



Investment Summary Quarter Ending March 31, 2014

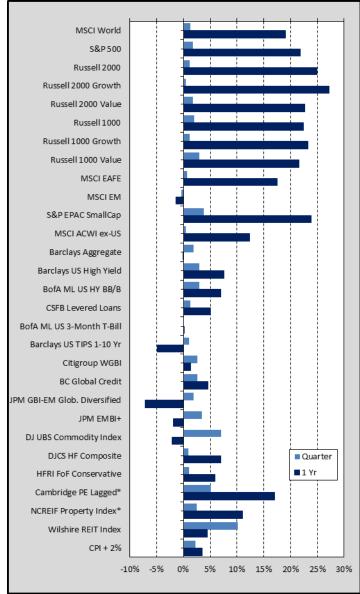
Don Stracke, CFA, CAIA, Senior Consultant Allan Martin, Partner, Anthony Ferrara, CAIA, Senior Analyst

# NEPC First Quarter Economic Environment

- GDP growth was revised downward for the First quarter, to 0.1%
  - Retail sales fell to a 1.3% year-over-year growth rate in February
  - The inventory-to-sales ratio has remained mostly flat since early 2010 and closed at 1.32 in January
  - Corporate Profits as a percent of GDP remained near secular highs at 12.7% at the end of the fourth quarter
  - The trade deficit increased marginally in January
- Unemployment rose to 6.7% in February; U-6 declined to 12.6% during the fourth quarter.
- Consumer confidence fell to 82.3 in December; the Case- Shiller home price index (as of 12/31) dipped slightly to 150.39 from its highest level (150.92) since the financial crisis
- Rolling 12 month CPI decreased to 1.1% at February end; capacity utilization rose slightly to 78.4% in the month
- Fed Funds rate remained at 0.25% while the 10 Yr. Treasury Yield finished December at 2.72%.
- The Federal Reserve Bank balance sheet increased in early 2014 while the European Central Bank balance sheet decreased
  - Large economies continue easing, Japan to the extreme, while the ECB tightens.
- S&P valuations rose in March and remained above the 10 year and long term averages, which are nearly equal at 16.35.
  - The cyclically adjusted Shiller PE Ratio, however, is above the long term average of 17.57 and slightly above the 10 year average of 22.99

# Market Environment – Q1 2014 Overview

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI World	World	1.3%	19.1%	10.2%	18.3%	6.8%
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Domestic Equity Benchman	ks					
S&P 500	Large Core	1.8%	21.9%	14.7%	21.2%	7.4%
Russell 2000	Small Core	1.1%	24.9%	13.2%	24.3%	8.5%
Russell 2000 Growth	Small Growth	0.5%	27.2%	13.6%	25.2%	8.9%
Russell 2000 Value	Small Value	1.8%	22.6%	12.7%	23.3%	8.1%
Russell 1000	Large Core	2.0%	22.4%	14.7%	21.7%	7.8%
Russell 1000 Growth	Large Growth	1.1%	23.2%	14.6%	21.7%	7.9%
Russell 1000 Value	Large Value	3.0%	21.6%	14.8%	21.8%	7.6%
		Qtr.	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	10 Yr.
nternational Equity Bench	marks_					
VISCI EAFE	International Developed	0.7%	17.6%	7.2%	16.0%	6.5%
MSCIEM	Emerging Equity	-0.4%	-1.4%	-2.9%	14.5%	10.1%
S&P EPAC SmallCap	Small Cap Int'l	3.8%	23.9%	9.6%	21.2%	9.4%
MSCI ACWI ex-US	World ex-US	0.5%	12.3%	4.1%	15.5%	7.1%
		Qtr.	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Domestic Fixed Income Be	nchmarks		,	_		
Barclays Aggregate	Core Bonds	1.8%	-0.1%	3.7%	4.8%	4.5%
Barclays US High Yield	High Yield	3.0%	7.5%	9.0%	18.2%	8.7%
BofA ML US HY BB/B	High Yield	3.0%	7.0%	8.5%	15.8%	7.9%
CSFB Levered Loans	Bank Loans	1.3%	5.0%	5.3%	12.2%	5.0%
BofA ML US 3-Month T-Bill	Cash	0.0%	0.1%	0.1%	0.1%	1.7%
Barclays US TIPS 1-10 Yr	Inflation	1.0%	-4.9%	2.2%	4.0%	4.0%
		Qtr.	<u>1 Yr.</u>	3 Yr.	<u>5 Yr.</u>	<u> 10 Yr.</u>
Global Fixed Income Bench	<u>ımarks</u>					
Citigroup WGBI	World Gov. Bonds	2.7%	1.4%	1.9%	3.8%	4.2%
BC Global Credit	Global Bonds	2.6%	4.6%	5.8%	9.9%	5.6%
JPM GBI-EM Glob. Div.	Em. Mkt. Bonds (Local)	1.9%	-7.1%	1.1%	9.8%	9.3%
JPM EMBI+	Em. Mkt. Bonds	3.5%	-1.9%	6.7%	10.9%	8.3%
		Qtr.	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Alternative Benchmarks	<u> </u>					
OJ UBS Commodity Index	Commodity	7.0%	<b>-2.1</b> %	-7.4%	4.2%	0.4%
OJCS HF Composite	Hedge Fund	0.9%	7.0%	4.4%	8.7%	6.1%
HFRI FoF Conservative	Fund of Funds	1.1%	5.9%	2.7%	4.6%	2.6%
Cambridge PE Lagged*	Private Equity	5.1%	17.0%	15.5%	10.6%	15.2%
NCREIF Property Index*	Real Estate	2.5%	11.0%	11.9%	5.7%	8.4%
Nilshire REIT Index	REIT	10.1%	4.4%	10.5%	29.2%	8.2%
CPI + 2%	Inflation/Real Assets	2.3%	3.5%	3.9%	4.2%	4.6%
*As of 12/31/2013						





### NEPC First Quarter 2014 Market Review

### Global Equities

- US stocks oscillated back and forth in the first quarter amid further guidance from the Federal Reserve.
- The S&P 500 Index rose 1.8%, while the Russell 2000 gained a modest 1.1%.
- International equities lagged US markets, returning 0.7%, as measured by the MSCI EAFE Index.
- Europe led non-US equities as France and peripheral countries recorded robust gains. Italy and Ireland were two of the best markets for the quarter, with stocks returning roughly 14% so far this year.
- Despite rallying in March, emerging markets ended the quarter down 0.4% following Russia's takeover of Crimea, and the continuing economic slowdown in China. Russia was the worst performing market with a -14.4% return, while Indonesia gained a hefty 21.3%.

### Global Fixed Income

- Bond markets rallied in the first quarter as investors snapped up safer, higher quality assets amid concerns around the crisis in Ukraine, an economic slowdown in China, and the unseasonably harsh winter in the US.
- The 10-year US Treasury yield decreased 31 basis points to 2.72% during the first quarter.
- The US Credit Index gained 2.9% and the Long Duration Credit Index returned 6.3% in the first quarter.
   High yield bonds returned 3.0%.
- Investment grade credit spreads narrowed to 103 basis points, the lowest they have been since before the financial crisis. The yield spread on high yield bonds over Treasuries fell to a near record low of 3.58%.
- Intermediate-term Treasury Inflation-Protected Securities, or TIPS, gained 1.0% during the quarter.
- The Credit Suisse Leveraged Loan Index gained 1.3% during the first quarter.
- Local currency debt, as measured by the JP Morgan GBI-EM Index, gained 1.9%. Hard currency debt, boosted by declining Treasury yields, outperformed local currency debt during the quarter, posting returns of 3.5%.



# NEPC First Quarter 2014 Market Review

### Commodity Markets

- Commodities started the year with a bang, with the DJ-UBS Index returning 7.2% in the first quarter.
- Fears of a grain shortage following Russia's invasion of Ukraine powered returns of 8.4% in the grain sector.
- Heating oil rallied early in the quarter on the heels of unseasonably cold weather but subsequently retreated in March as temperatures returned to more normal levels, resulting in losses of 1.8% for energy.
- Precious metals declined 4% as copper prices fell amid the slowdown in China.

### Hedge Funds

- Hedge funds turned in a positive performance in the first quarter, with the Credit Suisse Hedge Fund Composite returning 0.9% compared to 1.8% for the S&P 500.
- Most hedge fund strategies were in the black, with the exceptions being the Credit Suisse Managed
   Futures Index, which lost 4.3%, and the Credit Suisse Emerging Markets Index with returns of -2.0%.
- The broad Credit Suisse Long-Short Equity Index returned 1.6% for the quarter, with strong returns in January and February from healthcare and technology, followed by a sharp selloff in March.
- This year, we reduced directional credit exposure, and are favoring more hedged exposure to equities.
   We believe there may be greater opportunity in stock markets for individual security selection on both the long- and short-side in the future.

### NEPC First Quarter 2014 Market Review

### Private Markets

- Private equity fund raising got off to a strong start in the first quarter with new commitments—at around \$75.6 billion—keeping pace with commitments made in 2013.
- Asian fundraising totaled \$10.8 billion in the first quarter, getting a shot in the arm as three firms raised over \$1.0 billion each; Europe saw \$12.0 billion of new commitments of which 60% is going to buyout and growth equity funds.
- Globally, buyout and growth equity commitments totaled \$33.3 billion, representing 44% of all funds raised so far this year, while energy, natural resources and infrastructure accounted for 19%.
- Venture capital fundraising hit \$13.2 billion powered by five firms raising over \$5 billion.
- Mezzanine funds, at \$3.2 billion, accounted for only 4% of all new capital raised.
- Secondary funds raised only \$3.1 billion in the first quarter, but we expect this number to increase to more than \$20 billion as the year progresses with several large funds launching new fund raises.

### Real Estate

- NEPC remains neutral on core strategies in the US, and positive on non-core strategies, for instance, value-add and opportunistic.
- Real estate debt strategies are appealing, particularly in Europe's distressed lending environment, although currency risk is a potential consideration.

### Highlights of First Quarter Happenings at NEPC

THE ALTERNATIVE ROUTE: A SMOOTHER RIDE

### **NEPC Research**

### **Recent White Papers Posted**

- 4Q Market Thoughts "1997, 2007, or Something Else Altogether?" (January 2014)
- Moving in Different Directions: NEPC's 2014 Asset Allocation Letter (January 2014), NEPC's Asset Allocation Committee
- Annual Chairman's Letter (March 2014), Richard M. Charlton, Chairman
- Overlay Strategies: Increasing Portfolio Diversification Through Derivatives (March 2014), Brian Roberts, CAIA, Senior Consultant
- The Alternative Route: A Smoother Ride for Defined Contribution Plans (April 2014), Rob J. Fishman, CFA, Partner; Aaron S. Keel, CFA, Senior Analyst; Deirdre L. Pomerleau, Analyst

### **NEPC's 19th Annual Client Conference**

- May 13 and May 14, 2014
- Boston Convention Center
- Headline Speakers:
  - David M. Rubenstein, Co-Founder and Co-CEO, The Carlyle Group
  - Perry M. Traquina, CFA, Chairman and CEO, Managing Partner, Wellington Management Company
- Register at www.nepc.com

# NEPC'S 19<sup>TH</sup> ANNUAL CLIENT CONFERENCE May 13th & 14th at the Boston Convention Center REGISTER NOW!

### **Professional Staff Updates**

 Tim McCusker, CFA, CAIA, FSA named Chief Investment Officer





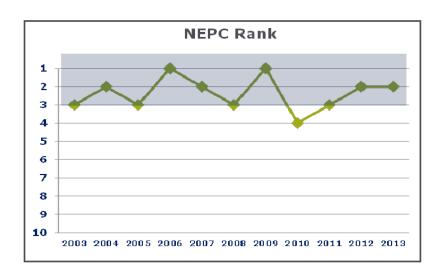
# **NEPC** Recognitions

# Top Three Again!

Thanks to you, our wonderful clients, NEPC has ranked in the Greenwich top three overall for 10 of the past 11 years.



