



NEPC, LLC

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## Vermont Pension Investment Committee

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### **Fourth Quarter 2014 Investment Performance Analysis (Part I - Total Fund Performance)**

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# NEPC Update



## Highlights of Fourth Quarter Happenings at NEPC

### NEPC Research

#### Recent White Papers Posted

- *Improving Asset Allocation with Factor Analysis (November 2014)* - Mark Cintolo, CAIA, Research Consultant
- *Improving Governance Under an OCIO Structure (October 2014)* - Steven Charlton, CFA, Director of Consulting Services
- *NEPC 2014 Defined Contribution Plan & Fee Survey: What Plan Sponsors Are Doing Now (October 2014)* - Ross Bremen, CFA, Partner; Dan Beaton, Senior Analyst



### Recent/Upcoming Events

- 2015 Market Outlook Webinar—January 22, 2015 at 3:00 PM EST
- NEPC’s 20th Annual Client Conference—May 19-20, 2015 in Boston at the Boston Convention & Exhibition Center (BCEC)

### NEPC Gives Back

A team of NEPC employees participated in Movember once again this year. Movember is a global men’s health charity requiring each ‘Mo Bro’ to sport a well-groomed mustache during the entire month of November to raise funds and awareness for men’s prostate cancer, testicular cancer, and mental health. The team raised about \$20,000 this year and ranked #49 nationally! Additionally, NEPC employees participated in Lee National Denim Day once again this year and raised \$1,745. Lee National Denim Day is a fundraiser that takes place in October and was created by Lee Jeans to support the American Cancer Society’s breast cancer programs.

### NEPC Client Recognitions

Several of NEPC’s clients were recognized by CIO Magazine recently. First, the October 2014 issue of CIO Magazine ranked the Power 100 CIOs, which included Tim Barrett, CIO of Texas Tech University System (#59), and Don Pierce, CIO of San Bernardino County Employees’ Retirement Association (#61). Next, several NEPC clients were nominated for the CIO 2014 Industry Innovation Awards. Additionally, NEPC’s client SBCERA was nominated for an Investor Intelligence Award in ‘Portfolio Design’.

### Professional Staff Updates

- **New Partner:** Sean Ruhmann, Partner, Director of Real Assets Research
- **New Principals:** Jeffrey Mitchell, CFA, CAIA, Principal, Senior Consultant; Terri Sacramone, SPHR, Principal, Senior Human Resources Manager; and Michael Sullivan, Principal, Senior Consultant
- We are also please to announce that Daniel Hennessy has joined NEPC as a Senior Consultant located in our Redwood City, CA office. Daniel will be focusing on Taft-Hartley and Public Funds in the West.

# 2015 Observations & Actions



- **Rethink fixed income portfolio structure in light of current market environment**
  - Use of an unconstrained/multi-sector fixed income portfolio may provide sound diversification and enhanced liquidity
  - Examine if alternatives are available to traditional portfolio positions (e.g., combining cash and long treasuries vs. holding core bond portfolio)
- **Review inflation hedging allocations in light of recent market action**
  - Some areas have likely sold off more than is warranted
- **Consider market weight or slightly over-weighted target allocation to developed non-U.S. equity**
  - Consider reducing the risk of the position by allocating to a currency hedged portfolio or implementing a currency hedge overlay
- **Remain committed to emerging markets**
  - Establish (at least) a market weight long-term target allocation (equity and debt) and rebalance toward targets
  - High conviction, active managers will be essential for successful implementation

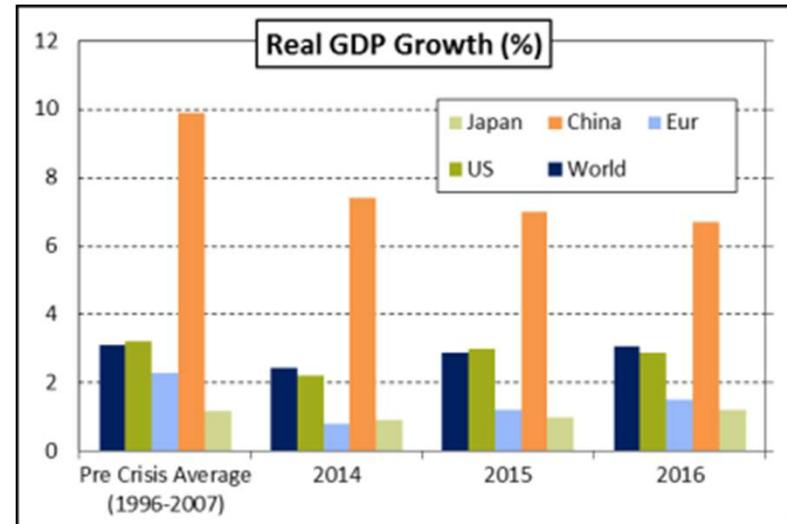
- **Protracted bull market, slow growth, and low interest rates persist**
  - Cautious optimism for US economy, but length and strength of rally warrants inquiry
  - Negative real interest rates have supported elevated valuations and low volatility
  - Investor complacency, coupled with lower liquidity, may leave market more vulnerable
- **Global monetary policies and capital markets continue to diverge**
  - The US successfully navigated the end of quantitative easing in 2014, while Europe pondered and Japan pursued further aggressive monetary policy
  - Regional equity market valuation divergence grew as US P/E ratios expanded
- **The US economy shows strength relative to other developed markets**
  - Improving labor markets, increasing confidence, and expected rise in interest rates are supportive of a stronger dollar, which has been a headwind for foreign exposures
  - Meaningful structural reform and continued aggressive monetary policy are required in Europe & Japan to propel assets higher
- **Fed rate hikes are on the horizon but markets expect a slow pace**
  - High US growth may spur accelerated hike, decoupling rates from market expectations
  - Fed tightening is a first step in a multi-year policy normalization process
- **Emerging Market fatigue tangible; low valuations cannot be ignored**
  - Short- and medium-term challenges camouflage long-term economic growth prospects
  - Plummeting energy prices have potential to create challenges for certain economies

- **Confirm alignment of portfolio positioning with long-term objectives**
  - Recognize investment program's tolerance to withstand short-term volatility
  - Some traditional approaches, such as core bonds, suboptimal in current environment
- **Balance desire for increased return with recognition of downside risks**
  - Barbell portfolio risk with defensive allocations to withstand range of outcomes
  - Shift judiciously across and within asset classes
    - Stretched liquid credit markets make equities relatively more attractive
    - Recognize potential for non-US developed markets to react to QE programs, both continued (Bank of Japan) and potential (European Central Bank)
- **Evaluate impact of expected US dollar strength on non-US allocations**
  - Consider strategic developed market currency hedging program to mitigate risk
  - Scrutinize allocation to and implementation within emerging markets
    - Attractive fundamentals and secular trends warrant market weight at a minimum
    - Challenging country specific conditions support pursuit of bold active management
- **Remain committed to high conviction active manager exposures**
  - Passive trends and market complacency may ignite dormant alpha opportunities
  - Use non-traditional strategies with reduced constraints across markets to capitalize
    - Global equity, tactical credit strategies, GAA, liquid alternative beta, global macro
- **Seek niche private strategies to mitigate challenge of high valuations**
  - Energy, European Real Estate, sector-focused growth equity, Asia-focused managers and select direct lending markets all provide compelling opportunities

## 5-7 Year Returns Commensurate with Growth; Near-Term Strength Can Persist

- **Global growth forecasts low but approaching pre-crisis levels with less reliance on China**

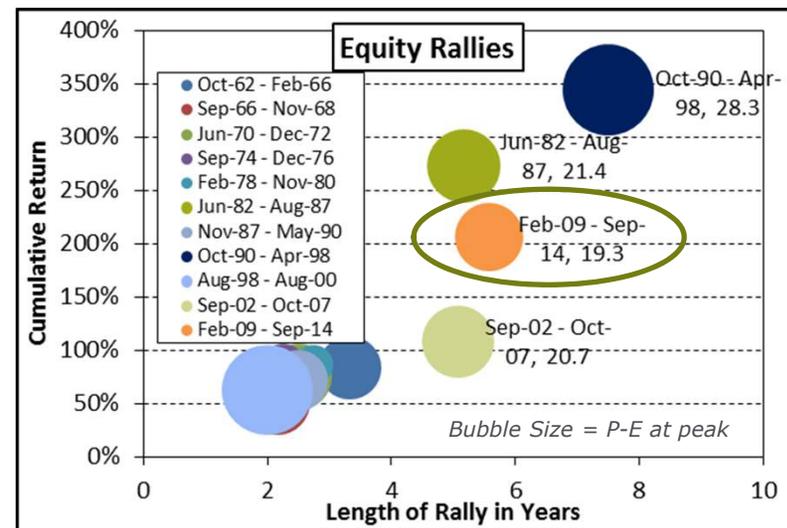
- Absolute figures projected to improve for the US and World
- Europe joins Japan as a drag on global growth
- China expectations compress but remain quite high



Source: Bloomberg as of 11/30

- **S&P rally unlikely to persist for another 5-7 years**

- Low-for-longer interest rates may provide near term support for higher valuations
- Tepid growth levels challenge ability to extend outsized returns over this horizon as stimulus wanes
- While perceived tail-ends of bull markets can be false signs, the current length and magnitude is only outpaced by '82-'87 and '90-'98

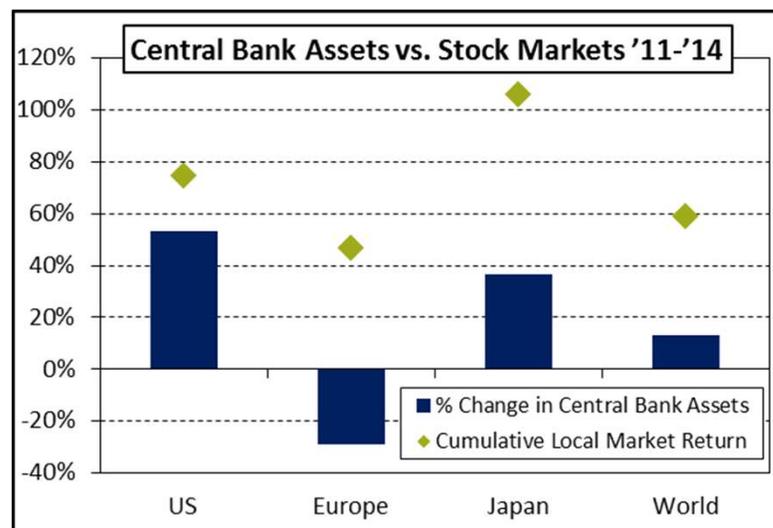


Source: Bloomberg and Shiller Data as of 9/30

## Policy and Market Divergences Continue to Develop

- **Central bank stimulus has been a key driver of market returns**

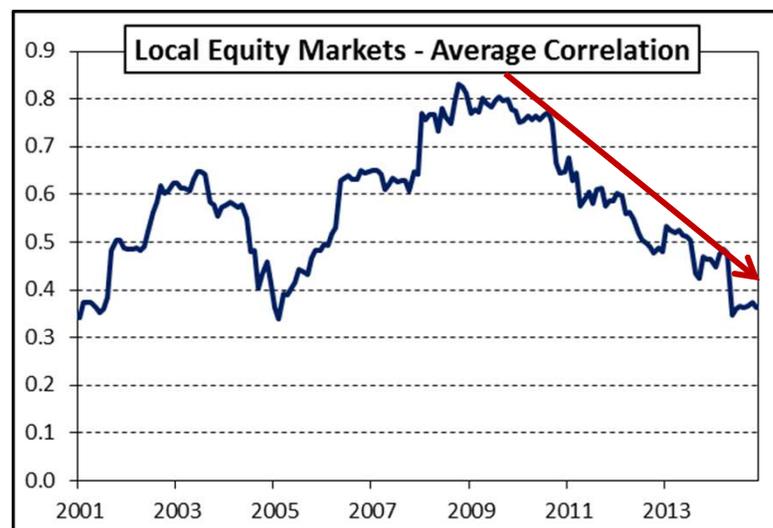
- Post crisis monetary policy was first highly stimulative, waned in 2010-2011, then resumed unevenly
- Greater stimulus led to strong *local* market returns
- Continued stimulus in Japan and Europe should be incorporated into outlook but hedging developed market currency exposure is prudent



Source: Bloomberg as of 11/30

- **Policy responses have been key driver of capital market results**

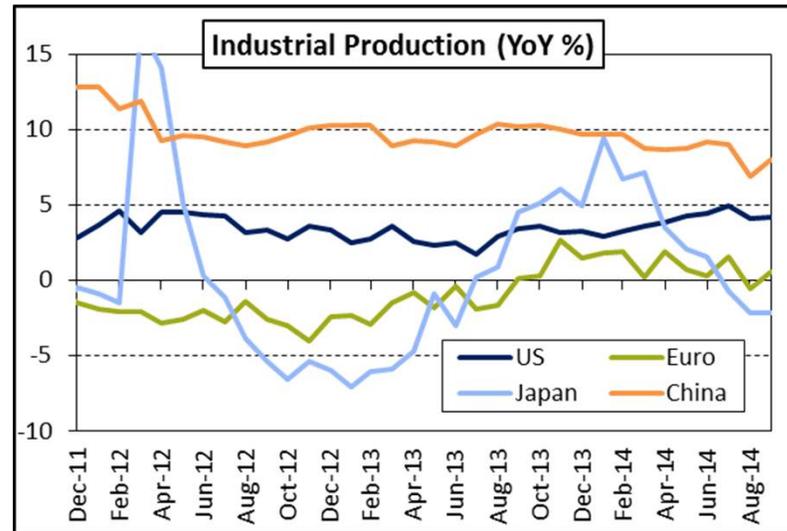
- Distinct economic environments across countries leads to differentiation in market returns
- Evolving monetary policies continue to diverge and likely lead to more independent capital market outcomes among countries



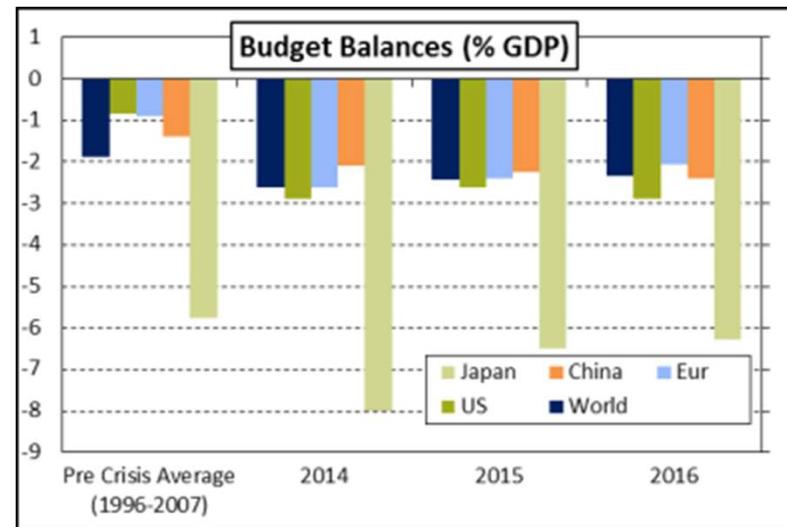
Source: Bloomberg as of 11/30 - Local indices consist of Australia, Europe, UK, Emerging Markets, Japan, New Zealand, US, and Canada

## Conditions Present for Elevated Growth in US; Challenges Abroad

- **Fundamental growth prospects more attractive in US and China than Europe and Japan**
  - China continues to remain elevated
  - Euro zone may benefit from recent decline in the Euro and Oil
- **Confidence has improved in US due to a variety of factors**
  - Improved job market, decline in oil and low inflation
- **Fiscal situation is diverse but all major players remain more stimulative than recent history**
  - Japan attacking deflation from all angles; heightened fiscal spending in conjunction with monetary stimulus
  - Europe, notably, expected to further shrink deficits
    - Driven by Germany (not shown) which projects a surplus
  - European policy makers may need to do more



