



NEPC, LLC

YOU DEMAND MORE. So do we.SM



Vermont Pension Investment Committee

Fourth Quarter Investment Performance Analysis

February 25, 2013

Richard M. Charlton, Chairman and CEO
Christopher Levell, ASA, CFA, CAIA, Partner
Douglas Moseley, Partner
Richard Pszenny, CFA, CAIA, Senior Analyst

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

BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

Table of Contents

	<u>Tab</u>
NEPC Update	1
Market Review	2
State Teachers' Retirement System	3
State Employees' Retirement System	4
State Municipal Employees' Retirement System	5
City of Burlington	6
VPIC Allocation Comparison	7
Manager Characteristics	8
Appendix	9

Market Review

- **Reassess current and future liquidity needs**
 - Determine the ability to pursue additional returns by locking-up capital in private markets/alternative investments
 - Alpha generation opportunities often higher in alternatives
 - Consider strategies that replace traditional bank activities, such as direct lending to medium-sized companies and real estate lending
- **Maintain diversification across and within asset classes. Rebalance...rebalance...rebalance**
 - Review rebalancing thresholds established in the Investment Policy Statement relative to actual allocations
 - Rebalancing policies provide a risk control feature, as well as an opportunity for enhanced returns
- **Rising rate environment should spur investors to continue reviewing the role of core US and non-US fixed income**
 - While rates have risen, forecasted returns remain below most assumed rates of return
 - Rebalance to target with high yield and bank loans
 - Consider allocations to global multi-sector and unconstrained bond funds
- **Do not neglect the risk of economic inflation in the portfolio**
 - Despite tapering, Fed policy remains accommodative
 - US improvements in economic and financial conditions could increase risks of economic inflation
 - Risk parity, real assets, and private market strategies can be considered as tools to address inflation risk and extend diversification of a portfolio
- **Maintain long-term commitment to emerging markets**
 - In the short-term, emerging world faces distinctive conditions in each country
 - Long-term secular outlook of stronger growth and continued development remains in place
 - Use active management to navigate potential macroeconomic and currency issues
 - Emerging markets stock and bond weakness presents an opportunity for investors whose portfolios are below-market weight
 - Relatively attractive return opportunities, but risks related to balance of payments (i.e., economic competitiveness) have come to light for some countries

Investment Market Update: As of December 31, 2013

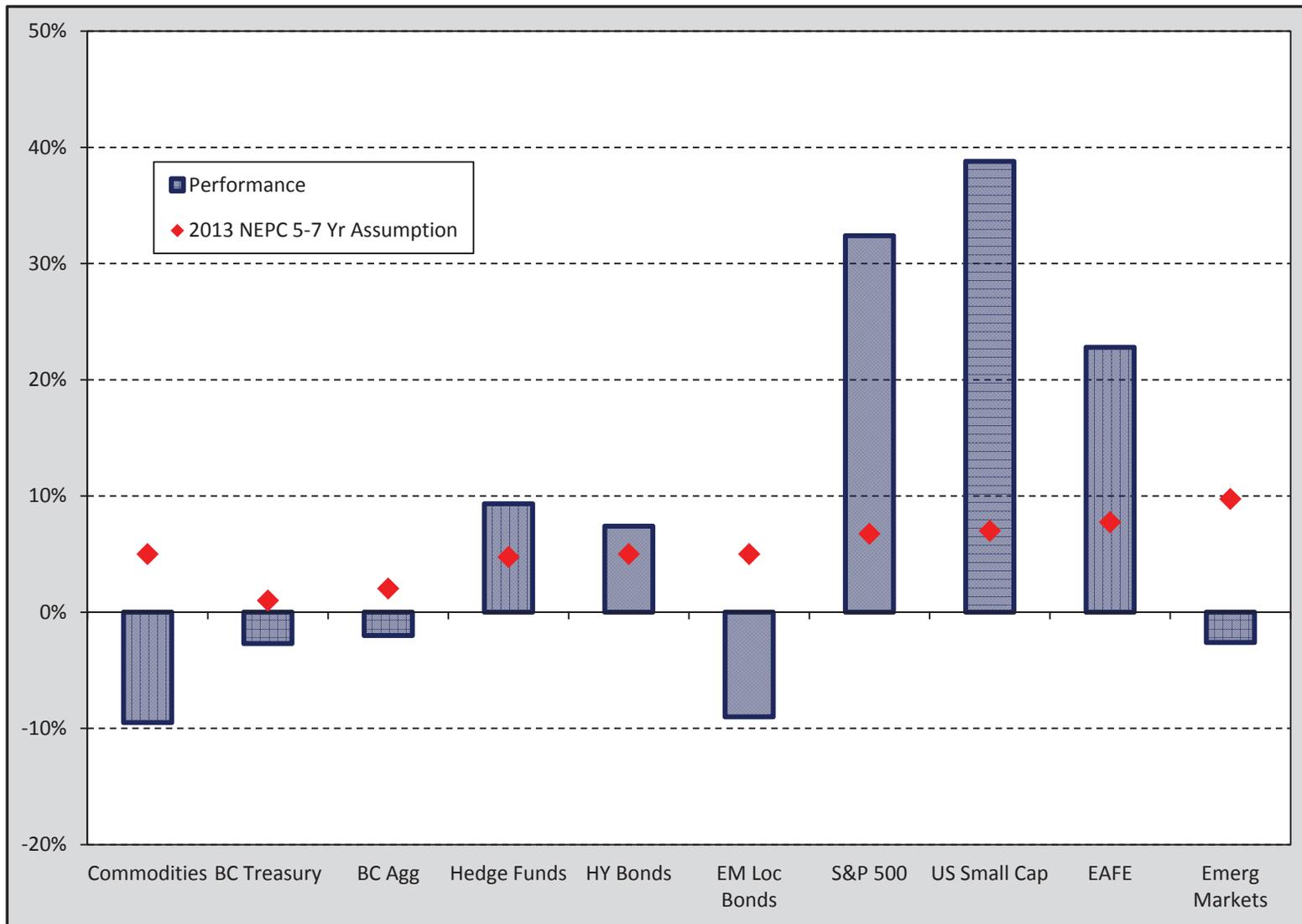
PERFORMANCE THROUGH 12/31/2013

Sector	Index	2008	2009	2010	2011	2012	OCT	NOV	DEC	Q4	2013
Small Cap Growth	Russell 2000 Growth	-38.5%	34.5%	29.1%	-2.9%	14.6%	1.8%	4.1%	2.0%	8.2%	43.3%
Small Cap	Russell 2000	-33.8%	27.2%	26.9%	-4.2%	16.3%	2.5%	4.0%	2.0%	8.7%	38.8%
SMID Cap	Russell 2500	-36.8%	34.4%	26.7%	-2.5%	17.9%	3.2%	2.7%	2.5%	8.7%	36.8%
Small Cap Value	Russell 2000 Value	-28.9%	20.6%	24.5%	-5.5%	18.1%	3.3%	3.9%	1.9%	9.3%	34.5%
Large Cap Growth	Russell 1000 Growth	-38.4%	37.2%	16.7%	2.6%	15.3%	4.4%	2.8%	2.9%	10.4%	33.5%
Large Cap	Russell 1000	-37.6%	28.4%	16.1%	1.5%	16.4%	4.4%	2.8%	2.7%	10.2%	33.1%
Large Cap Value	Russell 1000 Value	-36.8%	19.7%	15.5%	0.4%	17.5%	4.4%	2.8%	2.5%	10.0%	32.5%
Large Cap	S&P 500	-37.0%	26.5%	15.1%	2.1%	16.0%	4.6%	3.0%	2.5%	10.5%	32.4%
Int'l Developed	MSCI EAFE	-43.4%	31.8%	7.8%	-12.1%	17.3%	3.4%	0.8%	1.5%	5.7%	22.8%
Diversified	Diversified*	-24.5%	24.1%	13.5%	1.3%	12.7%	3.0%	1.1%	1.1%	5.2%	17.6%
High Yield	Barclays US Corp High Yield	-26.2%	58.2%	15.1%	5.0%	15.8%	2.5%	0.5%	0.5%	3.6%	7.4%
REITS	Wilshire US REIT	-39.2%	28.6%	28.6%	9.2%	17.6%	4.1%	-5.3%	0.6%	-3.0%	1.9%
Govt/Credit	Barclays US Govt/Credit 1-3 Yr	5.0%	3.8%	2.8%	1.6%	1.3%	0.2%	0.1%	-0.1%	0.2%	0.6%
Govt/Credit	Barclays Govt/Credit 1-5 Yr	5.1%	4.6%	4.1%	3.1%	2.2%	0.4%	0.2%	-0.4%	0.1%	0.3%
Interm Govt/Credit	Barclays US Govt/Credit Interm	5.1%	5.2%	5.9%	5.8%	3.9%	0.6%	-0.0%	-0.6%	-0.0%	-0.9%
Interm Core Bonds	Barclays US Agg Interm	4.9%	6.5%	6.1%	6.0%	3.6%	0.6%	-0.2%	-0.6%	-0.1%	-1.0%
Core Bonds	Barclays US Agg Bond	5.2%	5.9%	6.5%	7.8%	4.2%	0.8%	-0.4%	-0.6%	-0.1%	-2.0%
Muni Bonds	Barclays Municipal	-2.5%	12.9%	2.4%	10.7%	6.8%	0.8%	-0.2%	-0.3%	0.3%	-2.6%
Emerging Equities	MSCI EM	-53.3%	78.5%	18.9%	-18.4%	18.2%	4.9%	-1.5%	-1.4%	1.8%	-2.6%
Global Bonds	Citi WGBI	10.9%	2.6%	5.2%	6.4%	1.6%	1.0%	-1.1%	-0.9%	-1.1%	-4.0%
EMD USD	Barclays EM USD Aggregate	-14.7%	34.2%	12.8%	7.0%	17.9%	2.1%	-1.2%	0.3%	1.2%	-4.1%
Long Credit	Barclays US Long Credit	-3.9%	16.8%	10.7%	17.1%	12.7%	2.5%	-1.1%	0.2%	1.5%	-6.6%
Long Govt/Credit	Barclays US Govt/Credit Long	8.4%	1.9%	10.2%	22.5%	8.8%	2.1%	-1.6%	-0.5%	-0.1%	-8.8%
EMD Local	JPM GBI EM Global Diversified	-5.2%	22.0%	15.7%	-1.8%	16.8%	2.7%	-3.6%	-0.5%	-1.5%	-9.0%
Commodities	DJ UBS Commodity	-35.6%	18.9%	16.8%	-13.3%	-1.1%	-1.5%	-0.8%	1.2%	-1.1%	-9.5%
Treasury STRIPS	Barclays US Strips 20+ Yr	59.5%	-36.0%	10.9%	58.5%	3.0%	2.1%	-4.2%	-2.3%	-4.5%	-21.0%

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

Source: Morningstar Direct

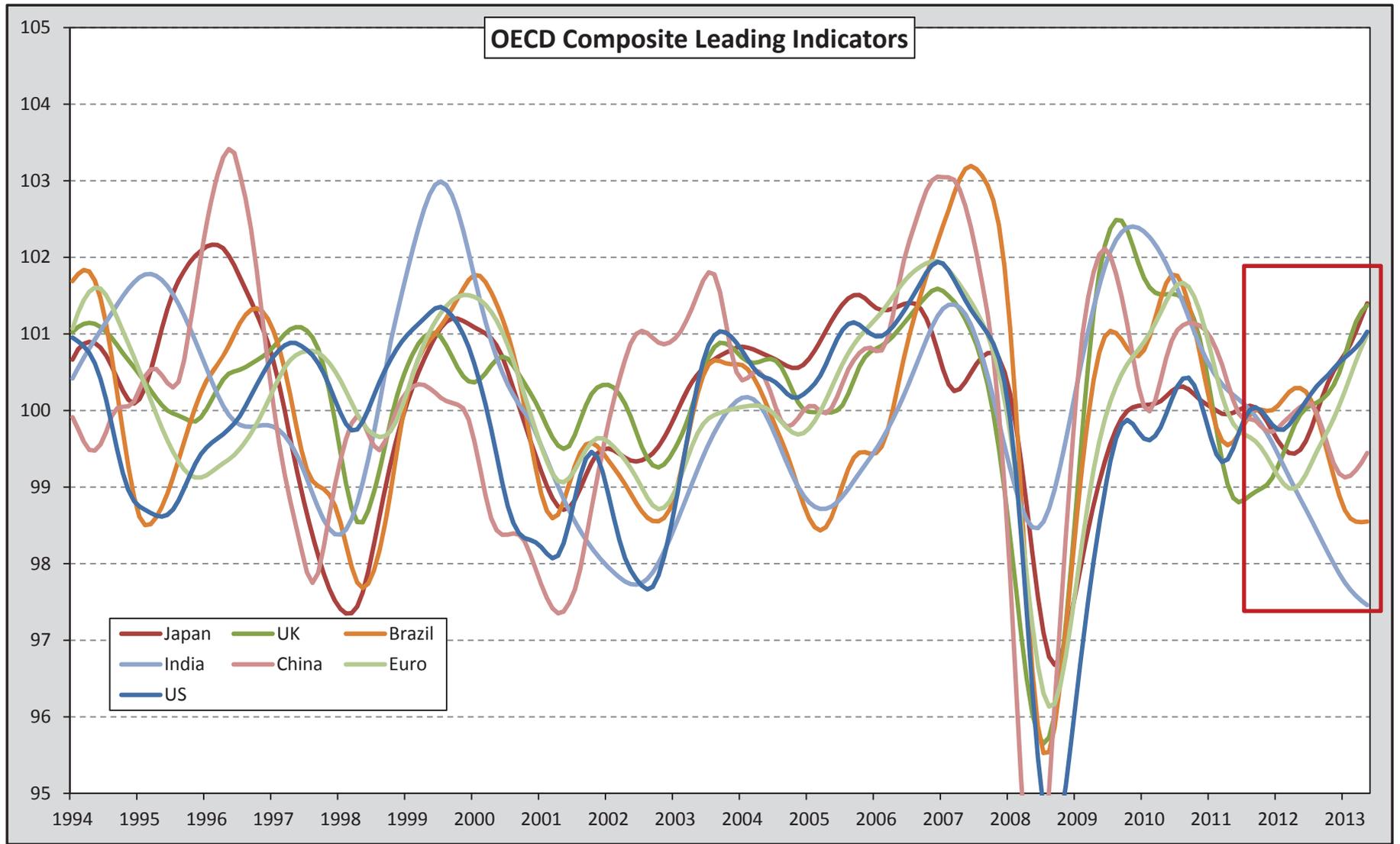
The Story of 2013 – US Equity Dominates...



Source: Bloomberg as of 12/31

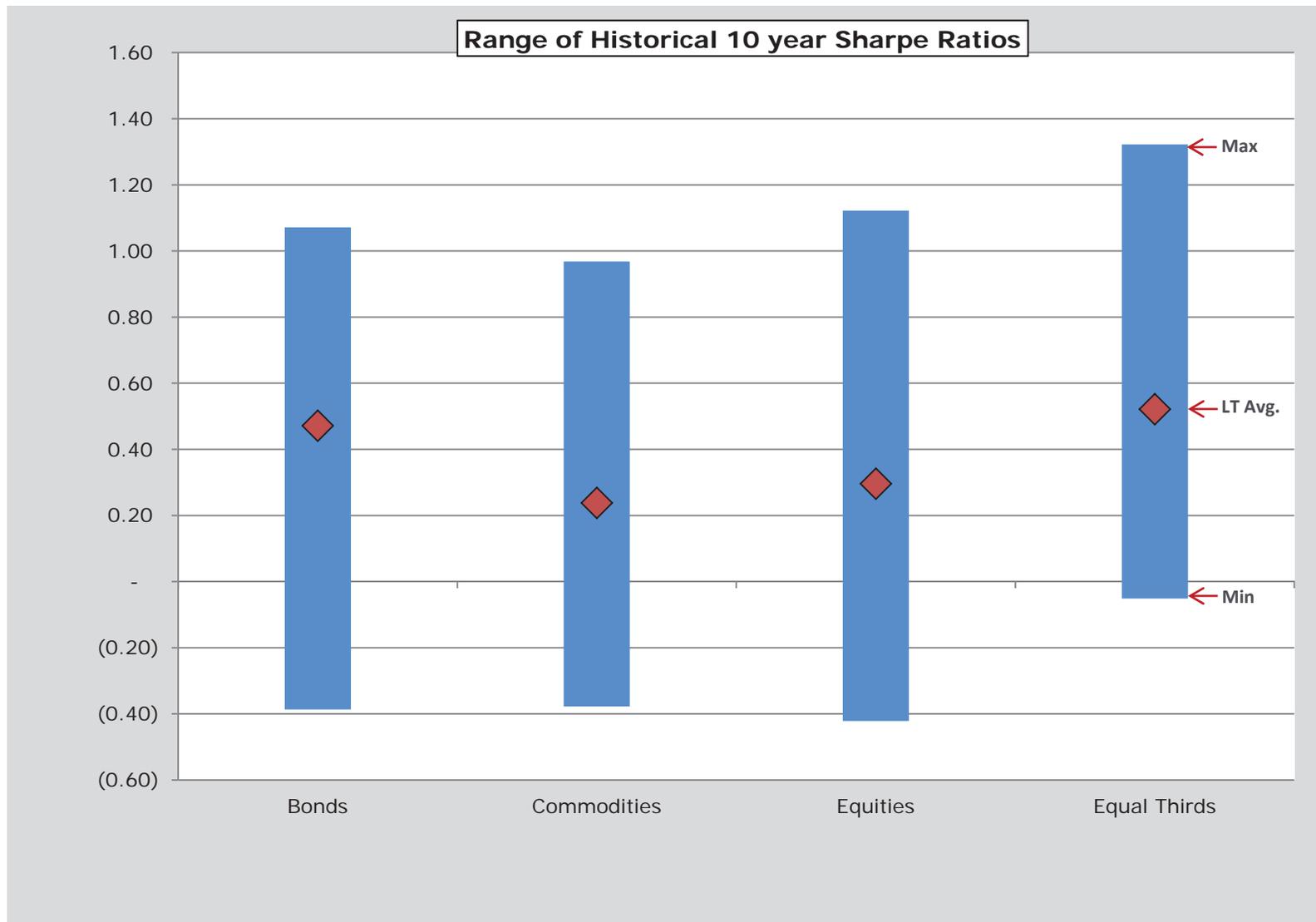
- **Diversification still matters, especially after a period when not rewarded**
- **Developed world growth outlook has improved despite fiscal drag**
- **US Fed taper will occur throughout 2014 with global implications**
- **Upward pressure on interest rates may have subsided**
- **Divergence in economic conditions broadens range of outcomes by country**