- Greenwich Associates surveys ~ 1,000 large fund sponsors every year, regarding 3 broad areas:
  - \* Investment Consulting
  - Manager Selection
  - \* Client Servicing
- NEPC is recognized for industry-leading stability and excellence:
  - Ranked #2 overall in 2013 and 2012\*
  - One of only two firms to rank in the top three in nine of the last 10 years\*
  - \* Ranked #1 for proactive advice and innovative ideas in nine of the last 11 years\*
  - \* Ranked #1 for long-term asset allocation in six of the last 11 years and ranked top three in 10 of the last 11 years\*



NEPC 2013 Ranking among 10 Largest Consulting Firms								
Category	Rank							
Understanding Goals and Objectives	#1							
Long-term Asset Allocation	#1							
Proactive Advice and Innovative Ideas	#1							
Capability of Consultant Assigned to Fund	#1							
Credibility with Investment Committee	#1							
Knowledge of Investment Managers	#1							

\* Rankings versus 10 largest consulting firms
Greenwich Associates is an independent research firm that interviews fund sponsors. Their rankings do not represent an endorsement of any consulting firm.

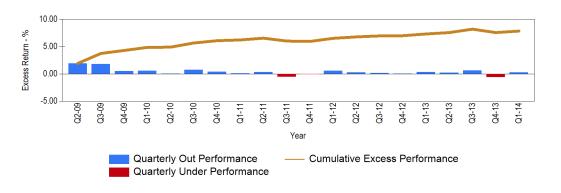


# Total Fund Performance Summary (Net)

	Market Value	3 Mo F	Rank	YTD	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs I	Rank	10 Yrs	Rank	Return	Since
Total Fund	\$4,122,353,883	2.1%	19	2.1%	19	13.8%	2	14.1%	5	9.9%	5	16.6%	2	6.8%	20	8.4%	Apr-94
Policy Index		1.8%	43	1.8%	43	13.5%	4	13.5%	8	9.3%	17	14.9%	10	6.9%	12	8.3%	Apr-94
Allocation Index		2.0%	25	2.0%	25	12.3%	23	12.4%	22	8.8%	30	13.9%	53	6.6%	35		Apr-94
InvestorForce Public DB > \$1B Net Median		1.7%		1.7%		11.5%		11.0%		8.3%		14.0%		6.3%		7.8%	Apr-94

- Over the last 12 months, the Fund achieved its primary objective of surpassing the 7.75% assumed rate. The Fund had a return of 14.1%, ranking in the 5th percentile and outperforming the policy index by 60 basis points. The Fund's assets totaled approximately \$4.1 billion.
- Over the past three years, the Fund returned 9.9% per annum ranking in the 5th percentile amongst a universe of Public Funds with over \$1 billion. This return outperformed the policy index by 60 basis points.
- For the five year period, the Fund returned 16.6% per annum ranking in the 2nd percentile at the end of the first quarter, outperforming the policy index by 170 basis points.

### **Quarterly and Cumulative Excess Performance**



### 3 Years Ending March 31, 2014

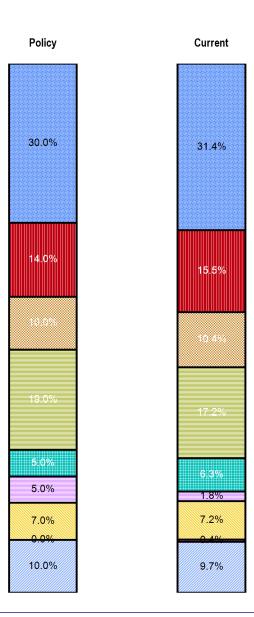
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	9.86%	5	8.96%	89	1.09	35	1.53	34
Policy Index	9.31%	17	8.98%	89	1.03	49	1.48	43
InvestorForce Public DB > \$1B Net Median	8.26%		7.66%		1.02		1.42	

### 5 Years Ending March 31, 2014

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	16.57%	2	10.45%	94	1.58	53	2.61	36
Policy Index	14.92%	10	9.94%	84	1.49	73	2.47	62



# Total Fund Asset Allocation vs. Policy Targets



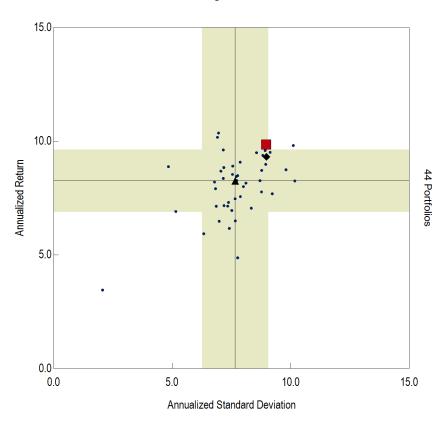
### **Asset Allocation vs. Target**

	Current	Current	Policy	Difference *	Policy Range	Within Range
U.S. Equity	\$1,295,202,436	31.4%	30.0%	1.4%	26.0% - 34.0%	Yes
Non-US Equity	\$638,973,593	15.5%	14.0%	1.5%	11.0% - 17.0%	Yes
Global Equity	\$429,153,673	10.4%	10.0%	0.4%	7.0% - 13.0%	Yes
U.S. Fixed Income	\$708,924,237	17.2%	19.0%	-1.8%	15.0% - 23.0%	Yes
Global Bonds	\$260,965,843	6.3%	5.0%	1.3%	3.0% - 7.0%	Yes
Private Equity	\$75,649,615	1.8%	5.0%	-3.2%	3.0% - 7.0%	No
Real Estate	\$298,330,294	7.2%	7.0%	0.2%	4.0% - 10.0%	Yes
Cash	\$17,135,793	0.4%	0.0%	0.4%	0.0% - 3.0%	Yes
Liquid Alternatives	\$398,018,399	9.7%	10.0%	-0.3%	7.0% - 13.0%	Yes
Total	\$4,122,353,883	100.0%	100.0%			

\*Difference between Policy and Current Allocation

# Total Fund Risk/Return

### 3 Years Ending March 31, 2014



_	Total	Fund

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

### 3 Years Ending March 31, 2014

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Fund	9.86%	5	8.96%	89
Policy Index	9.31%	17	8.98%	89
InvestorForce Public DB > \$1B Net Median	8.26%		7.66%	

### 3 Years Ending March 31, 2014

	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	1.09	35	1.54	34
Policy Index	1.03	49	1.49	43
InvestorForce Public DB > \$1B Net Median	1.02		1.42	



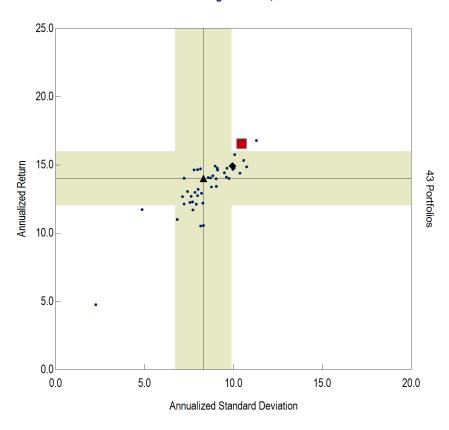
# Total Fund Risk Statistics vs. Peer Universe

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

Anizd Retur	'n	Anizd A	Alpha	Anlzd Standar	rd Deviation	Shar	pe Ratio	Sortin	o Ratio	Ве	ta
11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5		3.4 2.9 2.4 1.9 1.4 0.9 0.4 -0.1 -0.6 -1.1 -1.6 -2.1 -2.6		5.0 6.0 7.0 8.0 9.0 10.0		1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 1.0 0.9 0.8 0.7 0.6		2.7 2.5 2.3 2.1 1.9 1.7 1.5 1.3 1.1 0.9 0.7		0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4	
%tile  ↑ Policy Index Value %tile  Universe 5th %tile 25th %tile Median 75th %tile	9.86 5	● Total Fund Value %tile	0.58 16 0.00 42 1.96 0.44 -0.16 -0.73 -1.61	● Total Fund Value %tile  ♣ Policy Index Value %tile  Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	8.96 89 8.98 89 5.33 7.13 7.66 8.59 9.71	● Total Fund Value %tile  ♣ Policy Index Value %tile  Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	1.09 35 1.03 49 1.48 1.15 1.02 0.94 0.83	● Total Fund Value %tile  ▲ Policy Index Value %tile  Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	1.54 34 1.49 43 2.17 1.62 1.42 1.30 1.12	● Total Fund Value %tile  ◆ Policy Index Value %tile  Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	1.00 27 1.00 30 0.80 0.99 1.03 1.07 1.15

# Total Fund Risk/Return

5 Years Ending March 31, 2014



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

### 5 Years Ending March 31, 2014

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	
Total Fund	16.57%	2	10.45%	94	
Policy Index	14.92%	10	9.94%	84	
InvestorForce Public DB > \$1B Net Median	14.01%		8.31%		

### 5 Years Ending March 31, 2014

	Sharpe Ratio	Rank	Sortino Ratio	Rank	
Total Fund	1.58	53	2.62	36	
Policy Index	1.49	73	2.48	62	
InvestorForce Public DB > \$1B Net Median	1.59		2 55		



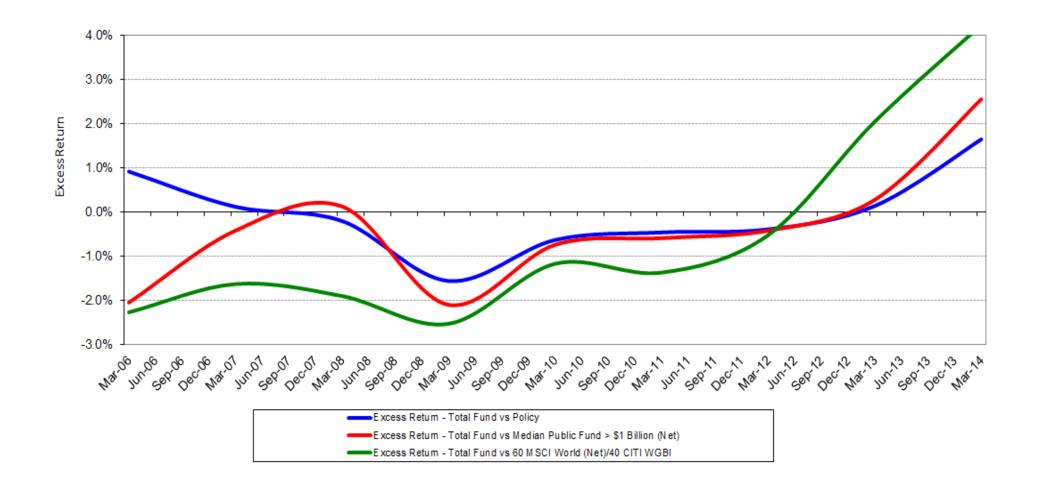
# Total Fund Risk Statistics vs. Peer Universe

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

Anizd I	Return	Anlzd /	Alpha	Anlzd Standa	rd Deviation	Sharp	e Ratio	Sortino	Ratio	Ве	ta
18.0 17.0 16.0		3.6 3.1 2.6 2.1		5.9 6.4 6.9 7.4		2.2 2.1 2.0 1.9		3.9 3.7 3.5 3.3		0.6 0.7 0.8	
15.0 14.0 13.0 12.0		1.6 1.1 0.6 0.1 -0.4		7.9 8.4 8.9 9.4 9.9		1.8 1.7 1.6 1.5		3.1 2.9 2.7 2.5 2.3		0.9 1.0 1.1 1.2	
11.0		-0.9 -1.4 -1.9	1	10.9 11.4 11.9		1.3		2.1 1.9 1.7		1.3	
<ul> <li>Total Fund Value %tile</li> <li>Policy Index Value %tile</li> </ul>	16.57 2 14.92 10	<ul> <li>Total Fund         Value         %tile</li> <li>Policy Index         Value         %tile</li> </ul>	0.95 24 0.00 77	<ul> <li>Total Fund Value %tile</li> <li>Policy Index Value %tile</li> </ul>	10.45 94 9.94 84	<ul><li>Total Fund Value %tile</li><li>Policy Index Value %tile</li></ul>	1.58 53 1.49 73	● Total Fund Value %tile ▲ Policy Index Value %tile	2.62 36 2.49 62	<ul><li>Total Fund Value %tile</li><li>Policy Index Value %tile</li></ul>	1.05 73 1.00 46
Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	15.71 14.66 14.01 12.48 10.60	Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	2.40 0.84 0.51 0.02 -0.88	Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	6.86 7.75 8.31 9.54 10.55	Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	1.92 1.65 1.59 1.48 1.38	Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	3.31 2.78 2.55 2.36 2.07	Universe 5th %tile 25th %tile Median 75th %tile 95th %tile	0.79 0.95 1.01 1.05 1.10

