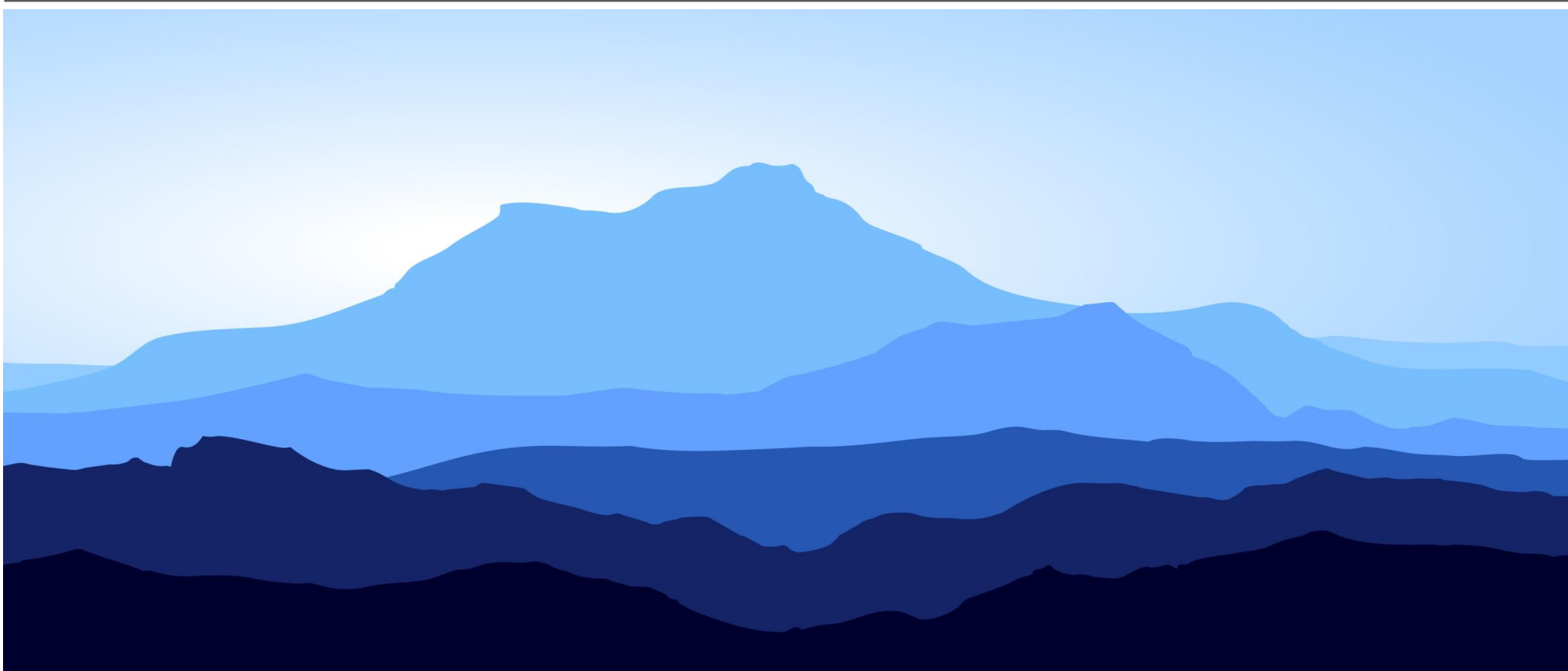


1Q 2014

# WATER & POWER EMPLOYEES' RETIREMENT SYSTEM

## QUARTERLY REPORT



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- Summary of WPERP Retirement Plan Portfolio Transitions
- WPERP Benchmark Descriptions
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## PERFORMANCE SUMMARY OF MAJOR WPERP INVESTMENT PLANS