Global Economic Divergence



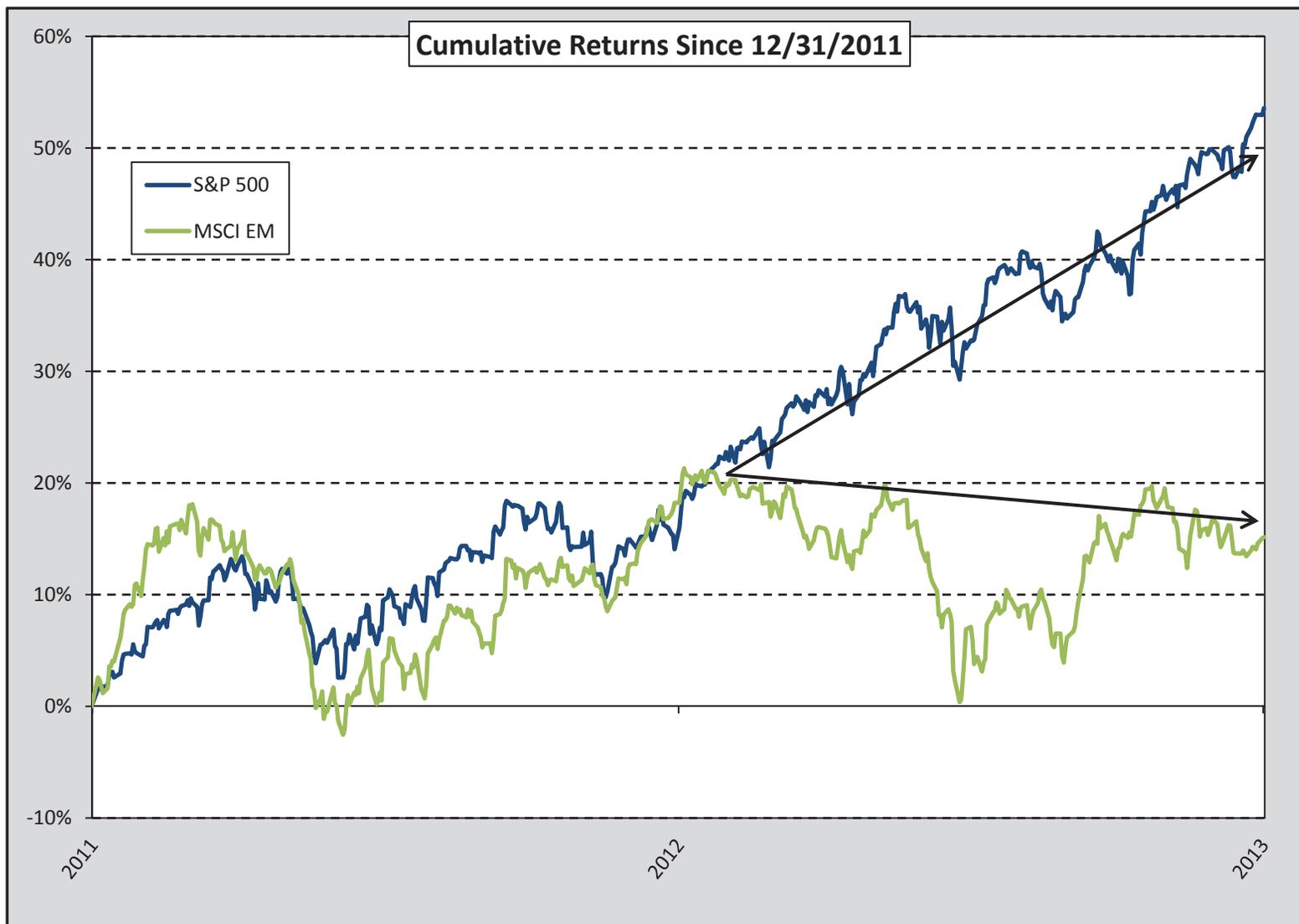
Source: Bloomberg as of 11/30

Diversification Still Wins In The Long Run



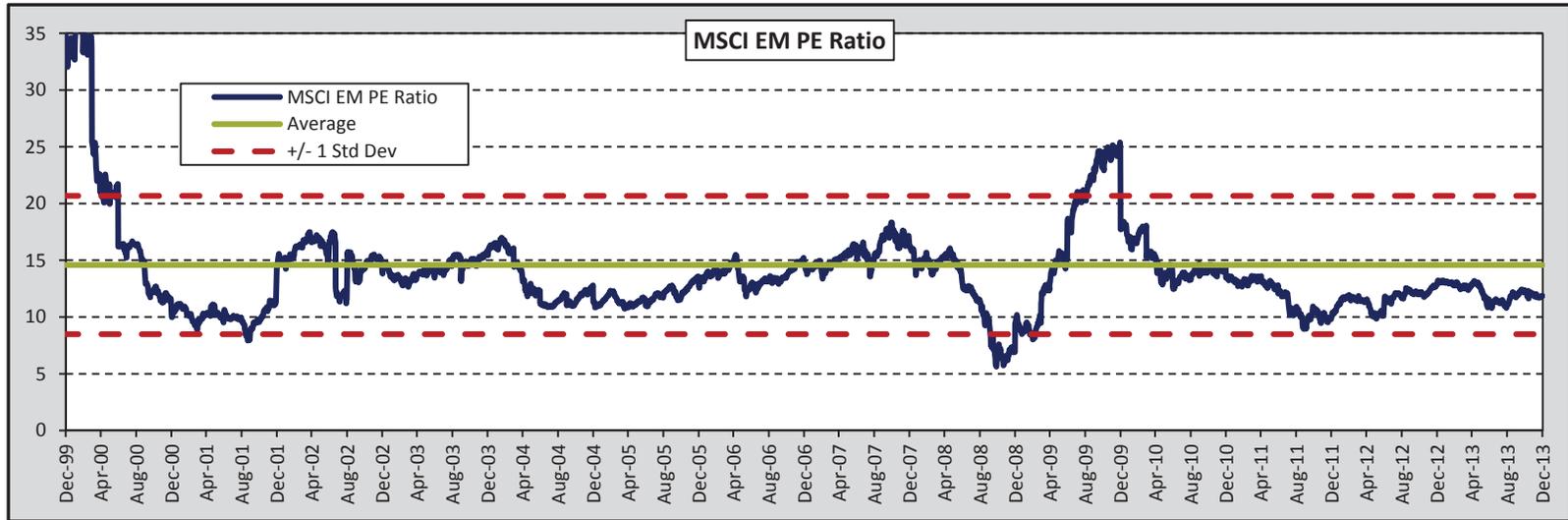
Source: Bloomberg, NEPC

Domestic and Emerging Equity Returns Diverged in 2013

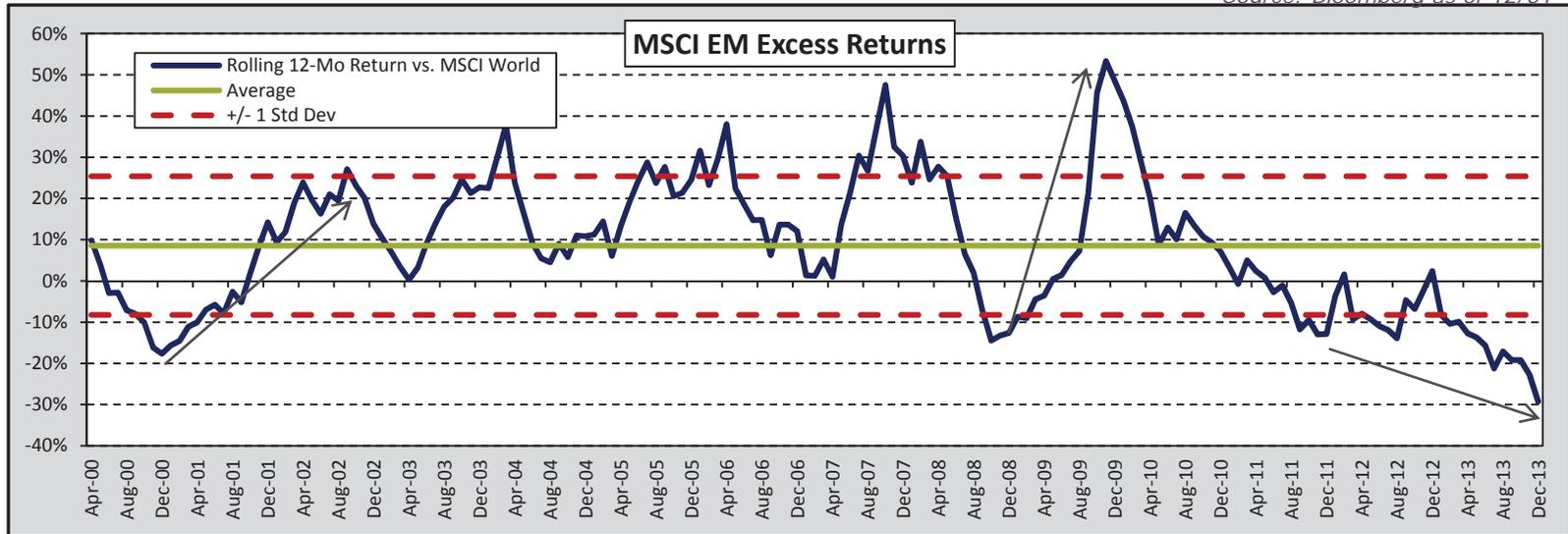


Source: Bloomberg as of 12/31

Emerging Markets Equity – Attractive Valuations...Due for a Rebound?



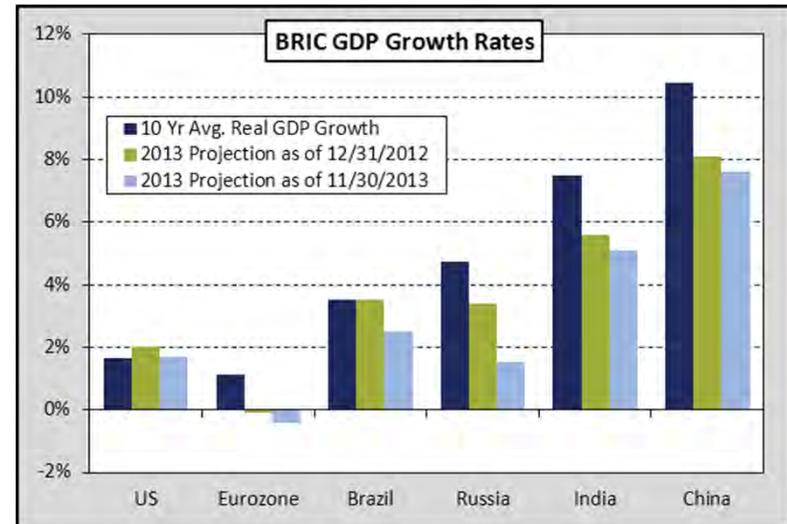
Source: Bloomberg as of 12/31



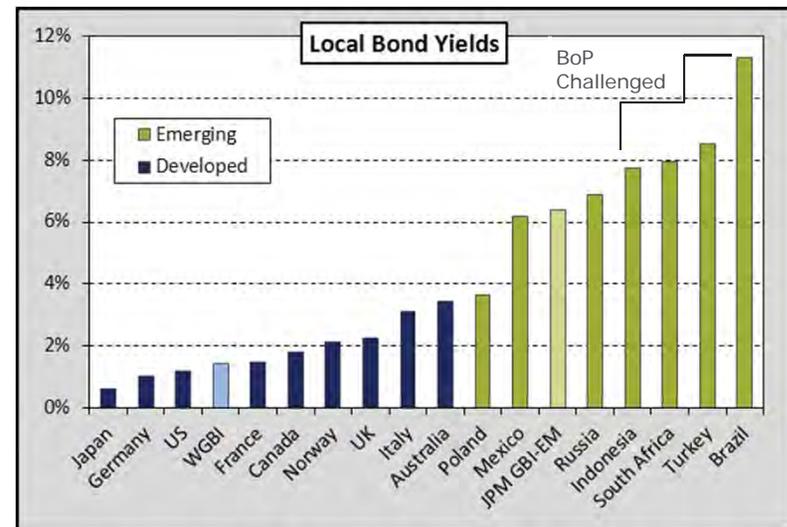
Source: Bloomberg as of 12/31

Emerging Markets – Challenges and Opportunities

- Growth has moderated but remains higher than in developed world
- Valuation and yield levels offer some compensation for current uncertainty
- Recent weakness offers an opportunity to build positions for those investors with below-market exposure to EM
- Active implementation can facilitate management around volatility at country and security level



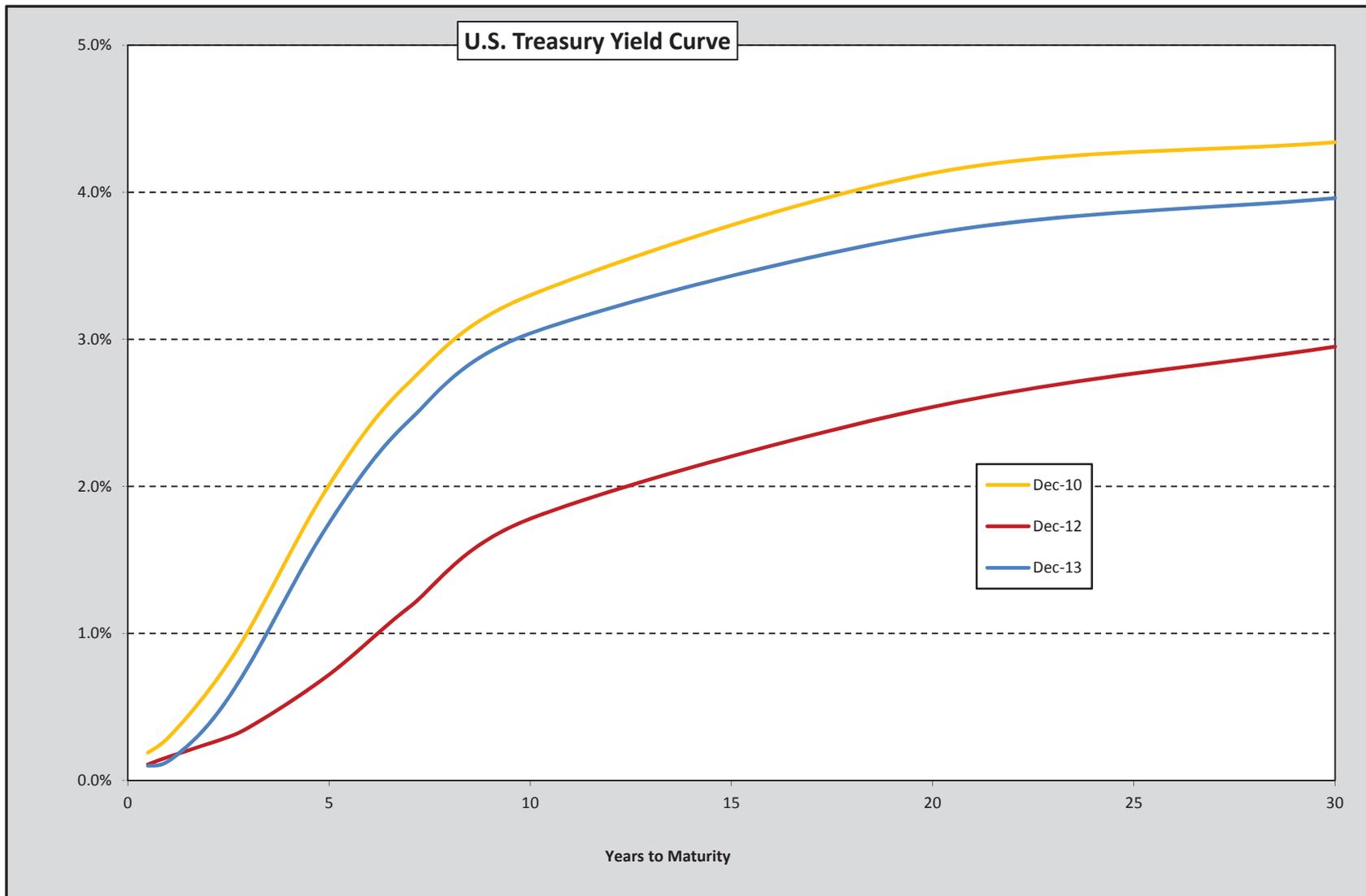
Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30

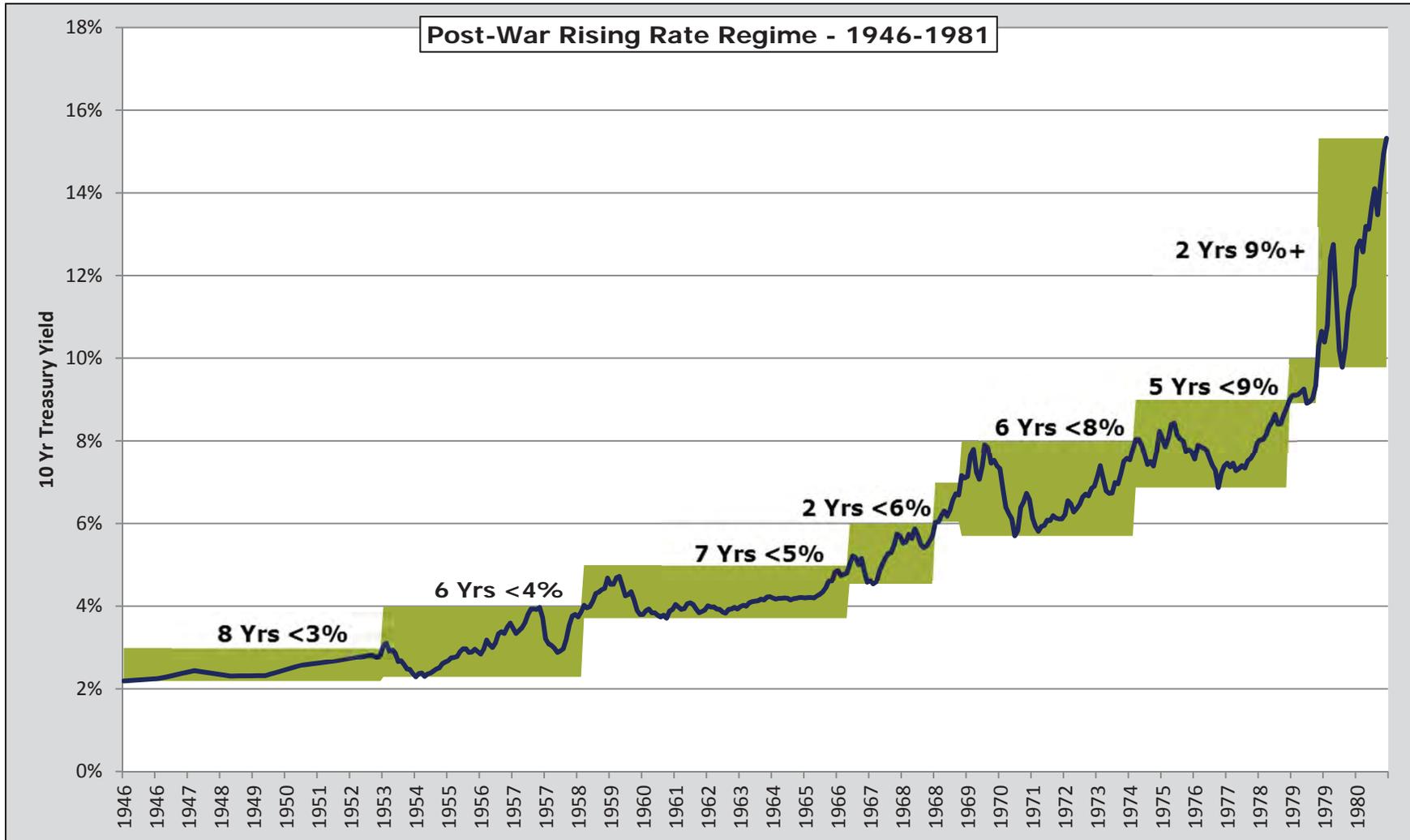
- **US monetary policy is diverging from other developed markets**
- **Further increase in interest rates must harmonize with changes in economic growth and inflation**
- **Narrow credit spreads and constrained liquidity expose investors to potential downside risks**
- **Strategic exposure to interest rates remains an important element of diversification**
- **Private investments offer an illiquidity premium and higher return expectation**