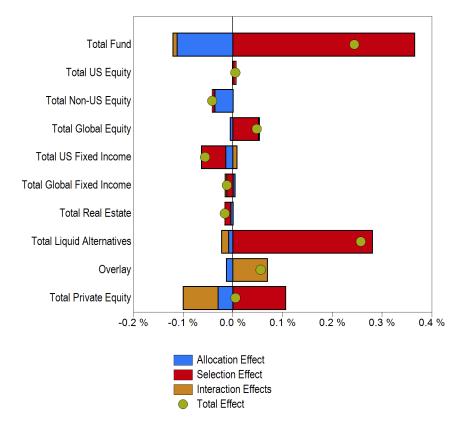


# Rolling 5 Year Excess Returns- Net of Fees



# Total Fund Attribution Analysis

Attribution Effects
3 Months Ending March 31, 2014



Attribution Summary 3 Months Ending March 31, 2014

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total US Equity	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Non-US Equity	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Global Equity	1.6%	1.1%	0.5%	0.1%	0.0%	0.0%	0.0%
Total US Fixed Income	1.6%	1.8%	-0.2%	0.0%	0.0%	0.0%	-0.1%
Total Global Fixed Income	2.2%	2.4%	-0.2%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	2.3%	2.5%	-0.2%	0.0%	0.0%	0.0%	0.0%
Total Liquid Alternatives	5.3%	2.4%	2.9%	0.3%	0.0%	0.0%	0.3%
Overlay	8.0%	0.0%	8.0%	0.0%	0.0%	0.1%	0.1%
Total Private Equity	4.9%	2.8%	2.1%	0.1%	0.0%	-0.1%	0.0%
Total	2.1%	1.9%	0.2%	0.4%	-0.1%	0.0%	0.2%

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 return shown on the performance summary.

The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index weights the

underlying policy indices of each option in the plan and the respective benchmark return.

The allocation, selection, and intersection effects are calculated using the custom index described above along with the policy or target weight of each composite.

May not add due to rounding.



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Fund	4,122,353,883	100.0	2.1	19	2.1	19	13.8	2	14.1	5	9.9	5	16.6	2	6.8	20	8.4	Apr-94
Policy Index			<u>1.8</u>	43	<u>1.8</u>	43	<u>13.5</u>	4	<u>13.5</u>	8	<u>9.3</u>	17	<u>14.9</u>	10	<u>6.9</u>	12	<u>8.3</u>	Apr-94
Over/Under			0.3		0.3		0.3		0.6		0.6		1.7		-0.1		0.1	
InvestorForce Public DB > \$1B Net Median			1.7		1.7		11.5		11.0		8.3		14.0		6.3		7.8	Apr-94
Total Fund ex Clifton	4,100,330,203	99.5	2.0		2.0		13.5		13.6		9.8		16.2		6.7		8.3	Apr-94
Total Fund ex Private Equity	4,046,704,268	98.2	2.0	22	2.0	22	12.5	22	12.4	22	-				-		14.0	Jan-12
Policy Index			<u>1.8</u>	43	<u>1.8</u>	43	<u>13.5</u>	4	<u>13.5</u>	8	<u>9.3</u>	17	<u>14.9</u>	10	<u>6.9</u>	12	<u>14.2</u>	Jan-12
Over/Under			0.2		0.2		-1.0		-1.1								-0.2	
InvestorForce Public DB > \$1B Net Median			1.7		1.7		11.5		11.0		8.3		14.0		6.3		12.6	Jan-12
Total US Equity	1,295,202,436	31.4	2.0	42	2.0	42	20.1	52	23.1	54	14.9	33	22.7	46	7.4	80	9.0	Dec-93
Total U.S. Equity Benchmark			<u>2.0</u>	43	<u>2.0</u>	43	<u>19.3</u>	61	<u>22.6</u>	58	<u>14.6</u>	37	<u>22.0</u>	54	<u>8.0</u>	68	9.4	Dec-93
Over/Under			0.0		0.0		0.8		0.5		0.3		0.7		-0.6		-0.4	5 00
eA All US Equity Net Median	44 44= 000		1.7	0=	1.7	0=	20.2	0=	23.5	0.0	13.8		22.4		8.7	10	10.6	Dec-93
BlackRock Extended Equity Index	44,447,002	1.1	2.7	27	2.7	27	22.7	<mark>27</mark>	25.5	32	14.5	25	25.8	23	10.1	40	13.0	Oct-02
Dow Jones U.S. Completion Total Stock Market			<u>2.8</u>	23	<u>2.8</u>	23	<u>22.7</u>	26	<u>25.5</u>	32	<u>14.3</u>	27	<u>25.7</u>	26	<u>10.0</u>	41	<u>13.0</u>	Oct-02
Over/Under			-0.1		-0.1		0.0		0.0		0.2		0.1		0.1		0.0	
eA US Small-Mid Cap Equity Net Median		_	1.5		1.5		20.7		23.2		12.7		24.0		9.7		12.1	Oct-02
Western U.S. Index Plus	124,000,120	3.0	2.0	42	2.0	42	19.1	63	22.3	61	15.6	24	28.4	8			2.3	May-07
S&P 500			<u>1.8</u>	47	<u>1.8</u>	47	<u>18.4</u>	69	<u>21.9</u>	64	<u>14.7</u>	37	<u>21.2</u>	66	<u>7.4</u>	80	<u>5.3</u>	May-07
Over/Under			0.2		0.2		0.7		0.4		0.9		7.2				-3.0	
eA All US Equity Net Median			1.7		1.7		20.2		23.5		13.8		22.4		8.7		6.3	May-07
BlackRock Equity Market Fund	1,126,755,313	27.3	2.0	43	2.0	43	19.3	60	22.6	57	14.6	37	22.0	<del>54</del>			6.9	Dec-07
Dow Jones U.S. Total Stock Market			<u>2.0</u>	43	<u>2.0</u>	43	<u>19.2</u>	61	<u>22.6</u>	58	<u>14.6</u>	37	<u>22.0</u>	54	<u>8.0</u>	67	<u>6.9</u>	Dec-07
Over/Under			0.0		0.0		0.1		0.0		0.0		0.0				0.0	
eA All US Equity Net Median			1.7		1.7		20.2		23.5		13.8		22.4		8.7		7.4	Dec-07

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

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

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



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Return (%)	Since
Total Non-US Equity	638,973,593	15.5	0.5	63	0.5	63	15.4	84	12.2	91	5.2	89	15.8	76	7.0	63	7.0	Mar-94
Total Non-US Equity Benchmark			<u>0.5</u>	63	<u>0.5</u>	63	<u>15.9</u>	80	<u>12.3</u>	90	<u>4.1</u>	91	<u>15.5</u>	81	<u>7.1</u>	55	<u>5.7</u>	Mar-94
Over/Under			0.0		0.0		-0.5		-0.1		1.1		0.3		-0.1		1.3	
eA All EAFE Equity Net Median			1.0		1.0		19.9		19.4		8.8		17.4		7.3		7.1	Mar-94
BlackRock ACWI ex-U.S. Index	278,092,937	6.7	0.9	45	0.9	45	16.6	56	13.0	70	4.5	82	16.2	64			2.2	Mar-07
MSCI ACWI ex USA			<u>0.5</u>	54	<u>0.5</u>	54	<u>15.9</u>	62	<u>12.3</u>	71	<u>4.1</u>	86	<u>15.5</u>	74	<u>7.1</u>	90	<u>1.7</u>	Mar-07
Over/Under			0.4		0.4		0.7		0.7		0.4		0.7				0.5	
eA ACWI ex-US All Cap Equity Net Median			0.7		0.7		16.9		15.5		6.4		17.5		8.3		3.1	Mar-07
Sprucegrove	189,498,091	4.6	2.0	23	2.0	23	17.5	70	14.6	82	7.4	68	17.4	39	8.0	32	9.0	Mar-02
MSCI EAFE			<u>0.7</u>	60	<u>0.7</u>	60	<u>18.7</u>	61	<u>17.6</u>	68	<u>7.2</u>	71	<u>16.0</u>	63	<u>6.5</u>	89	<u>7.1</u>	Mar-02
Over/Under			1.3		1.3		-1.2		-3.0		0.2		1.4		1.5		1.9	
MSCI ACWI ex USA			0.5	61	0.5	61	15.9	76	12.3	91	4.1	88	15.5	67	7.1	46	7.8	Mar-02
eA EAFE All Cap Equity Net Median			1.0		1.0		19.2		19.8		9.0		17.0		7.0		8.6	Mar-02
Hexavest	80,003,969	1.9	-0.7	84	-0.7	84	14.0	89	12.5	90	6.2	80					6.5	Dec-10
MSCI EAFE			<u>0.7</u>	60	<u>0.7</u>	60	<u>18.7</u>	61	<u>17.6</u>	64	<u>7.2</u>	71	<u>16.0</u>	73	<u>6.5</u>	82	<u>7.7</u>	Dec-10
Over/Under			-1.4		-1.4		-4.7		-5.1		-1.0						-1.2	
eA All EAFE Equity Net Median			1.0		1.0		19.9		19.4		8.8		17.4		7.3		9.2	Dec-10
Walter Scott	91,378,596	2.2	-2.7	92	-2.7	92	7.6	99	3.9	99	5.4	71					5.5	Dec-10
MSCI ACWI ex USA			<u>0.5</u>	54	<u>0.5</u>	54	<u>15.9</u>	62	<u>12.3</u>	71	<u>4.1</u>	86	<u>15.5</u>	74	<u>7.1</u>	90	<u>4.9</u>	Dec-10
Over/Under			-3.2		-3.2		-8.3		-8.4		1.3						0.6	
eA ACWI ex-US All Cap Equity Net Median			0.7		0.7		16.9		15.5		6.4		17.5		8.3		7.1	Dec-10

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



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD I (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%) F	Rank	10 Yrs (%) F	Rank	Return (%)	Since
Total Global Equity	429,153,673	10.4	1.6	49	1.6	49	17.0	55	16.8	55	9.4	57	15.7	88			6.0	May-05
MSCI ACWI			<u>1.1</u>	58	<u>1.1</u>	58	<u>17.1</u>	55	<u>16.6</u>	58	<u>8.6</u>	69	<u>17.8</u>	61	<u>7.0</u>	73	<u>6.9</u>	May-05
Over/Under			0.5		0.5		-0.1		0.2		8.0		-2.1				-0.9	
eA All Global Equity Net Median			1.5		1.5		17.7		17.7		9.9		18.8		8.2		7.9	May-05
GMO Global Equity	213,996,782	5.2	2.0	38	2.0	38	16.9	56	16.8	56	10.4	46	16.2	81			7.6	Apr-05
MSCI ACWI			<u>1.1</u>	58	<u>1.1</u>	58	<u>17.1</u>	55	<u>16.6</u>	58	<u>8.6</u>	69	<u>17.8</u>	61	<u>7.0</u>	73	<u>6.9</u>	Apr-05
Over/Under			0.9		0.9		-0.2		0.2		1.8		-1.6				0.7	
eA All Global Equity Net Median		_	1.5		1.5		17.7		17.7		9.9		18.8		8.2		7.9	Apr-05
BlackRock MSCI ACWI Equity Index	215,156,890	5.2	1.2	56	1.2	56	17.2	54	17.0	54			-				-	May-12
MSCI ACWI			<u>1.1</u>	58	<u>1.1</u>	58	<u>17.1</u>	55	<u>16.6</u>	58	<u>8.6</u>	69	<u>17.8</u>	61	<u>7.0</u>	73	<u>21.6</u>	May-12
Over/Under			0.1		0.1		0.1		0.4									
eA All Global Equity Net Median			1.5		1.5		17.7		17.7		9.9		18.8		8.2		22.2	May-12