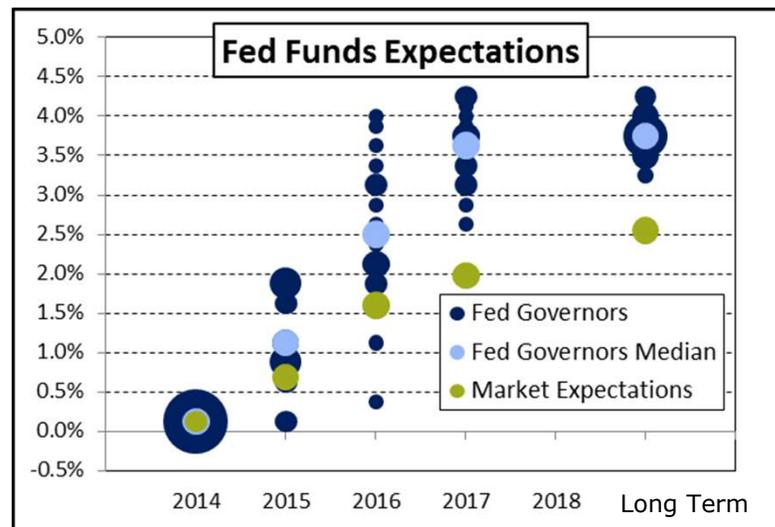
Source: Bloomberg as of 11/30



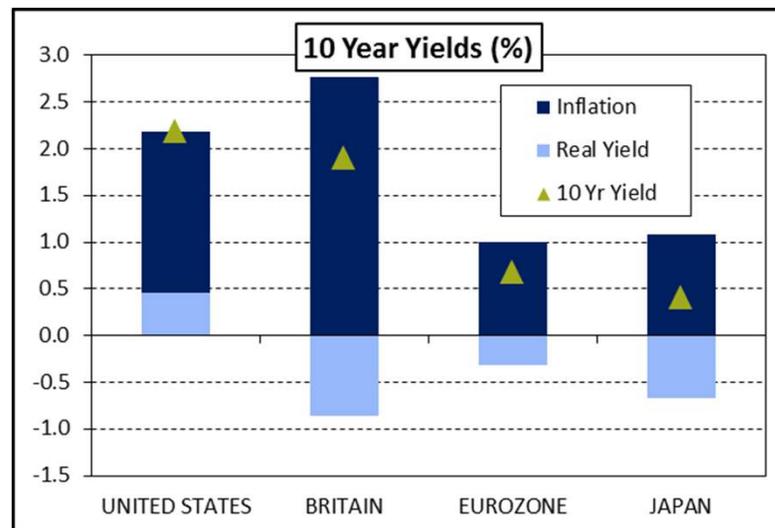
Source: Bloomberg as of 11/30

# Fed Rate Hikes Expected in 2015; Timing and Pace Are Uncertain

- Fed governors (blue dots) project higher rates over the next few years**
  - Market expectations (green dots) are less ambitious with reality likely in-between
  - Upside surprise to pace or level of interest rates supportive of higher USD; negative for US risk assets
  
- Low real rates suppressed by central banks, squeeze expectations for future returns**
  - UK, Europe & Japan all with negative 10 year real yields
  - US bonds look relatively attractive in this context
  - Real rates moving lower toward peers is bullish for risk assets
  - Long-term normalized monetary policy could reverse the trend



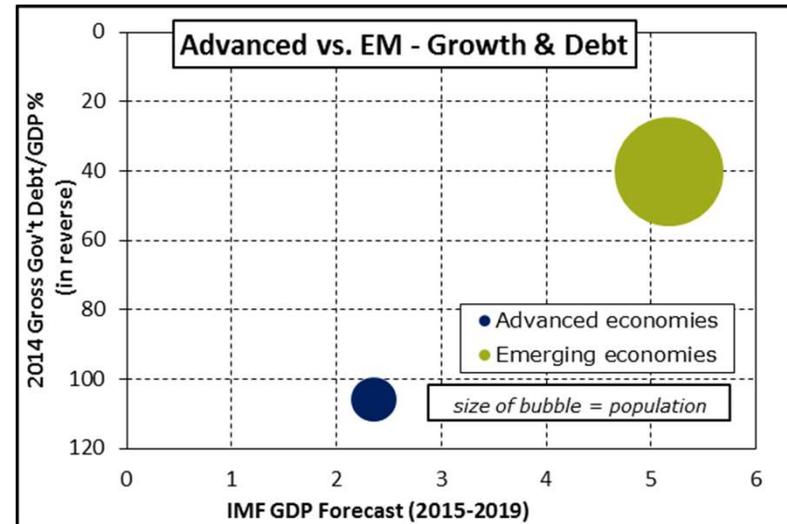
Source: Bloomberg and Federal Open Market Committee as of 11/30



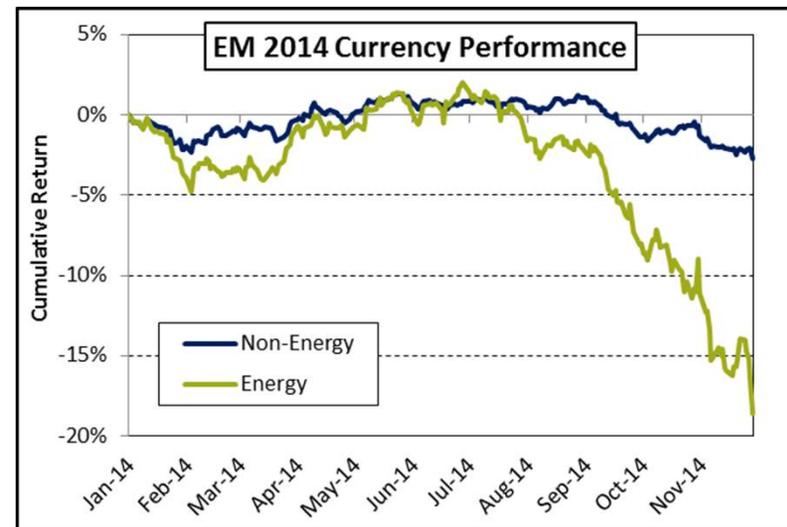
Source: Bloomberg as of 11/30

## Structural Long-Term Positives of Emerging Markets Remain; So Do Idiosyncratic Risks

- **Emerging markets have higher growth and lower debt levels vs. developed markets**
  - Near term risks are present as both China and commodity cycle slows
  - Strong dollar will hurt some currencies but will also aid exporters, helping EM growth
- **Local currency debt offers a compelling yield but paired with heightened volatility**
- **Both exogenous and internal factors can drive major shifts across countries**
  - Drop in energy prices in 2014 is a recent structural shift that will have a major impact on certain countries
  - Venezuela, Nigeria, Russia and several frontier countries



Source: IMF as of 10/31



Source: Bloomberg as of 11/30

## Investment Market Update: As of January 31, 2015

### PERFORMANCE THROUGH 1/31/2015

Sector	Index	2008	2009	2010	2011	2012	2013	2014	JAN	YTD
Treasury STRIPS	Barclays US Strips 20+ Yr	59.5%	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	13.8%	13.8%
REITS	Wilshire US REIT	-39.2%	28.6%	28.6%	9.2%	17.6%	1.9%	31.8%	6.5%	6.5%
Long Govt/Credit	Barclays US Govt/Credit Long	8.4%	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	6.4%	6.4%
Long Credit	Barclays US Long Credit	-3.9%	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	5.2%	5.2%
Core Bonds	Barclays US Agg Bond	5.2%	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	2.1%	2.1%
Muni Bonds	Barclays Municipal	-2.5%	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	1.8%	1.8%
Interm Govt/Credit	Barclays US Govt/Credit Interm	5.1%	5.2%	5.9%	5.8%	3.9%	-0.9%	3.1%	1.7%	1.7%
Interm Core Bonds	Barclays US Agg Interm	4.9%	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.4%	1.4%
Govt/Credit	Barclays Govt/Credit 1-5 Yr	5.1%	4.6%	4.1%	3.1%	2.2%	0.3%	1.4%	1.0%	1.0%
High Yield	Barclays US Corp HY	-26.2%	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	0.7%	0.7%
Emerging Equities	MSCI EM	-53.3%	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	0.6%	0.6%
EMD USD	Barclays EM USD Agg	-14.7%	34.2%	12.8%	7.0%	17.9%	-4.1%	4.8%	0.5%	0.5%
Govt/Credit	Barclays US Govt/Credit 1-3 Yr	5.0%	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.5%	0.5%
Int'l Developed	MSCI EAFE	-43.4%	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	0.5%	0.5%
EMD Loc	JPM GBI EM Glob Div	-5.2%	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	0.3%	0.3%
Global Bonds	Citi WGBI	10.9%	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-0.3%	-0.3%
Diversified	Diversified*	-24.5%	24.1%	13.5%	1.3%	12.7%	17.6%	7.8%	-0.4%	-0.4%
Large Cap Growth	Russell 1000 Growth	-38.4%	37.2%	16.7%	2.6%	15.3%	33.5%	13.0%	-1.5%	-1.5%
SMID Cap	Russell 2500	-36.8%	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.0%	-2.0%
Small Cap Growth	Russell 2000 Growth	-38.5%	34.5%	29.1%	-2.9%	14.6%	43.3%	5.6%	-2.3%	-2.3%
Large Cap	Russell 1000	-37.6%	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	-2.7%	-2.7%
Large Cap	S&P 500	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	-3.0%	-3.0%
Small Cap	Russell 2000	-33.8%	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-3.2%	-3.2%
Commodities	Bloomberg Commodity	-35.6%	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-3.3%	-3.3%
Large Cap Value	Russell 1000 Value	-36.8%	19.7%	15.5%	0.4%	17.5%	32.5%	13.5%	-4.0%	-4.0%
Small Cap Value	Russell 2000 Value	-28.9%	20.6%	24.5%	-5.5%	18.1%	34.5%	4.2%	-4.2%	-4.2%

\* 35% LC, 10% SC, 12% Intl Equity, 3% Emerging Equity, 25% Core Bonds, 5% HY, 5% Global Bonds, 5% REITS

Source: Morningstar Direct

# 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
<b>Teachers Composite</b>	<b>\$1,695,169,789</b>	<b>-0.1%</b>	<b>95</b>	<b>-2.2%</b>	<b>97</b>	<b>4.4%</b>	<b>80</b>	<b>8.5%</b>	<b>90</b>	<b>8.5%</b>	<b>74</b>
<i>Policy Index</i>		0.3%	93	-1.7%	95	3.5%	95	7.9%	95	7.2%	95
<i>Allocation Index</i>		0.4%	90	-1.7%	95	3.4%	95	7.8%	95	7.1%	95
<i>InvestorForce Public DB Gross Median</i>		1.9%		0.6%		5.8%		11.0%		9.2%	

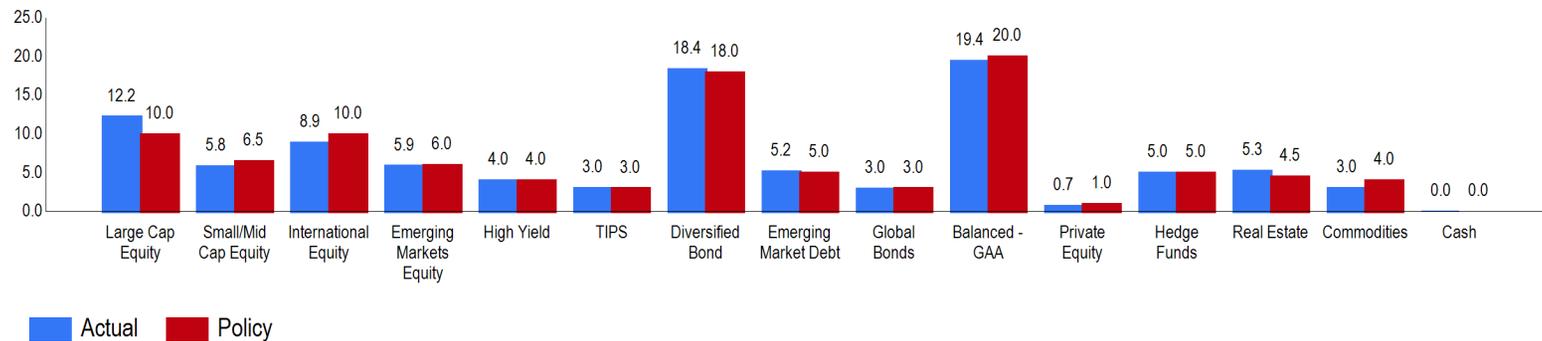
### 3 Years Ending December 31, 2014

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	8.55%	90	6.01%	48	1.41	97	2.36	78
Policy Index	7.92%	95	5.55%	29	1.42	97	2.10	95
Allocation Index	7.79%	95	5.63%	31	1.38	98	1.95	98

### 5 Years Ending December 31, 2014

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	8.48%	74	7.64%	43	1.10	73	1.75	62
Policy Index	7.15%	95	7.34%	35	0.97	93	1.57	86
Allocation Index	7.07%	95	7.48%	37	0.94	95	1.47	90

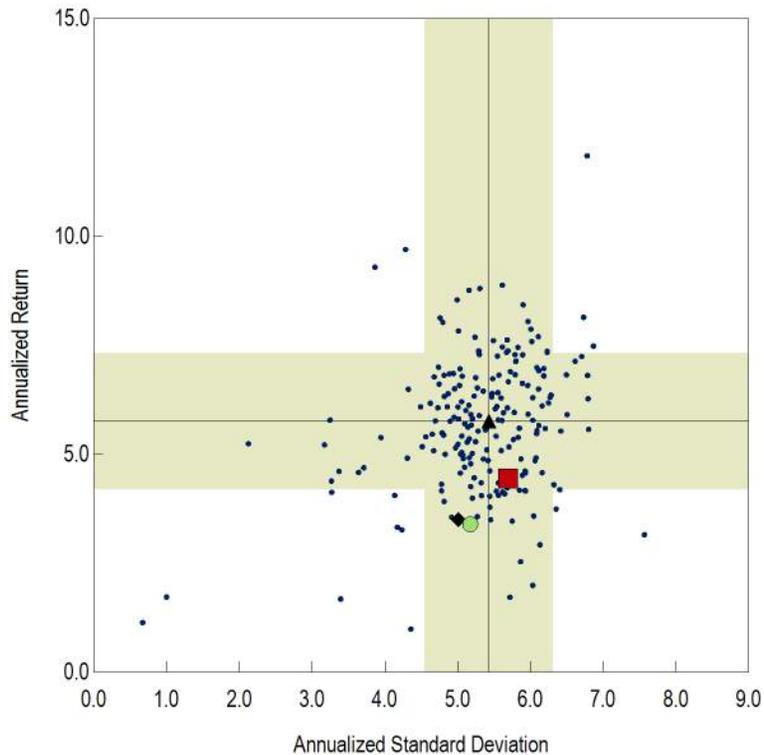
### Actual vs Target Allocation (%)



