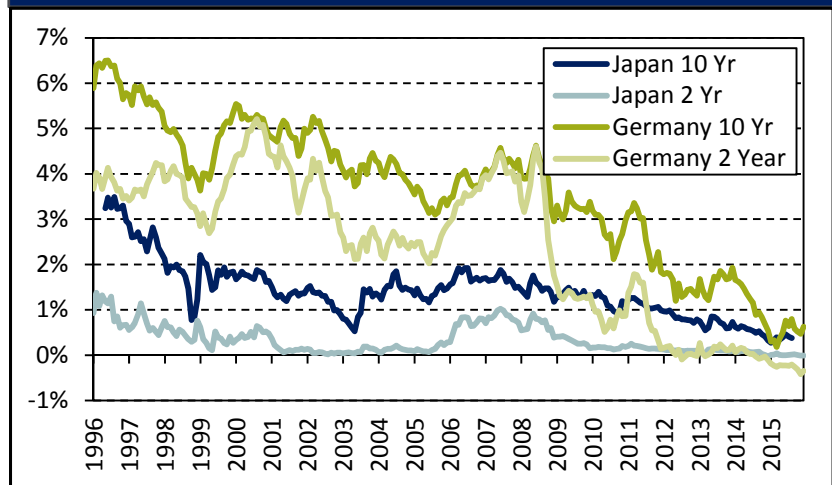
Source: Bloomberg

Global yield curves have mostly flattened



Source: Bloomberg

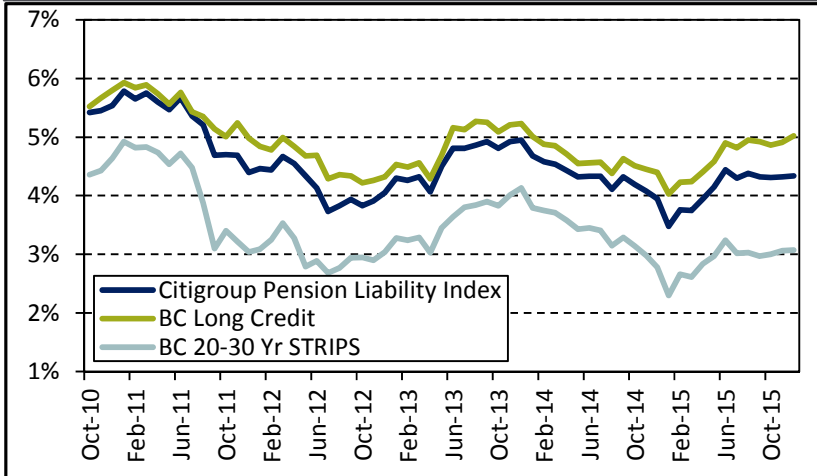
Global yields have trended lower over long term