Treasury Rates Have Risen But Remain Within Scope of Recent History



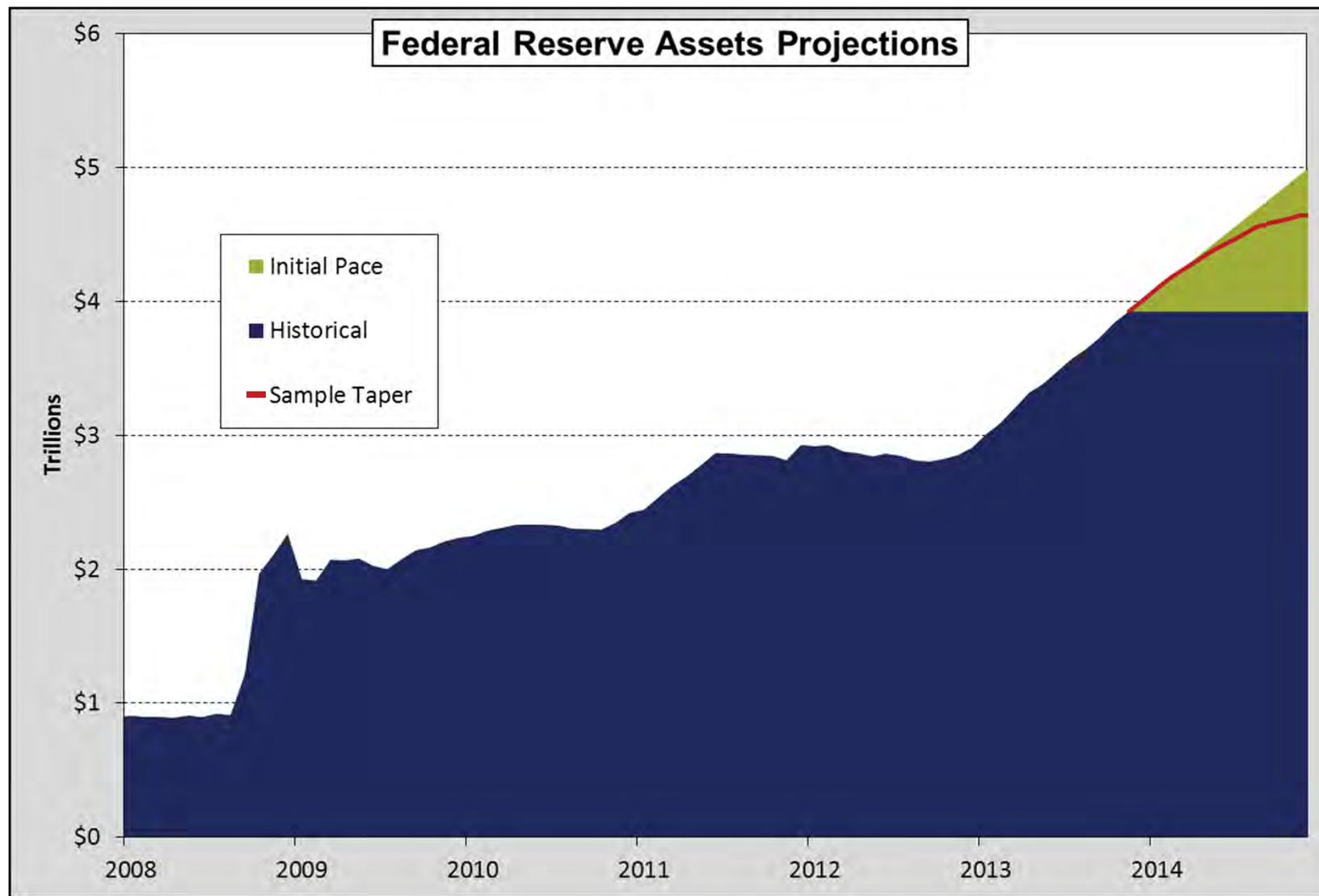
Source: US Treasury as of 12/31

Interest Rate Cycles are Long-Term and Driven by Economic Conditions



Source: Federal Reserve Bank of St. Louis

Unprecedented Monetary Policy Experiment Continues with "Taper"



Source: NEPC, Board of Governors of the Federal Reserve System

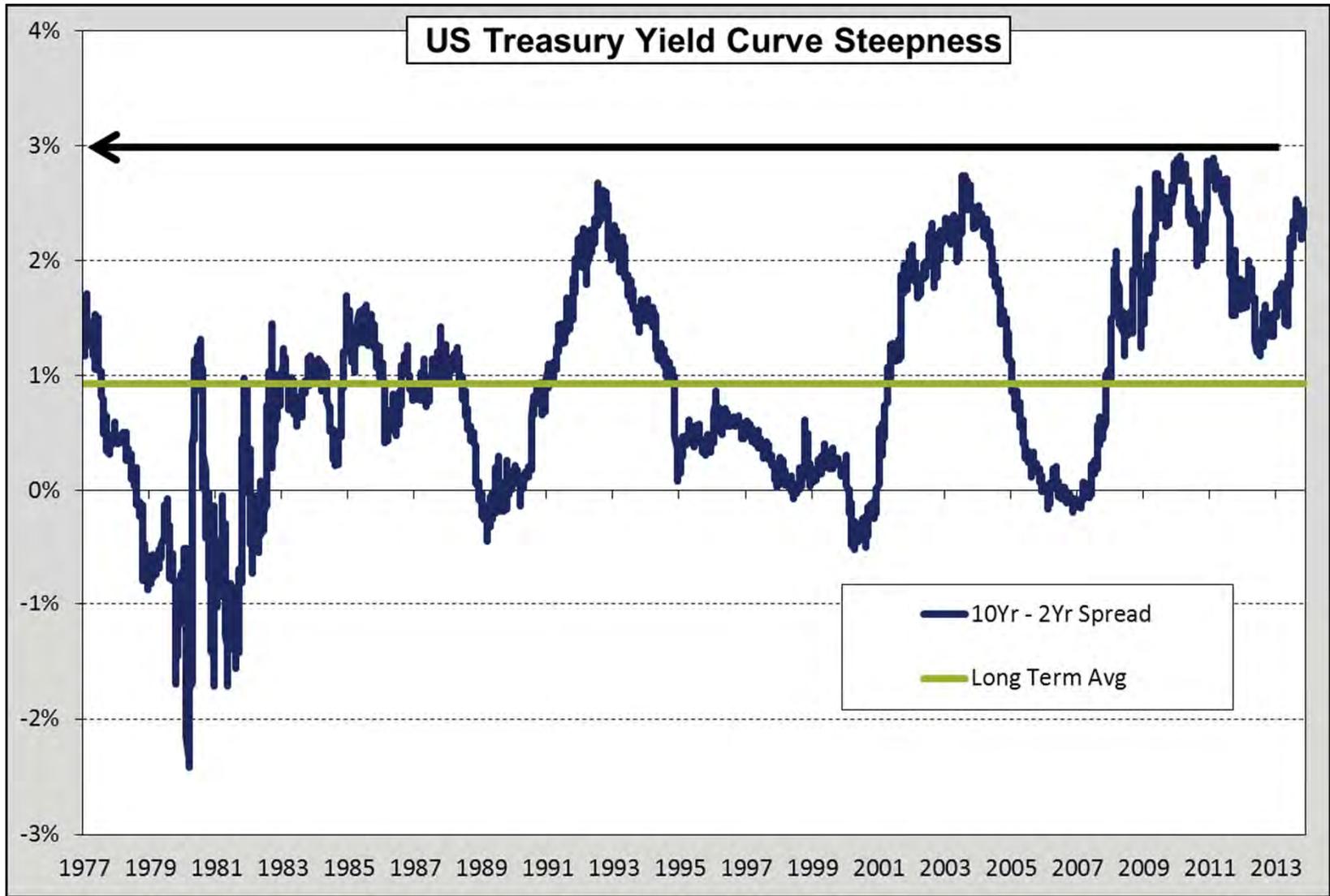
A Picture Is Worth Nine Hundred Words

Getting closer to the 6.5% unemployment threshold and almost 900 words in the latest FOMC statement: More and more difficult for the Fed to explain what it is doing



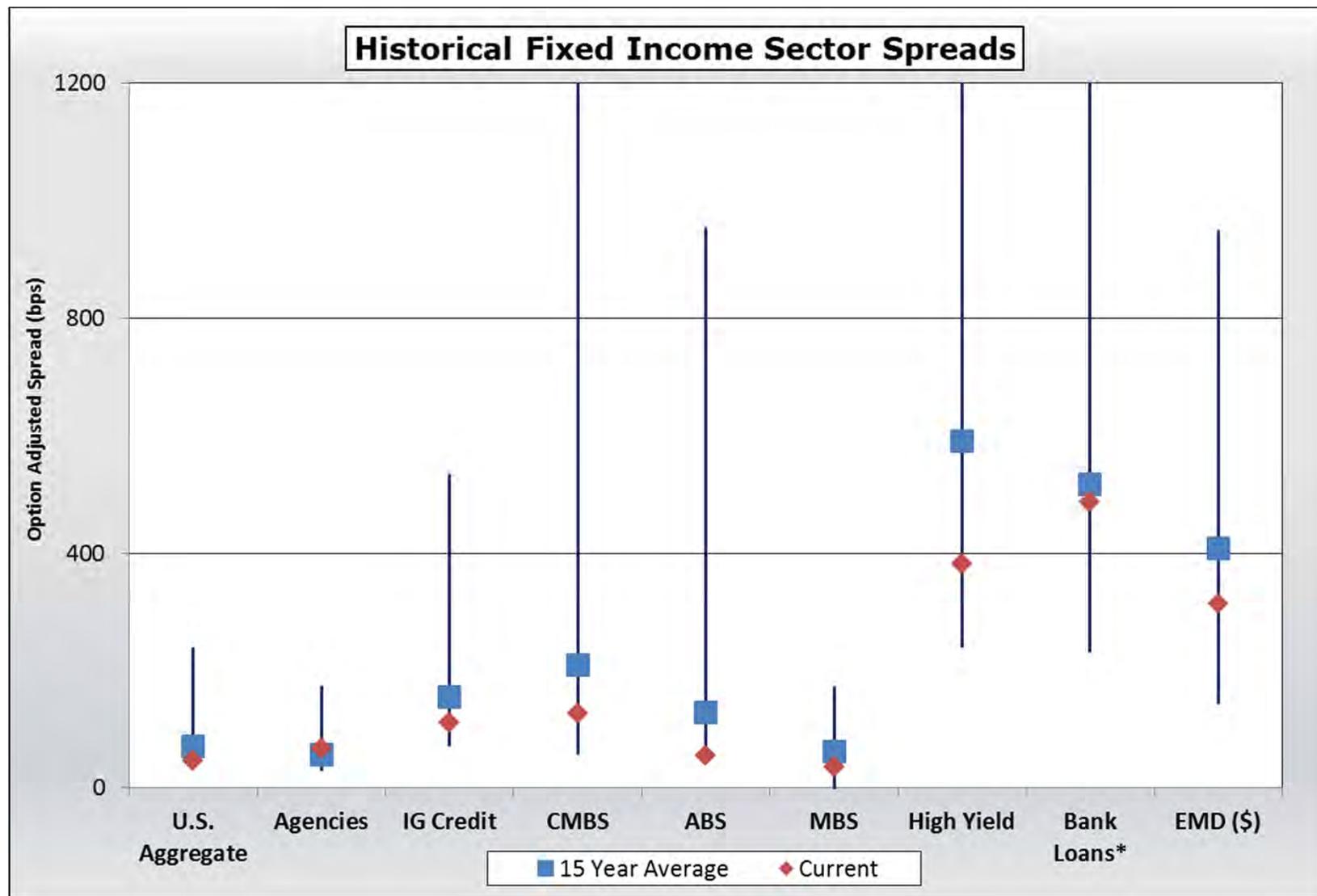
Source: FRB, DB Global Markets Research

10-Yr Treasury Range Bound while Fed Controls Short-Term Rates



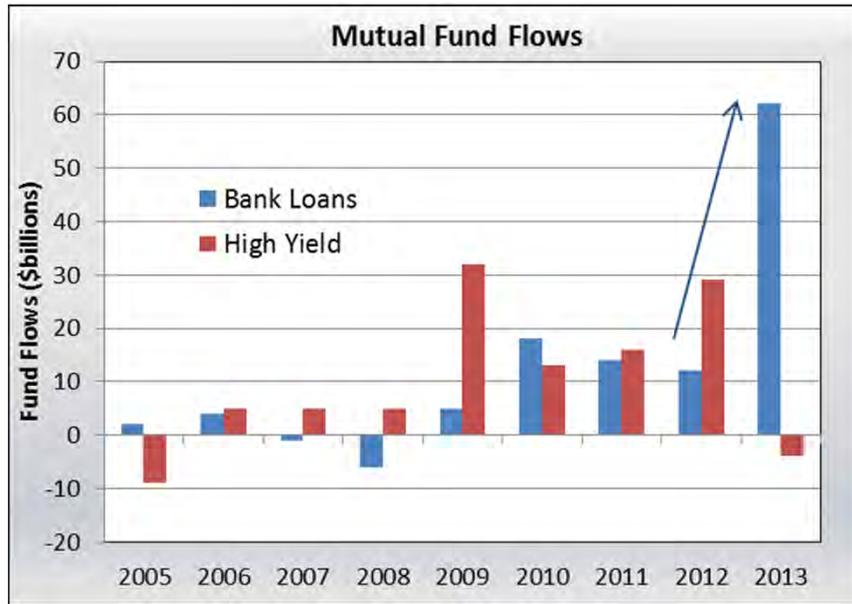
Source: NEPC, Board of Governors of the Federal Reserve System

Credit Spreads Approach Pre-Crisis Levels and Yields at All-Time Lows



Source: Barclays Live, *3-year Discount Margin

Liquidity Profile of Credit Markets is Evolving



Source: JP Morgan

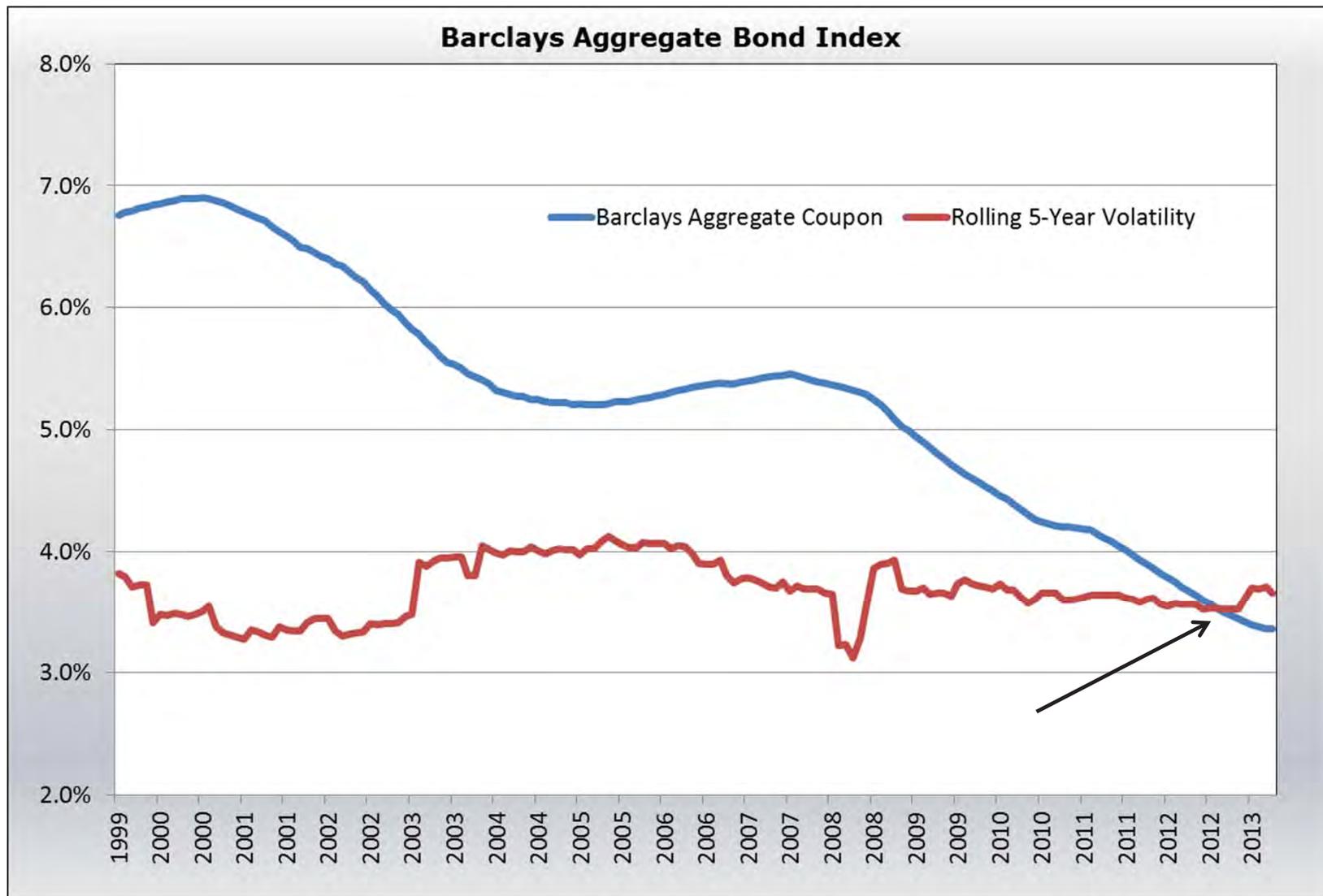


Source: Federal Reserve Bank of New York

- **Demand for higher return has led to significant flows into credit markets since 2008**
 - Increased participation of mutual funds and ETFs in credit markets could amplify illiquidity during periods of stress

- **Decline in Broker Dealer balance sheets is significant since 2008**
 - Impacts ability to transact in credit markets and enhances volatility during periods of stress

Core Bonds: Is it Time to Make a Change?