As of March 31, 2014, the WPERP Total Retirement Plan had an aggregate value of \$9.3 billion. This represents a \$122.3 million increase in value over the last quarter. During the most recent 1-year period, the WPERP Total Retirement Plan increased by \$1,075.8 million. Following a very strong 2013 in regard to US equity returns, domestic stocks began 2014 with a widespread selloff in January. However, strong returns in February allowed most major indices to post modest gains for the quarter as the S&P 500 and Russell 3000 returned 1.8% and 2.0%, respectively. US fixed income markets managed to post similar returns with the Barclays US Aggregate Bond Index earning 1.8% as the FED continued apace with its tapering of its QE program. International equities were more mixed, as strengthening markets in Europe were counterbalanced by a poor quarter for Asian equities, resulting in a 0.5% return for the MSCI ACWI ex-US Index. International Debt markets outperformed their US counterparts for the quarter as the strengthening of developed currencies against the dollar boosted returns for US investors in non-dollar denominated bonds, and positive monetary policy actions aided Emerging Markets Debt investors.

As of March 31, 2014, the WPERP Total Health Plan had an aggregate value of \$1.6 billion. This represents a \$21.8 million increase in value over the last quarter. During the most recent 1-year period, the WPERP Total Health Plan increased by \$181.4 million.

**Strategic Allocation Trends**

The Retirement Plan strategic allocation targets reflect the current long-term policy allocation, effective 7/1/2013. As of March 31, 2014, the WPERP Total Retirement Portfolio had a 61% allocation in Equities, 21% in Fixed Income, 7% in Covered Calls, 6% in Real Return, 2% in Private Equity, 3% in Real Estate, and 1% in Cash. The Health Plan strategic allocation targets reflect the current long-term policy allocation, effective 7/1/2013. The WPERP Total Health Plan had a 61% allocation in Equities, 22% in Fixed Income, 7% in Covered Calls, 6% in Real Return, 1% in Private Equity, 2% in Real Estate, and 1% in Cash. Following the 2011 Asset Allocation study, WPERP utilized a series of phased allocation targets, beginning in 4Q 2011, to transition towards the long-term policy targets. Both the Retirement and Health Plans reached their long-term policy targets as of 7/1/2013.

**Recent Investment Performance of Major WPERP Investment Plans**

Period ending March 31, 2014

**WPERP Total Retirement Plan**

	Quarter	1 Year	3 Year	5 Year	10 Year
Total Portfolio <sup>1</sup>	1.5	13.6	8.9	13.7	6.6
<i>Policy Benchmark<sup>2</sup></i>	<i>2.1</i>	<i>13.0</i>	<i>9.3</i>	<i>14.4</i>	<i>6.7</i>
<b>Excess Return</b>	<b>-0.6</b>	<b>0.6</b>	<b>-0.4</b>	<b>-0.7</b>	<b>-0.1</b>
Reference: Median Fund <sup>3</sup>	1.8	12.5	9.1	14.5	7.0
Reference: Net of Fees <sup>4</sup>	1.4	13.4	8.7	13.5	6.4

**WPERP Total Health Plan**

	Quarter	1 Year	3 Year	5 Year
Total Portfolio <sup>1</sup>	1.6	13.6	9.2	13.4
<i>Policy Benchmark<sup>2</sup></i>	<i>2.1</i>	<i>12.9</i>	<i>9.3</i>	<i>13.8</i>
<b>Excess Return</b>	<b>-0.5</b>	<b>0.7</b>	<b>-0.1</b>	<b>-0.4</b>

<sup>1</sup> Gross of Fees.

<sup>2</sup> See appendix for policy benchmark descriptions.