Source: Bloomberg

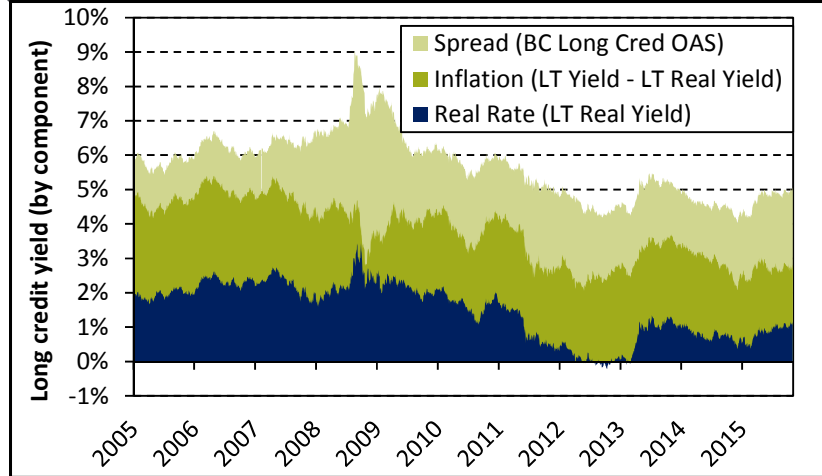
Long Rates and Liability

Long duration yields have fallen over last few years even with recent uptick



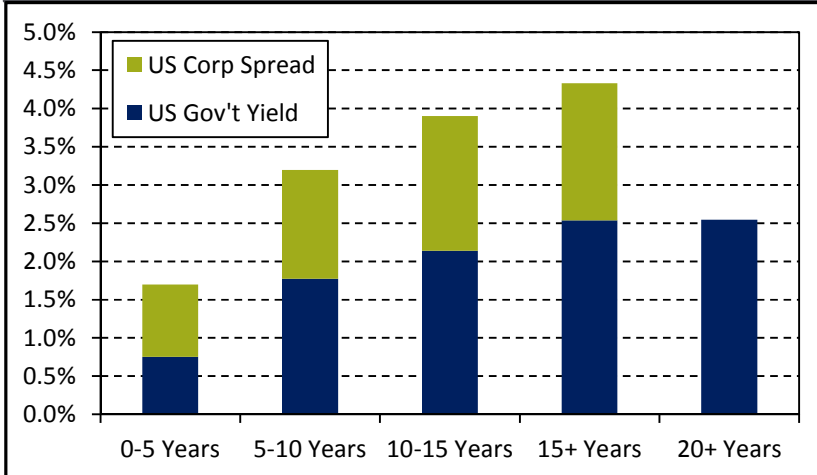
Source: Bloomberg, Citigroup, Barclays

Lower yields driven by low inflation expectations and real rates



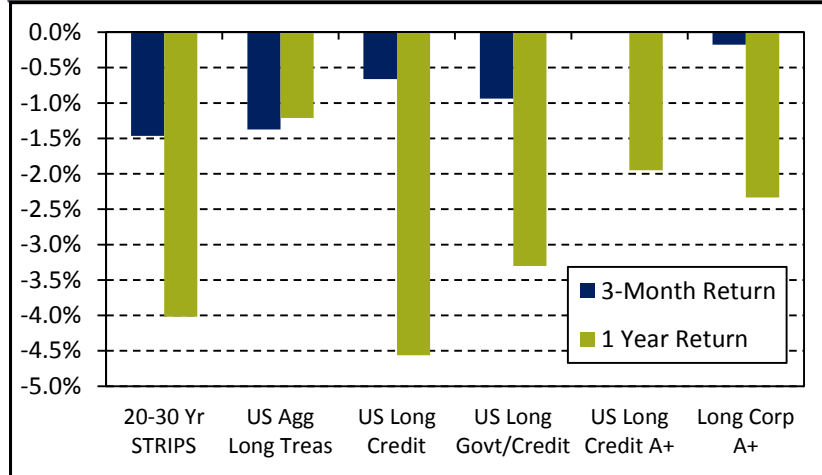
Source: Bloomberg, US Treasury, Barclays, NEPC