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD I (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total US Fixed Income	708,924,237	17.2	1.6	55	1.6	55	3.5	37	1.3	32	5.6	32	10.9	23	6.0	23	6.5	Feb-94
Barclays Aggregate			<u>1.8</u>	48	<u>1.8</u>	48	<u>2.3</u>	58	<u>-0.1</u>	78	<u>3.7</u>	58	<u>4.8</u>	63	<u>4.5</u>	52	<u>5.8</u>	Feb-94
Over/Under			-0.2		-0.2		1.2		1.4		1.9		6.1		1.5		0.7	F-1-04
eA All US Fixed Inc Net Median	054 505 700	0.0	1.8	00	1.8	00	2.6	0.7	0.5	20	4.1	20	5.9	20	4.5	00	5.6	Feb-94
Western	254,535,703	6.2	2.8	23	2.8	23	3.6	37 50	1.0	36 70	5.6	32 50	9.5	30	5.4	29 52	6.6	Dec-96
Barclays Aggregate Over/Under			<u>1.8</u> 1.0	48	<u>1.8</u> 1.0	48	<u>2.3</u> 1.3	58	<u>-0.1</u> 1.1	78	<u>3.7</u> 1.9	58	<u>4.8</u> 4.7	63	<u>4.5</u> 0.9	52	<u>5.7</u> 0.9	Dec-96
eA All US Fixed Inc Net Median			1.8		1.8		1.3 2.6		0.5		4.1		5.9		4.5		5.5	Dec-96
BlackRock U.S. Debt Fund	133,585,123	3.2	1.9	47	1.0	47	2.2	59	-0.1	78	3.8	57	4.9	61	4.5	50	5.7	Nov-95
Barclays Aggregate	100,000,120	0.2	<u>1.8</u>	48	<u>1.8</u>	48	<u>2.3</u>	58	-0.1	78	<u>3.7</u>	58	<u>4.8</u>	63	<u>4.5</u>	52	<u>5.7</u>	Nov-95
Over/Under			0.1	70	0.1	70	-0.1	00	0.0	, ,	0.1	00	0.1	00	0.0	02	0.0	7107 00
eA All US Fixed Inc Net Median			1.8		1.8		2.6		0.5		4.1		5.9		4.5		5.4	Nov-95
Reams	251,277,712	6.1	-0.2	99	-0.2	99	2.2	60	2.1	25	6.5	26	13.1	16	6.7	16	6.6	Sep-01
Reams Custom Index			<u>0.1</u>	97	<u>0.1</u>	97	<u>0.2</u>	97	<u>0.3</u>	61	<u>3.7</u>	59	<u>4.8</u>	63	<u>4.4</u>	53	<u>4.9</u>	Sep-01
Over/Under			-0.3		-0.3		2.0		1.8		2.8		8.3		2.3		1.7	
Barclays Aggregate			1.8	48	1.8	48	2.3	58	-0.1	78	3.7	58	4.8	63	4.5	52	4.9	Sep-01
eA All US Fixed Inc Net Median			1.8		1.8		2.6		0.5		4.1		5.9		4.5		4.9	Sep-01
Loomis Sayles Multi Strategy	69,525,699	1.7	3.8	10	3.8	10	7.0	15	2.6	21	7.4	20	14.8	11			7.5	Jul-05
Loomis Custom Index			<u>2.2</u>	35	<u>2.2</u>	35	<u>4.2</u>	30	<u>2.2</u>	25	<u>5.3</u>	34	<u>8.6</u>	34			<u>5.9</u>	Jul-05
Over/Under			1.6		1.6		2.8		0.4		2.1		6.2				1.6	
Barclays Aggregate			1.8	48	1.8	48	2.3	58	-0.1	78	3.7	58	4.8	63	4.5	52	4.8	Jul-05
eA All US Fixed Inc Net Median			1.8		1.8		2.6		0.5		4.1		5.9		4.5		4.9	Jul-05

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Global Fixed Income	260,965,843	6.3	2.2	83	2.2	83	5.1	56	1.2	61							1.9	Jun-12
Barclays Global Aggregate Over/Under			<u>2.4</u> -0.2	71	<u>2.4</u> -0.2	71	<u>4.8</u> 0.3	61	<u>1.9</u> -0.7	53	<u>2.8</u>	77	<u>5.1</u>	86	<u>4.5</u>	82	<u>1.4</u> 0.5	Jun-12
eA All Global Fixed Inc Net Median			2.8		2.8		5.2		2.0		4.8		7.7		5.3		4.2	Jun-12
Loomis Sayles Global Fixed Income	93,795,419	2.3	2.4	77	2.4	77	4.6	67	1.0	64				-			2.2	Jun-12
Barclays Global Aggregate Over/Under			<u>2.4</u> 0.0	77	<u>2.4</u> 0.0	77	<u>4.8</u> -0.2	64	<u>1.9</u> -0.9	51	<u>2.8</u>	75	<u>5.1</u>	85	<u>4.5</u>	78	<u>1.4</u> 0.8	Jun-12
eA Global Fixed Inc Unhedged Net Median			2.9		2.9		5.3		1.9		4.8		7.7		5.1		4.2	Jun-12
PIMCO Global Fixed Income	126,063,071	3.1	2.5	68	2.5	68	5.2	54	1.1	63			-				-0.8	Sep-12
Barclays Global Aggregate Over/Under			<u>2.4</u> 0.1	77	<u>2.4</u> 0.1	77	<u>4.8</u> 0.4	64	<u>1.9</u> -0.8	51	<u>2.8</u>	75	<u>5.1</u>	85	<u>4.5</u>	78	<u>-0.5</u> -0.3	Sep-12
eA Global Fixed Inc Unhedged Net Median			2.9		2.9		5.3		1.9		4.8		7.7		5.1		2.1	Sep-12
Loomis Strategic Alpha	41,107,353	1.0	0.5	97	0.5	97	2.3	95	-								2.0	Jul-13
Barclays Global Aggregate Over/Under			<u>2.4</u> -1.9	77	<u>2.4</u> -1.9	77	<u>4.8</u> -2.5	64	<u>1.9</u>	51	<u>2.8</u>	75	<u>5.1</u>	85	<u>4.5</u>	78	<u>3.5</u> -1.5	Jul-13
eA Global Fixed Inc Unhedged Net Median			2.9		2.9		5.3		1.9		4.8		7.7		5.1		4.3	Jul-13



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	3 Mo (%) Rank	YTD (%) Rank	Fiscal YTD Rank (%)	1 Yr (%) Rank	3 Yrs (%) Rank	5 Yrs (%) Rank	10 Yrs (%) Rank	Return (%)	Since
Total Real Estate	298,330,294	7.2	2.3	2.3	7.7	10.9	10.7	5.8	5.1	7.6	Mar-94
Total Real Estate Benchmark			<u>2.5</u>	<u>2.5</u>	<u>9.5</u>	<u>13.7</u>	<u>13.0</u>	<u>7.3</u>	<u>7.2</u>	<u>8.7</u>	Mar-94
Over/Under			-0.2	-0.2	-1.8	-2.8	-2.3	-1.5	-2.1	-1.1	
Prudential Real Estate	97,522,348	2.4	2.3	2.3	9.4	12.9	12.4	6.2		4.6	Jun-04
NCREIF-ODCE			<u>2.5</u>	<u>2.5</u>	<u>9.5</u>	<u>13.7</u>	<u>13.0</u>	<u>7.3</u>	<u>7.2</u>	<u>7.0</u>	Jun-04
Over/Under			-0.2	-0.2	-0.1	-0.8	-0.6	-1.1		-2.4	
UBS Real Estate	192,583,732	4.7	2.3	2.3	6.9	10.3	9.8	6.4	6.9	7.1	Mar-03
NCREIF-ODCE			<u>2.5</u>	<u>2.5</u>	<u>9.5</u>	<u>13.7</u>	<u>13.0</u>	<u>7.3</u>	<u>7.2</u>	<u>7.4</u>	Mar-03
Over/Under			-0.2	-0.2	-2.6	-3.4	-3.2	-0.9	-0.3	-0.3	
RREEF	8,224,214	0.2	3.8	3.8	11.4	16.9	28.5	4.6		-10.0	Sep-07
NCREIF-ODCE			<u>2.5</u>	<u>2.5</u>	<u>9.5</u>	<u>13.7</u>	<u>13.0</u>	<u>7.3</u>	<u>7.2</u>	<u>1.9</u>	Sep-07
Over/Under			1.3	1.3	1.9	3.2	15.5	-2.7		-11.9	

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



# Total Fund Performance Detail (Net)

	Market Value (\$)	% of Portfolio	<sup>3 Mo</sup> (%) R	ank	YTD (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	ank	3 Yrs (%)	ank	<sup>5</sup> Yrs (%)	Rank	10 Yrs (%) F	Rank	Return (%)	Since
Total Liquid Alternatives	398,018,399	9.7	5.3		5.3		13.4				-	-			-		16.8	Apr-13
CPI + 4% (Unadjusted)			<u>2.4</u>		<u>2.4</u>		<u>4.2</u>		<u>5.6</u>		<u>5.9</u>		<u>6.2</u>		<u>6.4</u>		<u>5.3</u>	Apr-13
Over/Under		_	2.9		2.9		9.2										11.5	
Tortoise Energy Infrastructure	133,697,586	3.2	8.5		8.5		18.6				-				-		22.0	Apr-13
Wells Fargo MLP Index			<u>2.8</u>		<u>2.8</u>		<u>8.0</u>	-	<u>10.7</u>		<u>14.2</u>						<u>9.3</u>	Apr-13
Over/Under			5.7		5.7		10.6										12.7	
Bridgewater All Weather Fund	264,320,813	6.4	3.7		3.7										-		7.2	Aug-13
DJ U.S. Total Stock Market Index + 3%			<u>2.8</u>		<u>2.8</u>		<u>21.9</u>		<u>26.2</u>								<u>18.4</u>	Aug-13
Over/Under			0.9		0.9												-11.2	
Overlay	17,135,793	0.4																
Clifton	17,135,793	0.4																

Overlay performance is not applicable on an individual account level



# Total Fund Performance Detail (Net)

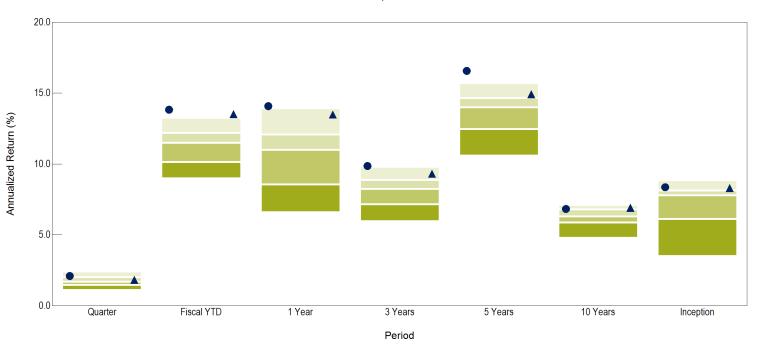
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	ank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	ank	5 Yrs (%)	Rank	10 Yrs (%) R	ank	Return (%)	Since
Total Private Equity	75,649,615	1.8	4.9	-	4.9		15.7		17.4			-						Jul-10
DJ U.S. Total Stock Market Index + 3%			<u>2.8</u>		<u>2.8</u>		<u>21.9</u>		<u>26.2</u>									Jul-10
Over/Under		_	2.1		2.1		-6.2		-8.8									
Adams Street Partners	49,805,589	1.2	5.9		5.9		18.1		19.8									Jul-10
DJ U.S. Total Stock Market Index + 3%			<u>2.8</u>		<u>2.8</u>		<u>21.9</u>		<u>26.2</u>									Jul-10
Over/Under			3.1		3.1		-3.8		-6.4									
Panteon Ventures	9,935,077	0.2	5.8		5.8		10.0		11.8									Aug-10
DJ U.S. Total Stock Market Index + 3%			<u>2.8</u>		<u>2.8</u>		<u>21.9</u>		<u>26.2</u>									Aug-10
Over/Under			3.0		3.0		-11.9		-14.4									
Harbourvest	15,908,949	0.4	1.6		1.6		10.7				-				-		-	May-13
DJ U.S. Total Stock Market Index + 3%			<u>2.8</u>		<u>2.8</u>		<u>21.9</u>		<u>26.2</u>									May-13
Over/Under			-1.2		-1.2		-11.2											,