Source: Barclays Live

Investment Market Update: As of January 31, 2014

PERFORMANCE THROUGH 1/31/2014

Sector	Index	2008	2009	2010	2011	2012	2013	Jan	2014
Treasury STRIPS	Barclays US Strips 20+ Yr	59.5%	-36.0%	10.9%	58.5%	3.0%	-21.0%	9.4%	9.4%
Long Govt/Credit	Barclays US Govt/Credit Long	8.4%	1.9%	10.2%	22.5%	8.8%	-8.8%	4.0%	4.0%
REITS	Wilshire US REIT	-39.2%	28.6%	28.6%	9.2%	17.6%	1.9%	3.9%	3.9%
Long Credit	Barclays US Long Credit	-3.9%	16.8%	10.7%	17.1%	12.7%	-6.6%	3.3%	3.3%
Muni Bonds	Barclays Municipal	-2.5%	12.9%	2.4%	10.7%	6.8%	-2.6%	1.9%	1.9%
Core Bonds	Barclays US Agg Bond	5.2%	5.9%	6.5%	7.8%	4.2%	-2.0%	1.5%	1.5%
Global Bonds	Citi WGBI	10.9%	2.6%	5.2%	6.4%	1.6%	-4.0%	1.3%	1.3%
Interm Core Bonds	Barclays US Agg Interm	4.9%	6.5%	6.1%	6.0%	3.6%	-1.0%	1.1%	1.1%
Interm Govt/Credit	Barclays US Govt/Credit Interm	5.1%	5.2%	5.9%	5.8%	3.9%	-0.9%	0.9%	0.9%
High Yield	Barclays US Corp High Yield	-26.2%	58.2%	15.1%	5.0%	15.8%	7.4%	0.7%	0.7%
Govt/Credit	Barclays Govt/Credit 1-5 Yr	5.1%	4.6%	4.1%	3.1%	2.2%	0.3%	0.4%	0.4%
Commodities	DJ UBS Commodity	-35.6%	18.9%	16.8%	-13.3%	-1.1%	-9.5%	0.3%	0.3%
Govt/Credit	Barclays US Govt/Credit 1-3 Yr	5.0%	3.8%	2.8%	1.6%	1.3%	0.6%	0.2%	0.2%
EMD USD	Barclays EM USD Aggregate	-14.7%	34.2%	12.8%	7.0%	17.9%	-4.1%	-0.3%	-0.3%
Diversified	Diversified*	-24.5%	24.1%	13.5%	1.3%	12.7%	17.6%	-1.5%	-1.5%
Small Cap Growth	Russell 2000 Growth	-38.5%	34.5%	29.1%	-2.9%	14.6%	43.3%	-1.7%	-1.7%
SMID Cap	Russell 2500	-36.8%	34.4%	26.7%	-2.5%	17.9%	36.8%	-2.3%	-2.3%
Small Cap	Russell 2000	-33.8%	27.2%	26.9%	-4.2%	16.3%	38.8%	-2.8%	-2.8%
Large Cap Growth	Russell 1000 Growth	-38.4%	37.2%	16.7%	2.6%	15.3%	33.5%	-2.9%	-2.9%
Large Cap	Russell 1000	-37.6%	28.4%	16.1%	1.5%	16.4%	33.1%	-3.2%	-3.2%
Large Cap	S&P 500	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	-3.5%	-3.5%
Large Cap Value	Russell 1000 Value	-36.8%	19.7%	15.5%	0.4%	17.5%	32.5%	-3.6%	-3.6%
Small Cap Value	Russell 2000 Value	-28.9%	20.6%	24.5%	-5.5%	18.1%	34.5%	-3.9%	-3.9%
Int'l Developed	MSCI EAFE	-43.4%	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.0%	-4.0%
EMD Local	JPM GBI EM Global Diversified	-5.2%	22.0%	15.7%	-1.8%	16.8%	-9.0%	-4.6%	-4.6%
Emerging Equities	MSCI EM	-53.3%	78.5%	18.9%	-18.4%	18.2%	-2.6%	-6.5%	-6.5%

* 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	YTD	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Teachers Composite	\$1,646,402,904	3.1%	94	8.1%	96	7.0%	94	8.1%	96	7.7%	88	12.7%	39
<i>Policy Index</i>		3.3%	93	9.4%	93	7.7%	91	9.4%	93	6.9%	94	10.2%	83
<i>Allocation Index</i>		3.3%	93	9.3%	93	7.6%	92	9.3%	93	6.8%	94	10.8%	76
<i>IFx Public DB Gross Median</i>		5.0%		15.5%		10.1%		15.5%		9.5%		12.2%	

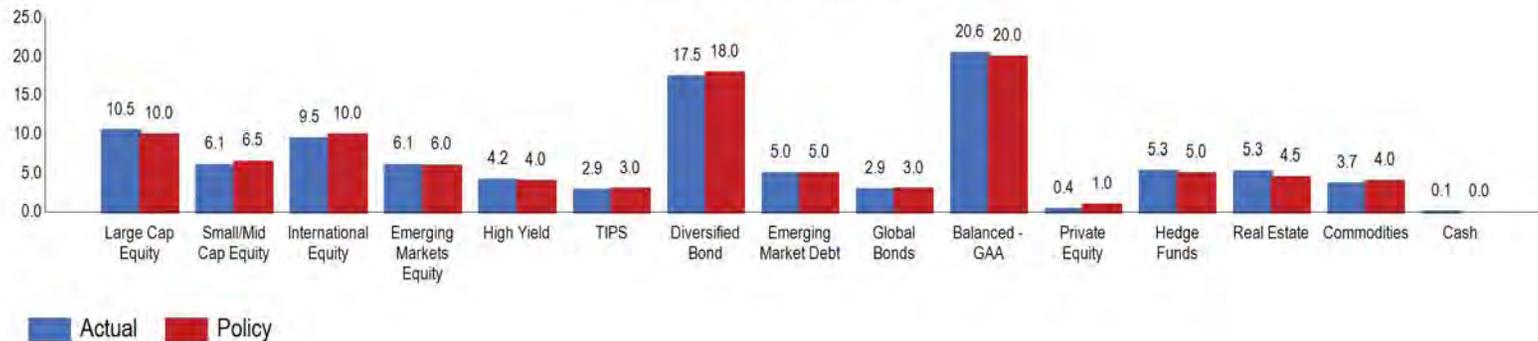
3 Years Ending December 31, 2013

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	7.75%	87	7.25%	38	1.06	80	1.46	66
Policy Index	6.89%	95	7.01%	31	0.97	88	1.31	84
Allocation Index	6.83%	95	7.13%	34	0.95	92	1.24	89

5 Years Ending December 31, 2013

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	12.70%	35	10.11%	67	1.25	58	1.92	51
Policy Index	10.23%	82	9.49%	53	1.07	96	1.56	98
Allocation Index	10.81%	73	9.75%	57	1.10	94	1.65	93

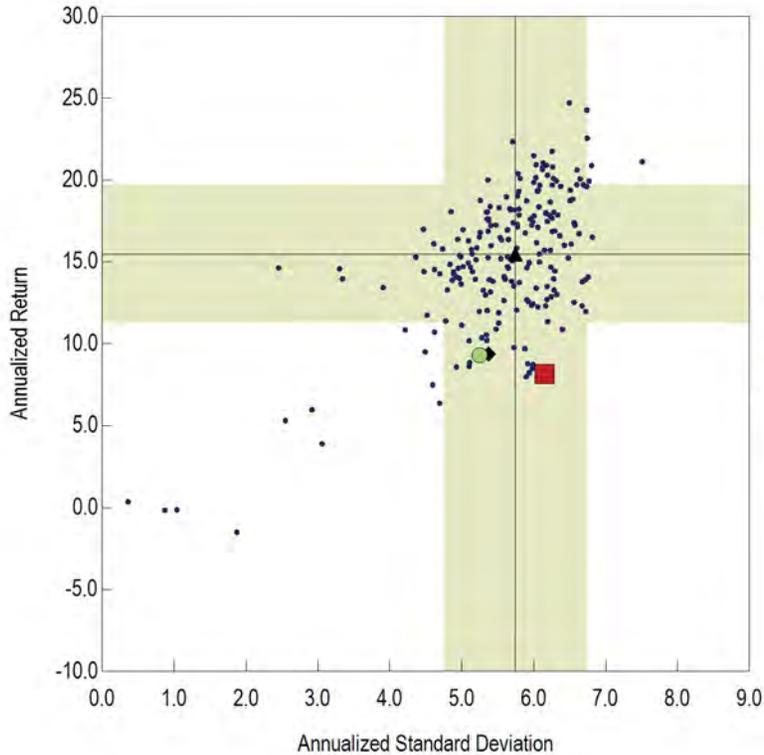
Actual vs Target Allocation (%)



Vermont State Teachers

Total Fund Risk/Return

1 Year Ending December 31, 2013



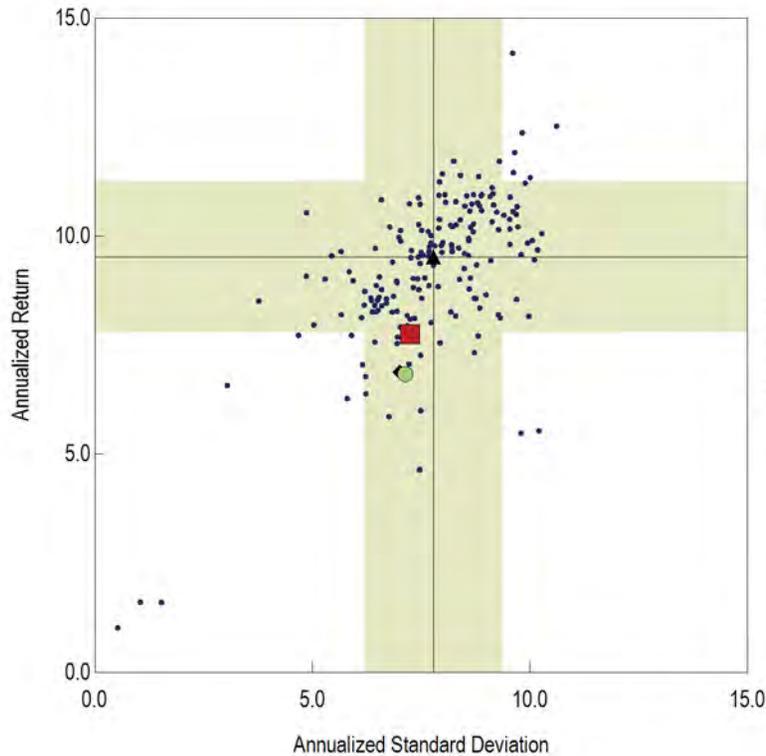
- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- IFX Public DB Gross

1 Year Ending December 31, 2013

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	8.13%	96	6.15%	73	1.31	98
Policy Index	9.38%	93	5.37%	34	1.74	92
S&P 500	32.39%	1	8.48%	99	3.81	2
60% MSCI ACWI (Net)/40% CITI WGBI	11.42%	86	6.94%	99	1.64	95
Citi WGBI	-4.00%	99	5.13%	23	-0.79	99
MSCI ACWI	22.80%	1	9.30%	99	2.45	70
MSCI ACWI ex USA	15.29%	53	11.46%	99	1.33	98
IFx Public DB Gross Median	15.49%	--	5.75%	--	2.84	--

212 Portfolios

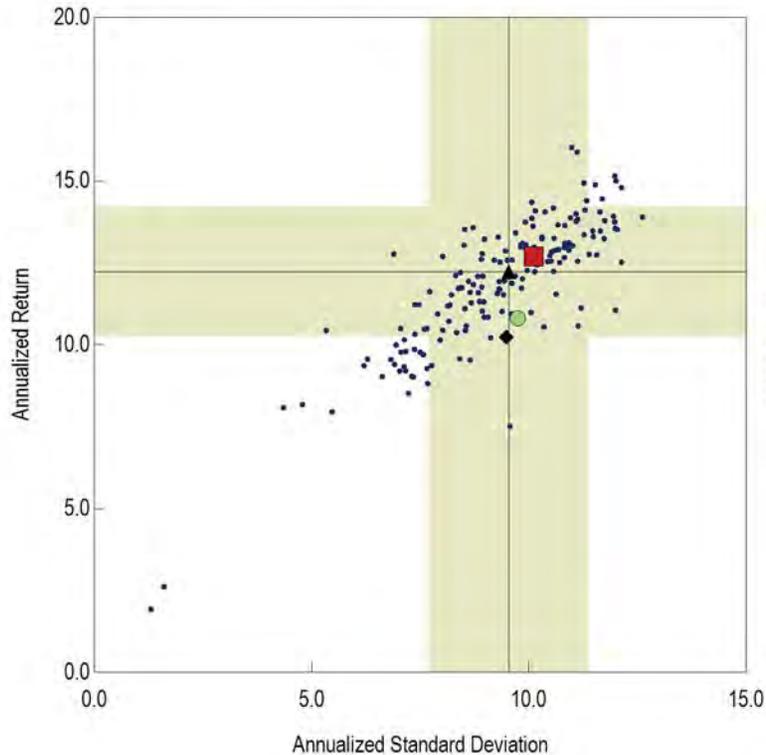
3 Years Ending December 31, 2013



3 Years Ending December 31, 2013

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	7.75%	88	7.25%	34	1.06	81
Policy Index	6.89%	94	7.01%	28	0.97	90
S&P 500	16.18%	1	12.11%	99	1.33	21
60% MSCI ACWI (Net)/40% CITI WGBI	6.50%	95	9.15%	83	0.70	99
Citi WGBI	1.25%	99	4.66%	3	0.25	99
MSCI ACWI	9.73%	42	14.14%	99	0.68	99
MSCI ACWI ex USA	5.14%	99	16.46%	99	0.31	99
IFx Public DB Gross Median	9.53%	--	7.78%	--	1.21	--

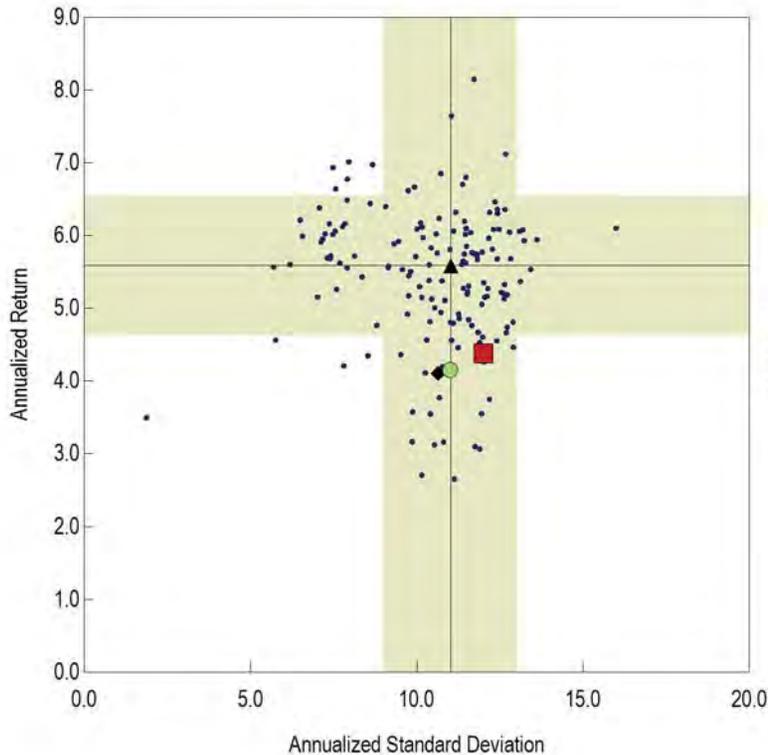
5 Years Ending December 31, 2013



5 Years Ending December 31, 2013

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	12.70%	39	10.11%	64	1.25	57
Policy Index	10.23%	83	9.49%	49	1.07	97
S&P 500	17.94%	1	15.81%	99	1.13	90
60% MSCI ACWI (Net)/40% CITI WGBI	10.02%	85	12.00%	97	0.83	99
Citi WGBI	2.28%	99	6.56%	5	0.33	99
MSCI ACWI	14.92%	3	17.60%	99	0.84	99
MSCI ACWI ex USA	12.82%	35	19.80%	99	0.64	99
IFx Public DB Gross Median	12.24%	--	9.54%	--	1.26	--

7 Years Ending December 31, 2013



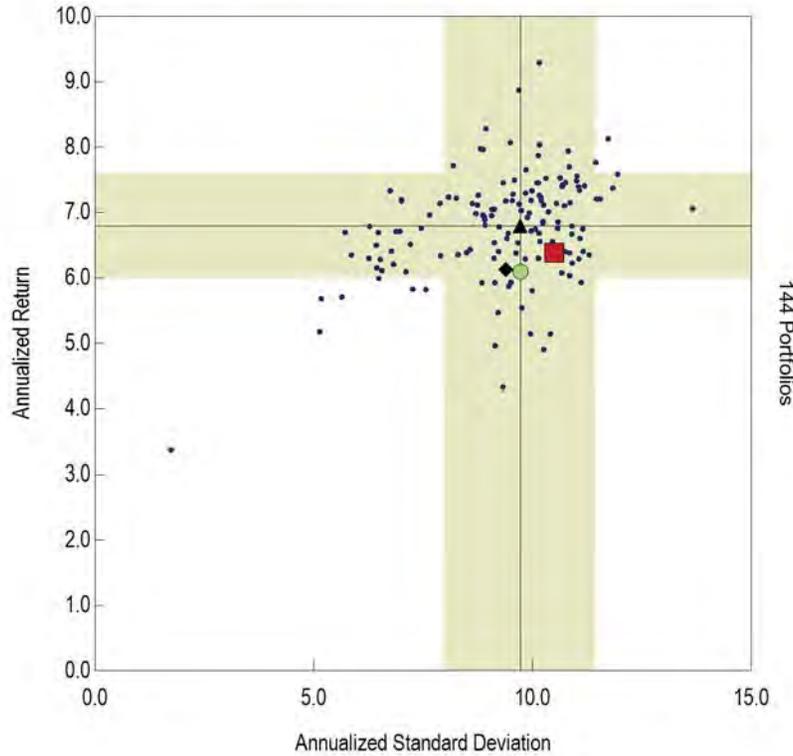
- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- IFx Public DB Gross

7 Years Ending December 31, 2013

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	4.38%	87	12.01%	78	0.29	92
Policy Index	4.10%	92	10.64%	44	0.30	88
S&P 500	6.13%	19	16.91%	99	0.31	86
60% MSCI ACWI (Net)/40% CITI WGBI	4.55%	84	12.50%	88	0.29	90
Citi WGBI	4.68%	80	7.20%	6	0.53	25
MSCI ACWI	3.75%	94	18.99%	99	0.15	99
MSCI ACWI ex USA	2.16%	99	21.37%	99	0.06	99
IFx Public DB Gross Median	5.59%	--	11.02%	--	0.42	--

Vermont State Teachers
Total Fund Risk/Return

10 Years Ending December 31, 2013



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

10 Years Ending December 31, 2013

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	6.38%	72	10.49%	76	0.46	86
Policy Index	6.13%	84	9.39%	42	0.49	78
S&P 500	7.41%	18	14.62%	99	0.40	97
60% MSCI ACWI (Net)/40% CITI WGBI	6.29%	79	10.98%	88	0.43	90
Citi WGBI	4.15%	99	6.83%	12	0.38	97
MSCI ACWI	7.17%	33	16.52%	99	0.34	99
MSCI ACWI ex USA	7.57%	11	18.82%	99	0.32	99
IFx Public DB Gross Median	6.80%	--	9.71%	--	0.56	--

Total Fund Asset Allocation vs. Policy Targets



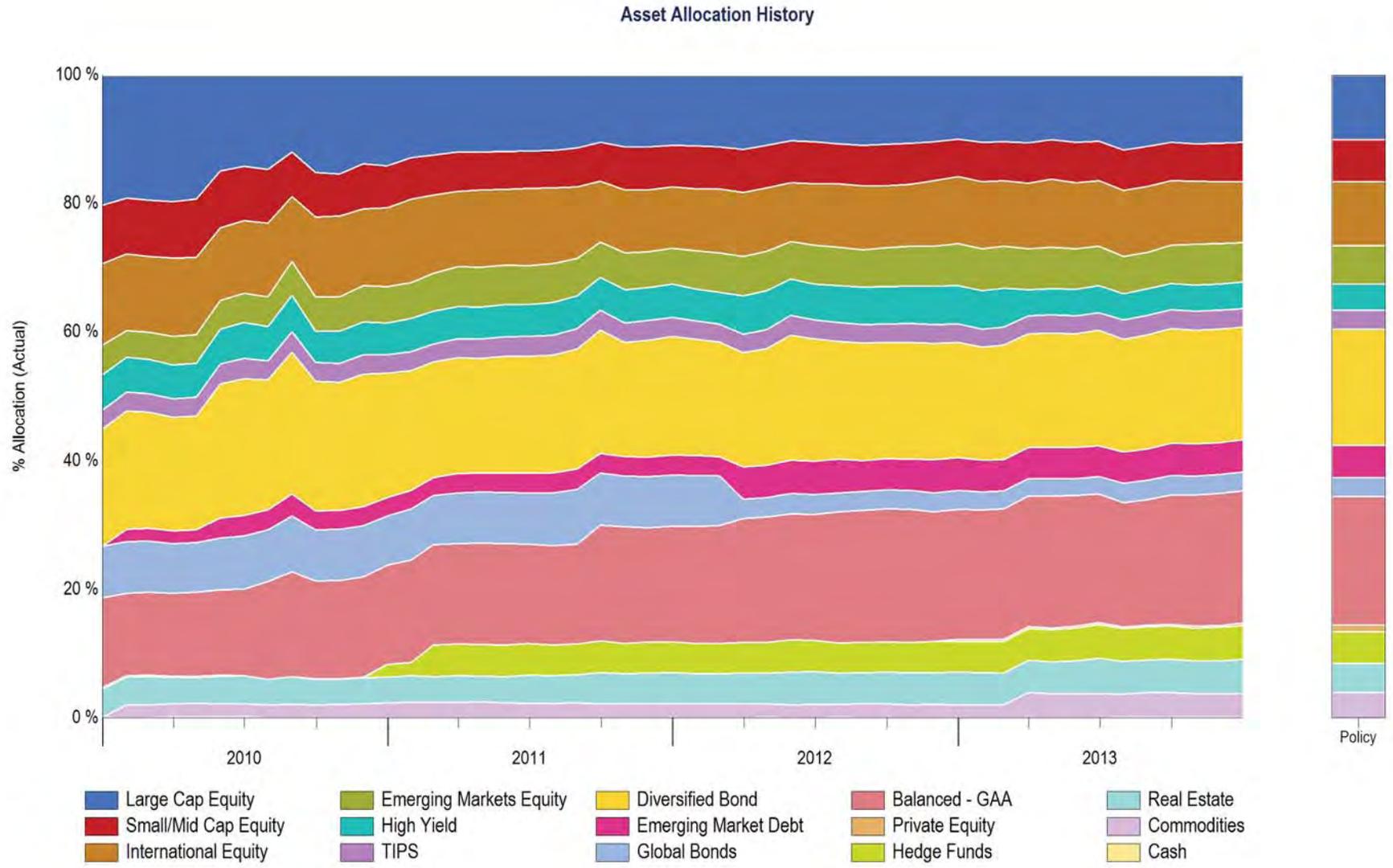
- Large Cap Equity
- Small/Mid Cap Equity
- International Equity
- Emerging Markets Equity
- High Yield
- TIPS
- Diversified Bond
- Emerging Market Debt
- Global Bonds
- Balanced - GAA
- Private Equity
- Hedge Funds
- Real Estate
- Commodities
- Cash