Yields are low but spreads above historic averages



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

Returns recently negative

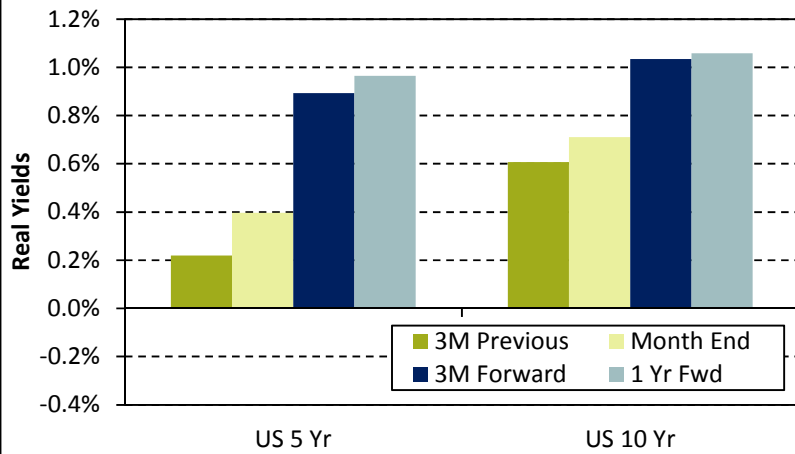


Source: Bloomberg, Barclays



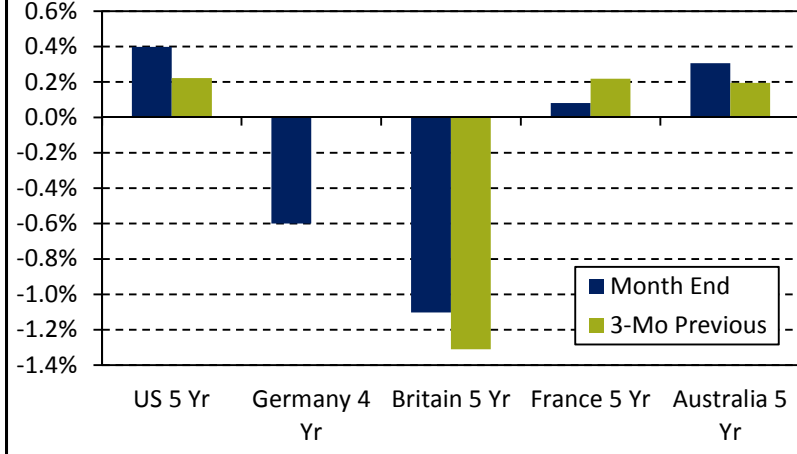
Inflation and Real Rates

US real yields have risen slightly



Source: Bloomberg

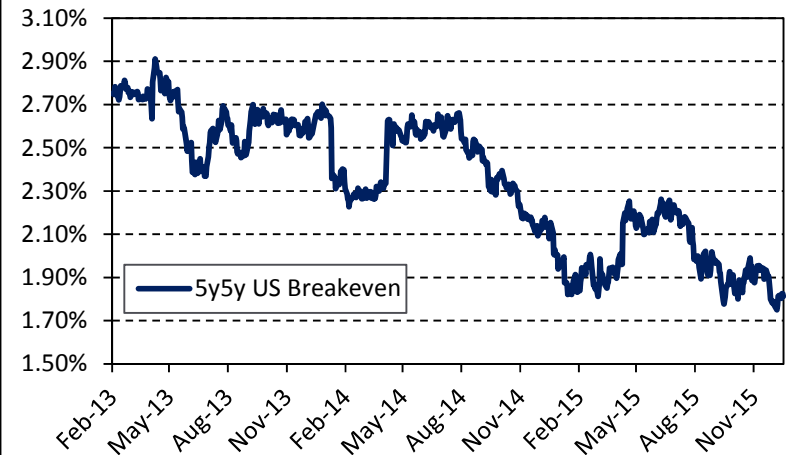
Global real yields are flat to negative



*3-Mo data not available for Germany 4 year rate

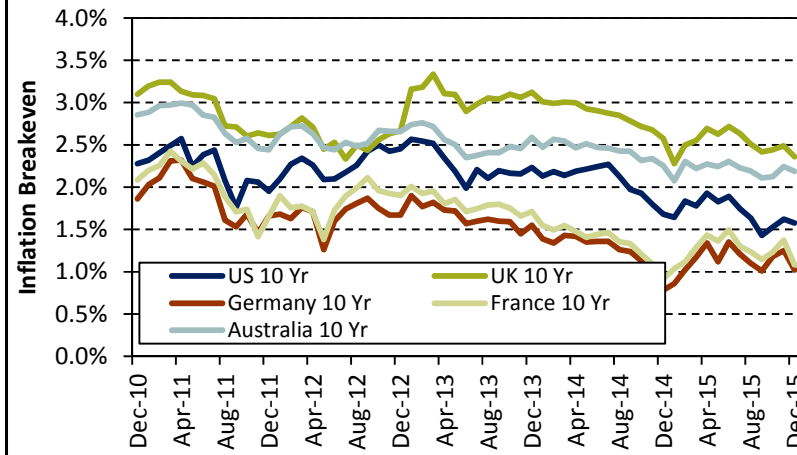
Source: Bloomberg

US inflation expectations very low



Source: Bloomberg

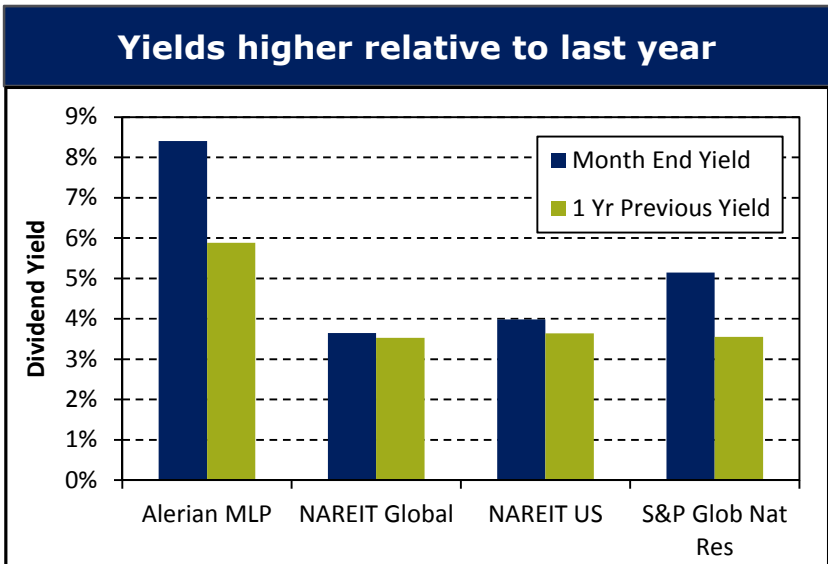
Global inflation expectations remain subdued