# Vermont State Teachers

## Total Fund Risk/Return

1 Year Ending December 31, 2014



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

1 Year Ending December 31, 2014

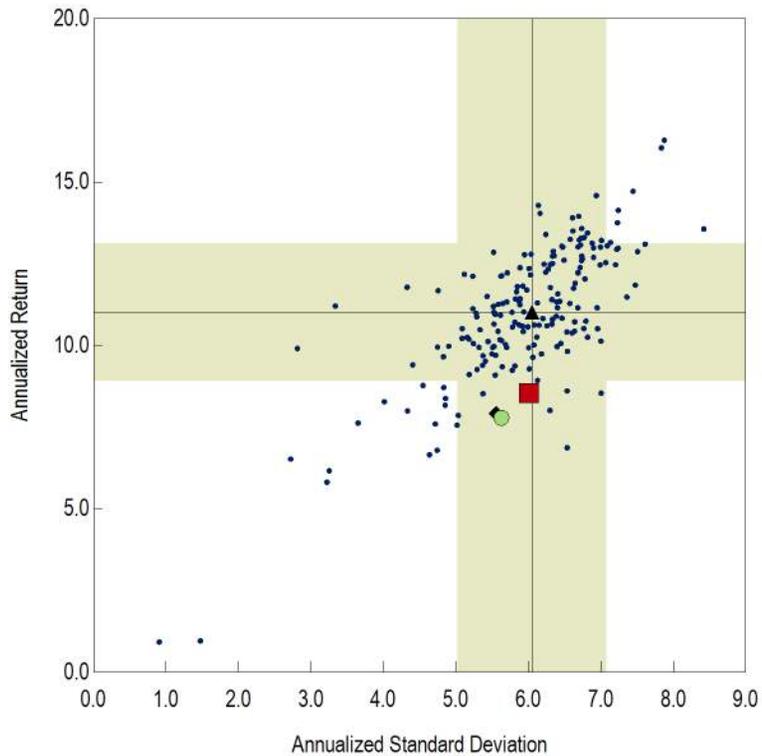
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	4.45%	80	5.69%	67	0.78	85
Policy Index	3.51%	95	5.01%	27	0.70	93
S&P 500	13.69%	1	8.26%	--	1.65	6
60% MSCI ACWI (Net)/40% CITI WGBI	2.35%	98	6.36%	94	0.37	99
Citi WGBI	-0.48%	--	4.50%	11	-0.11	--
MSCI ACWI	4.16%	87	8.79%	--	0.47	98
MSCI ACWI ex USA	-3.87%	--	10.05%	--	-0.39	--
InvestorForce Public DB Gross Median	5.77%	--	5.43%	--	1.09	--

206 Portfolios

# Vermont State Teachers

## Total Fund Risk/Return

3 Years Ending December 31, 2014



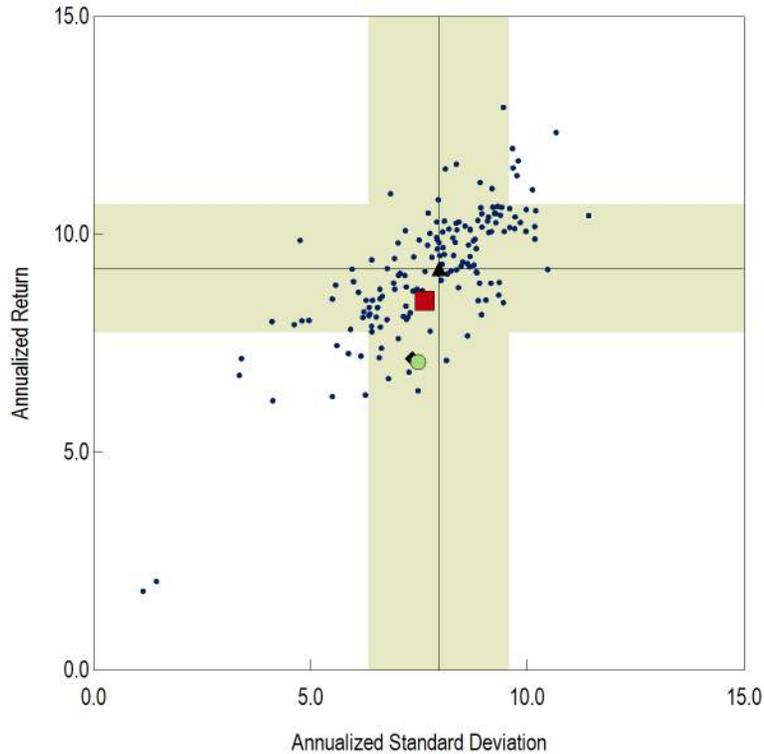
- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

3 Years Ending December 31, 2014

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	8.55%	90	6.01%	48	1.41	97
Policy Index	7.92%	95	5.55%	29	1.42	97
S&P 500	20.41%	1	9.10%	--	2.24	5
60% MSCI ACWI (Net)/40% CITI WGBI	7.96%	94	7.22%	95	1.10	99
Citi WGBI	-0.97%	--	4.34%	6	-0.24	--
MSCI ACWI	14.10%	3	10.64%	--	1.32	98
MSCI ACWI ex USA	9.00%	87	12.99%	--	0.69	--
InvestorForce Public DB Gross Median	11.02%	--	6.05%	--	1.84	--

194 Portfolios

5 Years Ending December 31, 2014

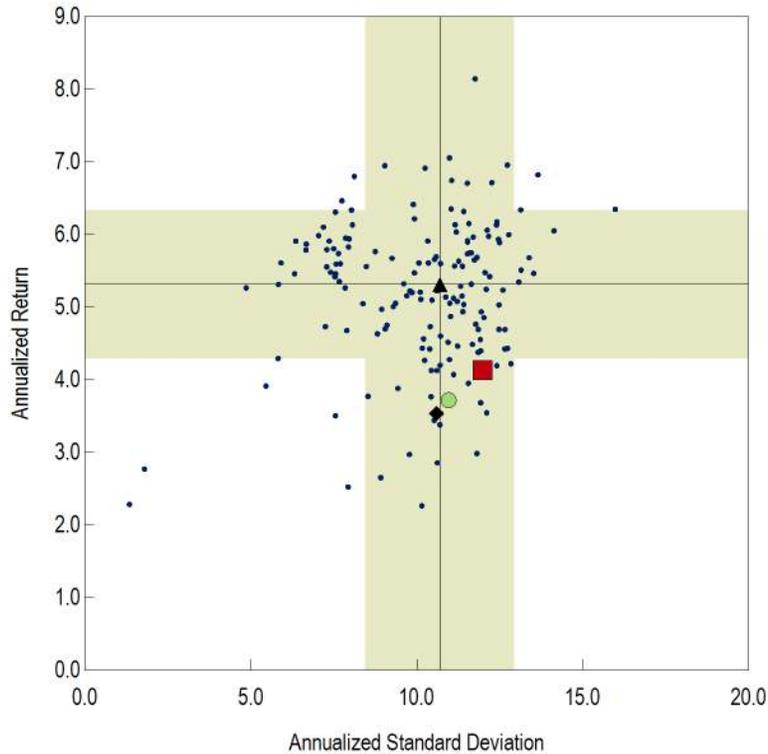


- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

5 Years Ending December 31, 2014

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	8.48%	74	7.64%	43	1.10	73
Policy Index	7.15%	95	7.34%	35	0.97	93
S&P 500	15.45%	1	13.00%	--	1.18	44
60% MSCI ACWI (Net)/40% CITI WGBI	6.35%	98	9.69%	92	0.65	--
Citi WGBI	1.67%	--	5.31%	6	0.30	--
MSCI ACWI	9.17%	53	14.57%	--	0.62	--
MSCI ACWI ex USA	4.43%	--	16.51%	--	0.26	--
InvestorForce Public DB Gross Median	9.22%	--	7.96%	--	1.16	--

7 Years Ending December 31, 2014

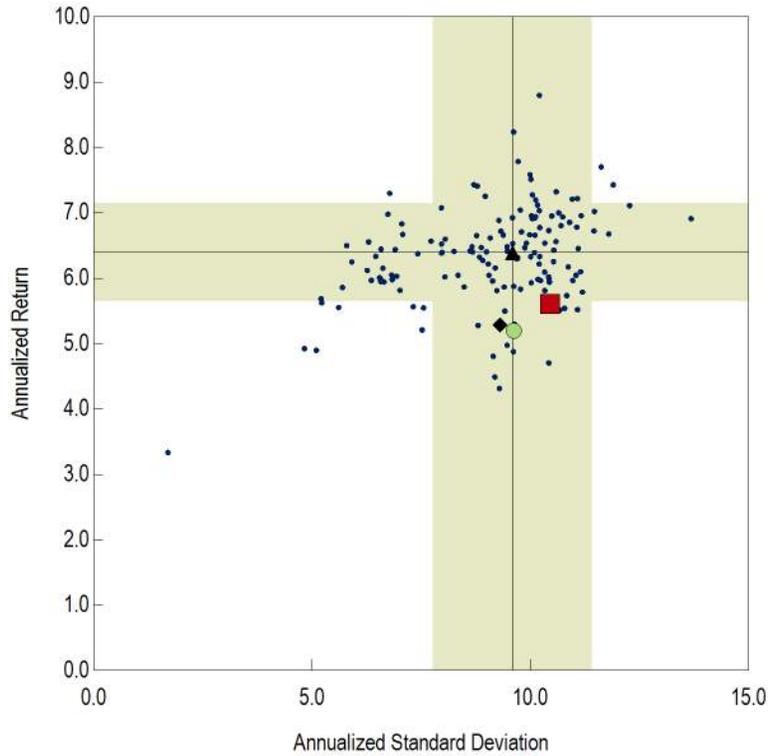


- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

7 Years Ending December 31, 2014

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	4.13%	86	11.99%	82	0.32	90
Policy Index	3.53%	94	10.59%	48	0.31	94
S&P 500	7.27%	1	16.82%	--	0.42	68
60% MSCI ACWI (Net)/40% CITI WGBI	3.27%	96	12.51%	91	0.24	99
Citi WGBI	3.07%	96	7.05%	7	0.40	73
MSCI ACWI	2.72%	98	18.90%	--	0.13	--
MSCI ACWI ex USA	-0.63%	--	21.26%	--	-0.04	--
InvestorForce Public DB Gross Median	5.32%	--	10.70%	--	0.48	--

10 Years Ending December 31, 2014

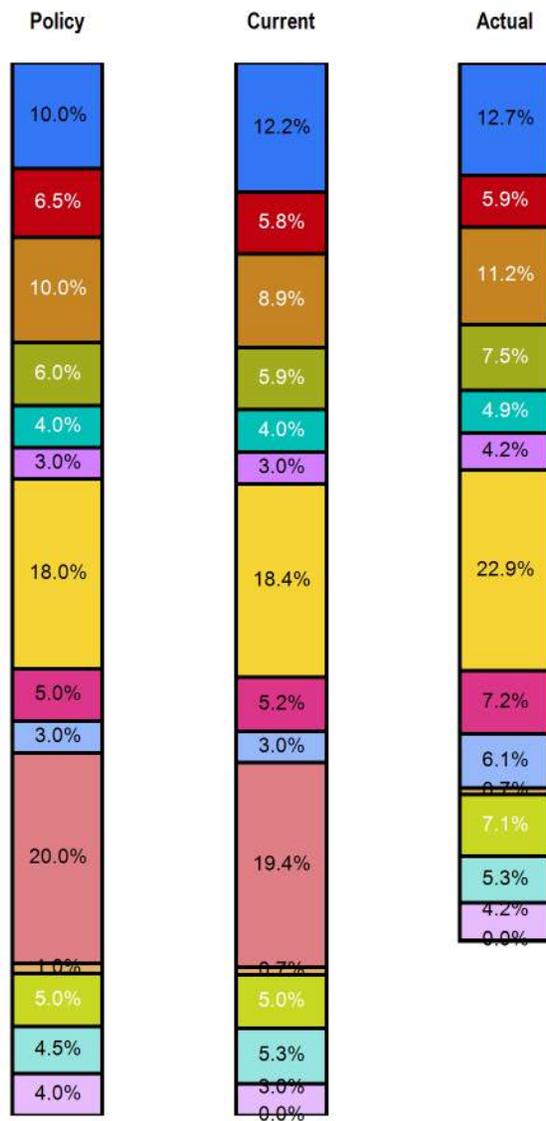


- Teachers Composite
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10 Years Ending December 31, 2014

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	5.61%	87	10.45%	80	0.40	92
Policy Index	5.29%	93	9.31%	45	0.41	91
S&P 500	7.67%	3	14.67%	--	0.43	89
60% MSCI ACWI (Net)/40% CITI WGBI	5.22%	94	10.92%	89	0.35	99
Citi WGBI	3.08%	--	6.61%	12	0.25	--
MSCI ACWI	6.09%	64	16.53%	--	0.28	--
MSCI ACWI ex USA	5.13%	94	18.83%	--	0.20	--
InvestorForce Public DB Gross Median	6.39%	--	9.59%	--	0.54	--

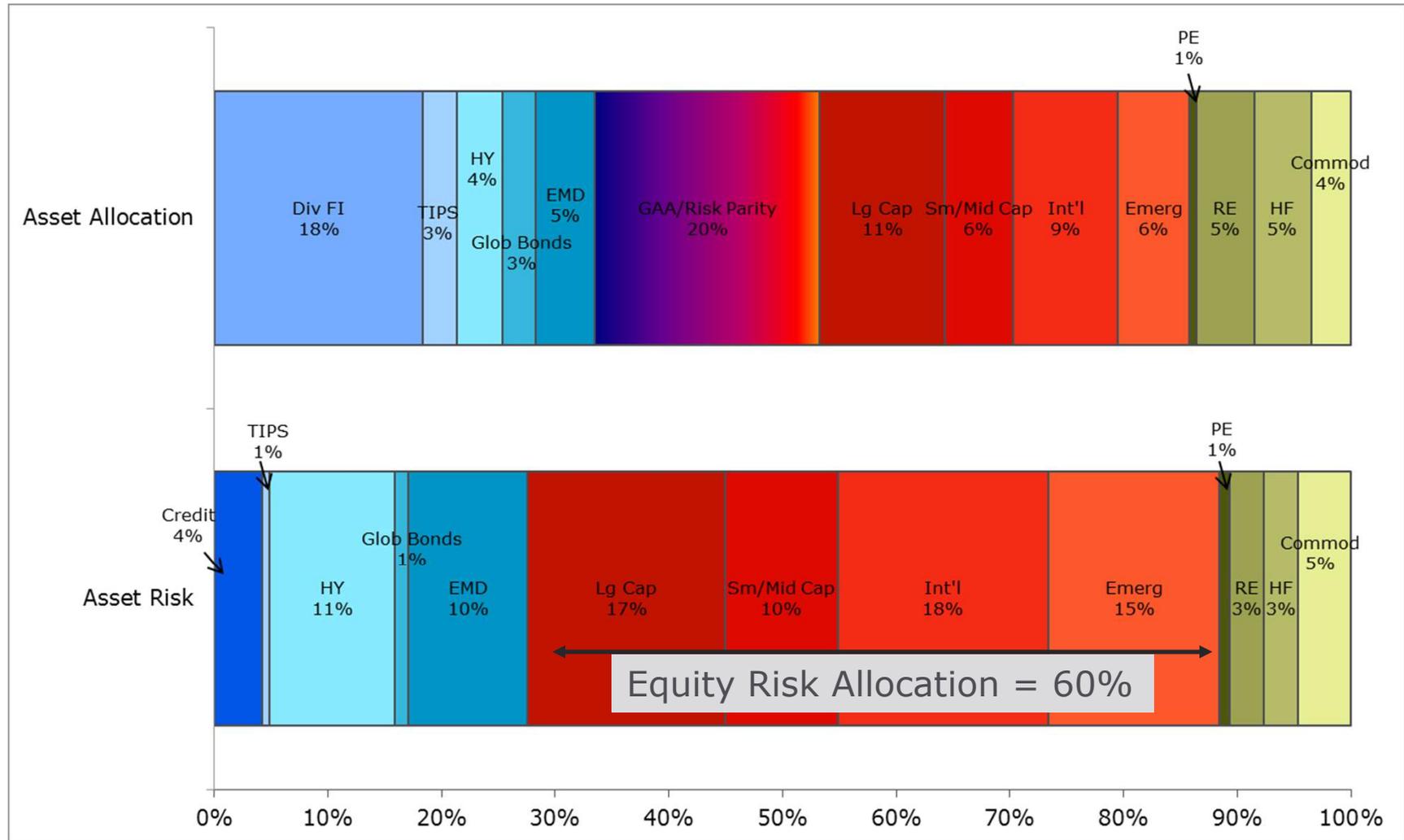
# Total Fund Asset Allocation vs. Policy Targets