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



# Total Fund Return Summary vs. Peer Universe

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

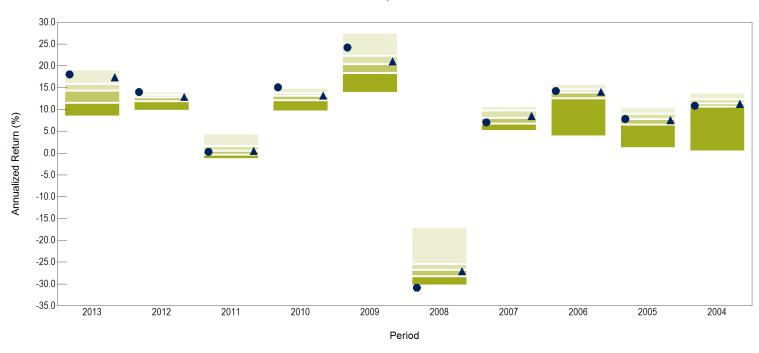


	Return (Rank)										
5th Percentile	2.4	13	.2	13.9		9.8	15.7	7.1		8.8	
25th Percentile	2.0	12	.2	12.1		8.9	14.7	6.8		8.2	
Median	1.7	11	.5	11.0		8.3	14.0	6.3		7.8	
75th Percentile	1.5	10	.1	8.6		7.2	12.5	5.9		6.1	
95th Percentile	1.1	9	.0	6.6		6.0	10.6	4.8		3.5	
# of Portfolios	44		14	44		44	43	42		32	
Total Fund	2.1	(19) 13	.8 (2)	14.1	(5)	9.9	(5) 16.6	(2) 6.8	(20)	8.4	(18)
Policy Index	1.8	(43) 13	.5 (4)	13.5	(8)	9.3 (	17) 14.9	(10) 6.9	(12)	8.3	(20)



# Total Fund Return Summary vs. Peer Universe

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

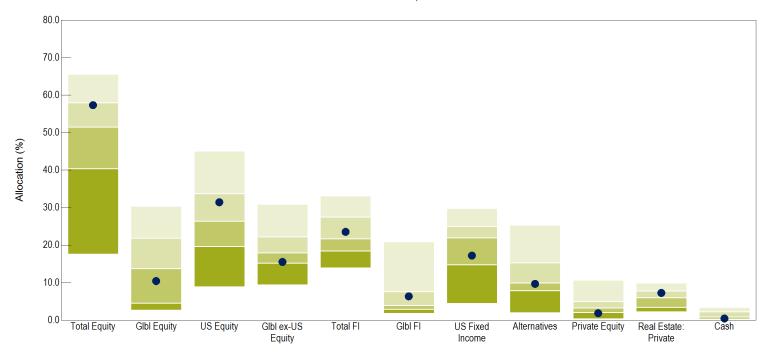


	Return (Rank)									
5th Percentile	19.1	14.0	4.5	14.9	27.6	-17.0	10.8	15.8	10.5	13.9
25th Percentile	15.9	13.4	1.7	13.8	22.3	-25.4	9.8	14.6	9.1	12.4
Median	14.3	12.8	0.6	13.2	20.4	-26.7	8.1	13.9	7.8	11.4
75th Percentile	11.5	11.9	-0.3	12.1	18.4	-28.2	6.8	12.6	6.6	10.7
95th Percentile	8.4	9.7	-1.4	9.6	13.8	-30.3	5.1	3.9	1.2	0.4
# of Portfolios	43	33	32	31	30	29	29	28	27	26
Total Fund	18.0 (9)	) 14.0 (10	0.3 (60)	15.1 (4)	) 24.2 (20)	-30.9 (98)	7.0 (74)	14.2 (35)	7.8 (50)	) 10.9 (72)
Policy Index	17.4 (12)	12.9 (46	6) 0.5 (53)	13.2 (52)	21.0 (38)	-27.1 (58)	8.5 (46)	14.0 (46)	7.6 (62)	) 11.3 (54)



# Total Fund Allocations vs. Peer Universe

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



5th Percentile 25th Percentile Median 75th Percentile 95th Percentile # of Portfolios

Total Fund

Allocatio	n (Rank)	)																				
65.5	-	30.4		45.1		30.9		33.1		20.9		29.7		25.3		10.7		9.9		3.4		
58.1		21.9		33.8		22.3		27.6		7.7		25.0		15.3		5.0		7.9		2.2		
51.6		13.8		26.5		18.0		21.8		4.0		22.0		10.0		3.3		6.1		0.9		
40.4		4.6		19.7		15.3		18.5		3.0		14.8		7.9		2.1		3.4		0.3		
17.7		2.7		8.9		9.4		14.0		1.9		4.5		2.0		0.4		2.3		0.1		
31		6		28		29		31		8		21		27		21		11		21		
57.3	(29)	10.4	(59)	31.4	(35)	15.5	(73)	23.5	(47)	6.3	(30)	17.2	(69)	9.7	(56)	1.8	(78)	7.2	(28)	0.4	(63)	



# Total Fund Risk Statistics

1 Years Ending March 31
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	i leais Litting march 31, 2014							
	% of Tot	Anlzd Ret	Anlzd Std Dev	Ann Excess BM Return	Info Ratio			
Total Fund	100.00%	14.08%	6.97%	0.59%	0.81			
Policy Index		13.49%	7.04%	0.00%	-			
Total Fund ex Private Equity	98.16%	12.37%	6.81%	-1.12%	-1.42			
Policy Index		13.49%	7.04%	0.00%				
Total Equity	57.33%	18.71%	10.32%	2.16%	1.66			
MSCI ACWI		16.55%	10.96%	0.00%				
Total US Equity	31.42%	23.09%	10.04%	0.47%	0.79			
Total U.S. Equity Benchmark		22.62%	9.95%	0.00%				
Total Non-US Equity	15.50%	12.16%	12.35%	-0.15%	-0.16			
Total Non-US Equity Benchmark		12.31%	12.98%	0.00%				
Total Global Equity	10.41%	16.85%	10.90%	0.29%	0.32			
MSCI ACWI		16.55%	10.96%	0.00%				
Total Fixed Income	23.53%	1.13%	3.40%	-0.75%	-0.28			
Barclays Global Aggregate		1.88%	5.01%	0.00%	<b></b>			
Total US Fixed Income	17.20%	1.28%	3.32%	1.37%	1.02			
Barclays Aggregate		-0.10%	3.52%	0.00%	<b></b>			
Total Global Fixed Income	6.33%	1.25%	5.45%	-0.63%	-0.48			
Barclays Global Aggregate		1.88%	5.01%	0.00%	<b></b>			
Total Real Estate	7.24%	10.94%	4.52%	-2.79%	-2.25			
Total Real Estate Benchmark		13.73%	5.68%	0.00%	<b></b>			
Total Liquid Alternatives	9.66%							
CPI + 4% (Unadjusted)		5.57%	0.90%	0.00%	<b></b>			
Overlay	0.42%							
91 Day T-Bills		0.04%	0.00%	0.00%	<del></del>			
Total Private Equity	1.84%	17.42%	7.61%	-8.78%	-0.81			



# Total Fund Risk Statistics

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		maning maron or, 2014			
	% of Tot	Anlzd Ret	Anlzd Std Dev	Ann Excess BM Return	Info Ratio
Total Fund	100.00%	9.86%	8.96%	0.54%	0.75
Policy Index		9.31%	8.98%	0.00%	-
Total Fund ex Private Equity	98.16%				
Policy Index		9.31%	8.98%	0.00%	
Total Equity	57.33%				
MSCI ACWI		8.55%	14.54%	0.00%	
Total US Equity	31.42%	14.91%	13.14%	0.29%	0.82
Total U.S. Equity Benchmark		14.63%	13.05%	0.00%	
Total Non-US Equity	15.50%	5.16%	15.96%	1.01%	0.74
Total Non-US Equity Benchmark		4.15%	16.88%	0.00%	
Total Global Equity	10.41%	9.45%	13.01%	0.89%	0.37
MSCI ACWI		8.55%	14.54%	0.00%	
Total Fixed Income	23.53%	5.51%	2.97%	2.73%	1.01
Barclays Global Aggregate	<del></del>	2.78%	4.49%	0.00%	
Total US Fixed Income	17.20%	5.58%	2.94%	1.83%	0.93
Barclays Aggregate	<del></del>	3.75%	2.84%	0.00%	
Total Global Fixed Income	6.33%				
Barclays Global Aggregate		2.78%	4.49%	0.00%	
Total Real Estate	7.24%	10.72%	4.50%	-2.32%	-2.16
Total Real Estate Benchmark	<del></del>	13.05%	5.32%	0.00%	
Total Liquid Alternatives	9.66%				
CPI + 4% (Unadjusted)	<del></del>	5.95%	1.12%	0.00%	
Overlay	0.42%				
91 Day T-Bills	-	0.05%	0.01%	0.00%	-
Total Private Equity	1.84%				
DJ U.S. Total Stock Market Index + 3%	-		-		-



# Total Fund Risk Statistics

5 Years Ending	March 31, 2014
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	5 Years Ending March 31, 2014							
	% of Tot	Anlzd Ret	Anlzd Std Dev	Ann Excess BM Return	Info Ratio			
Total Fund	100.00%	16.57%	10.45%	1.65%	1.52			
Policy Index	<del></del>	14.92%	9.94%	0.00%				
Total Fund ex Private Equity	98.16%							
Policy Index	-	14.92%	9.94%	0.00%				
Total Equity	57.33%							
MSCI ACWI	-	17.80%	16.22%	0.00%				
Total US Equity	31.42%	22.71%	14.66%	0.68%	1.91			
Total U.S. Equity Benchmark		22.03%	14.53%	0.00%				
Total Non-US Equity	15.50%	15.79%	17.74%	0.27%	0.16			
Total Non-US Equity Benchmark		15.52%	18.68%	0.00%				
Total Global Equity	10.41%	15.69%	14.22%	-2.12%	-0.61			
MSCI ACWI		17.80%	16.22%	0.00%				
Total Fixed Income	23.53%	10.87%	4.75%	5.77%	1.32			
Barclays Global Aggregate		5.10%	5.34%	0.00%				
Total US Fixed Income	17.20%	10.91%	4.73%	6.11%	1.58			
Barclays Aggregate		4.80%	2.82%	0.00%				
Total Global Fixed Income	6.33%							
Barclays Global Aggregate		5.10%	5.34%	0.00%				
Total Real Estate	7.24%	5.77%	7.98%	-1.54%	-1.15			
Total Real Estate Benchmark	<del>-</del>	7.31%	8.26%	0.00%				
Total Liquid Alternatives	9.66%							
CPI + 4% (Unadjusted)		6.20%	1.06%	0.00%				
Overlay	0.42%							
91 Day T-Bills	-	0.08%	0.01%	0.00%	-			
Total Private Equity	1.84%							
DJ U.S. Total Stock Market Index + 3%	<del></del>		<b></b>					