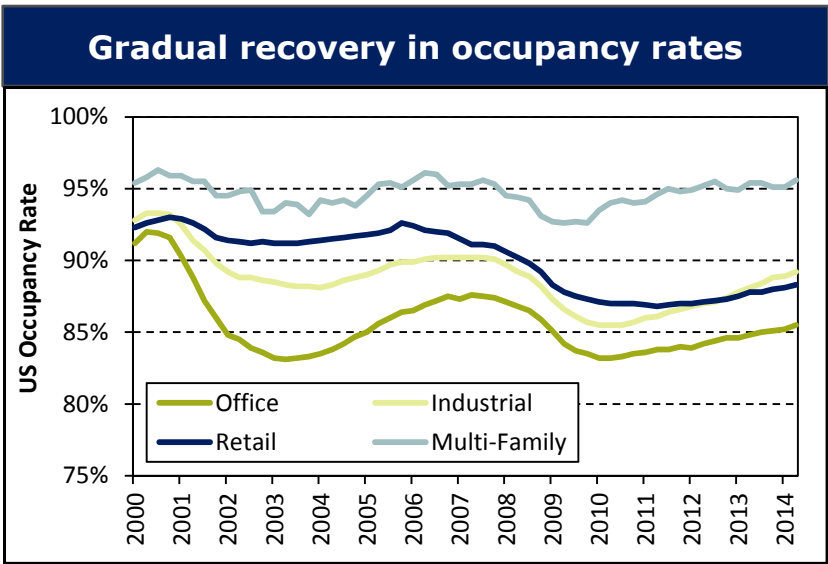
Source: Bloomberg



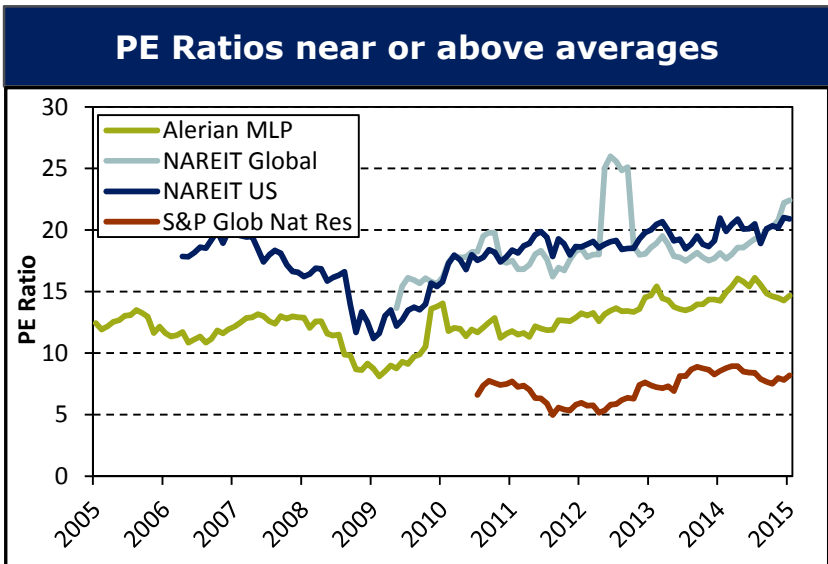
Inflation Sensitive Growth Assets



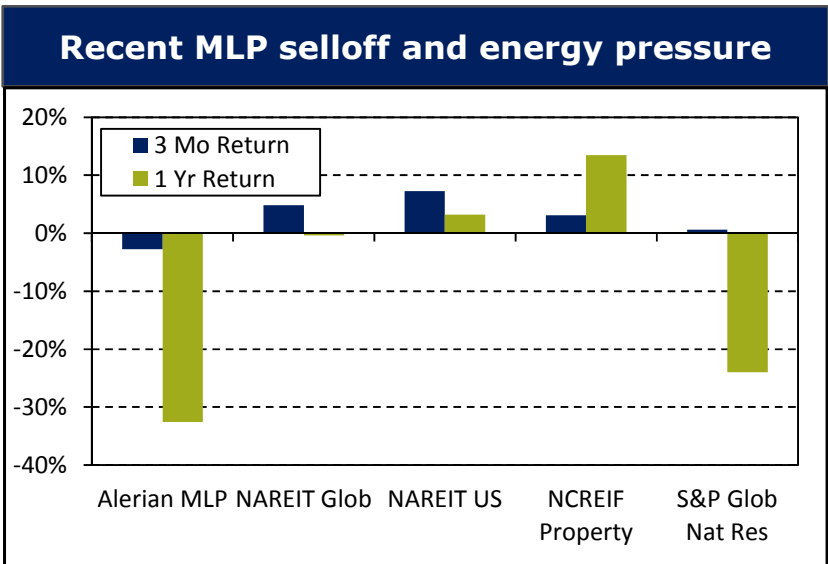
Source: Bloomberg, Alerian, Nareit, Standard and Poors