	Current	Policy	Current	Difference*
Large Cap Equity	\$207,442,142	10.0%	12.2%	2.2%
Small/Mid Cap Equity	\$98,825,127	6.5%	5.8%	-0.7%
International Equity	\$151,289,324	10.0%	8.9%	-1.1%
Emerging Markets Equity	\$99,810,082	6.0%	5.9%	-0.1%
High Yield	\$68,564,475	4.0%	4.0%	0.0%
TIPS	\$51,409,646	3.0%	3.0%	0.0%
Diversified Bond	\$311,127,485	18.0%	18.4%	0.4%
Emerging Market Debt	\$87,333,668	5.0%	5.2%	0.2%
Global Bonds	\$50,734,761	3.0%	3.0%	0.0%
Balanced - GAA	\$329,447,668	20.0%	19.4%	-0.6%
Private Equity	\$12,529,218	1.0%	0.7%	-0.3%
Hedge Funds	\$85,435,795	5.0%	5.0%	0.0%
Real Estate	\$89,476,763	4.5%	5.3%	0.8%
Commodities	\$51,617,770	4.0%	3.0%	-1.0%
Cash	\$125,865	--	0.0%	0.0%
<b>Total</b>	<b>\$1,695,169,789</b>	<b>100.0%</b>	<b>100.0%</b>	

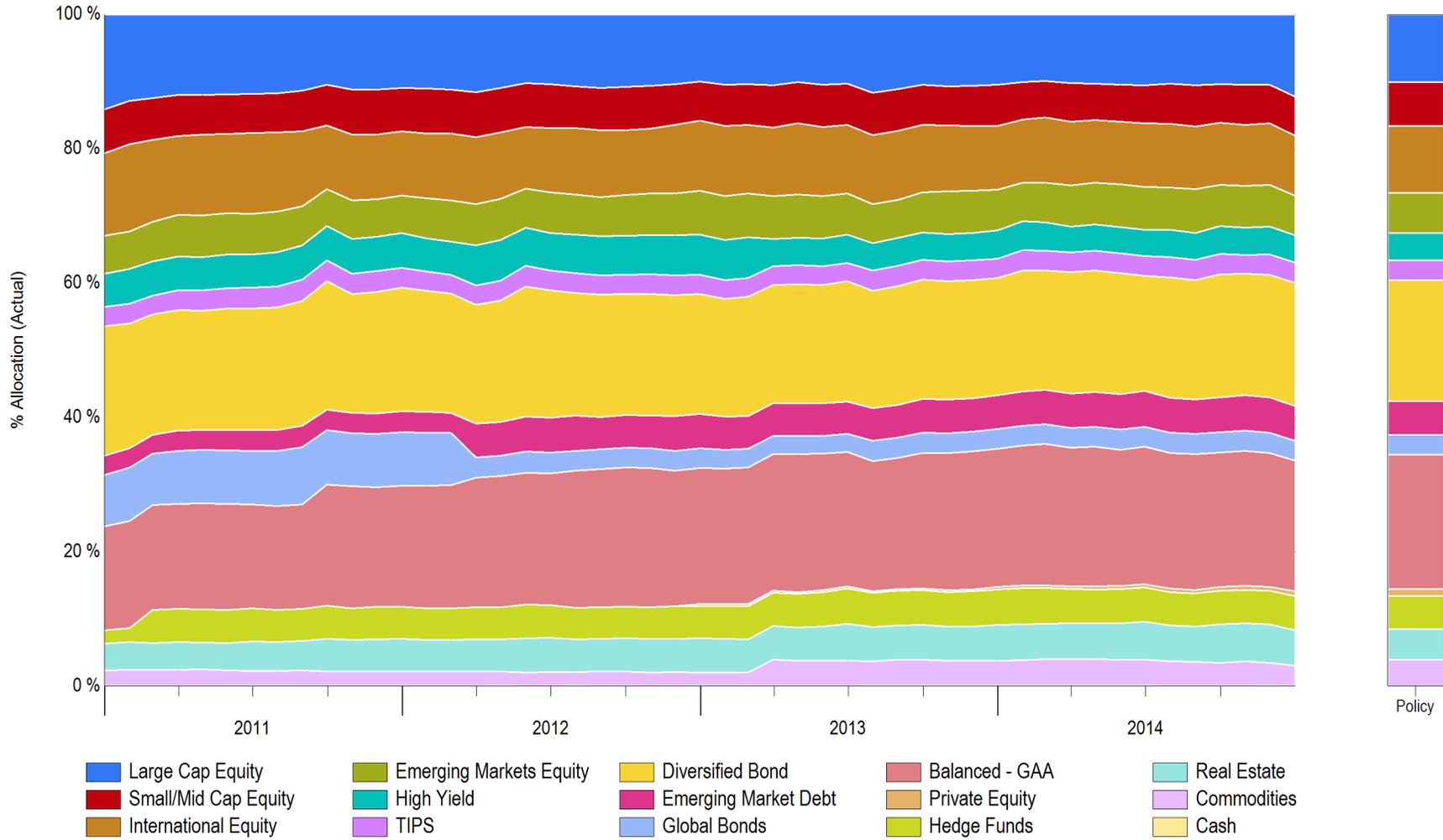
\*Difference between Policy and Current Allocation

Total Plan Performance Analysis



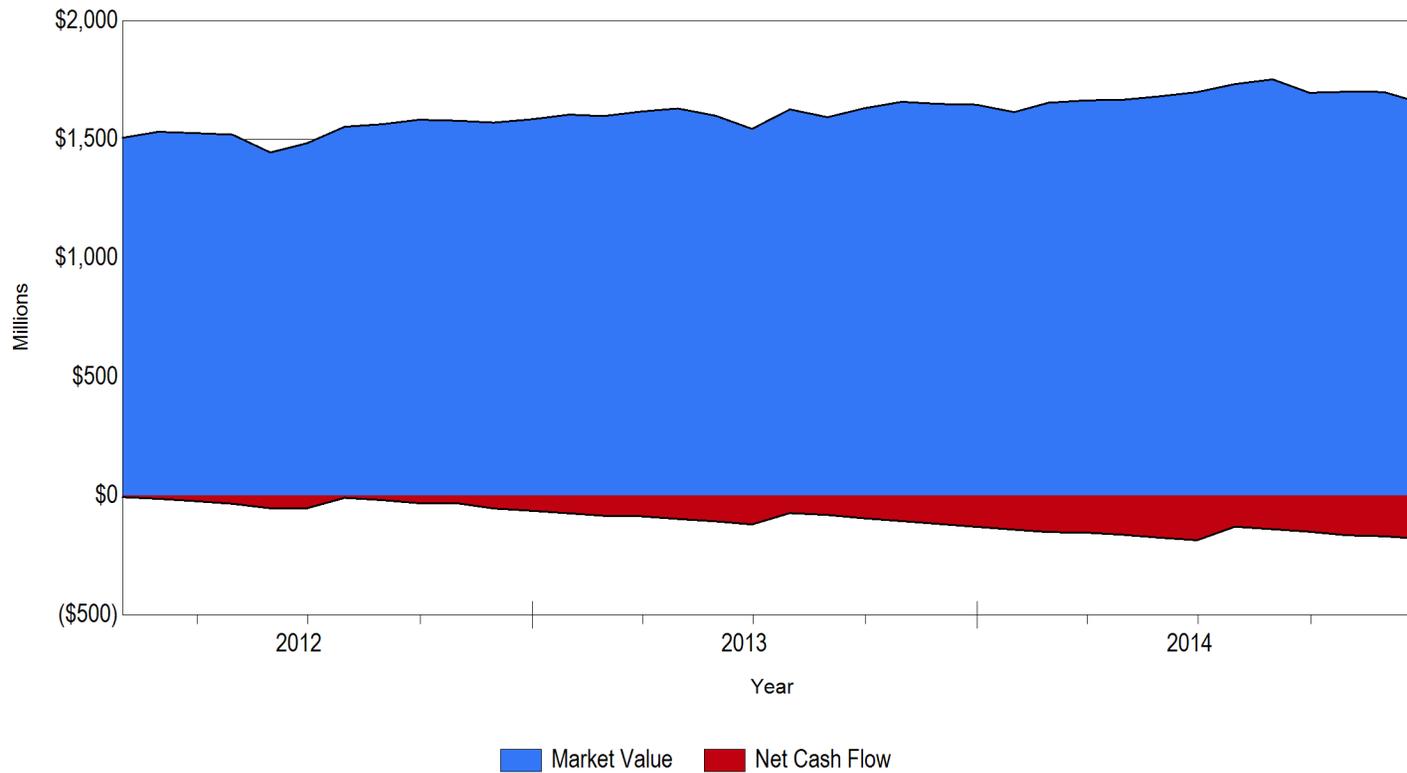
Total Fund Asset Allocation History

Asset Allocation History



**Total Fund Asset Growth Summary**

3 Years Ending December 31, 2014



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$1,697,054,148	\$1,699,754,628	\$1,646,698,342	\$1,458,453,863
- Withdrawals	-\$88,084,932	-\$118,127,888	-\$205,142,158	-\$662,345,732
+ Contributions	\$58,229,573	\$123,986,790	\$154,553,793	\$481,985,709
= Net Cash Flow	-\$29,855,359	\$5,858,902	-\$50,588,365	-\$180,823,901
+ Net Investment Change	-\$13,597,829	-\$52,012,570	\$57,490,983	\$375,970,998
= Ending Market Value	\$1,653,600,960	\$1,653,600,960	\$1,653,600,960	\$1,653,600,960

Vermont State Teachers

**Total Fund Asset Growth Summary by Manager**

	Quarter Ending December 31, 2014					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Aberdeen	\$105,349,496	-\$204,669	\$204,669	\$0	-\$5,539,414	\$99,810,082
Acadian	\$65,345,286	-\$81,412	\$81,412	\$0	-\$1,833,611	\$63,511,675
Allianz Structured Alpha	\$44,153,555	-\$209,436	\$0	-\$209,436	\$2,282,182	\$46,226,301
AQR Global Risk Premium	\$138,893,267	-\$5,638,782	\$138,782	-\$5,500,000	-\$2,191,218	\$131,202,048
BlackRock TIPS	\$51,448,294	-\$5,509,993	\$5,509,993	\$0	-\$38,648	\$51,409,646
Champlain	\$33,334,692	-\$67,735	\$67,735	\$0	\$1,691,795	\$35,026,487
GAM	\$16,908,464	\$0	\$0	\$0	-\$37,694	\$16,870,770
Grosvenor	\$34,430,056	\$0	\$0	\$0	\$181,105	\$34,611,161
Guggenheim	\$51,811,506	-\$63,613	\$63,613	\$0	-\$801,216	\$51,010,290
Harbourvest Dover VIII Fund	\$3,943,441	\$0	\$1,063,626	\$1,063,626	\$294,123	\$5,301,189
Harbourvest Partners IX Buyout Fund	\$2,742,714	\$0	\$459,096	\$459,096	\$184,384	\$3,386,194
Harbourvest Partners IX Credit Opportunities	\$442,848	\$0	\$133,883	\$133,883	\$18,366	\$595,096
Harbourvest Partners IX Venture Fund	\$2,670,548	-\$135,331	\$338,183	\$202,852	\$150,168	\$3,023,567
HIPEP VII	--	\$0	\$223,172	\$223,172	\$0	\$223,172
KDP	\$17,607,985	-\$27,591	\$27,591	\$0	-\$53,799	\$17,554,186
Mellon Dynamic Growth	\$33,989,596	-\$57,002	\$57,002	\$0	\$1,796,460	\$35,786,056
Mondrian	\$66,516,765	-\$62,808	\$62,808	\$0	-\$2,932,187	\$63,584,578
Mondrian GFI	\$51,633,584	-\$40,613	\$40,613	\$0	-\$898,823	\$50,734,761
Morgan Stanley Prime Property	\$43,563,072	\$0	\$0	\$0	-\$3,612,685	\$39,950,387
Permal	\$34,336,726	\$0	\$0	\$0	-\$382,862	\$33,953,864
PIMCO All Asset	\$100,273,024	-\$221,435	\$0	-\$221,435	-\$2,686,954	\$97,364,635
PIMCO Core Plus	\$112,374,048	-\$3,280,297	\$80,297	-\$3,200,000	\$1,779,053	\$110,953,101
PIMCO Unconstrained	\$111,096,623	-\$3,163,566	\$163,566	-\$3,000,000	-\$71,211	\$108,025,413
RREEF America REIT III	\$10,242,774	-\$375,415	\$0	-\$375,415	-\$1,022,094	\$8,845,265
Schroder	\$58,120,355	\$0	\$5,500,000	\$5,500,000	-\$12,002,585	\$51,617,770

Vermont State Teachers

Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2014					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Siguler Guff	\$5,000,514	\$0	\$1,023,224	\$1,023,224	-\$7,050	\$6,016,688
SSgA ACWI Ex US	\$25,156,245	-\$4,541	\$4,541	\$0	-\$963,174	\$24,193,071
SSgA Russell 2000 Growth	\$21,606,399	-\$4,938	\$4,938	\$0	\$2,176,879	\$23,783,278
SSgA S&P 400	\$9,285,981	-\$2,301,871	\$1,871	-\$2,300,000	\$573,046	\$7,559,027
SSgA S&P 500 Cap-Wgt	\$80,201,752	-\$3,006,118	\$42,304,551	\$39,298,433	\$3,169,818	\$122,670,004
SSgA S&P 500 Equal-Wgt	\$44,612,278	-\$6,565	\$6,565	\$0	\$2,693,581	\$47,305,859
T. Rowe	\$51,323,308	-\$58,744,759	\$46,326	-\$58,698,433	\$3,272,575	-\$4,102,550
Transwestern / Aslan III	\$436,621	\$0	\$0	\$0	\$0	\$436,621
UBS Trumbull	\$37,762,705	\$0	\$0	\$0	-\$3,534,902	\$34,227,803
Vermont Cash	\$380,789	-\$811,240	\$556,315	-\$254,925	\$0	\$125,865
Wellington	\$32,653,247	-\$4,065,203	\$65,203	-\$4,000,000	\$3,803,088	\$32,456,334
Wellington DAS	\$43,527,739	\$0	\$0	\$0	\$2,394,931	\$45,922,670
Wellington OIF	\$65,697,648	\$0	\$0	\$0	-\$602,719	\$65,094,929
Wellington Opportunistic EMD	\$88,180,205	\$0	\$0	\$0	-\$846,536	\$87,333,668
<b>Total</b>	<b>\$1,697,054,148</b>	<b>-\$88,084,932</b>	<b>\$58,229,573</b>	<b>-\$29,855,359</b>	<b>-\$13,597,829</b>	<b>\$1,653,600,960</b>