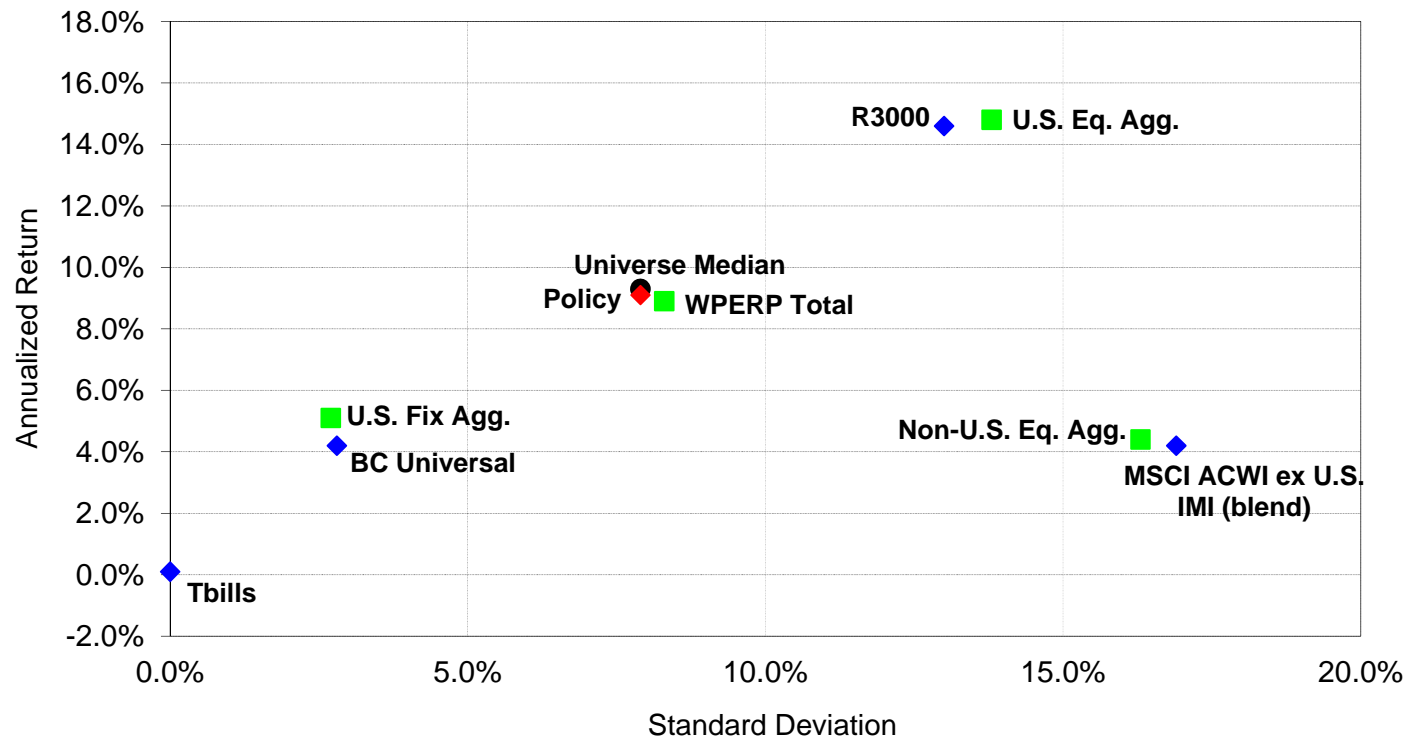
<sup>3</sup> Mellon Total Funds Public Universe.

<sup>4</sup> Net of Fees returns are estimated based on existing WPERP manager fee schedule.