Asset Allocation vs. Target

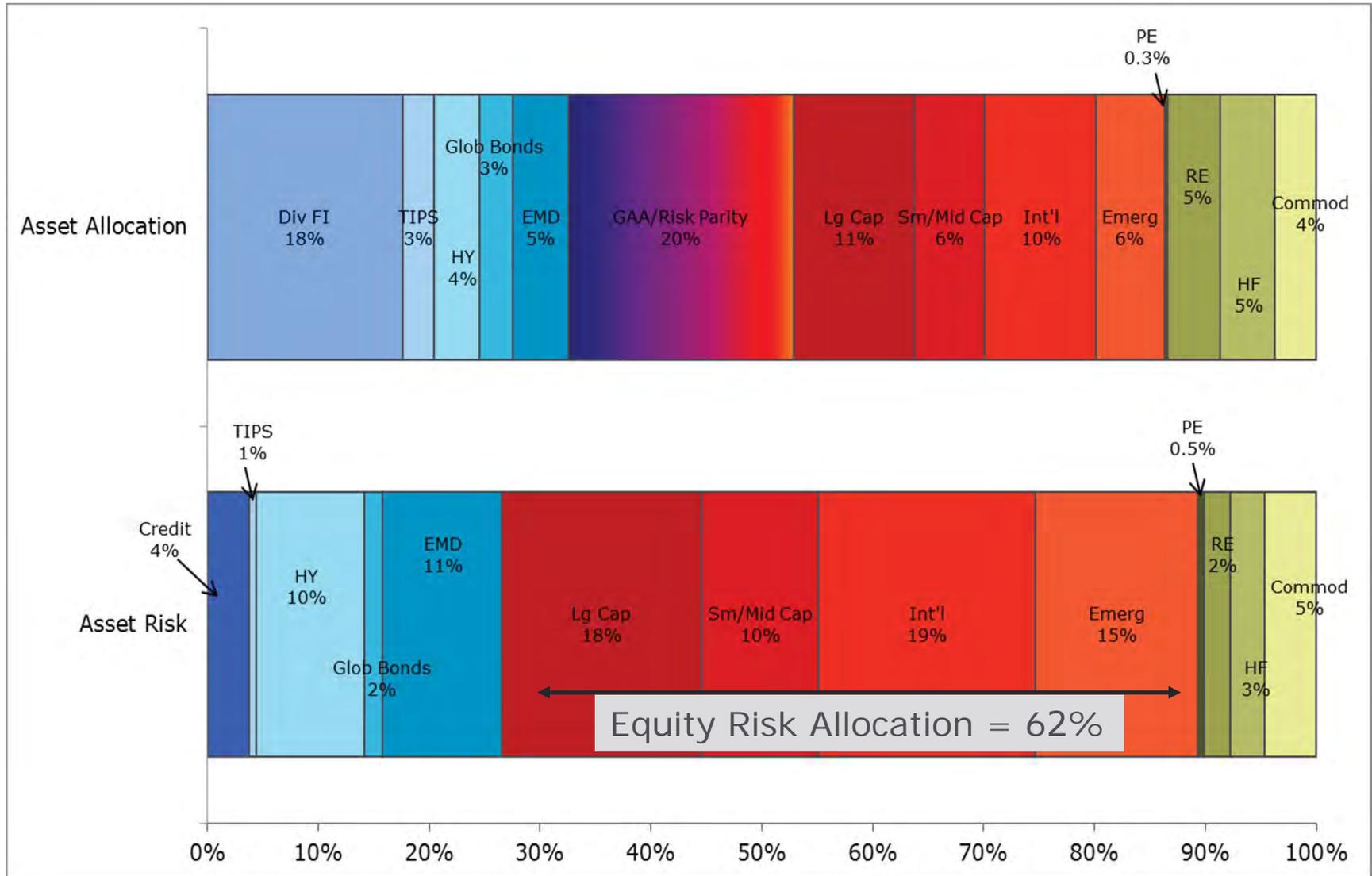
	Current	Policy	Current	Difference*
Large Cap Equity	\$172,910,032	10.0%	10.5%	0.5%
Small/Mid Cap Equity	\$99,942,003	6.5%	6.1%	-0.4%
International Equity	\$156,237,270	10.0%	9.5%	-0.5%
Emerging Markets Equity	\$100,882,727	6.0%	6.1%	0.1%
High Yield	\$68,659,731	4.0%	4.2%	0.2%
TIPS	\$47,753,234	3.0%	2.9%	-0.1%
Diversified Bond	\$287,819,073	18.0%	17.5%	-0.5%
Emerging Market Debt	\$82,329,292	5.0%	5.0%	0.0%
Global Bonds	\$48,193,763	3.0%	2.9%	-0.1%
Balanced - GAA	\$338,385,262	20.0%	20.6%	0.6%
Private Equity	\$6,356,823	1.0%	0.4%	-0.6%
Hedge Funds	\$87,423,111	5.0%	5.3%	0.3%
Real Estate	\$87,134,258	4.5%	5.3%	0.8%
Commodities	\$61,527,086	4.0%	3.7%	-0.3%
Cash	\$849,238	--	0.1%	0.1%
Total	\$1,646,402,904	100.0%	100.0%	

*Difference between Policy and Current Allocation

Total Fund Asset Allocation History

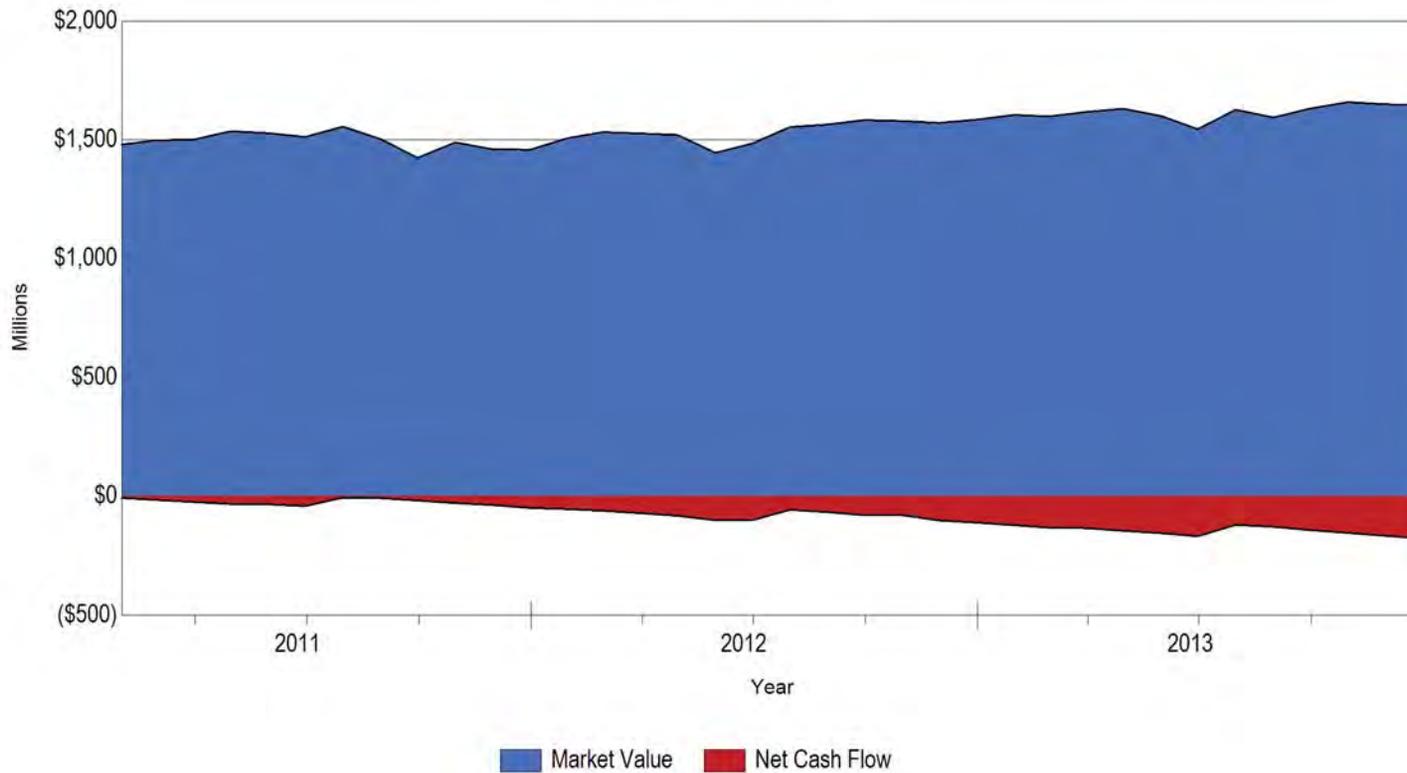


Total Plan Performance Analysis



Total Fund Asset Growth Summary

3 Years Ending December 31, 2013



	Last Three Months	Year-To-Date	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$1,631,815,465	\$1,585,232,773	\$1,544,981,481	\$1,585,232,773	\$1,477,107,656
- Withdrawals	-\$92,381,813	-\$238,549,195	-\$138,107,823	-\$238,549,195	-\$1,004,774,089
+ Contributions	\$56,870,796	\$171,654,437	\$128,549,717	\$171,654,437	\$827,001,044
= Net Cash Flow	-\$35,511,017	-\$66,894,758	-\$9,558,106	-\$66,894,758	-\$178,236,923
+ Net Investment Change	\$50,098,457	\$128,064,889	\$110,979,529	\$128,064,889	\$347,532,171
= Ending Market Value	\$1,646,402,904	\$1,646,402,904	\$1,646,402,904	\$1,646,402,904	\$1,646,402,904

Vermont State Teachers

Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2013					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Aberdeen	\$97,584,453	\$0	\$4,000,000	\$4,000,000	-\$701,726	\$100,882,727
Acadian	\$68,393,493	-\$9,500,000	\$0	-\$9,500,000	\$5,617,467	\$64,510,960
Allianz Structured Alpha	\$40,471,266	\$0	\$0	\$0	-\$426,196	\$40,045,071
AQR Global Risk Premium	\$129,750,055	\$0	\$0	\$0	\$2,284,469	\$132,034,524
BlackRock TIPS	\$48,731,895	\$0	\$0	\$0	-\$978,661	\$47,753,234
Champlain	\$33,273,807	-\$2,000,000	\$0	-\$2,000,000	\$3,123,900	\$34,397,706
GAM	\$16,896,075	\$0	\$0	\$0	\$733,916	\$17,629,991
Grosvenor	\$33,571,111	\$0	\$0	\$0	\$1,394,545	\$34,965,656
Guggenheim	--	\$0	\$50,957,884	\$50,957,884	\$228,585	\$51,186,469
Harbourvest Dover VIII Fund	\$1,548,666	-\$95,672	\$1,151,629	\$1,055,957	\$96,633	\$2,701,256
Harbourvest Partners IX Buyout Fund	\$1,719,924	\$0	\$106,077	\$106,077	\$0	\$1,826,002
Harbourvest Partners IX Credit Opportunities	\$316,891	\$0	\$27,841	\$27,841	\$0	\$344,732
Harbourvest Partners IX Venture Fund	\$1,018,087	\$0	\$466,746	\$466,746	\$0	\$1,484,834
KDP	\$16,614,861	-\$18,206	\$0	-\$18,206	\$534,098	\$17,130,753
Mellon Global Expanded Alpha	\$34,053,826	\$0	\$0	\$0	\$1,543,725	\$35,597,551
Mondrian	\$68,123,083	-\$6,000,000	\$0	-\$6,000,000	\$4,505,188	\$66,628,271
Mondrian GFI	\$48,626,546	\$0	\$0	\$0	-\$432,783	\$48,193,763
Morgan Stanley Prime Property	\$38,391,969	\$0	\$0	\$0	\$1,382,111	\$39,774,079
Permal	\$33,335,590	\$0	\$0	\$0	\$1,491,874	\$34,827,465
PIMCO All Asset	\$98,021,706	-\$147,838	\$0	-\$147,838	\$1,421,637	\$99,295,505
PIMCO Core Plus	\$104,928,372	-\$300,000	\$0	-\$300,000	-\$603,441	\$104,024,931
PIMCO Unconstrained	\$103,891,304	\$0	\$0	\$0	-\$441,475	\$103,449,828
Post Advisory	\$49,827,924	-\$50,526,193	\$0	-\$50,526,193	\$1,040,778	\$342,509
RREEF America REIT III	\$12,186,056	-\$408,747	\$0	-\$408,747	\$369,629	\$12,146,938
Schroder	\$62,634,511	\$0	\$0	\$0	-\$1,107,425	\$61,527,086

Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2013					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
SSgA ACWI Ex US	\$27,960,217	-\$4,000,000	\$0	-\$4,000,000	\$1,137,822	\$25,098,039
SSgA Russell 2000 Growth	\$22,926,940	-\$4,000,000	\$0	-\$4,000,000	\$1,683,195	\$20,610,135
SSgA S&P 400	\$7,434,402	\$0	\$0	\$0	\$620,055	\$8,054,457
SSgA S&P 500 Cap-Wgt	\$76,448,871	-\$9,000,000	\$0	-\$9,000,000	\$7,938,724	\$75,387,595
SSgA S&P 500 Equal-Wgt	\$44,304,558	-\$3,238,328	\$0	-\$3,238,328	\$4,247,540	\$45,313,770
T. Rowe	\$49,449,609	-\$2,500,000	\$0	-\$2,500,000	\$5,259,057	\$52,208,666
Transwestern / Aslan III	\$471,321	-\$13,458	\$0	-\$13,458	\$847	\$458,710
UBS Trumbull	\$33,979,310	-\$90,966	\$90,966	\$0	\$775,221	\$34,754,531
Vermont Cash	\$1,321,991	-\$542,406	\$69,653	-\$472,753	\$0	\$849,238
Wellington	\$33,862,239	\$0	\$0	\$0	\$3,017,467	\$36,879,705
Wellington DAS	\$40,656,580	\$0	\$0	\$0	-\$357,337	\$40,299,243
Wellington OIF	\$67,450,299	\$0	\$0	\$0	\$4,007,383	\$71,457,682
Wellington Opportunistic EMD	\$81,637,655	\$0	\$0	\$0	\$691,637	\$82,329,292
Total	\$1,631,815,465	-\$92,381,813	\$56,870,796	-\$35,511,017	\$50,098,457	\$1,646,402,904

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	2013 Q4 (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Teachers Composite	1,646,402,903	100.0	100.0	3.1	94	8.1	96	8.1	96	7.8	88	12.7	39
<i>Policy Index</i>				3.3	93	9.4	93	9.4	93	6.9	94	10.2	83
<i>Allocation Index</i>				3.3	93	9.3	93	9.3	93	6.8	94	10.8	76
<i>IFx Public DB Gross Median</i>				5.0		15.5		15.5		9.5		12.2	
US Equity	272,852,035	16.6	--	9.9	49	--	--	--	--	--	--	--	--
<i>Russell 3000</i>				10.1	44	33.6	64	33.6	64	16.2	53	18.7	65
<i>eA All US Equity Gross Median</i>				9.8		35.6		35.6		16.4		20.1	
Large Cap Comp	172,910,032	10.5	10.0	10.4	47	33.9	49	33.9	49	16.5	41	21.2	14
<i>S&P 500</i>				10.5	45	32.4	62	32.4	62	16.2	47	17.9	57
<i>eA US Large Cap Equity Gross Median</i>				10.3		33.6		33.6		16.0		18.2	
T. Rowe	52,208,666	3.2	3.0	10.8	38	33.7	49	33.7	49	16.7	39	18.8	41
SSgA S&P 500 Cap-Wgt	75,387,595	4.6	4.0	10.5	45	32.4	61	32.4	61	16.2	46	--	--
<i>S&P 500</i>				10.5	45	32.4	62	32.4	62	16.2	47	17.9	57
SSgA S&P 500 Equal-Wgt	45,313,770	2.8	3.0	9.9	61	36.2	29	36.2	29	16.9	35	23.4	5
<i>S&P 500 Equal Weighted</i>				9.9	62	36.2	29	36.2	29	17.0	34	23.3	5
<i>S&P 500 ex Tobacco Equal Weighted</i>				9.9	61	36.4	28	36.4	28	17.0	34	23.4	5
Small/Mid Cap Comp	99,942,003	6.1	6.5	8.9	48	38.2	51	38.2	51	17.1	41	22.2	60
<i>Russell 2000</i>				8.7	52	38.8	45	38.8	45	15.7	60	20.1	83
<i>eA US Small-Mid Cap Equity Gross Median</i>				8.8		38.2		38.2		16.3		22.8	
SSgA S&P 400	8,054,457	0.5	0.5	8.3	64	33.7	68	33.7	68	--	--	--	--
<i>S&P 400 MidCap</i>				8.3	64	33.5	70	33.5	70	15.6	57	21.9	54
<i>eA US Mid Cap Equity Gross Median</i>				8.8		35.8		35.8		16.0		22.0	
Champlain	34,397,706	2.1	2.0	9.6	34	39.2	26	39.2	26	17.7	27	--	--
<i>Russell 2500</i>				8.7	55	36.8	43	36.8	43	16.3	45	21.8	56
<i>eA US Mid Cap Equity Gross Median</i>				8.8		35.8		35.8		16.0		22.0	
Wellington	36,879,705	2.2	2.0	8.9	70	34.9	77	34.9	77	17.1	46	22.2	44
<i>Russell 2000 Value</i>				9.3	61	34.5	78	34.5	78	14.5	78	17.6	95
<i>eA US Small Cap Value Equity Gross Median</i>				9.8		38.1		38.1		16.8		21.6	
SSgA Russell 2000 Growth	20,610,135	1.3	2.0	8.2	60	43.3	70	43.3	70	16.8	73	22.6	76
<i>Russell 2000 Growth</i>				8.2	60	43.3	70	43.3	70	16.8	73	22.6	76
<i>eA US Small Cap Growth Equity Gross Median</i>				8.8		45.6		45.6		18.8		24.4	