# 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
<b>Teachers Composite</b>	<b>1,695,169,789</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.1</b>	<b>95</b>	<b>-2.2</b>	<b>97</b>	<b>4.4</b>	<b>80</b>	<b>8.5</b>	<b>90</b>	<b>8.5</b>	<b>74</b>
<i>Policy Index</i>				0.3	93	-1.7	95	3.5	95	7.9	95	7.2	95
<i>Allocation Index</i>				0.4	90	-1.7	95	3.4	95	7.8	95	7.1	95
<i>InvestorForce Public DB Gross Median</i>				1.9		0.6		5.8		11.0		9.2	
<b>US Equity</b>	<b>306,267,268</b>	<b>18.1</b>	<b>--</b>	<b>6.4</b>	<b>37</b>	<b>5.1</b>	<b>38</b>	<b>11.6</b>	<b>41</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000</i>				5.2	55	5.3	36	12.6	33	20.5	47	15.6	58
<i>eA All US Equity Gross Median</i>				5.5		4.0		10.3		20.3		16.0	
<b>Large Cap Comp</b>	<b>207,442,142</b>	<b>12.2</b>	<b>10.0</b>	<b>5.2</b>	<b>40</b>	<b>5.8</b>	<b>46</b>	<b>13.7</b>	<b>35</b>	<b>21.1</b>	<b>38</b>	<b>16.2</b>	<b>32</b>
<i>S&amp;P 500</i>				4.9	47	6.1	38	13.7	35	20.4	50	15.5	45
<i>eA US Large Cap Equity Gross Median</i>				4.8		5.4		12.5		20.4		15.2	
T. Rowe	37,466,278	2.2	3.0	4.9	47	5.6	48	13.1	44	20.9	43	15.4	46
SSgA S&P 500 Cap-Wgt	122,670,004	7.2	4.0	5.0	46	6.2	37	13.7	34	20.5	49	--	--
<i>S&amp;P 500</i>				4.9	47	6.1	38	13.7	35	20.4	50	15.5	45
SSgA S&P 500 Equal-Wgt	47,305,859	2.8	3.0	6.0	21	5.3	52	14.4	25	22.3	23	17.4	11
<i>S&amp;P 500 Equal Weighted</i>				6.1	20	5.4	51	14.5	24	22.4	22	17.4	11
<b>Small/Mid Cap Comp</b>	<b>98,825,127</b>	<b>5.8</b>	<b>6.5</b>	<b>8.6</b>	<b>14</b>	<b>4.0</b>	<b>22</b>	<b>7.9</b>	<b>37</b>	<b>19.8</b>	<b>46</b>	<b>17.1</b>	<b>39</b>
<i>Russell 2000</i>				9.7	7	1.7	51	4.9	64	19.2	53	15.5	69
<i>eA US Small-Mid Cap Equity Gross Median</i>				6.5		1.9		6.5		19.3		16.3	
SSgA S&P 400	7,559,027	0.4	0.5	6.4	35	2.1	66	9.7	49	20.1	52	--	--
<i>S&amp;P 400 MidCap</i>				6.3	35	2.1	66	9.8	49	20.0	52	16.5	51
<i>eA US Mid Cap Equity Gross Median</i>				5.7		3.3		9.3		20.2		16.6	
Champlain	35,026,487	2.1	2.0	5.1	61	3.1	53	9.1	54	19.7	57	16.9	43
<i>Russell 2500</i>				6.8	27	1.1	80	7.1	71	20.0	52	16.4	54
<i>eA US Mid Cap Equity Gross Median</i>				5.7		3.3		9.3		20.2		16.6	
Wellington	32,456,334	1.9	2.0	12.0	3	5.9	1	8.0	27	19.4	59	17.3	30
<i>Russell 2000 Value</i>				9.4	22	0.0	52	4.2	68	18.3	67	14.3	78
<i>eA US Small Cap Value Equity Gross Median</i>				7.4		0.2		5.8		19.8		16.2	
SSgA Russell 2000 Growth	23,783,278	1.4	2.0	10.1	27	3.3	44	5.6	33	20.2	48	16.8	65
<i>Russell 2000 Growth</i>				10.1	27	3.3	44	5.6	32	20.1	48	16.8	65
<i>eA US Small Cap Growth Equity Gross Median</i>				8.5		2.8		3.9		20.0		17.7	

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
<b>Int'l Equity Comp</b>	<b>151,289,324</b>	<b>8.9</b>	<b>10.0</b>	<b>-3.6</b>	<b>71</b>	<b>-10.1</b>	<b>78</b>	<b>-2.4</b>	<b>33</b>	<b>11.2</b>	<b>74</b>	<b>6.4</b>	<b>70</b>
MSCI EAFE				-3.6	68	-9.2	68	-4.9	70	11.1	77	5.3	88
eA All EAFE Equity Gross Median				-2.7		-8.3		-3.7		12.8		7.3	
Acadian	63,511,675	3.7	4.0	-2.8	53	-10.5	83	-2.7	36	13.1	46	7.6	46
Mondrian	63,584,578	3.8	4.0	-4.4	83	-10.1	79	-1.6	25	10.2	87	6.0	77
MSCI EAFE				-3.6	68	-9.2	68	-4.9	70	11.1	77	5.3	88
SSgA ACWI Ex US	24,193,071	1.4	2.0	-3.8	84	-8.9	78	-3.6	62	9.3	88	--	--
MSCI ACWI ex USA				-3.9	85	-8.9	78	-3.9	66	9.0	90	4.4	97
eA ACWI ex-US All Cap Equity Gross Median				-1.6		-6.7		-2.0		11.7		7.6	
<b>Emerging Market Comp</b>	<b>99,810,082</b>	<b>5.9</b>	<b>6.0</b>	<b>-5.3</b>	<b>78</b>	<b>-8.5</b>	<b>80</b>	<b>-1.1</b>	<b>59</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Aberdeen	99,810,082	5.9	6.0	-5.3	78	-8.5	80	-1.1	59	5.6	61	6.3	20
MSCI Emerging Markets				-4.5	67	-7.8	72	-2.2	74	4.0	80	1.8	76
eA Emg Mkts Equity Gross Median				-3.6		-6.6		-0.1		6.3		3.6	
<b>US Fixed Income</b>	<b>431,101,607</b>	<b>25.4</b>	<b>--</b>	<b>1.3</b>	<b>37</b>	<b>1.3</b>	<b>41</b>	<b>6.2</b>	<b>30</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Barclays Aggregate				1.8	19	2.0	23	6.0	33	2.7	65	4.4	59
eA All US Fixed Inc Gross Median				0.8		0.9		4.2		3.5		5.0	
<b>Diversified Fixed</b>	<b>311,127,485</b>	<b>18.4</b>	<b>18.0</b>	<b>2.1</b>	<b>11</b>	<b>2.5</b>	<b>13</b>	<b>7.4</b>	<b>18</b>	<b>4.1</b>	<b>43</b>	<b>6.0</b>	<b>35</b>
Barclays Aggregate				1.8	19	2.0	23	6.0	33	2.7	65	4.4	59
eA All US Fixed Inc Gross Median				0.8		0.9		4.2		3.5		5.0	
Allianz Structured Alpha	46,226,301	2.7	2.0	5.2	1	7.7	1	17.3	1	9.3	1	9.6	1
Citigroup 10 Year Treasury				3.6	1	4.3	1	10.7	1	2.1	96	6.1	11
PIMCO Core Plus	110,953,101	6.5	6.5	1.6	49	1.4	75	5.4	75	3.4	53	5.3	33
Barclays Aggregate				1.8	29	2.0	36	6.0	52	2.7	83	4.4	80
PIMCO Unconstrained	108,025,413	6.4	6.5	-0.1	99	0.3	98	3.0	95	2.0	97	--	--
25% HY, 25% EMD, 50% BC Agg				0.2	99	-0.6	99	5.0	83	4.8	9	6.3	9
3-Month Libor Total Return USD				0.1	99	0.1	99	0.2	99	0.3	99	0.3	99
Wellington DAS	45,922,670	2.7	3.0	5.5	1	5.7	1	14.0	1	5.9	4	8.7	1
Wellington Custom Benchmark				4.2	1	5.2	1	13.3	1	3.1	66	6.6	5

Allianz is Net of Fees from inception to Q3 2012, and Grossed up quarterly since.

Wellington DAS is Net of 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
<b>High Yield Comp</b>	<b>68,564,475</b>	<b>4.0</b>	<b>4.0</b>	<b>-1.2</b>	<b>64</b>	<b>-1.6</b>	<b>31</b>	<b>2.9</b>	<b>43</b>	<b>8.3</b>	<b>52</b>	<b>8.9</b>	<b>57</b>
Barclays High Yield				-1.0	57	-2.9	59	2.5	52	8.4	50	9.0	52
eA US High Yield Fixed Inc Gross Median				-0.8		-2.6		2.5		8.4		9.1	
KDP	17,554,186	1.0	1.0	-0.3	34	-1.6	30	2.8	44	6.8	86	7.7	91
Barclays High Yield				-1.0	57	-2.9	59	2.5	52	8.4	50	9.0	52
BofA Merrill Lynch US High Yield BB-B Rated				-0.4	36	-2.0	37	3.5	27	8.1	57	8.8	61
Guggenheim	51,010,290	3.0	3.0	-1.5	71	-1.7	32	2.9	43	--	--	--	--
Barclays High Yield				-1.0	57	-2.9	59	2.5	52	8.4	50	9.0	52
eA US High Yield Fixed Inc Gross Median				-0.8		-2.6		2.5		8.4		9.1	
<b>TIPS</b>	<b>51,409,646</b>	<b>3.0</b>	<b>3.0</b>										
BlackRock TIPS	51,409,646	3.0	3.0	-0.1	--	-2.2	--	3.5	--	0.4	--	4.1	--
Barclays US TIPS				0.0	--	-2.1	--	3.6	--	0.4	--	4.1	--
<b>Global Fixed Income Comp</b>	<b>50,734,761</b>	<b>3.0</b>	<b>3.0</b>	<b>-1.7</b>	<b>73</b>	<b>-4.5</b>	<b>73</b>	<b>-0.7</b>	<b>85</b>	<b>-1.1</b>	<b>99</b>	<b>2.8</b>	<b>85</b>
Citi WGBI				-1.5	69	-5.2	79	-0.5	82	-1.0	98	1.7	96
eA All Global Fixed Inc Gross Median				-0.7		-2.7		2.5		4.7		5.2	
Mondrian GFI	50,734,761	3.0	3.0	-1.7	73	-4.5	73	-0.7	85	-1.6	99	1.8	95
Citi WGBI				-1.5	69	-5.2	79	-0.5	82	-1.0	98	1.7	96
<b>Emerging Market Debt</b>	<b>87,333,668</b>	<b>5.2</b>	<b>5.0</b>										
Wellington Opportunistic EMD	87,333,668	5.2	5.0	-1.0	15	-2.8	29	6.1	20	6.4	27	8.1	19
JP Morgan EMBI Global TR				-1.6	25	-3.3	32	5.5	27	5.3	45	7.3	41
eA All Emg Mkts Fixed Inc Gross Median				-3.5		-6.0		1.8		4.9		6.6	
<b>Total Real Estate</b>	<b>89,476,763</b>	<b>5.3</b>	<b>4.5</b>	<b>3.4</b>	<b>--</b>	<b>7.4</b>	<b>--</b>	<b>15.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Morgan Stanley Prime Property	39,950,387	2.4	2.0	4.5	--	8.7	--	15.7	--	15.2	--	15.6	--
UBS Trumbull	34,227,803	2.0	2.0	3.0	--	6.3	--	11.8	--	10.8	--	12.5	--
RREEF America REIT III	8,845,265	0.5	0.5	2.5	--	8.3	--	28.0	--	22.8	--	25.7	--
Transwestern / Aslan III	436,621	0.0	0.0	0.0	--	-3.8	--	2.2	--	20.6	--	-2.2	--
NCREIF Property Index				3.0	--	5.7	--	11.8	--	11.1	--	12.1	--
NCREIF ODCE				3.3	--	6.6	--	12.5	--	12.4	--	13.9	--
Siguler Guff	6,016,688	0.4		-0.1	--	5.3	--	--	--	--	--	--	--

Wellington Opportunistic EMD is Net of manager fees

Real Estate is as of Q3 2014

# 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
<b>Hedge Fund Comp</b>	<b>85,435,795</b>	<b>5.0</b>	<b>5.0</b>	<b>-0.3</b>	<b>68</b>	<b>-0.8</b>	<b>70</b>	<b>2.4</b>	<b>60</b>	<b>8.5</b>	<b>35</b>	<b>--</b>	<b>--</b>
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>				0.5		0.2		3.0		6.8		4.6	
Grosvenor	34,611,161	2.0	2.0	0.5	49	0.5	46	3.4	44	8.9	30	--	--
GAM	16,870,770	1.0	1.0	-0.2	67	-0.3	63	1.6	68	7.8	39	--	--
Permal	33,953,864	2.0	2.0	-1.1	79	-2.3	84	1.8	66	8.3	36	--	--
<i>HFRI Fund of Funds Composite Index</i>				0.9	42	1.2	40	3.3	44	5.7	66	3.3	72
<b>GAA Comp</b>	<b>329,447,668</b>	<b>19.4</b>	<b>20.0</b>	<b>-1.1</b>	<b>67</b>	<b>-3.8</b>	<b>67</b>	<b>4.8</b>	<b>32</b>	<b>7.7</b>	<b>44</b>	<b>8.2</b>	<b>25</b>
<i>eA Global TAA Gross Median</i>				0.3		-1.1		2.7		7.1		5.9	
Mellon Dynamic Growth	35,786,056	2.1	2.5	5.3	1	7.2	1	6.8	12	10.1	15	9.3	16
<i>Mellon Dynamic Growth Benchmark</i>				0.0	53	-2.0	56	3.5	43	8.3	38	6.6	42
AQR Global Risk Premium	131,202,048	7.7	8.0	-1.6	74	-5.0	73	8.3	5	7.2	48	10.5	10
<i>60% MSCI World / 40% CITI WGBI</i>				0.1	52	-2.7	59	3.1	45	9.1	28	7.3	32
PIMCO All Asset	97,364,635	5.7	5.0	-2.7	81	-5.3	74	1.7	70	6.4	57	7.4	31
<i>PIMCO All Asset Index</i>				0.7	49	-0.1	41	4.9	30	4.4	67	5.8	52
<i>CPI + 5% (Seasonally Adjusted)</i>				0.6	49	1.8	21	5.7	21	6.4	57	6.7	41
Wellington OIF	65,094,929	3.8	4.5	-0.9	64	-4.2	71	1.5	71	9.2	28	5.7	54
<i>65% MSCI ACWI (Net) / 35% BC Agg</i>				0.9	48	-0.6	47	4.9	30	10.1	15	7.8	29
<b>Commodities</b>	<b>51,617,770</b>	<b>3.0</b>	<b>4.0</b>										
Schroder	51,617,770	3.0	4.0	-19.1	--	-28.5	--	-23.6	--	-11.1	--	-5.2	--
<i>Bloomberg Commodity Index</i>				-12.1	--	-22.5	--	-17.0	--	-9.4	--	-5.5	--
<b>Cash</b>	<b>125,865</b>	<b>0.0</b>	<b>0.0</b>										
Vermont Cash	125,865	0.0	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	--	0.1	--
<b>Private Equity</b>	<b>12,529,218</b>	<b>0.7</b>	<b>1.0</b>										
Harbourvest Partners IX Credit Opportunities	595,096	0.0											
Harbourvest Partners IX Venture Fund	3,023,567	0.2											
Harbourvest Partners IX Buyout Fund	3,386,194	0.2											
Harbourvest Dover VIII Fund	5,301,189	0.3											