# Investment Market Update: As of March 31, 2014

### PERFORMANCE THROUGH 3/31/2014

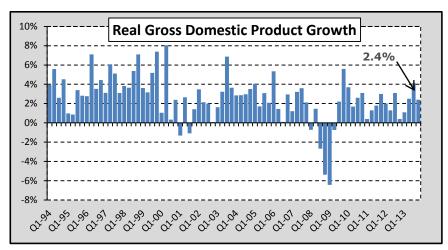
Sector	Index	2008	2009	2010	2011	2012	2013	Jan	Feb	Mar	2014
Treasury STRIPS	Barclays US Strips 20+ Yr	59.5%	-36.0%	10.9%	58.5%	3.0%	-21.0%	9.4%	1.2%	1.7%	12.7%
REITS	Wilshire US REIT	-39.2%	28.6%	28.6%	9.2%	17.6%	1.9%	3.9%	5.0%	0.9%	10.1%
Commodities	DJ UBS Commodity	-35.6%	18.9%	16.8%	-13.3%	-1.1%	-9.5%	0.3%	6.2%	0.4%	7.0%
Long Govt/Credit	Barclays US Govt/Credit Long	8.4%	1.9%	10.2%	22.5%	8.8%	-8.8%	4.0%	1.7%	0.8%	6.6%
Long Credit	Barclays US Long Credit	-3.9%	16.8%	10.7%	17.1%	12.7%	-6.6%	3.3%	2.1%	0.8%	6.3%
Muni Bonds	Barclays Municipal	-2.5%	12.9%	2.4%	10.7%	6.8%	-2.6%	1.9%	1.2%	0.2%	3.3%
Large Cap Value	Russell 1000 Value	-36.8%	19.7%	15.5%	0.4%	17.5%	32.5%	-3.6%	4.3%	2.4%	3.0%
High Yield	Barclays US Corp High Yield	-26.2%	58.2%	15.1%	5.0%	15.8%	7.4%	0.7%	2.0%	0.2%	3.0%
EMD USD	Barclays EM USD Aggregate	-14.7%	34.2%	12.8%	7.0%	17.9%	-4.1%	-0.3%	2.3%	0.8%	2.8%
Global Bonds	Citi WGBI	10.9%	2.6%	5.2%	6.4%	1.6%	-4.0%	1.3%	1.4%	-0.1%	2.7%
SMID Cap	Russell 2500	-36.8%	34.4%	26.7%	-2.5%	17.9%	36.8%	-2.3%	5.1%	-0.4%	2.3%
Diversified	Diversified*	-24.5%	24.1%	13.5%	1.3%	12.7%	17.6%	-1.5%	3.4%	0.3%	2.1%
Large Cap	Russell 1000	-37.6%	28.4%	16.1%	1.5%	16.4%	33.1%	-3.2%	4.7%	0.6%	2.0%
EMD Local	JPM GBI EM Global Diversified	-5.2%	22.0%	15.7%	-1.8%	16.8%	-9.0%	-4.6%	3.9%	2.8%	1.9%
Core Bonds	Barclays US Agg Bond	5.2%	5.9%	6.5%	7.8%	4.2%	-2.0%	1.5%	0.5%	-0.2%	1.8%
Large Cap	S&P 500	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	-3.5%	4.6%	0.8%	1.8%
Small Cap Value	Russell 2000 Value	-28.9%	20.6%	24.5%	-5.5%	18.1%	34.5%	-3.9%	4.6%	1.2%	1.8%
Interm Core Bonds	Barclays US Agg Interm	4.9%	6.5%	6.1%	6.0%	3.6%	-1.0%	1.1%	0.4%	-0.3%	1.2%
Large Cap Growth	Russell 1000 Growth	-38.4%	37.2%	16.7%	2.6%	15.3%	33.5%	-2.9%	5.1%	-1.0%	1.1%
Small Cap	Russell 2000	-33.8%	27.2%	26.9%	-4.2%	16.3%	38.8%	-2.8%	4.7%	-0.7%	1.1%
Interm Govt/Credit	Barclays US Govt/Credit Interm	5.1%	5.2%	5.9%	5.8%	3.9%	-0.9%	0.9%	0.4%	-0.3%	1.0%
Int'l Developed	MSCI EAFE	-43.4%	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.0%	5.6%	-0.6%	0.7%
Small Cap Growth	Russell 2000 Growth	-38.5%	34.5%	29.1%	-2.9%	14.6%	43.3%	-1.7%	4.8%	-2.5%	0.5%
Govt/Credit	Barclays Govt/Credit 1-5 Yr	5.1%	4.6%	4.1%	3.1%	2.2%	0.3%	0.4%	0.2%	-0.3%	0.4%
Govt/Credit	Barclays US Govt/Credit 1-3 Yr	5.0%	3.8%	2.8%	1.6%	1.3%	0.6%	0.2%	0.1%	-0.1%	0.2%
Emerging Equities	MSCI EM	-53.3%	78.5%	18.9%	-18.4%	18.2%	-2.6%	-6.5%	3.3%	3.1%	-0.4%

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

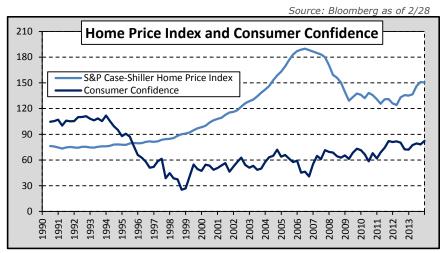
Source: Morningstar Direct



### **US Economic Environment**

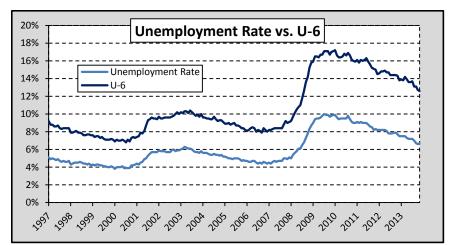


GDP growth was revised downward in the first quarter, to 0.1%

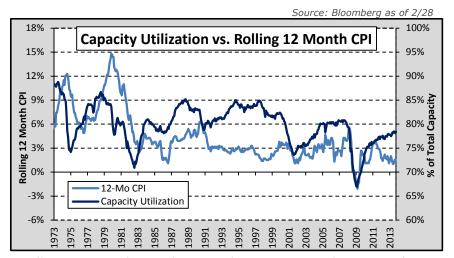


Consumer confidence fell to 82.3 in March; the Case-Shiller home price index (as of 12/31) dipped slightly to 150.39 from its highest level (150.92) since the financial crisis

Source: Bloomberg as of 3/31



Unemployment rose to 6.7% in February; U-6 declined to 12.6%

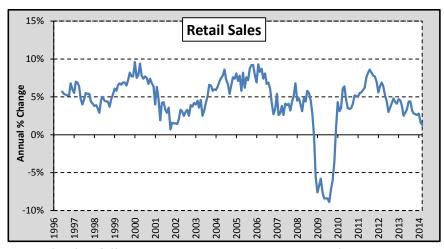


Rolling 12 month CPI decreased to 1.1% at February end; capacity utilization rose slightly to 78.4% in the month

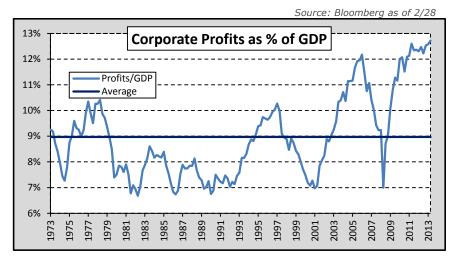
Source: Bloomberg as of 2/28



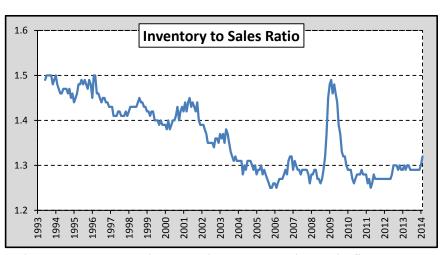
### Components of GDP



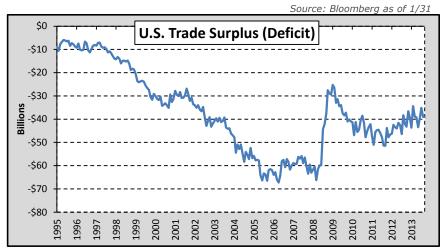
Retail sales fell to a 1.3% year-over-year growth rate in February



Corporate Profits as a percent of GDP remained near secular highs at 12.7% at the end of the fourth quarter



The inventory-to-sales ratio has remained mostly flat since early 2010 and closed at 1.32 in January



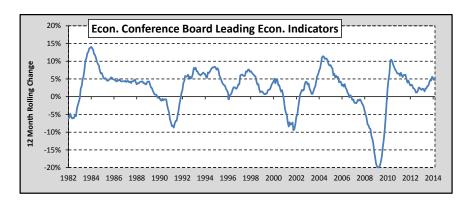
The trade deficit increased marginally in January

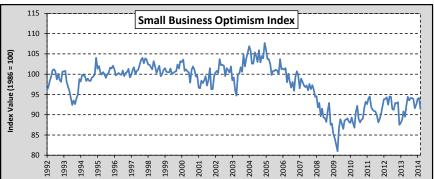
Source: Bloomberg as of 12/31

Source: Bloomberg as of 1/31



# **Key Economic Indicators**

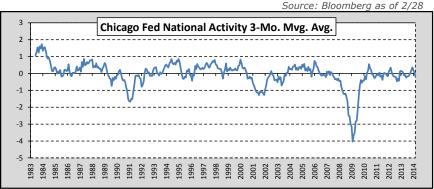




The rolling percentage change in the Leading Economic Indicators index decreased to 4.72% through February



The small business optimism index decreased to 91.4 through February.



US GDP relative to potential GDP rose slightly through Q3 but remained near historic lows

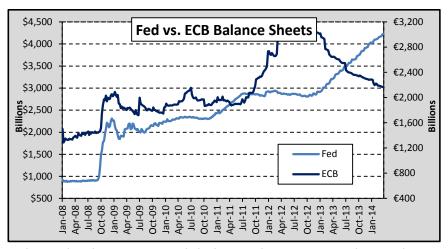
Source: Bureau of Economic Analysis, Congressional Budget Office as of 10/1

Chicago Fed National Activity 3 Month moving average turned negative through February; indicating below average growth

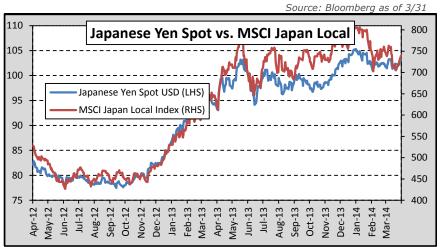
Source: Bloomberg as of 2/28



# Economic Environment – Monetary Policy and Banks

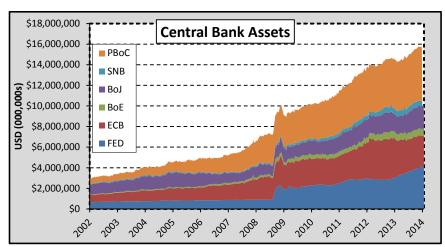


The Federal Reserve Bank balance sheet increased in early 2014 while the European Central Bank balance sheet decreased

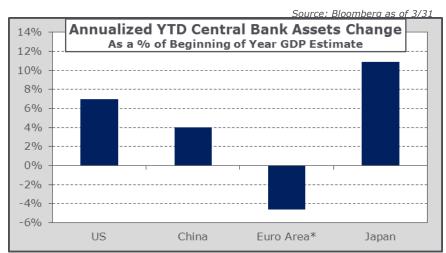


The Japanese Yen has strengthened 1.9% relative to the US dollar in 2014; while the MSCI Japan TR Net Local Index returned (8.0)%

Source: Bloomberg as of 3/31



Central bank assets worldwide have risen significantly since 2008



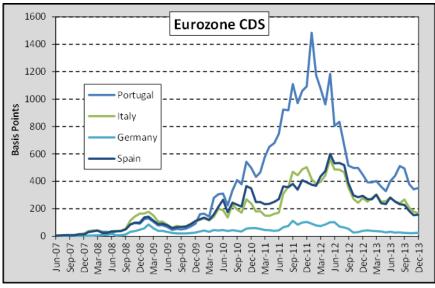
Large economies continue easing, Japan to the extreme, while the ECB tightens

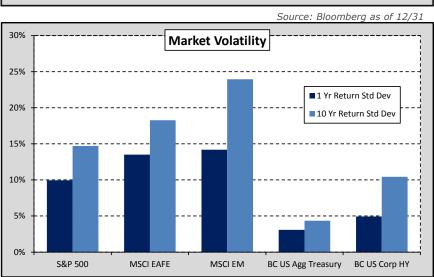
Source: Bloomberg as of 9/30; All calculations converted to USD \*GDP figure reflects