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	2013 Q4 (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Int'l Equity Comp	156,237,270	9.5	10.0	7.1	39	23.6	58	23.6	58	8.6	68	11.9	88
MSCI EAFE				5.7	71	22.8	65	22.8	65	8.2	74	12.4	81
eA All EAFE Equity Gross Median				6.6		24.6		24.6		9.7		14.5	
Acadian	64,510,960	3.9	4.0	8.4	15	27.1	32	27.1	32	8.9	63	13.6	67
Mondrian	66,628,271	4.0	4.0	6.7	49	23.9	55	23.9	55	9.5	53	11.1	94
MSCI EAFE				5.7	71	22.8	65	22.8	65	8.2	74	12.4	81
SSgA ACWI Ex US	25,098,039	1.5	2.0	4.8	81	15.6	81	15.6	81	5.4	89	--	--
MSCI ACWI ex USA				4.8	81	15.3	83	15.3	83	5.1	92	12.8	84
eA ACWI ex-US All Cap Equity Gross Median				5.9		19.5		19.5		8.5		14.8	
Emerging Market Comp	100,882,727	6.1	6.0	-0.5	95	-5.9	94	-5.9	94	--	--	--	--
Aberdeen	100,882,727	6.1	6.0	-0.5	95	-5.9	94	-5.9	94	2.1	22	20.1	14
MSCI Emerging Markets				1.8	70	-2.6	80	-2.6	80	-2.1	75	14.8	74
eA Emg Mkts Equity Gross Median				2.8		1.0		1.0		-0.1		16.8	
US Fixed Income	404,232,038	24.6	--	-0.2	90	--	--	--	--	--	--	--	--
Barclays Aggregate				-0.1	88	-2.0	83	-2.0	83	3.3	68	4.4	71
eA All US Fixed Inc Gross Median				0.4		-0.3		-0.3		4.0		5.8	
Diversified Fixed	287,819,073	17.5	18.0	-0.6	96	-2.3	86	-2.3	86	4.3	46	8.6	28
Barclays Aggregate				-0.1	88	-2.0	83	-2.0	83	3.3	68	4.4	71
eA All US Fixed Inc Gross Median				0.4		-0.3		-0.3		4.0		5.8	
Allianz Structured Alpha	40,045,071	2.4	2.0	-1.1	99	-2.5	95	-2.5	95	5.0	10	9.9	2
Citigroup 10 Year Treasury				-2.5	99	-7.8	99	-7.8	99	4.0	52	1.8	99
PIMCO Core Plus	104,024,931	6.3	6.5	-0.6	98	-2.5	95	-2.5	95	4.1	43	--	--
Barclays Aggregate				-0.1	84	-2.0	82	-2.0	82	3.3	88	4.4	87
PIMCO Unconstrained	103,449,828	6.3	6.5	-0.4	97	-1.5	55	-1.5	55	--	--	--	--
25% HY, 25% EMD, 50% BC Agg				1.1	5	-0.9	27	-0.9	27	5.6	2	9.8	2
3-Month Libor Total Return USD				0.1	61	0.3	6	0.3	6	0.4	99	0.4	99
Wellington DAS	40,299,243	2.4	3.0	-0.9	99	-3.9	99	-3.9	99	7.2	1	7.9	7
Wellington Custom Benchmark				-2.8	99	-11.7	99	-11.7	99	4.8	15	5.3	65

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	2013 Q4 (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
High Yield Comp	68,659,731	4.2	4.0	2.9	83	7.6	52	7.6	52	9.3	52	16.0	72
Barclays High Yield				3.6	46	7.4	54	7.4	54	9.3	52	18.9	17
eA US High Yield Fixed Inc Gross Median				3.5		7.6		7.6		9.3		16.9	
Liquidating Post Advisory	342,509	0.0	3.0										
KDP	17,130,753	1.0	1.0	3.1	77	5.2	93	5.2	93	8.1	87	--	--
Barclays High Yield				3.6	46	7.4	54	7.4	54	9.3	52	18.9	17
BofA Merrill Lynch US High Yield BB-B Rated				3.3	62	6.3	80	6.3	80	8.7	73	16.5	58
Guggenheim	51,186,469	3.1		--	--	--	--	--	--	--	--	--	--
eA US High Yield Fixed Inc Gross Median				3.5		7.6		7.6		9.3		16.9	
TIPS	47,753,234	2.9	3.0										
BlackRock TIPS	47,753,234	2.9	3.0	-2.0	--	-8.6	--	-8.6	--	3.5	--	--	--
Barclays US TIPS				-2.0	--	-8.6	--	-8.6	--	3.5	--	5.6	--
Global Fixed Income Comp	48,193,763	2.9	3.0	-0.9	92	-6.2	97	-6.2	97	1.4	95	6.1	55
Citi WGBI				-1.1	94	-4.0	86	-4.0	86	1.2	96	2.3	99
eA All Global Fixed Inc Gross Median				1.0		0.2		0.2		4.7		6.7	
Mondrian GFI	48,193,763	2.9	3.0	-0.9	92	-6.2	97	-6.2	97	0.4	99	3.7	90
Citi WGBI				-1.1	94	-4.0	86	-4.0	86	1.2	96	2.3	99
Emerging Market Debt	82,329,292	5.0	5.0										
Wellington Opportunistic EMD	82,329,292	5.0	5.0	0.8	49	-5.1	39	-5.1	39	6.9	16	--	--
JP Morgan EMBI Global TR				0.9	47	-6.6	61	-6.6	61	6.3	33	11.5	63
eA All Emg Mkts Fixed Inc Gross Median				0.8		-6.1		-6.1		5.0		12.5	
Total Real Estate	87,134,258	5.3	4.5	3.0	--	14.7	--	14.7	--	--	--	--	--
Morgan Stanley Prime Property	39,774,079	2.4	2.0	3.6	--	17.4	--	17.4	--	15.5	--	3.4	--
UBS Trumbull	34,754,531	2.1	2.0	2.3	--	10.4	--	10.4	--	11.3	--	4.6	--
RREEF America REIT III	12,146,938	0.7	0.5	3.1	--	17.0	--	17.0	--	31.0	--	-2.5	--
Transwestern / Aslan III	458,710	0.0	0.0	0.2	--	50.0	--	50.0	--	14.8	--	-36.0	--
NCREIF Property Index				2.5	--	11.0	--	11.0	--	11.9	--	5.7	--
NCREIF ODCE				3.2	--	14.0	--	14.0	--	13.6	--	3.7	--

Morgan Stanley Prime Property is estimated

Transwestern is based on preliminary manager statement

Post Advisory funds were invested into Guggenheim

Vermont State Teachers

Total Fund Performance Detail

	Market Value (\$)	% of Portfolio	Policy %	2013 Q4 (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Hedge Fund Comp	87,423,111	5.3	5.0	4.3	35	14.1	22	14.1	22	6.2	31	--	--
<i>eA HFN FOF - Multi-Strategy Net Median</i>				3.6		10.5		10.5		4.5		7.1	
Grosvenor	34,965,656	2.1	2.0	4.2	40	15.2	16	15.2	16	6.5	29	--	--
GAM	17,629,991	1.1	1.0	4.3	34	14.0	22	14.0	22	--	--	--	--
Permal	34,827,465	2.1	2.0	4.5	31	13.0	29	13.0	29	--	--	--	--
<i>HFRI Fund of Funds Composite Index</i>				3.5	55	8.7	60	8.7	60	2.4	76	4.8	78
GAA Comp	338,385,262	20.6	20.0	2.8	61	3.3	69	3.3	69	6.3	47	13.1	12
<i>eA Global TAA Gross Median</i>				3.7		7.7		7.7		6.0		10.3	
Mellon Global Expanded Alpha	35,597,551	2.2	2.5	4.5	32	12.2	31	12.2	31	8.0	26	14.0	10
<i>Mellon GA GEA Index</i>				3.6	51	10.3	40	10.3	40	6.9	40	9.3	62
AQR Global Risk Premium	132,034,524	8.0	8.0	1.8	84	-2.0	88	-2.0	88	6.7	42	--	--
<i>60% MSCI World / 40% CITI WGBI</i>				4.4	36	13.9	24	13.9	24	7.9	29	10.4	45
PIMCO All Asset	99,295,505	6.0	5.0	1.5	87	1.7	74	1.7	74	7.0	38	11.7	27
<i>PIMCO All Asset Index</i>				1.0	91	0.2	77	0.2	77	5.2	58	8.1	75
<i>CPI + 5% (Seasonally Adjusted)</i>				1.6	86	6.6	54	6.6	54	7.2	36	7.2	76
Wellington OIF	71,457,682	4.3	4.5	5.9	16	12.1	32	12.1	32	3.4	72	12.2	21
<i>65% MSCI ACWI (Net) / 35% BC Agg</i>				4.7	27	13.6	25	13.6	25	7.7	33	11.5	31
Commodities	61,527,086	3.7	4.0										
Schroder	61,527,086	3.7	4.0	-1.8	--	-8.5	--	-8.5	--	-5.0	--	--	--
<i>Dow Jones-UBS Commodity Index TR</i>				-1.1	--	-9.5	--	-9.5	--	-8.1	--	1.5	--
Cash	849,238	0.1	0.0										
Vermont Cash	849,238	0.1	0.0	0.0	--	0.0	--	0.0	--	0.1	--	0.2	--
<i>91 Day T-Bills</i>				0.0	--	0.0	--	0.0	--	0.1	--	0.1	--
Private Equity	6,356,823	0.4	1.0										
Harbourvest Partners IX Credit Opportunities	344,732	0.0											
Harbourvest Partners IX Venture Fund	1,484,834	0.1											
Harbourvest Partners IX Buyout Fund	1,826,002	0.1											
Harbourvest Dover VIII Fund	2,701,256	0.2											

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

Mellon CF GEA Index: 50% MSCI ACWI / 25% CITI WGBI H/H / 10% BC Global Inflation Linked H/H / 5% BC US Interm. Credit / 5% DJ-UBS Commodity / 5% R2000.

Harbourvest is based on preliminary manager statement for Q4 2013

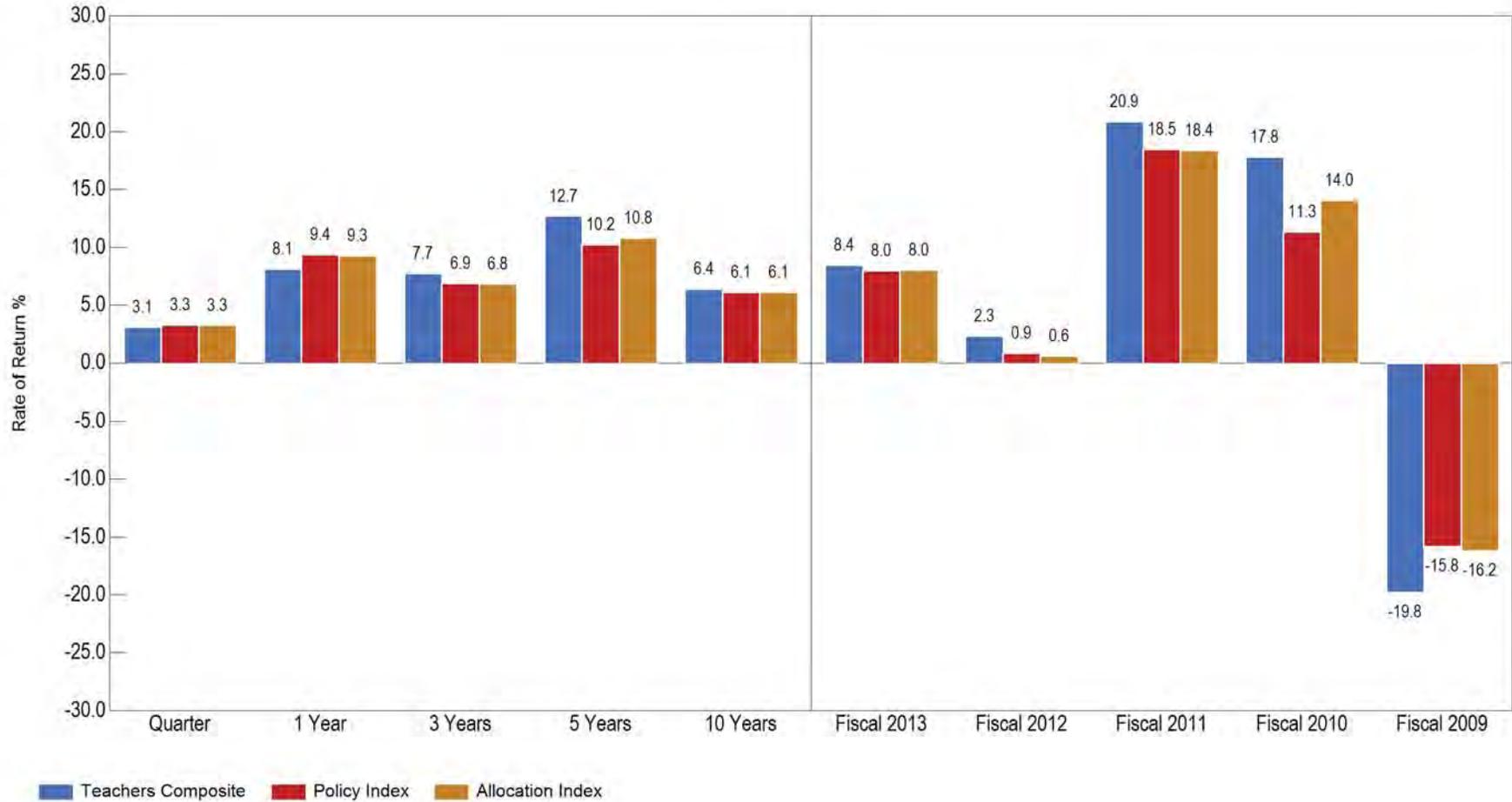
Schroder is net of fee

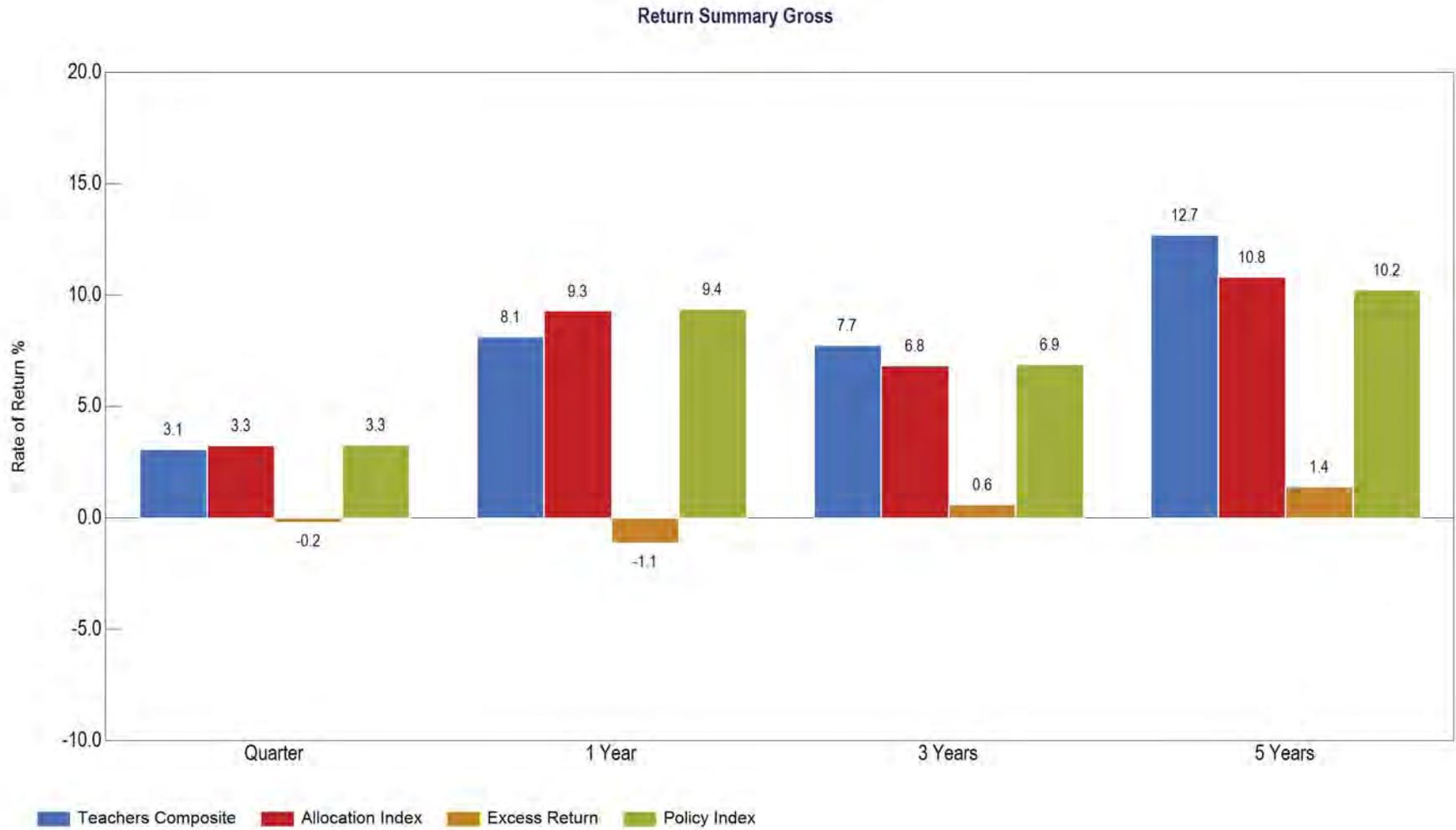


December 31, 2013

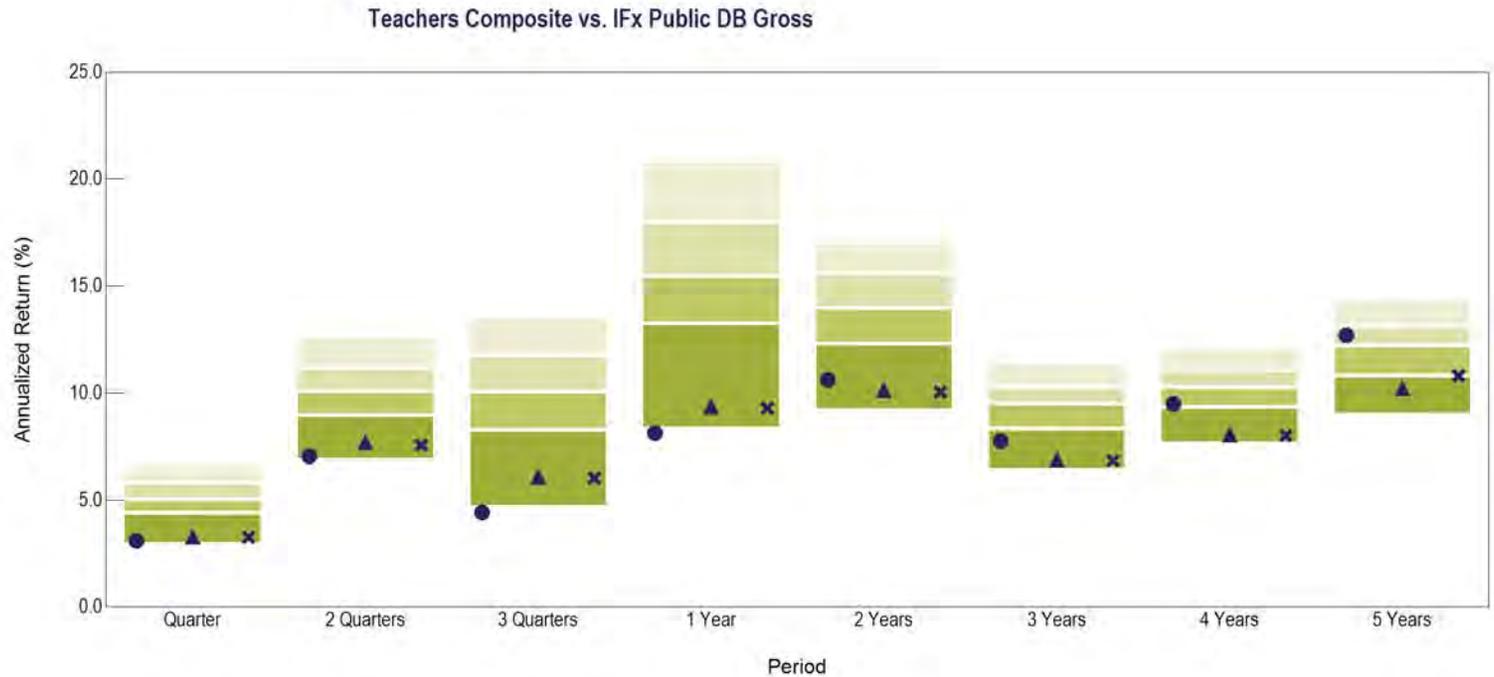
Vermont State Teachers
Teachers Composite