Harbourvest is based on preliminary Q4 Capital Account Statement

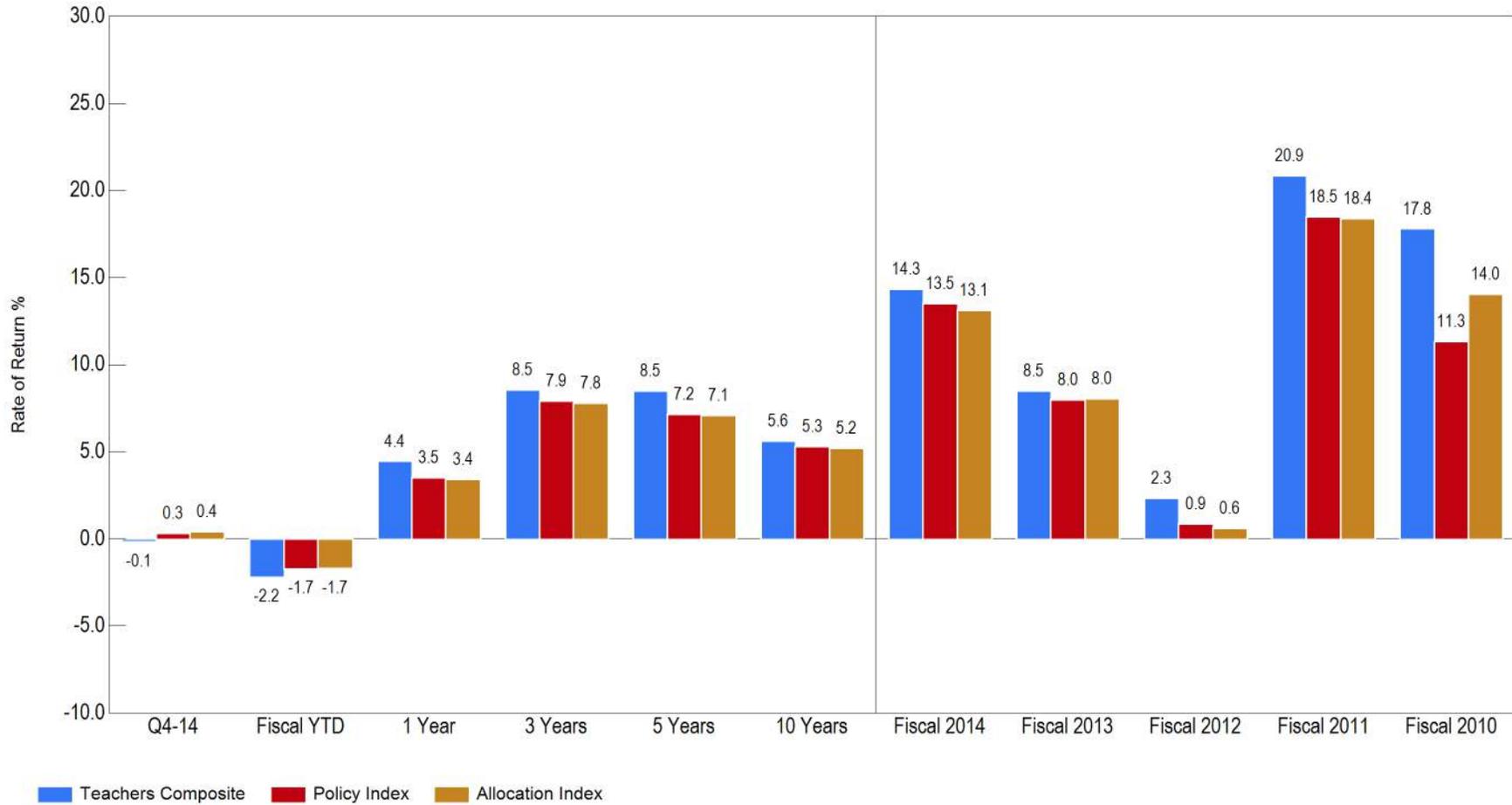
PIMCO All Asset Index: 40% BC Agg / 30% TIPS / 10% S&P500 / 10% BC HY / 10% JPM EMBI+

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

Hedge Fund Comp and Commodities are Net of Manager Fees

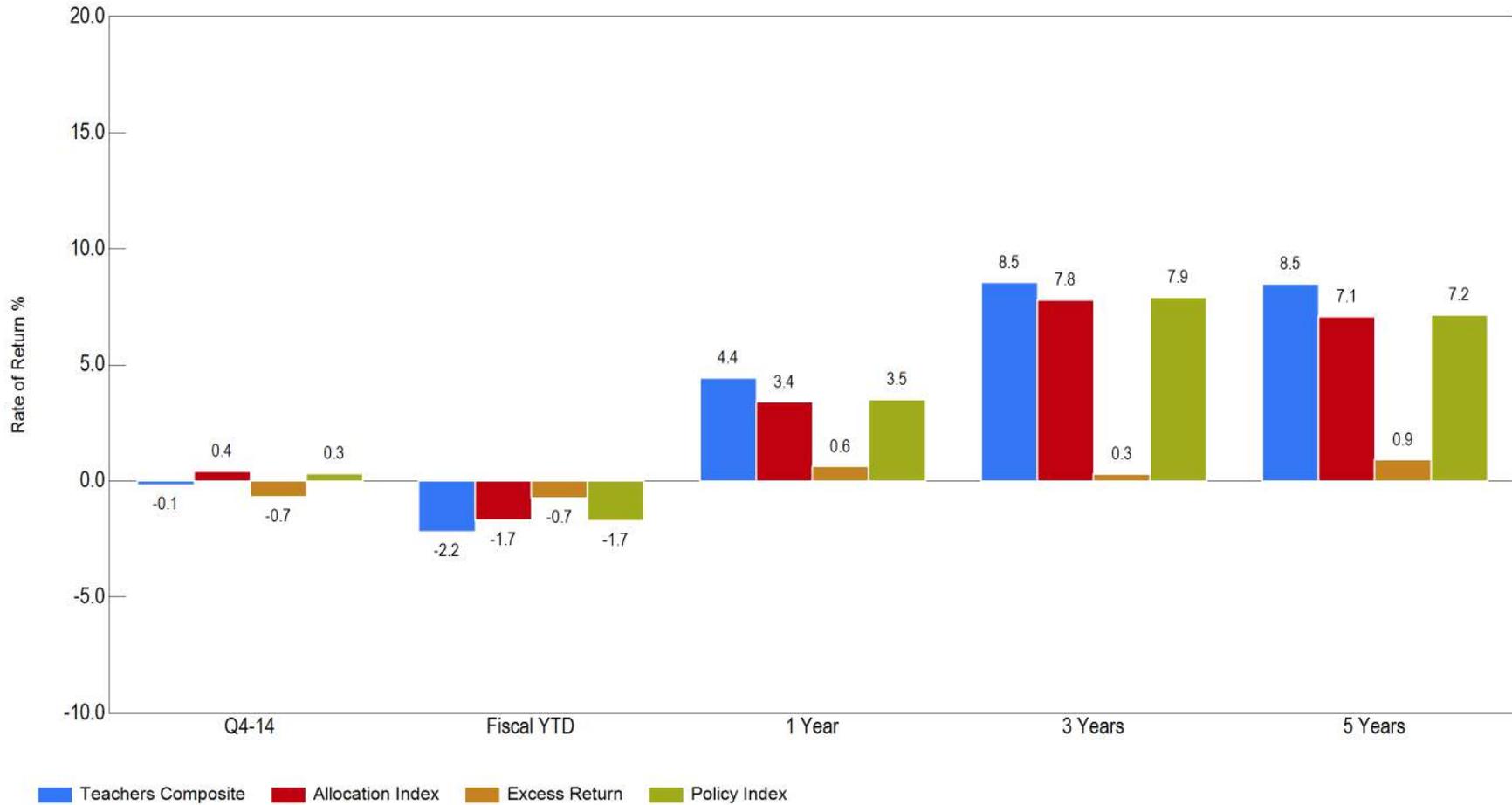
Wellington OIF is Net of Manager Fees

Return Summary Gross



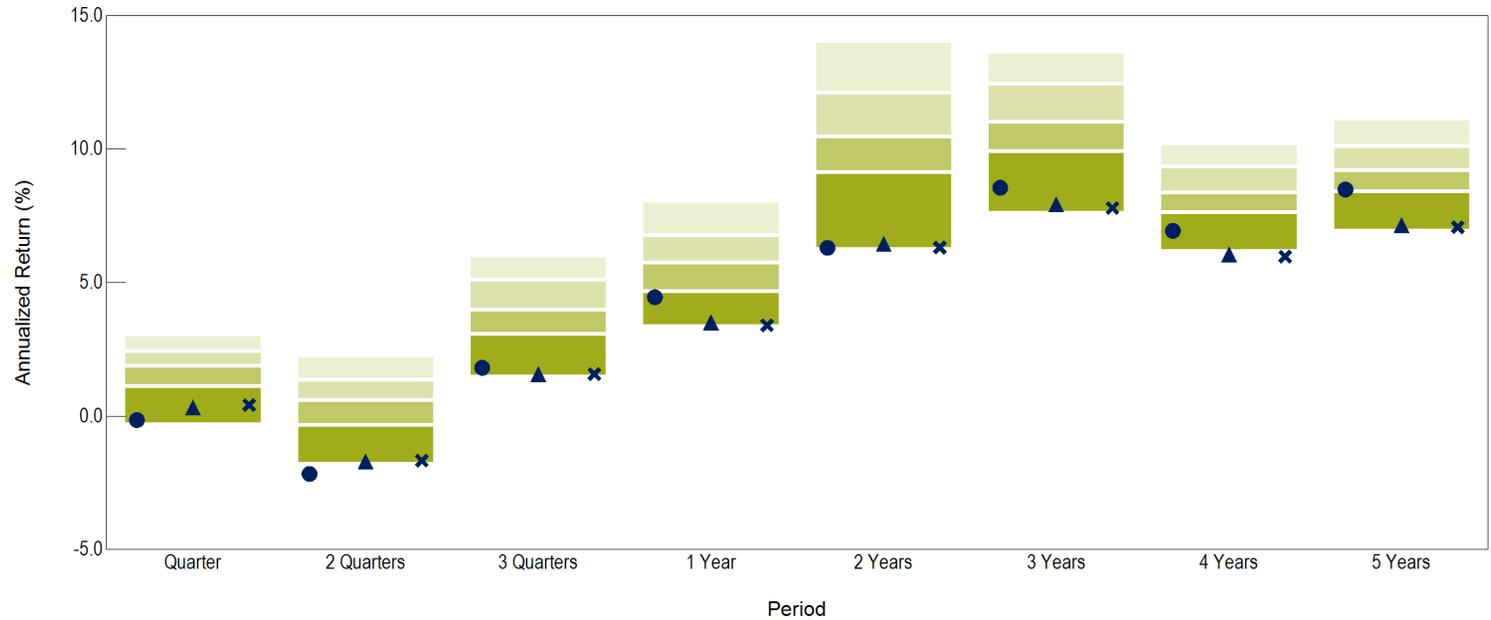
Total Fund Return Summary

Return Summary Gross



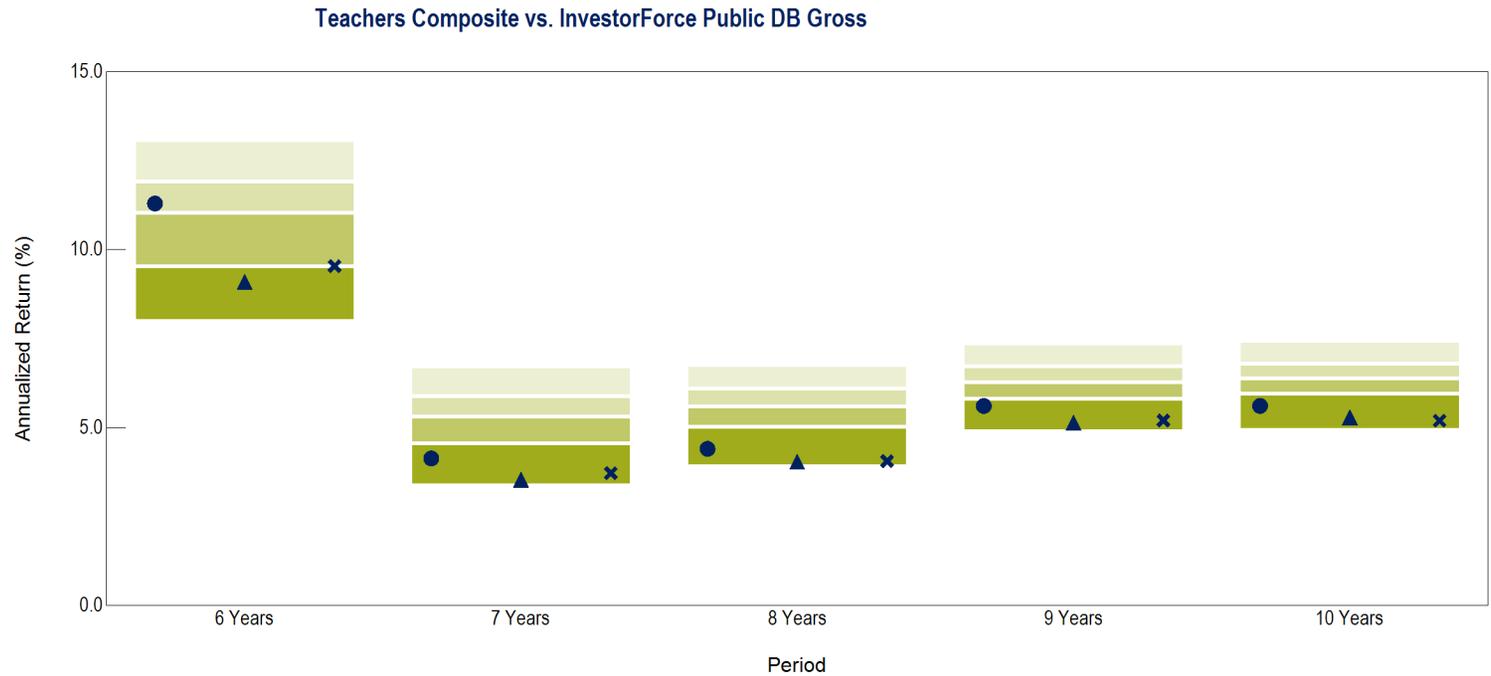
# Total Fund Return Summary vs. Peer Universe

Teachers Composite vs. InvestorForce Public DB Gross



	Return (Rank)															
5th Percentile	3.0		2.3		6.0		8.0		14.0		13.6		10.2		11.1	
25th Percentile	2.4		1.4		5.1		6.8		12.1		12.5		9.4		10.1	
Median	1.9		0.6		4.0		5.8		10.5		11.0		8.4		9.2	
75th Percentile	1.1		-0.3		3.1		4.7		9.2		9.9		7.6		8.4	
95th Percentile	-0.3		-1.8		1.5		3.4		6.3		7.6		6.2		7.0	
# of Portfolios	215		212		211		206		202		194		176		169	
● Teachers Composite	-0.1	(95)	-2.2	(97)	1.8	(94)	4.4	(80)	6.3	(95)	8.5	(90)	6.9	(89)	8.5	(74)
▲ Policy Index	0.3	(93)	-1.7	(95)	1.6	(95)	3.5	(95)	6.4	(94)	7.9	(95)	6.1	(97)	7.2	(95)
× Allocation Index	0.4	(90)	-1.7	(95)	1.6	(95)	3.4	(95)	6.3	(95)	7.8	(95)	6.0	(97)	7.1	(95)

Total Fund Return Summary vs. Peer Universe



	Return (Rank)									
5th Percentile	13.1		6.7		6.7		7.4		7.4	
25th Percentile	11.9		5.9		6.1		6.7		6.8	
Median	11.0		5.3		5.6		6.3		6.4	
75th Percentile	9.5		4.6		5.0		5.8		6.0	
95th Percentile	8.0		3.4		3.9		4.9		4.9	
# of Portfolios	166		162		154		150		145	
● Teachers Composite	11.3	(44)	4.1	(86)	4.4	(90)	5.6	(86)	5.6	(87)
▲ Policy Index	9.1	(82)	3.5	(94)	4.0	(94)	5.1	(91)	5.3	(93)
× Allocation Index	9.5	(76)	3.7	(92)	4.1	(94)	5.2	(91)	5.2	(94)