## WPERP Retirement Plan Risk/Return Analysis – Last 3 Years

Period ending March 31, 2014

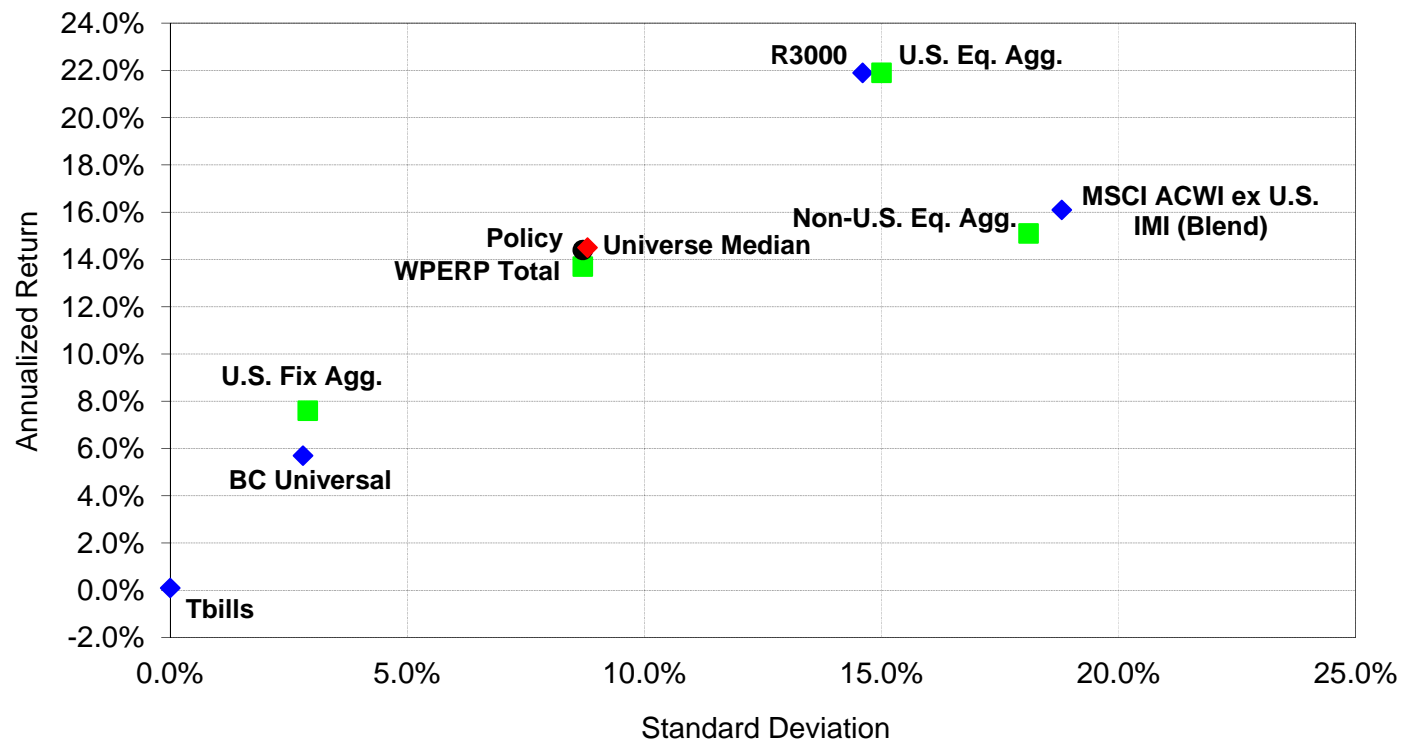


\*Median Fund in the Mellon Total Fund Public Universe.