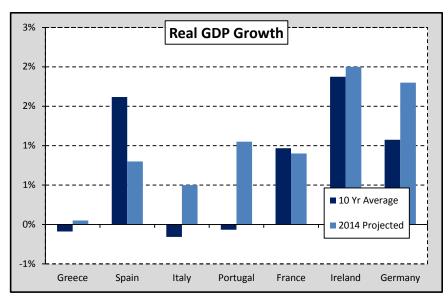
World Bank Euro Area GDP

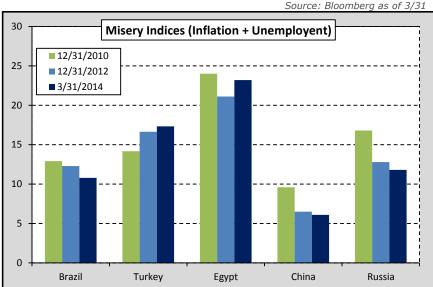


## Looming Macro Uncertainties







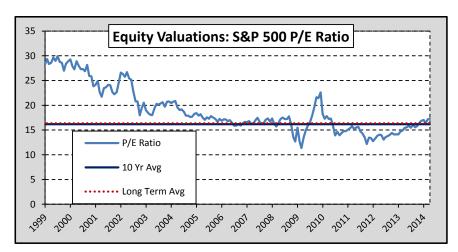


Source: Morningstar as of 3/31

Source: Bloomberg as of 3/31

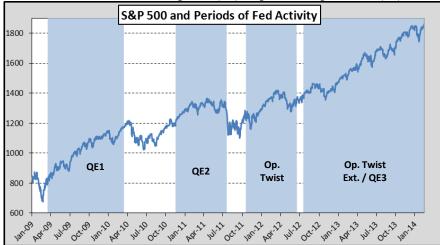


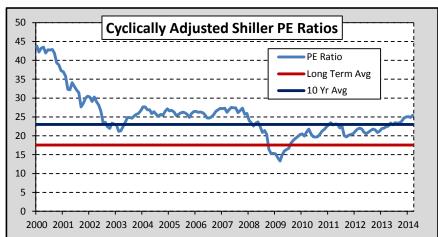
## Market Environment – US Equity



S&P valuations rose in March and remained above the 10 year and long term averages, which are nearly equal at 16.35...







...The cyclically adjusted Shiller PE Ratio, however, is above the long term average of 17.57 and slightly above the 10 year average of 22.99

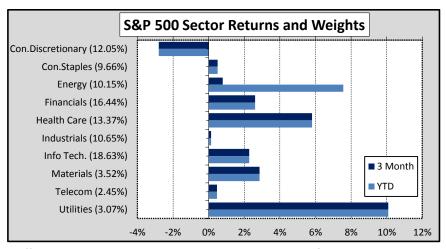
Source: Shiller Data as of 3/31; Long term average dates to 1/1/1926



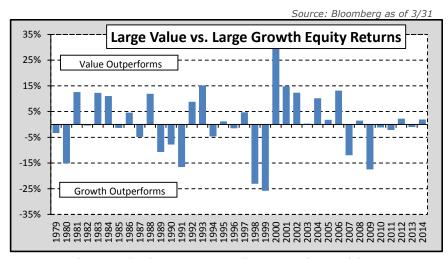
The VIX remained near historically low levels in March; the S&P 500 rose 0.8% on the month



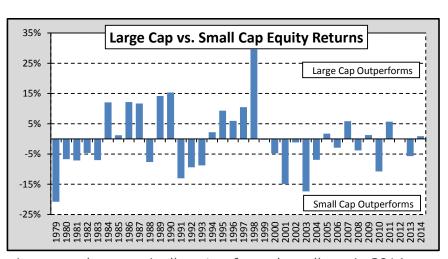
## **US Stock Market Performance**



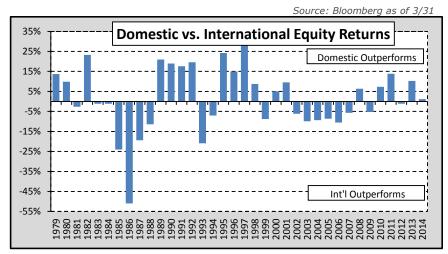
All sectors are positive to start 2014 except for Consumer Discretionary



Large value stocks have marginally outperformed large growth in 2014



Large cap has marginally outperformed small cap in 2014



Domestic equity has marginally outperformed international equity in 2014

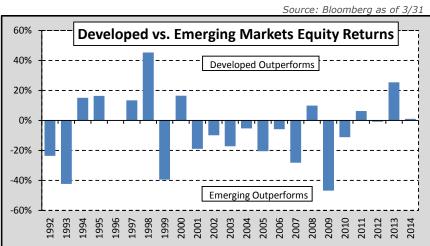


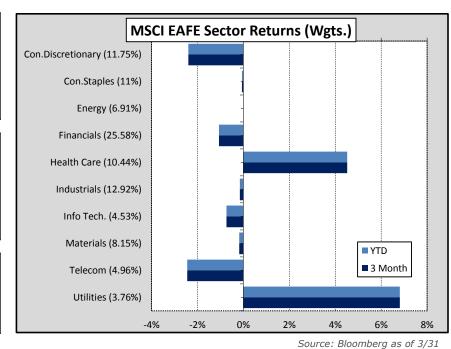
## Non-US Stock Performance

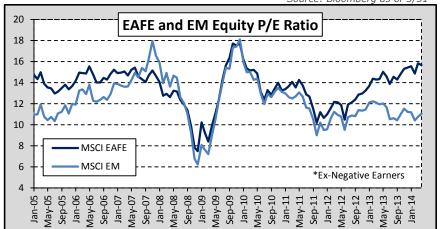
Developed Market Equity Returns (U.S. Dollars)									
_	<u>YTD 3-Mo 1 Yr. 3 Yr. Ann</u>								
Europe ex UK	5.4%	5.4%	24.3%	5.0%					
United Kingdom	4.6%	4.6%	17.5%	5.2%					
Japan	-3.7%	-3.7%	12.2%	0.4%					
Pacific Ex Japan	-1.3%	-1.3%	-5.2%	0.5%					
Canada	1.2%	1.2%	3.0%	-4.3%					
USA	3.3%	3.3%	23.2%	12.0%					

US Dollar Return vs. Major Foreign Currencies									
(Negative = Dollar Depreciates, Positive = Dollar Appreciates)									
<u>YTD 3-Mo 1 Yr. 3 Yr. Ann.</u>									
Euro	-1.6%	-1.6%	-5.7%	0.0%					
Japanese Yen	-0.6%	-0.6%	9.1%	7.0%					
British Pound	-2.3%	-2.3%	-10.4%	-1.0%					
Canada	4.0%	4.0%	6.9%	4.2%					
Australia	2.0%	2.0%	12.6%	4.3%					

Currency Impact on D				
(Negative = Currency Hurt,				
	<u>YTD</u>	<u>3-Mo</u>	<u> 1 Yr.</u>	<u> 3 Yr. Ann.</u>
MSCI EAFE (Local)	1.6%	1.6%	18.0%	8.0%
MSCI EAFE (USD)	2.8%	2.8%	19.3%	6.6%
Currency Impact	1.2%	1.2%	1.3%	-1.4%





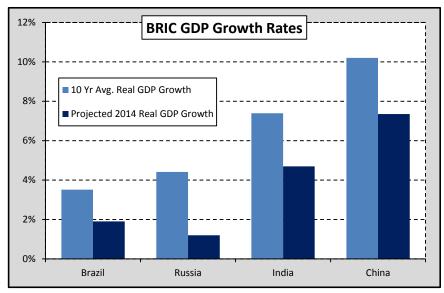


Source: Bloomberg as of 3/31

Source: Bloomberg as of 3/31



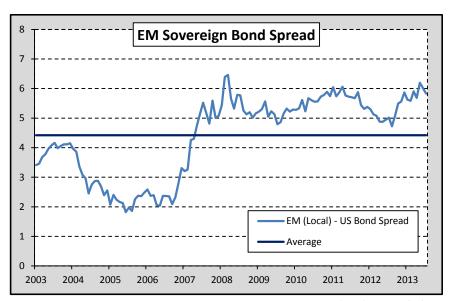
## **Emerging Markets**



Source:	Bloomberg	as	of	3,	/31	
---------	-----------	----	----	----	-----	--

Emerging Markets Valuation						
	MSCI EM	MSCI EM Small Cap				
PE Ratio	11.87	21.10				
PE Historical Avg	14.43	18.22				
PB Ratio	1.49	1.32				
Historical Avg	1.53	1.27				
PS Ratio	1.02	0.77				
Historical Avg	1.12	0.71				

- MSCI EM PE, PB, and PS Ratios are below historical averages
- MSCI EM Small Cap PE, PB, and PS are all above historical averages  $\,$

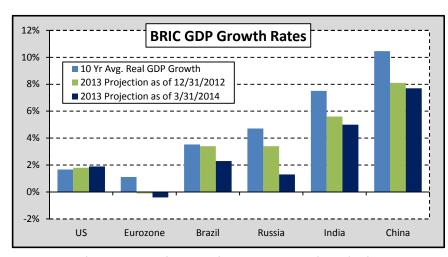


Source: Bloomberg as of 3/31

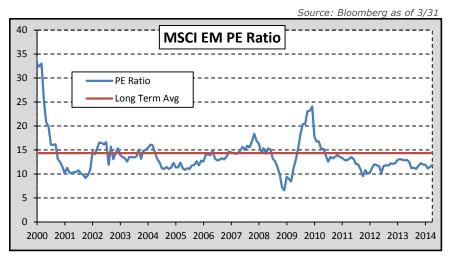
US Dollar Return vs. N	Azior EM Cur	rancias	Source: Bloom	berg as or 5/51		
OS Dollar Return Vs. I	najoi Lin Cui	rencies				
(Negative = Dollar Depreciates, Positive = Dollar Appreciates)						
	<u>YTD</u>	<u>3-Mo</u>	<u> 1 Yr.</u>	<u> 3 Yr. Ann.</u>		
Brazilian Real	-4.1%	-4.1%	11.0%	10.4%		
Russian Ruble	6.2%	6.2%	11.4%	6.8%		
Indian Rupee	-3.3%	-3.3%	9.0%	9.4%		
Chinese Renminbi	2.6%	2.6%	0.1%	-1.7%		
Singapore Dollar	-0.2%	-0.2%	-0.9%	-0.9%		
Hungarian Forint	3.0%	3.0%	-6.4%	5.6%		
Turkish Lira	-0.3%	-0.3%	15.5%	10.3%		
Mexican Peso	0.2%	0.2%	5.7%	3.0%		
So. African Rand	0.3%	0.3%	12.3%	13.7%		
So. Korean Won	1.1%	1.1%	-4.5%	-1.1%		



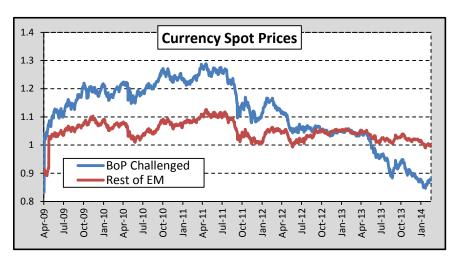
## Market Environment – Emerging Markets



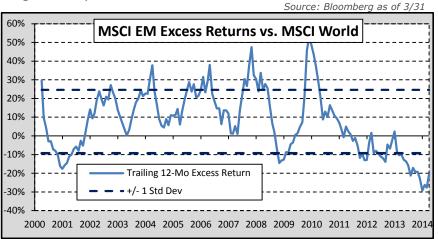
Projected GDP growth rates have continued to decline in emerging market countries



The MSCI EM PE Ratio remains below its long term average



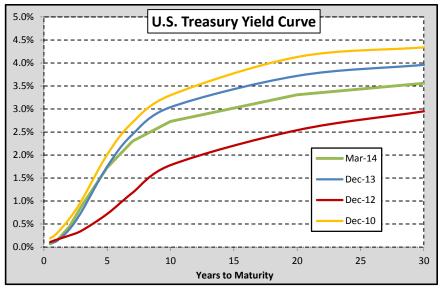
Currencies of BoP challenged countries (Brazil, India, Indonesia, Turkey, and South Africa) have depreciated significantly relative to currencies of other EM countries