Return Summary Gross



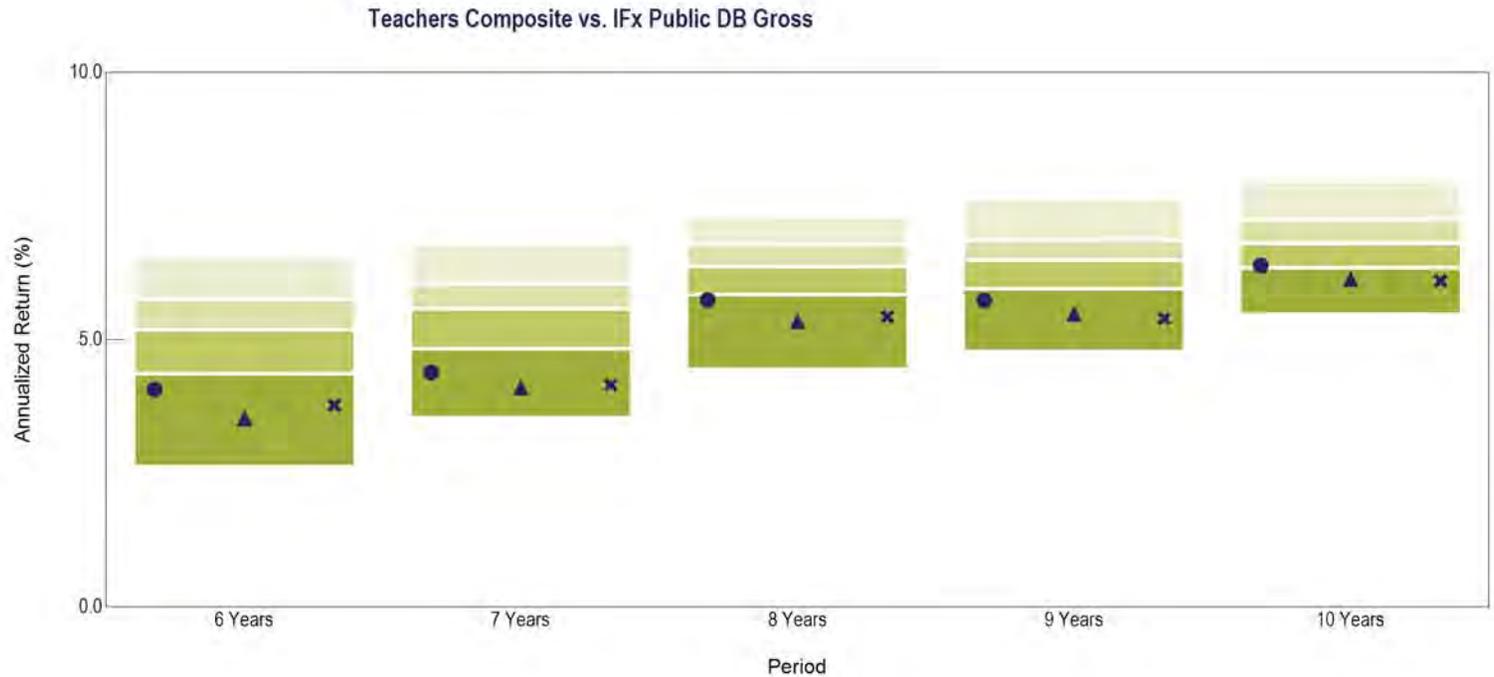


Total Fund Return Summary vs. Peer Universe



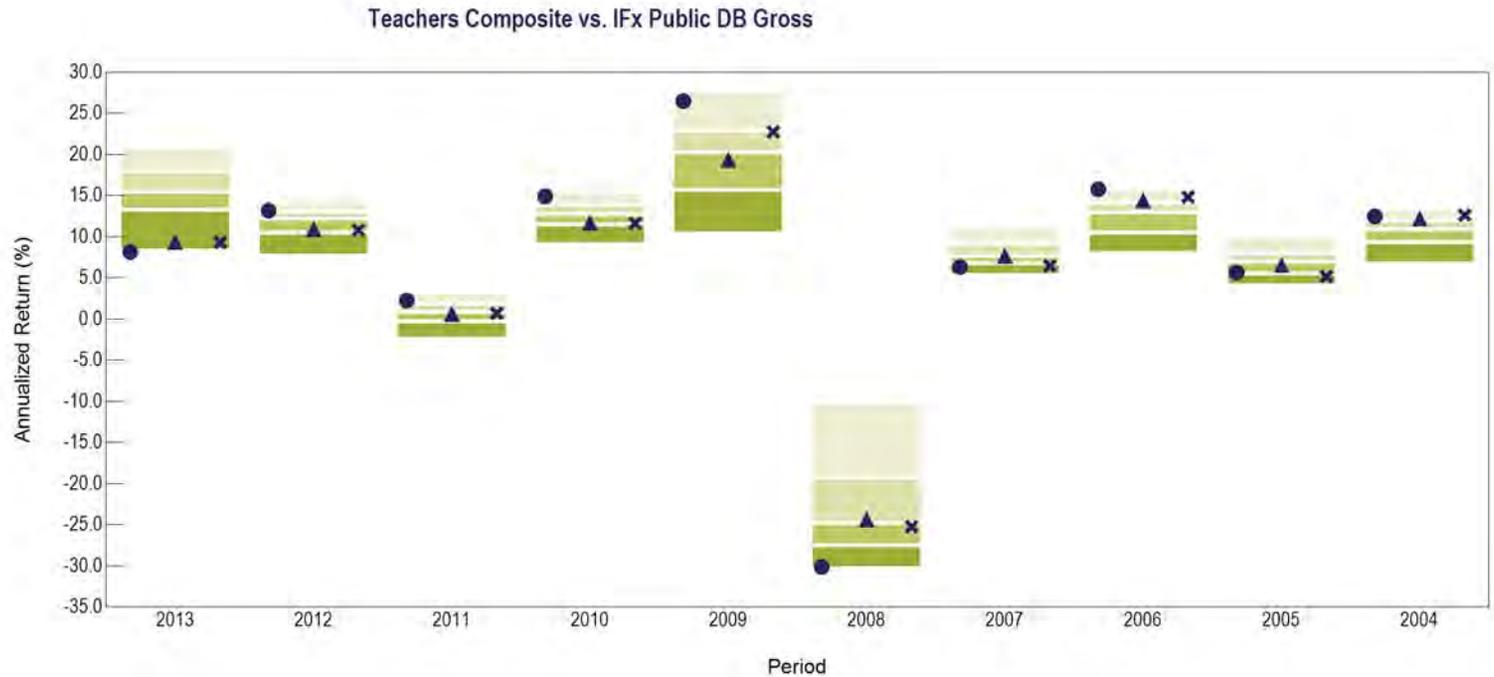
	Return (Rank)							
	Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years
5th Percentile	6.6	12.7	13.6	20.8	17.0	11.4	12.1	14.4
25th Percentile	5.8	11.2	11.8	18.0	15.6	10.3	11.1	13.1
Median	5.0	10.1	10.1	15.5	14.0	9.5	10.3	12.2
75th Percentile	4.4	9.0	8.3	13.3	12.3	8.4	9.4	10.8
95th Percentile	3.0	6.9	4.7	8.4	9.2	6.4	7.7	9.0
# of Portfolios	212	212	212	212	205	185	178	174
● Teachers Composite	3.1 (94)	7.0 (94)	4.4 (96)	8.1 (96)	10.6 (92)	7.7 (88)	9.5 (70)	12.7 (39)
▲ Policy Index	3.3 (93)	7.7 (91)	6.1 (92)	9.4 (93)	10.2 (93)	6.9 (94)	8.1 (94)	10.2 (83)
× Allocation Index	3.3 (93)	7.6 (92)	6.0 (93)	9.3 (93)	10.0 (94)	6.8 (94)	8.0 (94)	10.8 (76)

Total Fund Return Summary vs. Peer Universe



	Return (Rank)		6 Years		7 Years		8 Years		9 Years		10 Years	
5th Percentile			6.5	(82)	6.8	(87)	7.3	(78)	7.6	(84)	8.0	(72)
25th Percentile			5.8	(89)	6.1	(92)	6.8	(88)	6.9	(90)	7.2	(84)
Median			5.2	(86)	5.6	(91)	6.4	(87)	6.5	(92)	6.8	(85)
75th Percentile			4.4		4.8		5.8		6.0		6.3	
95th Percentile			2.6		3.5		4.4		4.8		5.5	
# of Portfolios			170		160		156		148		144	
● Teachers Composite			4.1	(82)	4.4	(87)	5.7	(78)	5.7	(84)	6.4	(72)
▲ Policy Index			3.5	(89)	4.1	(92)	5.3	(88)	5.5	(90)	6.1	(84)
× Allocation Index			3.8	(86)	4.2	(91)	5.4	(87)	5.4	(92)	6.1	(85)

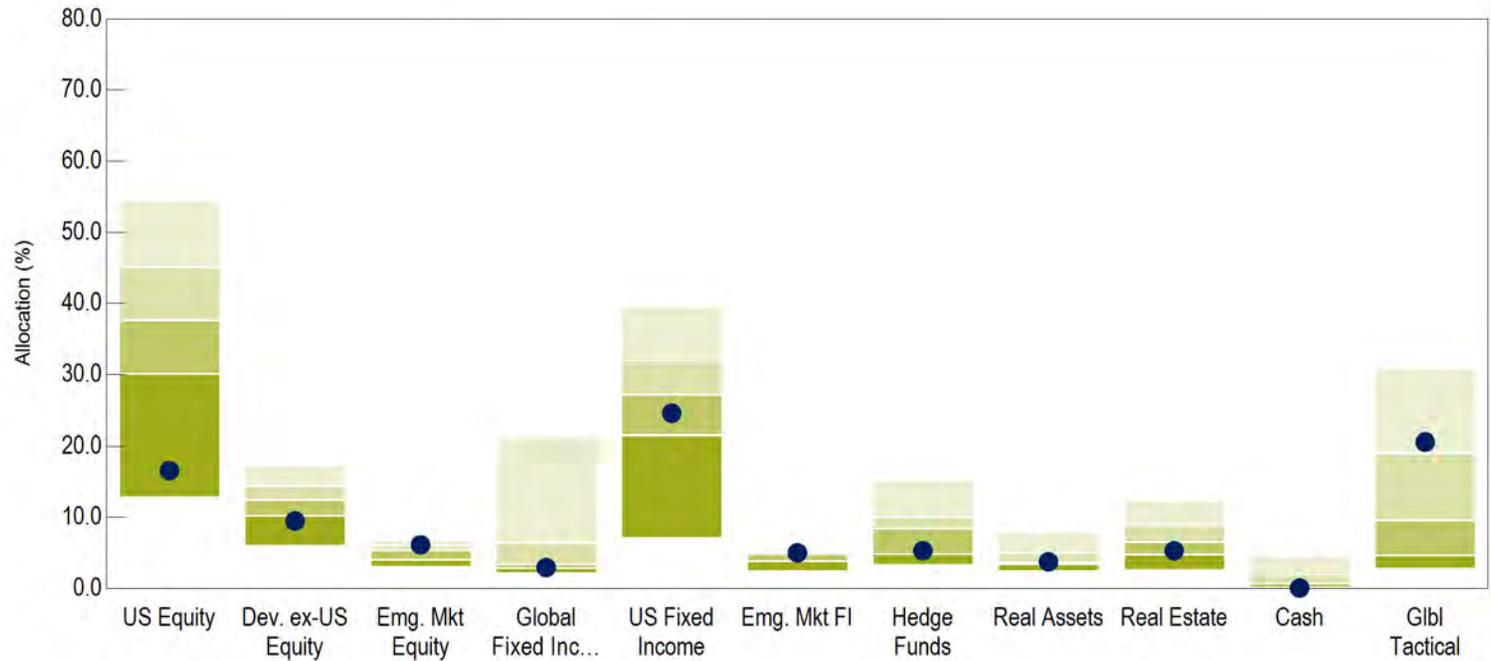
Total Fund Return Summary vs. Peer Universe



	Return (Rank)										
	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	
5th Percentile	20.8	14.3	3.4	15.5	27.6	-10.2	11.1	15.8	9.9	13.2	
25th Percentile	18.0	13.1	1.9	13.9	23.0	-19.2	9.1	14.2	8.1	12.0	
Median	15.5	12.2	0.9	12.8	20.3	-24.7	7.7	13.0	6.9	10.9	
75th Percentile	13.3	10.5	-0.3	11.5	15.7	-27.4	6.8	10.5	5.5	9.4	
95th Percentile	8.4	7.7	-2.4	9.2	10.4	-30.2	5.4	8.0	4.2	6.8	
# of Portfolios	212	192	162	154	152	149	146	136	131	125	
● Teachers Composite	8.1 (96)	13.2 (24)	2.2 (17)	14.9 (12)	26.5 (9)	-30.1 (94)	6.3 (83)	15.7 (6)	5.6 (73)	12.4 (14)	
▲ Policy Index	9.4 (93)	10.9 (71)	0.6 (62)	11.7 (72)	19.3 (55)	-24.3 (49)	7.6 (52)	14.4 (20)	6.6 (57)	12.2 (21)	
× Allocation Index	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)	12.6 (11)	

Total Plan Allocation vs. Peer Universe

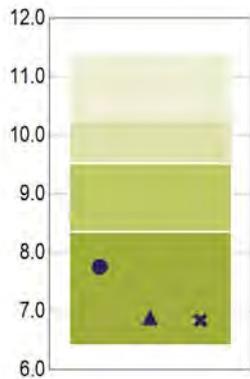
Total Plan Allocation vs. I/Fx Public DB Gross
As of December 31, 2013



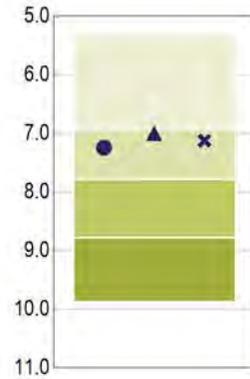
	Allocation (Rank)											
5th Percentile	54.5	17.3	6.7	21.4	39.6	5.2	15.1	7.9	12.3	4.6	30.9	--
25th Percentile	45.2	14.5	6.1	6.4	32.1	5.0	10.2	5.0	9.0	2.0	19.1	--
Median	37.7	12.5	5.4	3.5	27.2	4.9	8.5	3.8	6.6	0.8	9.7	--
75th Percentile	30.2	10.3	4.1	2.9	21.6	3.9	5.0	3.5	4.9	0.2	4.8	--
95th Percentile	12.9	6.1	3.1	2.2	7.1	2.5	3.4	2.5	2.7	0.0	2.9	--
# of Portfolios	130	30	18	14	96	11	40	23	88	95	39	--
● Teachers Composite	16.6 (93)	9.5 (83)	6.1 (25)	2.9 (78)	24.6 (64)	5.0 (32)	5.3 (67)	3.7 (60)	5.3 (68)	0.1 (87)	20.6 (16)	--

Teachers Composite vs. IFX Public DB Gross
3 Years

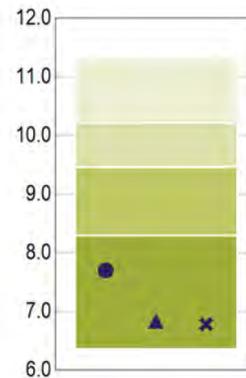
Anlzd Return



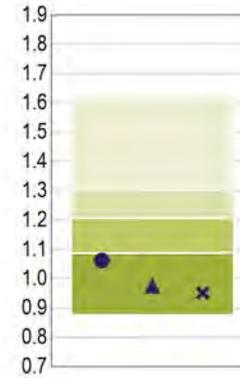
Anlzd Standard Deviation



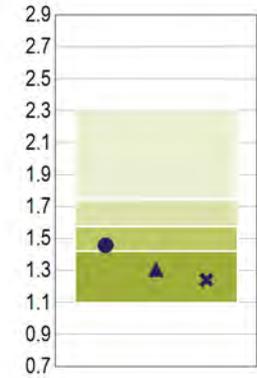
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	7.75
%tile	88
▲ Policy Index	
Value	6.89
%tile	94
× Allocation Index	
Value	6.83
%tile	94
Universe	
5th %tile	11.37
25th %tile	10.28
Median	9.53
75th %tile	8.35
95th %tile	6.42

● Teachers Composite	
Value	7.25
%tile	34
▲ Policy Index	
Value	7.01
%tile	28
× Allocation Index	
Value	7.13
%tile	30
Universe	
5th %tile	5.32
25th %tile	6.94
Median	7.78
75th %tile	8.77
95th %tile	9.87

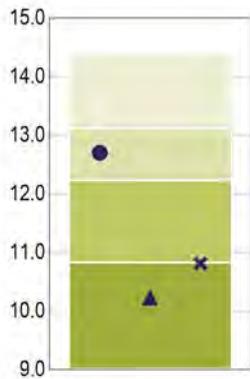
● Teachers Composite	
Value	7.69
%tile	88
▲ Policy Index	
Value	6.83
%tile	94
× Allocation Index	
Value	6.78
%tile	94
Universe	
5th %tile	11.31
25th %tile	10.23
Median	9.47
75th %tile	8.30
95th %tile	6.37

● Teachers Composite	
Value	1.06
%tile	81
▲ Policy Index	
Value	0.97
%tile	90
× Allocation Index	
Value	0.95
%tile	93
Universe	
5th %tile	1.62
25th %tile	1.30
Median	1.21
75th %tile	1.09
95th %tile	0.88

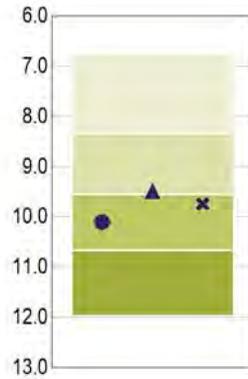
● Teachers Composite	
Value	1.46
%tile	66
▲ Policy Index	
Value	1.31
%tile	85
× Allocation Index	
Value	1.24
%tile	89
Universe	
5th %tile	2.31
25th %tile	1.75
Median	1.58
75th %tile	1.43
95th %tile	1.10