## WPERP Retirement Plan Risk/Return Analysis – Last 5 Years

Period ending March 31, 2014

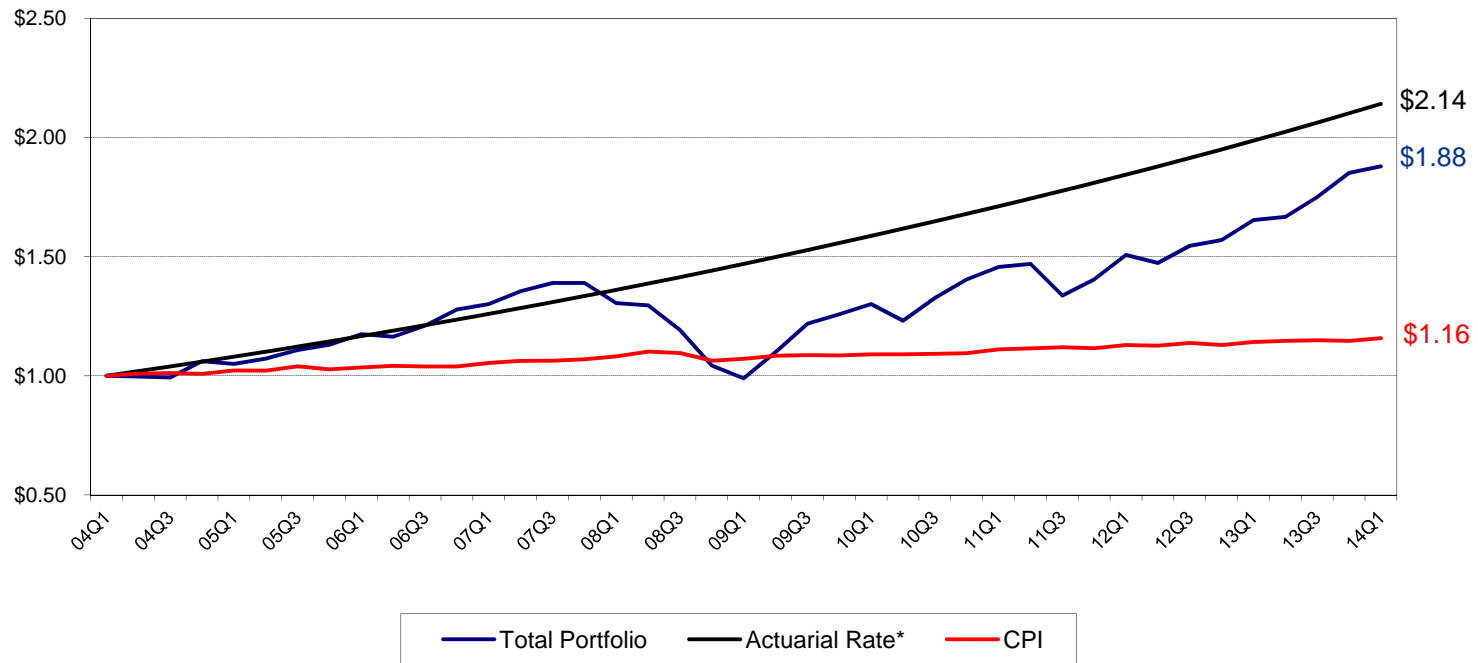


\*Median Fund in the Mellon Total Fund Public Universe.



**WPERP Retirement Plan Growth of a Dollar – Latest 10 Years**

Period ending March 31, 2014



\* Changed from 8% to 7.75% on 7/1/2010



## Investment Market Risk Metrics

### Takeaways

- US equity markets' valuations remain at top decile levels.
- Equity volatility (VIX) is approaching bottom decile levels, perhaps signaling rising complacency.
- Non-US equity valuations are below long-term averages. Emerging Markets equities moved up 3% in March, but remain historically cheap.
- Credit spreads continued to tighten, and are at levels not seen since 2007 (i.e., risk taking).
- The slope of the yield curve remains steep, indicating expectations for higher future rates (versus cash rates today).
- Interest rate risk is back in top decile territory. The 10-year Treasury yield ended March at 2.7%, right where it started the month.
- Inflation metrics point to inflation being low and stable, but commodities showed some strengthening during March.
- The PCA Market Sentiment Indicator "PMSI" continued to read **green**.