Source: Bloomberg, CB Richard Ellis



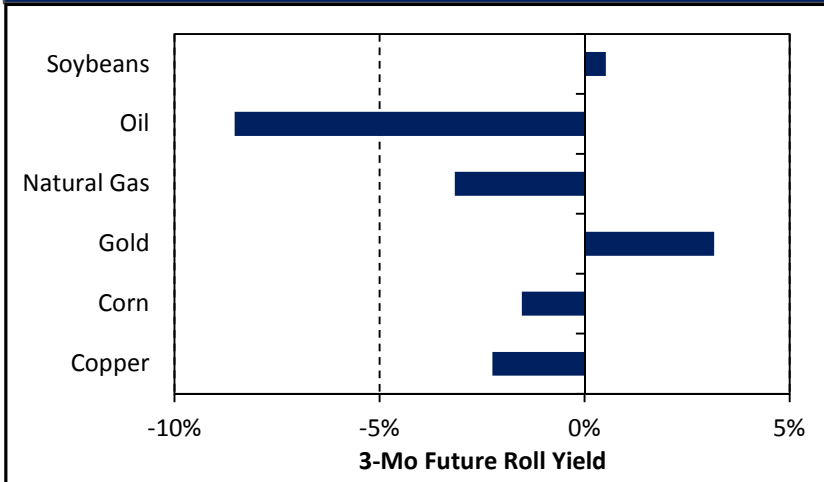
Source: Bloomberg, US Census Bureau



Source: Bloomberg, Alerian, Nareit, Standard and Poors

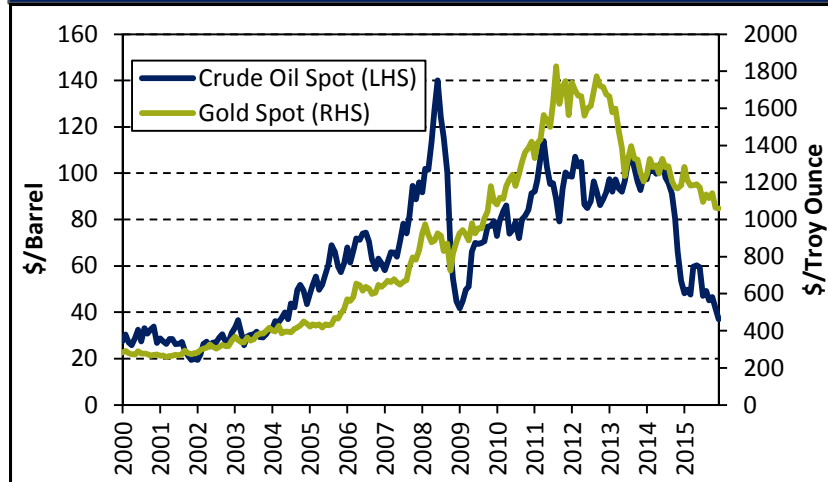
Commodities

Contango in major commodity futures



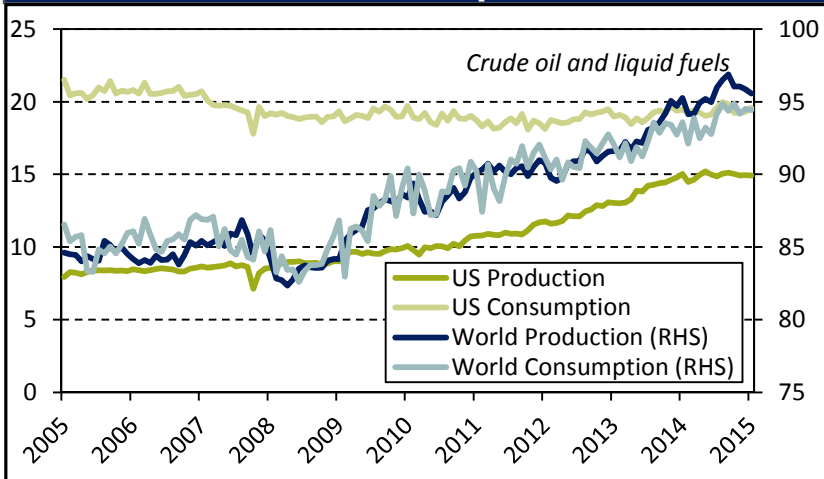
Source: Bloomberg

Precipitous fall in oil prices



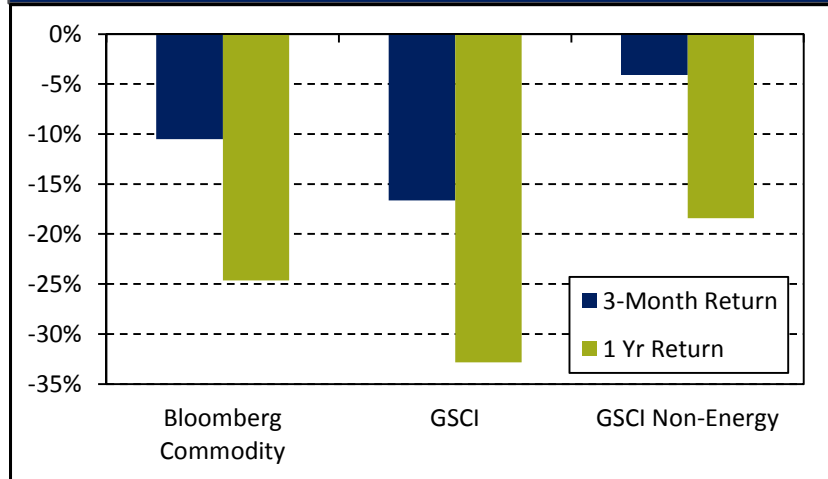
Source: Bloomberg

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



Glossary of Investment Terminology

The calculation methodology for each measure of performance is outlined below.

Measurement	Description	Equation
Policy Target	Measures policy allocation decisions.	= TARGET ASSET WEIGHTS X INDEX RETURNS
Allocation Index	Measures actual allocation decisions. Deviations from the policy target can be derived. (Allocation Index – Policy Index)	= ACTUAL ASSET WEIGHTS X INDEX RETURNS
Composite (Total Return)	Measures actual performance and can derive active management decisions. (Composite – Allocation Index)	= ACTUAL ASSET WEIGHTS X ACTUAL RETURNS

The calculation methodology for each measure of attribution is outlined below.

Measurement	Description	Equation
Allocation Effect	Measure the effects of overweighting or underweighting managers and asset classes.	= (ACTUAL MANAGER WEIGHT – POLICY TARGET WEIGHT) X POLICY INDEX RETURN
Selection Effect	Measures the managers’ ability to add excess return relative to the policy index.	= (ACTUAL MANAGER RETURN – INDEX RETURN) X POLICY TARGET WEIGHT
Interaction Effect	Measures the cross correlation of both selection and allocation affects and is often referred to as an “error term”.	= (ACTUAL MANAGER RETURN X (ACTUAL MANAGER WEIGHT – POLICY TARGET WEIGHT)) – ((MANAGER WEIGHT – POLICY TARGET WEIGHT) X INDEX RETURN)

- **Past performance is no guarantee of future results.**
- **The goal of this report is to provide a basis for monitoring financial markets. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.**
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