# Total Fund Return Summary vs. Peer Universe

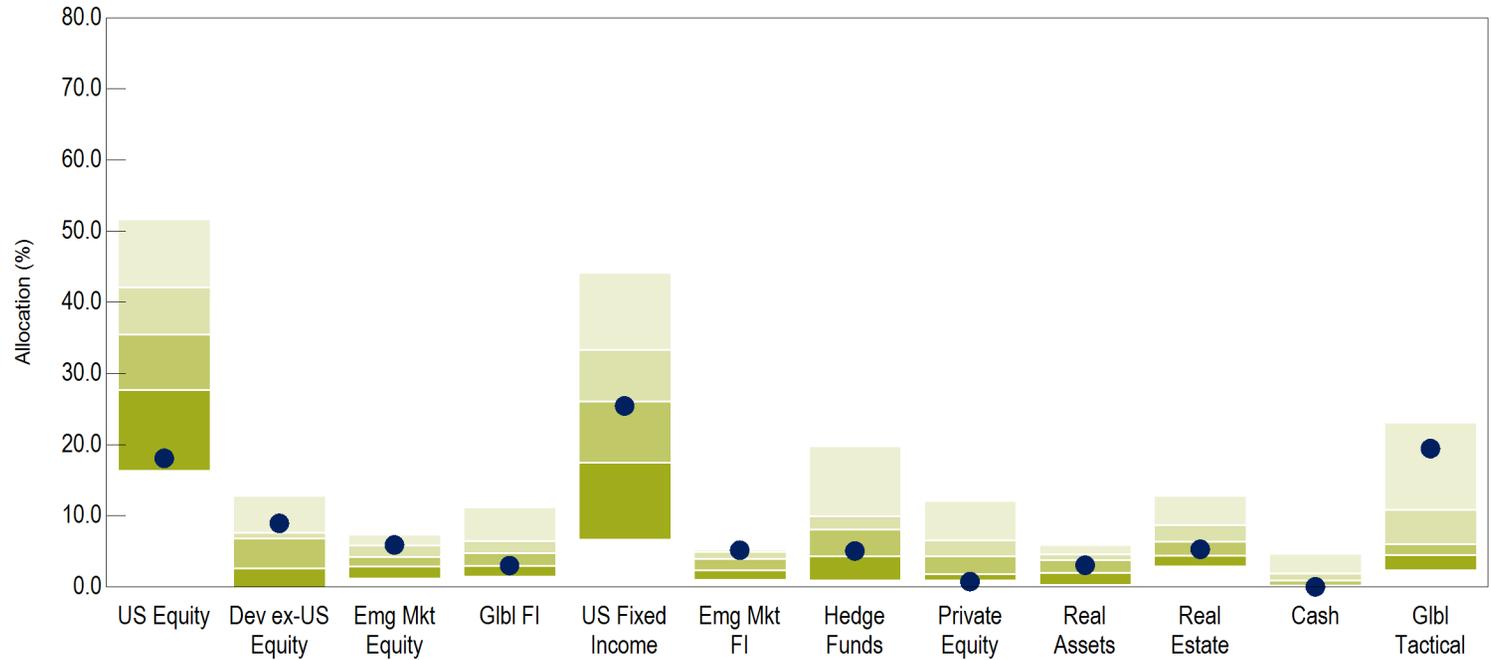
Teachers Composite vs. InvestorForce Public DB Gross



	Return (Rank)										
	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	
5th Percentile	8.0	20.8	14.3	3.4	15.5	27.6	-10.2	11.1	15.8	9.9	
25th Percentile	6.8	18.0	13.1	1.9	13.9	23.0	-19.2	9.1	14.2	8.1	
Median	5.8	15.5	12.2	0.9	12.8	20.3	-24.7	7.7	13.0	6.9	
75th Percentile	4.7	13.3	10.5	-0.3	11.5	15.7	-27.4	6.8	10.5	5.5	
95th Percentile	3.4	8.4	7.7	-2.4	9.2	10.4	-30.2	5.4	8.0	4.2	
# of Portfolios	206	212	192	162	154	152	149	146	136	131	
● Teachers Composite	4.4 (80)	8.2 (96)	13.2 (23)	2.2 (17)	14.9 (12)	26.5 (9)	-30.1 (94)	6.3 (83)	15.7 (6)	5.6 (73)	
▲ Policy Index	3.5 (95)	9.5 (92)	10.9 (71)	0.6 (62)	11.7 (72)	19.3 (55)	-24.3 (49)	7.6 (52)	14.4 (20)	6.6 (57)	
× Allocation Index	3.4 (95)	9.3 (93)	10.8 (72)	0.7 (62)	11.6 (74)	22.7 (26)	-25.2 (57)	6.5 (80)	14.8 (17)	5.1 (81)	

Total Fund Allocation vs. Peer Universe

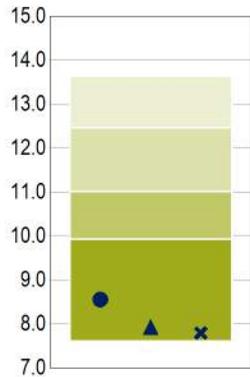
Total Plan Allocation vs. InvestorForce Public DB Gross  
As of December 31, 2014



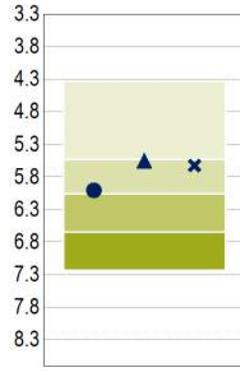
	Allocation (Rank)												
5th Percentile	51.7	12.8	7.3	11.1	44.1	5.3	19.8	12.1	5.9	12.8	4.7	23.1	--
25th Percentile	42.2	7.7	5.9	6.6	33.4	5.0	10.0	6.6	4.6	8.8	1.9	10.9	--
Median	35.6	6.9	4.3	4.8	26.1	4.1	8.1	4.3	3.8	6.5	1.0	6.1	--
75th Percentile	27.7	2.7	2.9	3.0	17.5	2.4	4.4	1.9	2.0	4.5	0.3	4.5	--
95th Percentile	16.4	0.0	1.2	1.5	6.7	1.1	1.0	1.0	0.3	3.0	0.0	2.4	--
# of Portfolios	199	21	67	47	174	32	67	68	39	131	183	68	--
● Teachers Composite	18.1 (93)	8.9 (14)	5.9 (26)	3.0 (76)	25.4 (53)	5.2 (15)	5.0 (68)	0.7 (98)	3.0 (56)	5.3 (66)	0.0 (93)	19.4 (11)	--

Teachers Composite vs. IFX Public DB Gross  
3 Years

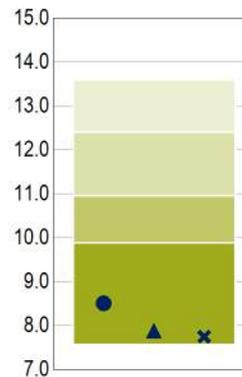
Anlzd Return



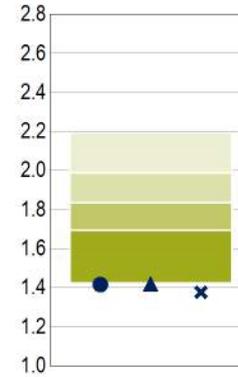
Anlzd Standard Deviation



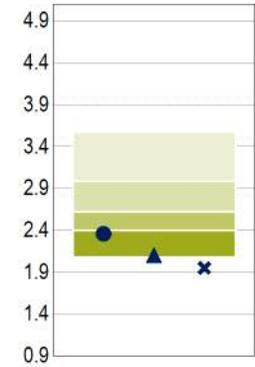
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	8.55
%tile	90
▲ Policy Index	
Value	7.92
%tile	95
✕ Allocation Index	
Value	7.79
%tile	95
Universe	
5th %tile	13.64
25th %tile	12.47
Median	11.02
75th %tile	9.94
95th %tile	7.62

● Teachers Composite	
Value	6.01
%tile	48
▲ Policy Index	
Value	5.55
%tile	29
✕ Allocation Index	
Value	5.63
%tile	31
Universe	
5th %tile	4.33
25th %tile	5.52
Median	6.05
75th %tile	6.64
95th %tile	7.23

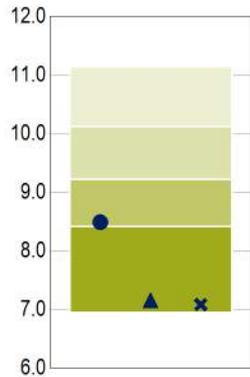
● Teachers Composite	
Value	8.50
%tile	90
▲ Policy Index	
Value	7.87
%tile	95
✕ Allocation Index	
Value	7.74
%tile	95
Universe	
5th %tile	13.59
25th %tile	12.42
Median	10.97
75th %tile	9.89
95th %tile	7.57

● Teachers Composite	
Value	1.41
%tile	97
▲ Policy Index	
Value	1.42
%tile	97
✕ Allocation Index	
Value	1.38
%tile	98
Universe	
5th %tile	2.19
25th %tile	1.99
Median	1.84
75th %tile	1.70
95th %tile	1.42

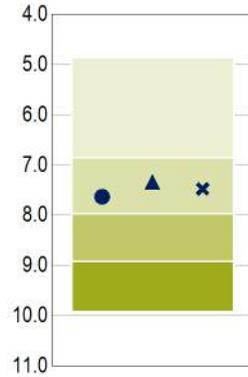
● Teachers Composite	
Value	2.36
%tile	78
▲ Policy Index	
Value	2.10
%tile	95
✕ Allocation Index	
Value	1.95
%tile	98
Universe	
5th %tile	3.57
25th %tile	2.99
Median	2.62
75th %tile	2.40
95th %tile	2.09

Teachers Composite vs. IFx Public DB Gross  
5 Years

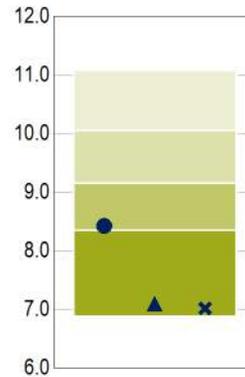
Anlzd Return



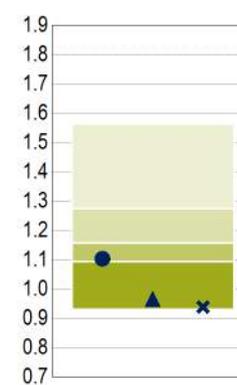
Anlzd Standard Deviation



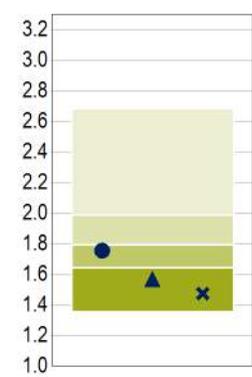
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	8.48
%tile	74
▲ Policy Index	
Value	7.15
%tile	95
✕ Allocation Index	
Value	7.07
%tile	95
Universe	
5th %tile	11.14
25th %tile	10.13
Median	9.22
75th %tile	8.42
95th %tile	6.95

● Teachers Composite	
Value	7.64
%tile	43
▲ Policy Index	
Value	7.34
%tile	35
✕ Allocation Index	
Value	7.48
%tile	37
Universe	
5th %tile	4.86
25th %tile	6.84
Median	7.96
75th %tile	8.91
95th %tile	9.92

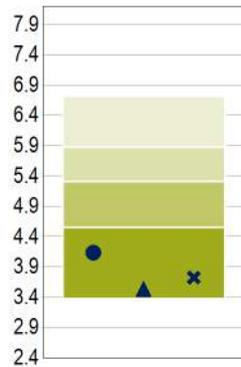
● Teachers Composite	
Value	8.42
%tile	74
▲ Policy Index	
Value	7.09
%tile	95
✕ Allocation Index	
Value	7.01
%tile	95
Universe	
5th %tile	11.08
25th %tile	10.07
Median	9.16
75th %tile	8.36
95th %tile	6.89

● Teachers Composite	
Value	1.10
%tile	73
▲ Policy Index	
Value	0.97
%tile	93
✕ Allocation Index	
Value	0.94
%tile	95
Universe	
5th %tile	1.56
25th %tile	1.28
Median	1.16
75th %tile	1.10
95th %tile	0.93

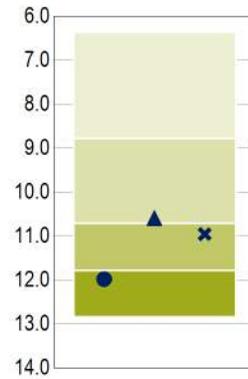
● Teachers Composite	
Value	1.75
%tile	62
▲ Policy Index	
Value	1.57
%tile	86
✕ Allocation Index	
Value	1.47
%tile	90
Universe	
5th %tile	2.68
25th %tile	1.99
Median	1.79
75th %tile	1.65
95th %tile	1.36

Teachers Composite vs. IFx Public DB Gross  
7 Years

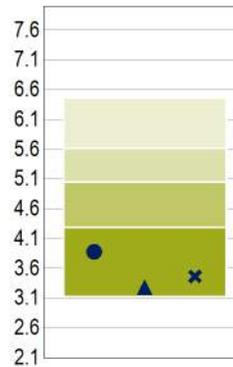
Anlzd Return



Anlzd Standard Deviation



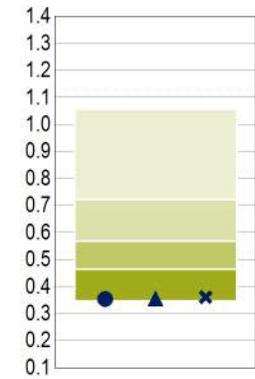
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	4.13
%tile	86
▲ Policy Index	
Value	3.53
%tile	94
✕ Allocation Index	
Value	3.72
%tile	92
Universe	
5th %tile	6.71
25th %tile	5.88
Median	5.32
75th %tile	4.56
95th %tile	3.38

● Teachers Composite	
Value	11.99
%tile	82
▲ Policy Index	
Value	10.59
%tile	48
✕ Allocation Index	
Value	10.96
%tile	55
Universe	
5th %tile	6.37
25th %tile	8.77
Median	10.70
75th %tile	11.77
95th %tile	12.83

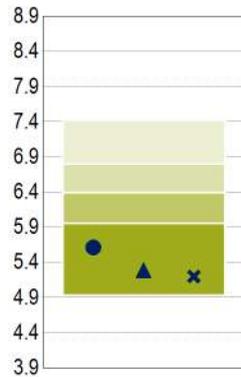
● Teachers Composite	
Value	3.88
%tile	86
▲ Policy Index	
Value	3.28
%tile	94
✕ Allocation Index	
Value	3.46
%tile	92
Universe	
5th %tile	6.46
25th %tile	5.63
Median	5.06
75th %tile	4.30
95th %tile	3.13

● Teachers Composite	
Value	0.32
%tile	90
▲ Policy Index	
Value	0.31
%tile	94
✕ Allocation Index	
Value	0.32
%tile	93
Universe	
5th %tile	0.82
25th %tile	0.61
Median	0.48
75th %tile	0.39
95th %tile	0.29

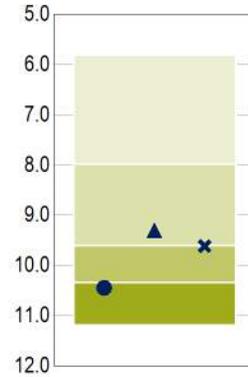
● Teachers Composite	
Value	0.35
%tile	95
▲ Policy Index	
Value	0.36
%tile	94
✕ Allocation Index	
Value	0.36
%tile	93
Universe	
5th %tile	1.05
25th %tile	0.72
Median	0.57
75th %tile	0.47
95th %tile	0.35

Teachers Composite vs. IFx Public DB Gross  
10 Years

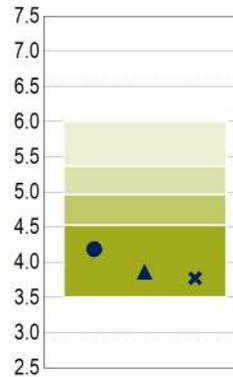
Anlzd Return



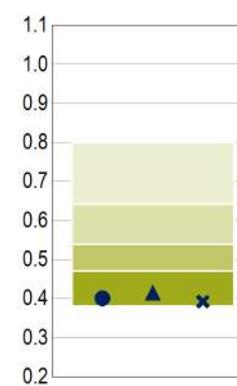
Anlzd Standard Deviation



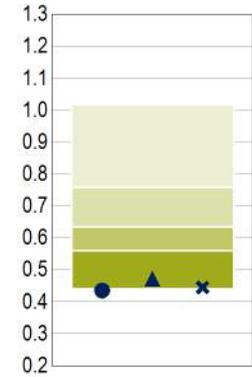
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	5.61
%tile	87
▲ Policy Index	
Value	5.29
%tile	93
× Allocation Index	
Value	5.20
%tile	94
Universe	
5th %tile	7.42
25th %tile	6.80
Median	6.39
75th %tile	5.96
95th %tile	4.93