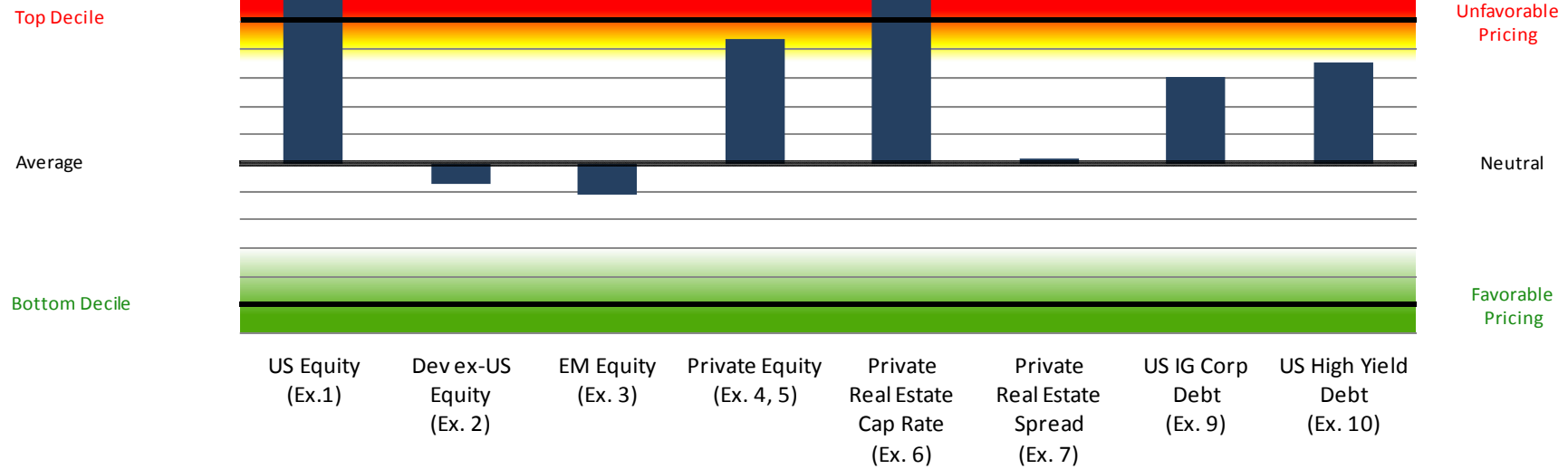
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<sup>1</sup> See Appendix for the rationale for selection and calculation methodology used for the risk metrics.



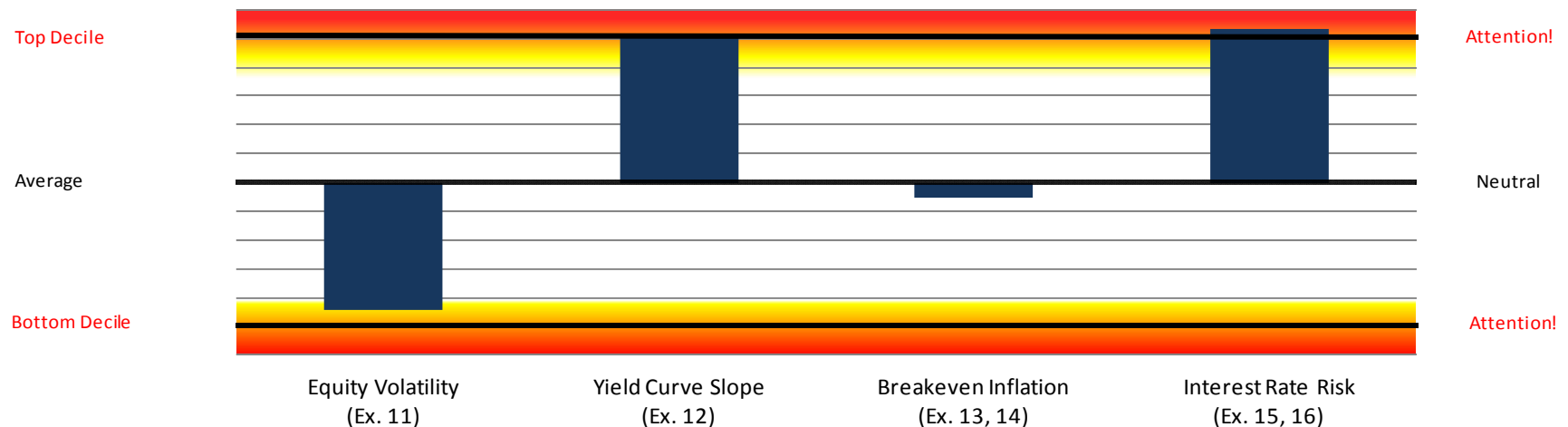
## Valuation Metrics versus Historical Range