Teachers Composite vs. IFx Public DB Gross
5 Years

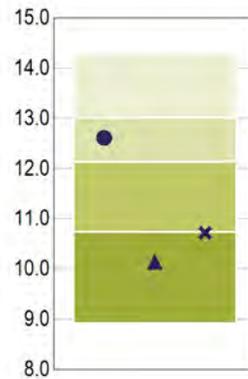
Anlzd Return



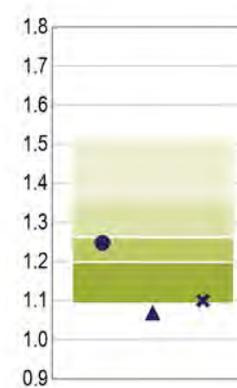
Anlzd Standard Deviation



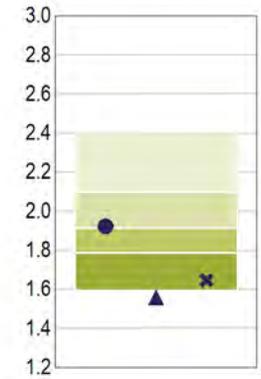
Ann Excess RF Return



Sharpe Ratio



Sortino Ratio RF



● Teachers Composite	
Value	12.70
%tile	39
▲ Policy Index	
Value	10.23
%tile	83
× Allocation Index	
Value	10.81
%tile	76
Universe	
5th %tile	14.37
25th %tile	13.11
Median	12.24
75th %tile	10.84
95th %tile	9.02

● Teachers Composite	
Value	10.11
%tile	64
▲ Policy Index	
Value	9.49
%tile	49
× Allocation Index	
Value	9.75
%tile	54
Universe	
5th %tile	6.76
25th %tile	8.32
Median	9.54
75th %tile	10.66
95th %tile	11.96

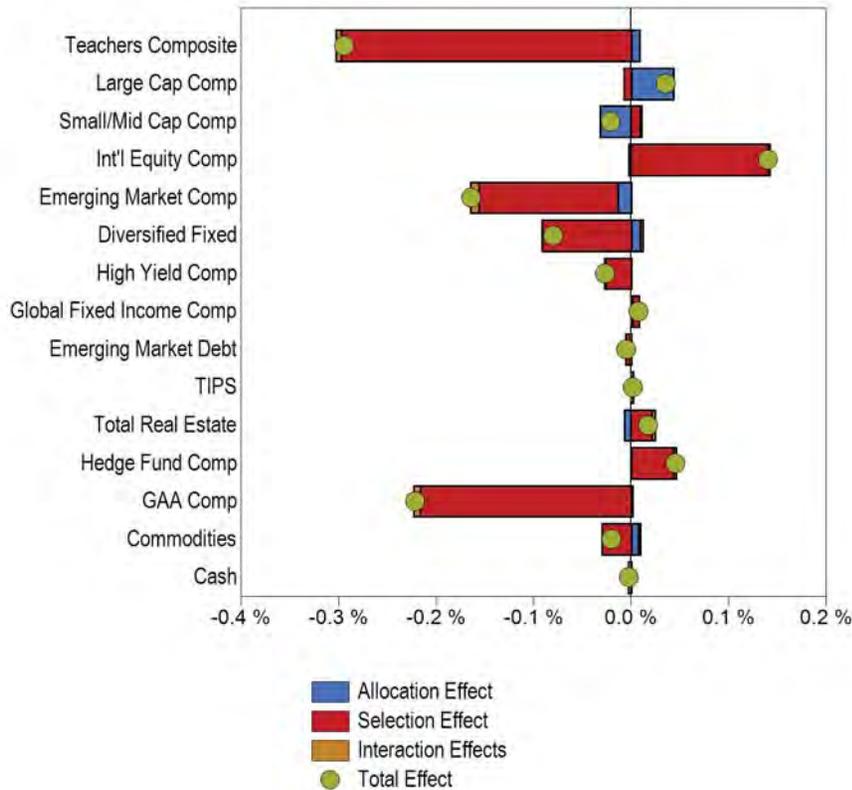
● Teachers Composite	
Value	12.61
%tile	39
▲ Policy Index	
Value	10.14
%tile	83
× Allocation Index	
Value	10.72
%tile	76
Universe	
5th %tile	14.28
25th %tile	13.03
Median	12.15
75th %tile	10.75
95th %tile	8.93

● Teachers Composite	
Value	1.25
%tile	57
▲ Policy Index	
Value	1.07
%tile	97
× Allocation Index	
Value	1.10
%tile	95
Universe	
5th %tile	1.51
25th %tile	1.36
Median	1.26
75th %tile	1.20
95th %tile	1.09

● Teachers Composite	
Value	1.92
%tile	49
▲ Policy Index	
Value	1.56
%tile	98
× Allocation Index	
Value	1.65
%tile	93
Universe	
5th %tile	2.41
25th %tile	2.10
Median	1.92
75th %tile	1.79
95th %tile	1.60

Total Fund Attribution Analysis

**Attribution Effects Relative to Policy Index
3 Months Ending December 31, 2013**



**Attribution Summary
3 Months Ending December 31, 2013**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	10.4%	10.5%	-0.1%	0.0%	0.0%	0.0%	0.0%
Small/Mid Cap Comp	8.9%	8.7%	0.2%	0.0%	0.0%	0.0%	0.0%
Int'l Equity Comp	7.1%	5.7%	1.4%	0.1%	0.0%	0.0%	0.1%
Emerging Market Comp	-0.5%	1.8%	-2.4%	-0.1%	0.0%	0.0%	-0.2%
Diversified Fixed	-0.6%	-0.1%	-0.5%	-0.1%	0.0%	0.0%	-0.1%
High Yield Comp	2.9%	3.6%	-0.7%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-0.9%	-1.1%	0.2%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	0.8%	0.9%	-0.1%	0.0%	0.0%	0.0%	0.0%
TIPS	-2.0%	-2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	3.0%	2.5%	0.5%	0.0%	0.0%	0.0%	0.0%
Hedge Fund Comp	4.3%	3.5%	0.9%	0.0%	0.0%	0.0%	0.0%
GAA Comp	2.8%	3.9%	-1.1%	-0.2%	0.0%	0.0%	-0.2%
Commodities	-1.8%	-1.1%	-0.7%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	3.1%	3.4%	-0.3%	-0.3%	0.0%	0.0%	-0.3%

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.

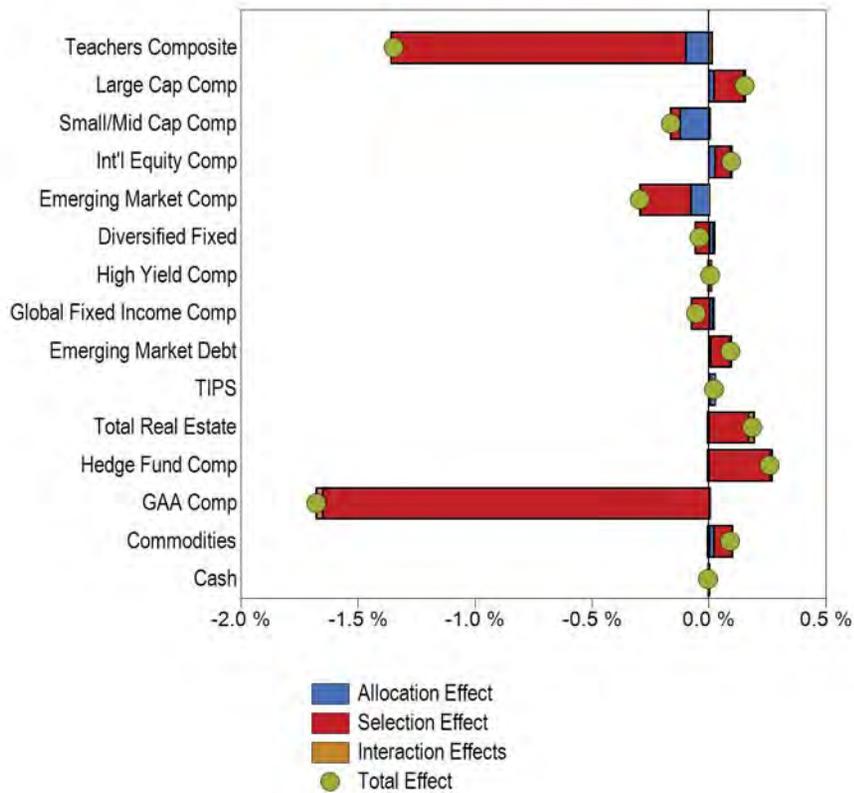
The target return shown for each composite is a custom index, based on aggregated policy indices. This policyindex asset weights the underlying policy indices of each option in the plan and the respective benchmark.

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, 2013



Attribution Summary
1 Year Ending December 31, 2013

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	33.9%	32.4%	1.5%	0.1%	0.0%	0.0%	0.2%
Small/Mid Cap Comp	38.2%	38.8%	-0.7%	0.0%	-0.1%	0.0%	-0.2%
Int'l Equity Comp	23.6%	22.8%	0.8%	0.1%	0.0%	0.0%	0.1%
Emerging Market Comp	-5.9%	-2.6%	-3.3%	-0.2%	-0.1%	0.0%	-0.3%
Diversified Fixed	-2.3%	-2.0%	-0.3%	-0.1%	0.0%	0.0%	0.0%
High Yield Comp	7.6%	7.4%	0.2%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	-6.2%	-4.0%	-2.2%	-0.1%	0.0%	0.0%	-0.1%
Emerging Market Debt	-5.1%	-6.6%	1.4%	0.1%	0.0%	0.0%	0.1%
TIPS	-8.6%	-8.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	14.7%	11.0%	3.7%	0.2%	0.0%	0.0%	0.2%
Hedge Fund Comp	14.1%	8.7%	5.3%	0.3%	0.0%	0.0%	0.3%
GAA Comp	3.2%	11.4%	-8.2%	-1.7%	0.0%	0.0%	-1.7%
Commodities	-8.4%	-9.5%	1.1%	0.1%	0.0%	0.0%	0.1%
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	8.1%	9.4%	-1.3%	-1.3%	-0.1%	0.0%	-1.3%

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, 2013

	% 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%	7.75%	88	7.25%	34	0.67%	29	1.06	81	1.46	66	0.84%	11
Policy Index	--	6.89%	94	7.01%	28	0.00%	50	0.97	90	1.31	85	0.00%	1
US Equity	16.57%	16.73%	46	13.60%	42	-0.56%	46	1.23	41	1.70	42	1.58%	3
Russell 3000	--	16.24%	53	12.71%	28	0.00%	41	1.27	35	1.84	32	0.00%	1
Large Cap Comp	10.50%	16.53%	41	12.87%	50	-0.63%	50	1.28	46	1.85	43	1.14%	1
S&P 500	--	16.18%	47	12.11%	31	0.00%	42	1.33	38	2.00	31	0.00%	1
Small/Mid Cap Comp	6.07%	17.10%	41	15.25%	35	2.90%	41	1.12	38	1.57	32	2.63%	1
Russell 2000	--	15.67%	60	16.68%	68	0.00%	73	0.94	67	1.34	60	0.00%	1
Int'l Equity Comp	9.49%	8.56%	68	15.20%	25	1.08%	61	0.56	60	0.73	57	2.30%	11
MSCI EAFE	--	8.17%	74	16.48%	61	0.00%	76	0.49	74	0.67	69	0.00%	1
Emerging Market Comp	6.13%	2.13%	22	17.60%	19	3.93%	22	0.12	20	0.17	19	5.14%	69
MSCI Emerging Markets	--	-2.06%	75	19.31%	58	0.00%	76	-0.11	76	-0.16	78	0.00%	1
US Fixed Income	24.58%	4.92%	38	3.38%	65	1.72%	34	1.44	57	2.32	34	2.04%	45
Barclays Aggregate	--	3.26%	68	2.75%	49	0.00%	87	1.17	82	1.62	77	0.00%	1
Diversified Fixed	17.48%	4.31%	46	3.32%	64	0.90%	59	1.28	73	1.74	71	1.66%	37
Barclays Aggregate	--	3.26%	68	2.75%	49	0.00%	87	1.17	82	1.62	77	0.00%	1
High Yield Comp	4.17%	9.31%	52	5.53%	27	1.46%	32	1.67	29	2.29	42	1.29%	52
Barclays High Yield	--	9.32%	52	6.50%	70	0.00%	73	1.42	74	2.00	71	0.00%	1
Global Fixed Income Comp	2.93%	1.44%	95	5.52%	51	0.06%	96	0.25	96	0.45	94	1.91%	10
Citi WGBI	--	1.25%	96	4.66%	29	0.00%	96	0.25	96	0.43	95	0.00%	1
Emerging Market Debt	5.00%	6.94%	16	7.73%	14	0.79%	15	0.89	10	1.16	14	1.22%	8
JP Morgan EMBI Global TR	--	6.30%	33	7.81%	17	0.00%	32	0.80	23	1.09	20	0.00%	1
TIPS	2.90%	3.53%	69	5.42%	79	-0.01%	84	0.64	88	0.75	72	0.11%	1
Barclays US TIPS	--	3.55%	65	5.43%	79	0.00%	84	0.64	85	0.76	68	0.00%	1
Total Real Estate	5.29%	16.00%	--	6.88%	--	-0.27%	--	2.32	--	1,522.38	--	2.67%	--
NCREIF Property Index	--	11.92%	--	4.81%	--	0.00%	--	2.46	--	1,132.78	--	0.00%	--
Hedge Fund Comp	5.31%	6.24%	31	4.44%	52	3.71%	34	1.39	29	1.83	31	1.15%	1
HFRI Fund of Funds Composite Index	--	2.41%	76	4.09%	40	0.00%	76	0.58	70	0.78	70	0.00%	1
GAA Comp	20.55%	6.26%	47	8.75%	44	0.43%	56	0.71	53	0.92	53	3.16%	18
60% MSCI ACWI (Net)/40% CITI WGBI	--	6.50%	46	9.15%	53	0.00%	61	0.70	54	0.92	53	0.00%	1

Vermont State Teachers

Vermont State Teachers

5 Years Ending December 31, 2013

	% 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%	12.70%	39	10.11%	64	1.92%	21	1.25	57	1.92	49	1.57%	46
Policy Index	--	10.23%	83	9.49%	49	0.00%	89	1.07	97	1.56	98	0.00%	1
US Equity	16.57%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	18.71%	65	16.32%	37	0.00%	66	1.14	58	1.75	58	0.00%	1
Large Cap Comp	10.50%	21.18%	14	16.84%	73	2.18%	30	1.25	26	1.95	32	1.92%	2
S&P 500	--	17.94%	57	15.81%	47	0.00%	63	1.13	57	1.69	56	0.00%	1
Small/Mid Cap Comp	6.07%	22.16%	60	19.05%	55	3.99%	69	1.16	61	1.85	63	2.95%	1
Russell 2000	--	20.08%	83	20.93%	82	0.00%	95	0.96	91	1.47	93	0.00%	1
Int'l Equity Comp	9.49%	11.91%	88	18.28%	22	0.43%	82	0.65	80	0.94	85	2.42%	9
MSCI EAFE	--	12.44%	81	19.71%	63	0.00%	88	0.63	87	0.95	84	0.00%	1
Emerging Market Comp	6.13%	--	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets	--	14.79%	74	22.59%	53	0.00%	77	0.65	75	1.19	62	0.00%	1
US Fixed Income	24.58%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays Aggregate	--	4.44%	71	2.88%	41	0.00%	89	1.51	78	2.32	80	0.00%	1
Diversified Fixed	17.48%	8.59%	28	4.31%	68	3.34%	32	1.98	50	4.02	26	2.67%	54
Barclays Aggregate	--	4.44%	71	2.88%	41	0.00%	89	1.51	78	2.32	80	0.00%	1
High Yield Comp	4.17%	16.03%	72	6.50%	15	3.41%	17	2.45	16	4.17	39	3.75%	73
Barclays High Yield	--	18.93%	17	9.24%	88	0.00%	86	2.04	76	4.09	42	0.00%	1
Global Fixed Income Comp	2.93%	6.08%	55	7.25%	56	3.79%	61	0.83	67	1.43	56	3.00%	25
Citi WGBI	--	2.28%	99	6.56%	44	0.00%	99	0.33	99	0.43	99	0.00%	1
Emerging Market Debt	5.00%	--	--	--	--	--	--	--	--	--	--	--	--
JP Morgan EMBI Global TR	--	11.52%	63	7.66%	9	0.00%	51	1.49	47	2.16	41	0.00%	1
TIPS	2.90%	--	--	--	--	--	--	--	--	--	--	--	--
Barclays US TIPS	--	5.63%	52	5.91%	77	0.00%	72	0.94	72	1.43	57	0.00%	1
Total Real Estate	5.29%	--	--	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index	--	5.68%	--	6.85%	--	0.00%	--	0.82	--	1.12	--	0.00%	--
Hedge Fund Comp	5.31%	--	--	--	--	--	--	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	--	4.82%	78	4.18%	35	0.00%	78	1.13	68	1.54	70	0.00%	1
GAA Comp	20.55%	13.14%	12	10.21%	54	5.03%	16	1.28	19	1.99	19	3.93%	25
60% MSCI ACWI (Net)/40% CITI WGBI	--	10.02%	54	12.00%	80	0.00%	86	0.83	81	1.23	77	0.00%	1
Commodities	3.74%	--	--	--	--	--	--	--	--	--	--	--	--

Glossary of Investment Terminology

Of Portfolios/Observations¹ – The total number of data points that make up a specified universe

Allocation Index³ - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect² - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies)³ - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS)³ - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution³ - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity⁴ - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

Batting Average¹ - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

Brinson Fachler (BF) Attribution¹ - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution¹ - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp)⁴ - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

Correlation¹ - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net

Glossary of Investment Terminology

Coupon⁴ – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect¹ - Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument³ - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation¹ - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:

Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

Duration³ - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio¹ – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

Foreign Bond³ - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark⁴ - The highest peak in value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate⁴ - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects² - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median³ - The value (rate of return, market sensitivity, etc.) that exceeds one-half of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration³ - The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS)³ - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni)⁴ - A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change¹ – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee⁴ - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net

Glossary of Investment Terminology

Policy Index³ - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

Price to Book (P/B)⁴ - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings (P/E)³ - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)⁴ - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE)⁴ - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect² - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee¹ – A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

Total Effects² - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return¹ - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe³ - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation¹ – Standard Deviation of Positive Returns

Weighted Avg. Market Cap.⁴ - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield (%)³ - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity³ -The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net

Glossary of Investment Terminology—Risk Statistics

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:
 $(\text{Annualized Return of Portfolio} - \text{Annualized Return of Benchmark}) / \text{Annualized Standard Deviation}(\text{Period Portfolio Return} - \text{Period Benchmark Return})$. To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:
 $\text{Calculation Average } (X-Y) / \text{Downside Deviation } (X-Y) * 2$
Where X=Return Series Y = Return Series Y which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:
 $(\text{Annualized Return of Portfolio} - \text{Annualized Return of Risk Free}) / \text{Annualized Standard Deviation (Portfolio Returns)}$

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:
 $\text{Tracking Error} = \text{Standard Deviation } (X-Y) * \sqrt{(\# \text{ of periods per year})}$
Where X = periods portfolio return and Y = the period's benchmark return
For monthly returns, the periods per year = 12
For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:
 $(\text{Portfolio Average Return} - \text{Average Return of Risk-Free Rate}) / \text{Portfolio Beta}$

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

$\text{Upside Capture} = \text{Total Return}(\text{Fund Returns}) / \text{Total Returns}(\text{BM Return})$ when Period Benchmark Return is $> = 0$

$\text{Downside Capture} = \text{Total Return}(\text{Fund Returns}) / \text{Total Returns}(\text{BM Return})$ when Benchmark < 0

Data Source: InvestorForce

- **Past performance is no guarantee of future results.**
- **NEPC relies on the plan's custodian bank for portfolio pricing, calculation of accruals, and transaction information. Information on market indices and security characteristics is received from other 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.**
- **This report is provided as a management aid for the client's internal use only. Performance contained in this report does not constitute a recommendation by NEPC.**
- **This report may contain confidential or proprietary information and may not be copied or redistributed.**