● Teachers Composite	
Value	10.45
%tile	80
▲ Policy Index	
Value	9.31
%tile	45
× Allocation Index	
Value	9.62
%tile	53
Universe	
5th %tile	5.82
25th %tile	7.98
Median	9.59
75th %tile	10.33
95th %tile	11.19

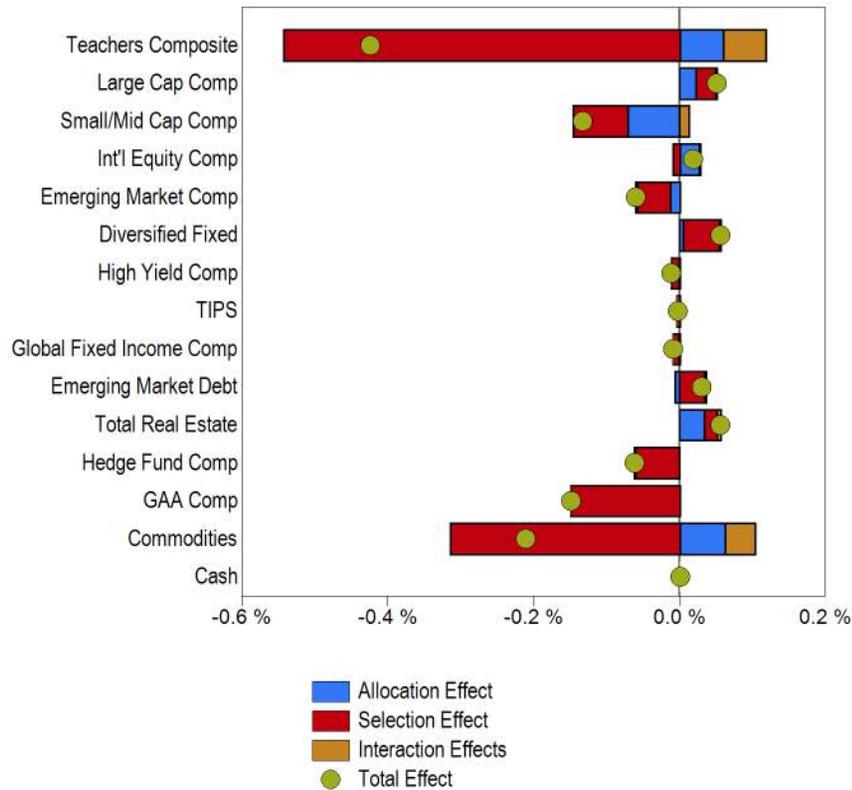
● Teachers Composite	
Value	4.19
%tile	87
▲ Policy Index	
Value	3.86
%tile	93
× Allocation Index	
Value	3.77
%tile	94
Universe	
5th %tile	6.00
25th %tile	5.38
Median	4.97
75th %tile	4.53
95th %tile	3.51

● Teachers Composite	
Value	0.40
%tile	92
▲ Policy Index	
Value	0.41
%tile	91
× Allocation Index	
Value	0.39
%tile	94
Universe	
5th %tile	0.80
25th %tile	0.64
Median	0.54
75th %tile	0.47
95th %tile	0.38

● Teachers Composite	
Value	0.43
%tile	96
▲ Policy Index	
Value	0.47
%tile	91
× Allocation Index	
Value	0.44
%tile	95
Universe	
5th %tile	1.02
25th %tile	0.76
Median	0.64
75th %tile	0.56
95th %tile	0.44

Total Fund Attribution Analysis

Attribution Effects Relative to Policy Index  
3 Months Ending December 31, 2014



Attribution Summary  
3 Months Ending December 31, 2014

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	5.2%	4.9%	0.3%	0.0%	0.0%	0.0%	0.1%
Small/Mid Cap Comp	8.6%	9.7%	-1.1%	-0.1%	-0.1%	0.0%	-0.1%
Int'l Equity Comp	-3.6%	-3.6%	-0.1%	0.0%	0.0%	0.0%	0.0%
Emerging Market Comp	-5.3%	-4.5%	-0.8%	0.0%	0.0%	0.0%	-0.1%
Diversified Fixed	2.1%	1.8%	0.3%	0.0%	0.0%	0.0%	0.1%
High Yield Comp	-1.2%	-1.0%	-0.2%	0.0%	0.0%	0.0%	0.0%
TIPS	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-1.7%	-1.5%	-0.3%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	-1.0%	-1.6%	0.7%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	3.4%	3.0%	0.4%	0.0%	0.0%	0.0%	0.1%
Hedge Fund Comp	-0.3%	0.9%	-1.2%	-0.1%	0.0%	0.0%	-0.1%
GAA Comp	-1.1%	-0.3%	-0.8%	-0.1%	0.0%	0.0%	-0.1%
Commodities	-19.1%	-12.1%	-7.0%	-0.3%	0.1%	0.0%	-0.2%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>-0.4%</b>	<b>-0.5%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>-0.4%</b>

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.

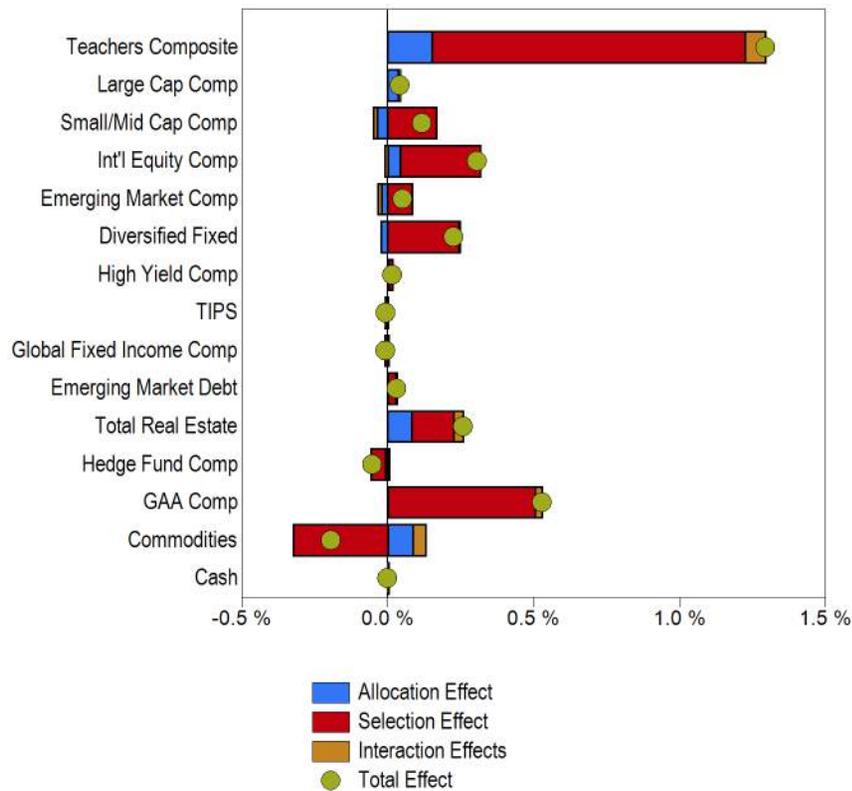
The target return shown for each composite is a custom index, based on aggregated policy indices. This policyindex asset weights the underlying policy indices of each option in the plan and the respective benchmark.

The allocation, selection, and interaction effects are calculated using the custom index described above alongwith 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, 2014**



**Attribution Summary  
1 Year Ending December 31, 2014**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	13.7%	13.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Small/Mid Cap Comp	7.9%	4.9%	3.0%	0.2%	0.0%	0.0%	0.1%
Int'l Equity Comp	-2.4%	-4.9%	2.5%	0.3%	0.0%	0.0%	0.3%
Emerging Market Comp	-1.1%	-2.2%	1.1%	0.1%	0.0%	0.0%	0.0%
Diversified Fixed	7.4%	6.0%	1.4%	0.2%	0.0%	0.0%	0.2%
High Yield Comp	2.9%	2.5%	0.4%	0.0%	0.0%	0.0%	0.0%
TIPS	3.5%	3.6%	-0.1%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-0.7%	-0.5%	-0.2%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	6.1%	5.5%	0.6%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	15.2%	11.8%	3.4%	0.1%	0.1%	0.0%	0.3%
Hedge Fund Comp	2.4%	3.3%	-1.0%	0.0%	0.0%	0.0%	-0.1%
GAA Comp	4.8%	2.3%	2.5%	0.5%	0.0%	0.0%	0.5%
Commodities	-23.6%	-17.0%	-6.6%	-0.3%	0.1%	0.0%	-0.2%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>4.4%</b>	<b>3.1%</b>	<b>1.3%</b>	<b>1.1%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>1.3%</b>

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 alongwith 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, 2014

	% 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%	8.55%	90	6.01%	48	0.05%	56	1.41	97	2.36	78	0.89%	37
Policy Index	--	7.92%	95	5.55%	29	0.00%	58	1.42	97	2.10	95	0.00%	1
US Equity	18.07%	20.58%	46	9.99%	32	-0.93%	47	2.05	33	3.36	20	1.53%	4
Russell 3000	--	20.51%	47	9.42%	20	0.00%	36	2.17	23	3.31	22	0.00%	1
Large Cap Comp	12.24%	21.07%	38	9.35%	31	0.17%	37	2.25	26	3.28	31	0.83%	1
S&P 500	--	20.41%	50	9.10%	23	0.00%	41	2.24	27	3.32	28	0.00%	1
Small/Mid Cap Comp	5.83%	19.75%	46	11.78%	44	3.06%	62	1.67	47	3.06	22	2.88%	1
Russell 2000	--	19.21%	53	13.31%	83	0.00%	87	1.44	77	2.44	60	0.00%	1
Int'l Equity Comp	8.92%	11.22%	74	12.77%	50	0.67%	75	0.88	75	1.15	71	2.16%	11
MSCI EAFE	--	11.06%	77	13.21%	72	0.00%	85	0.83	83	1.12	77	0.00%	1
Emerging Market Comp	5.89%	5.58%	61	15.62%	73	1.60%	62	0.35	66	0.49	62	4.54%	61
MSCI Emerging Markets	--	4.05%	80	15.21%	62	0.00%	81	0.26	81	0.37	78	0.00%	1
US Fixed Income	25.43%	4.47%	39	3.24%	68	1.39%	41	1.37	58	1.70	63	1.05%	24
Barclays Aggregate	--	2.66%	65	2.67%	52	0.00%	87	0.98	84	1.39	81	0.00%	1
Diversified Fixed	18.35%	4.06%	43	3.29%	69	0.89%	54	1.22	67	1.70	63	0.97%	21
Barclays Aggregate	--	2.66%	65	2.67%	52	0.00%	87	0.98	84	1.39	81	0.00%	1
High Yield Comp	4.04%	8.34%	52	3.72%	17	1.63%	18	2.22	17	3.51	28	1.28%	66
Barclays High Yield	--	8.43%	50	4.56%	57	0.00%	62	1.84	56	3.06	55	0.00%	1
TIPS	3.03%	0.38%	68	5.24%	80	-0.06%	69	0.06	70	0.08	69	0.12%	5
Barclays US TIPS	--	0.44%	61	5.22%	78	0.00%	61	0.07	61	0.09	60	0.00%	1
Global Fixed Income Comp	2.99%	-1.13%	99	4.71%	58	-0.16%	99	-0.25	99	-0.42	99	1.79%	11
Citi WGBI	--	-0.97%	98	4.34%	46	0.00%	98	-0.24	99	-0.33	99	0.00%	1
Emerging Market Debt	5.15%	6.45%	27	7.32%	28	1.43%	28	0.87	26	1.21	31	1.17%	7
JP Morgan EMBI Global TR	--	5.33%	45	7.70%	37	0.00%	47	0.69	45	1.05	39	0.00%	1
Total Real Estate	5.28%	14.44%	--	5.84%	--	0.16%	--	2.46	--	1,709.99	--	1.78%	--
NCREIF Property Index	--	11.11%	--	4.44%	--	0.00%	--	2.49	--	1,314.12	--	0.00%	--
Hedge Fund Comp	5.04%	8.46%	35	3.53%	32	2.59%	31	2.38	21	6.08	10	1.28%	3
HFRI Fund of Funds Composite Index	--	5.67%	66	3.18%	21	0.00%	62	1.77	49	3.44	39	0.00%	1
GAA Comp	19.43%	7.67%	44	7.70%	57	-0.09%	60	0.99	53	1.33	51	3.11%	32
60% MSCI ACWI (Net)/40% CITI WGBI	--	7.96%	40	7.22%	49	0.00%	59	1.10	49	1.47	46	0.00%	1

# Vermont State Teachers

## Total Fund Risk Statistics

5 Years Ending December 31, 2014

	% 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%	8.48%	74	7.64%	43	1.09%	13	1.10	73	1.75	62	0.91%	23
Policy Index	--	7.15%	95	7.34%	35	0.00%	62	0.97	93	1.57	86	0.00%	1
US Equity	18.07%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	15.63%	58	13.55%	29	0.00%	46	1.15	35	1.82	38	0.00%	1
Large Cap Comp	12.24%	16.16%	32	13.63%	50	-0.01%	44	1.18	36	1.83	41	1.11%	1
S&P 500	--	15.45%	45	13.00%	29	0.00%	44	1.18	36	1.88	35	0.00%	1
Small/Mid Cap Comp	5.83%	17.14%	39	15.81%	36	3.59%	37	1.08	35	1.86	28	3.11%	1
Russell 2000	--	15.55%	69	17.98%	80	0.00%	88	0.86	82	1.42	73	0.00%	1
Int'l Equity Comp	8.92%	6.44%	70	15.65%	22	1.48%	65	0.41	63	0.61	60	2.23%	10
MSCI EAFE	--	5.33%	88	16.73%	56	0.00%	88	0.32	87	0.48	87	0.00%	1
Emerging Market Comp	5.89%	--	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets	--	1.78%	76	18.55%	53	0.00%	77	0.09	76	0.14	75	0.00%	1
US Fixed Income	25.43%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays Aggregate	--	4.45%	59	2.69%	47	0.00%	85	1.63	64	2.53	61	0.00%	1
Diversified Fixed	18.35%	6.04%	35	3.27%	65	1.22%	41	1.82	46	2.89	41	1.52%	34
Barclays Aggregate	--	4.45%	59	2.69%	47	0.00%	85	1.63	64	2.53	61	0.00%	1
High Yield Comp	4.04%	8.90%	57	5.16%	18	1.60%	22	1.71	20	2.51	36	1.52%	64
Barclays High Yield	--	9.03%	52	6.30%	63	0.00%	69	1.42	66	2.19	64	0.00%	1
TIPS	3.03%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays US TIPS	--	4.11%	59	5.12%	73	0.00%	74	0.79	69	1.03	51	0.00%	1
Global Fixed Income Comp	2.99%	2.83%	85	5.64%	58	1.19%	85	0.49	84	0.80	73	2.12%	15
Citi WGBI	--	1.67%	96	5.31%	47	0.00%	97	0.30	95	0.42	95	0.00%	1
Emerging Market Debt	5.15%	--	--	--	--	--	--	--	--	--	--	--	--
JP Morgan EMBI Global TR	--	7.27%	41	7.31%	13	0.00%	38	0.99	29	1.42	27	0.00%	1
Total Real Estate	5.28%	--	--	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index	--	12.13%	--	5.02%	--	0.00%	--	2.41	--	901.16	--	0.00%	--
Hedge Fund Comp	5.04%	--	--	--	--	--	--	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	--	3.29%	72	4.02%	25	0.00%	63	0.80	56	1.14	56	0.00%	1
GAA Comp	19.43%	8.22%	25	8.45%	42	3.09%	36	0.96	37	1.40	43	3.72%	26
60% MSCI ACWI (Net)/40% CITI WGBI	--	6.35%	43	9.69%	65	0.00%	73	0.65	63	0.97	63	0.00%	1
Commodities	3.04%	--	--	--	--	--	--	--	--	--	--	--	--