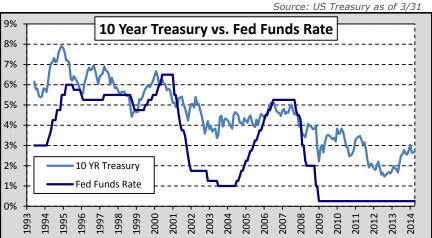


MSCI EM Rolling 12-Month excess returns relative to MSCI World are at below the lower bound of the historical range

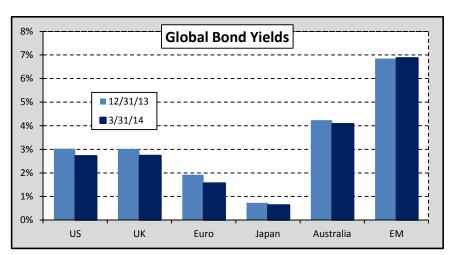


## Market Environment – Interest Rates

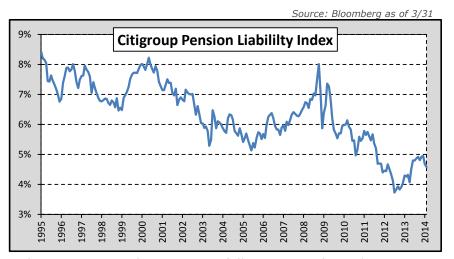




Fed Funds rate remained at 0.25% while the 10 Yr. Treasury Yield finished March at 2.72%



Bond yields across the globe have mostly declined in 2014

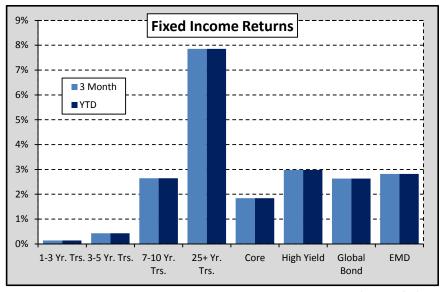


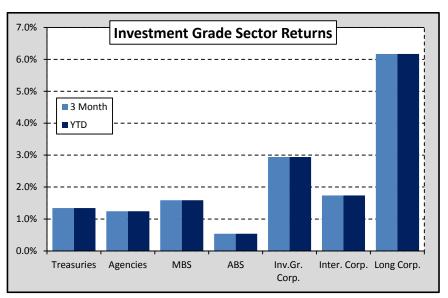
The Citi Pension discount rate fell to 4.58% through February

Source: Bloomberg as of 3/31 Source: Citigroup as of 2/28



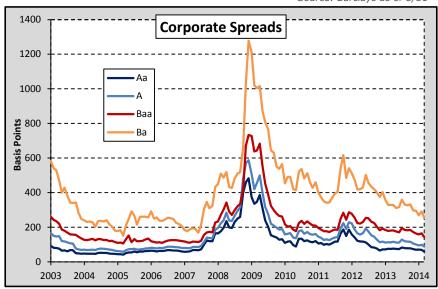
## Fixed Income Performance

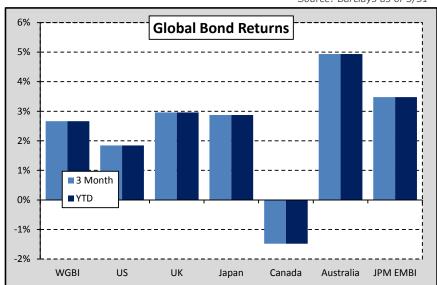










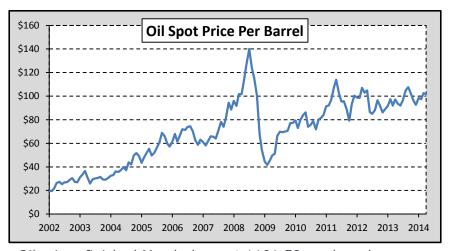


Source: Barclays as of 3/31

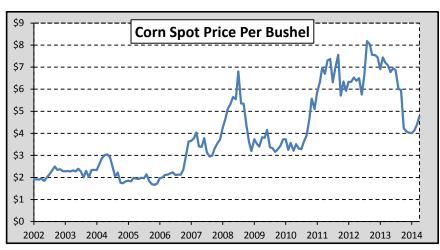
Source: Barclays, Bloomberg as of 3/31



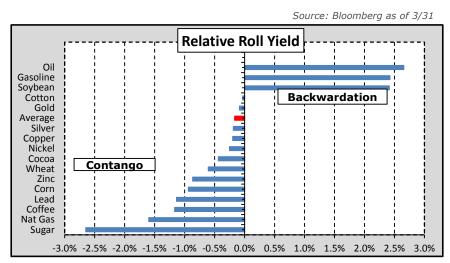
## Market Environment - Commodities



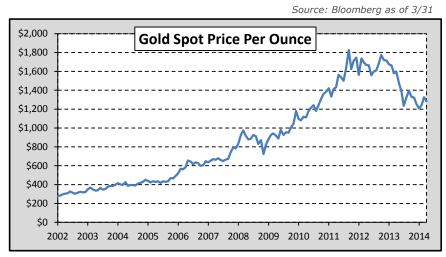
Oil prices finished March down at \$101.58 per barrel



Corn prices finished March up at \$4.77 per bushel



Many commodity futures' prices are contangoed, meaning a higher forward price is expected relative to the current spot



Gold prices finished March down at \$1284.01 per ounce



# Total Fund

## **Cash Flow Summary**

### Quarter Ending March 31, 2014

						_
	Beginning Market Value	Withdrawals	Contributions	Net Investment Change	Ending Market Value	Quarter Return
Adams Street Partners	\$42,445,656	\$0	\$4,651,183	\$2,708,750	\$49,805,589	5.93%
BlackRock ACWI ex-U.S. Index	\$290,890,130	-\$15,273,279	\$0	\$2,476,086	\$278,092,937	0.88%
BlackRock Equity Market Fund	\$1,121,767,099	-\$17,662,108	\$0	\$22,650,323	\$1,126,755,313	2.01%
BlackRock Extended Equity Index	\$43,281,890	-\$8,777	\$0	\$1,173,889	\$44,447,002	2.67%
BlackRock MSCI ACWI Equity Index	\$212,623,481	-\$26,115	\$0	\$2,559,524	\$215,156,890	1.18%
BlackRock U.S. Debt Fund	\$131,068,003	-\$23,350	\$0	\$2,540,470	\$133,585,123	1.90%
Bridgewater All Weather Fund	\$254,905,986	-\$263,079	\$0	\$9,677,905	\$264,320,813	3.69%
Clifton	\$39,988,536	-\$46,950,581	\$21,587,587	\$2,510,251	\$17,135,793	8.02%
GMO Global Equity	\$209,734,792	-\$287,563	\$0	\$4,549,553	\$213,996,782	2.03%
Harbourvest	\$16,646,718	-\$996,434	\$0	\$258,665	\$15,908,949	1.56%
Hexavest	\$80,514,432	-\$91,776	\$0	-\$418,687	\$80,003,969	-0.75%
Loomis Sayles Global Fixed Income	\$91,531,091	-\$69,911	\$0	\$2,334,239	\$93,795,419	2.40%
Loomis Sayles Multi Strategy	\$66,934,121	-\$69,037	\$0	\$2,660,614	\$69,525,699	3.77%
Loomis Strategic Alpha	\$40,842,876	-\$40,956	\$0	\$305,434	\$41,107,353	0.55%
Panteon Ventures	\$9,903,934	-\$525,000	\$0	\$556,144	\$9,935,077	5.80%
PIMCO Global Fixed Income	\$122,867,727	-\$106,407	\$0	\$3,301,751	\$126,063,071	2.51%
Prudential Real Estate	\$95,185,595	-\$185,709	\$185,709	\$2,336,754	\$97,522,348	2.26%
Reams	\$251,728,906	-\$112,884	\$0	-\$338,310	\$251,277,712	-0.22%
RREEF	\$8,610,268	-\$736,835	\$0	\$350,781	\$8,224,214	3.80%
Sprucegrove	\$185,640,498	-\$174,062	\$0	\$4,031,655	\$189,498,091	1.98%
Tortoise Energy Infrastructure	\$123,023,887	-\$233,929	\$0	\$10,907,628	\$133,697,586	8.48%
UBS Real Estate	\$189,646,544	-\$1,827,582	\$0	\$4,764,769	\$192,583,732	2.26%
Walter Scott	\$93,660,860	-\$201,171	\$0	-\$2,081,093	\$91,378,596	-2.65%
Western	\$247,565,929	-\$132,389	\$0	\$7,102,163	\$254,535,703	2.76%
Western U.S. Index Plus	\$121,431,888	-\$83,068	\$0	\$2,651,300	\$124,000,120	2.05%
Total	\$4,092,440,847	-\$86,082,001	\$26,424,479	\$89,570,558	\$4,122,353,883	2.10%



### 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:

(Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - 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:

Calculation Average (X-Y)/Downside Deviation (X-Y) \* 2Where X=Return Series X 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:

(Annualized Return of Portfolio – Annualized Return of Risk Free) / 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:

Tracking Error = Standard Deviation  $(X-Y) * \sqrt{(\# of periods per year)}$ Where X = periods portfolio return and <math>Y = the period's benchmark returnFor 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:

(Portfolio Average Return - Average Return of Risk-Free Rate)/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.

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

 $Downside Capture = Total Return (Fund Returns) / Total Returns (BMR eturn) \ when Benchmark < 0$ 

Data Source: InvestorForce



## Glossary of Investment Terminology

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

**Allocation Index**<sup>3</sup> - 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 Effect**<sup>2</sup> - 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)**<sup>3</sup> - 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)**<sup>3</sup> - 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.

**Attribution**<sup>3</sup> - 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 Maturity**<sup>4</sup> - 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 Average**<sup>1</sup> - 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) Attribution**<sup>1</sup> - 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) Attribution**<sup>1</sup> - 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)** <sup>4</sup> - 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: 1 InvestorForce, 2 Interaction Effect Performance Attribution, 3 NEPC, LLC, 4 Investopedia, 5 Hedgeco.net



### Glossary of Investment Terminology

**Coupon<sup>4</sup>** – 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 Effect**<sup>1</sup> - Is the effect that changes in currency exchange rates over time affect excess performance.

**Derivative Instrument**<sup>3</sup> - 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.

**Duration**<sup>3</sup> - 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 Ratio**<sup>1</sup> – 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 Bond**<sup>3</sup> - 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 Hurdle**<sup>5</sup> – 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 Mark**<sup>4</sup> - 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 Rate**<sup>4</sup> - 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 Effects**<sup>2</sup> - 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.

**Median**<sup>3</sup> - 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 Duration**<sup>3</sup> - The percentage change in the price of a fixed income security that results from a change in yield.

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

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

**Net Investment Change<sup>1</sup>** – Is the change in an investment after accounting for all Net Cash Flows.

**Performance Fee<sup>4</sup>** - 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: 1 InvestorForce, 2 Interaction Effect Performance Attribution, 3 NEPC, LLC, 4 Investopedia, 5 Hedgeco.net



## Glossary of Investment Terminology

**Policy Index**<sup>3</sup> - 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)**<sup>3</sup> - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

**Price to Sales (P/S)**<sup>4</sup> - 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)**<sup>4</sup> - 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) Effect**<sup>2</sup> - 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 rate**<sup>5</sup> – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

**Tiered Fee<sup>1</sup>** – 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 Effects**<sup>2</sup> - 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.

**Universe**<sup>3</sup> - The list of all assets eligible for inclusion in a portfolio.

**Upside Deviation**<sup>1</sup> – Standard Deviation of Positive Returns

**Weighted Avg. Market Cap.**<sup>4</sup> - 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 Maturity**<sup>3</sup> -The discount rate that equates the present value of cash flows, both principal and interest, to market price.

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



## Reporting Methodology

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



## Information Disclaimer

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- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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