### A Measure of Risk

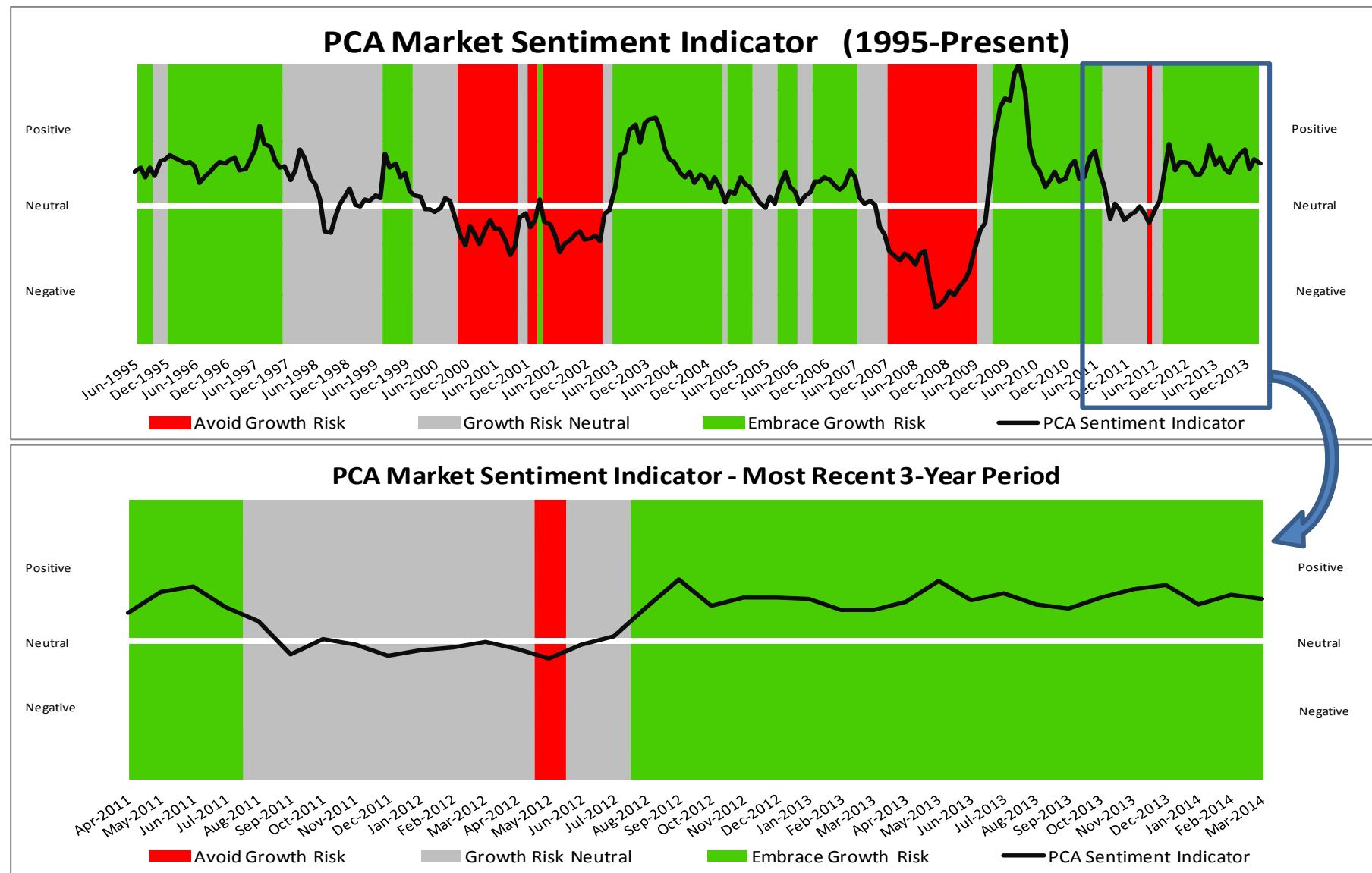


## Other Important Metrics within their Historical Ranges

### Pay Attention to Extreme Readings







#### Information Behind Current Sentiment Reading

Bond Spread Momentum Trailing-Twelve Months

Equity Return Momentum Trailing-Twelve Months

Agreement Between Bond and Equity Momentum Measures?

Positive

Positive

Agree



#### Growth Risk Visibility (Current Overall Sentiment)

Positive

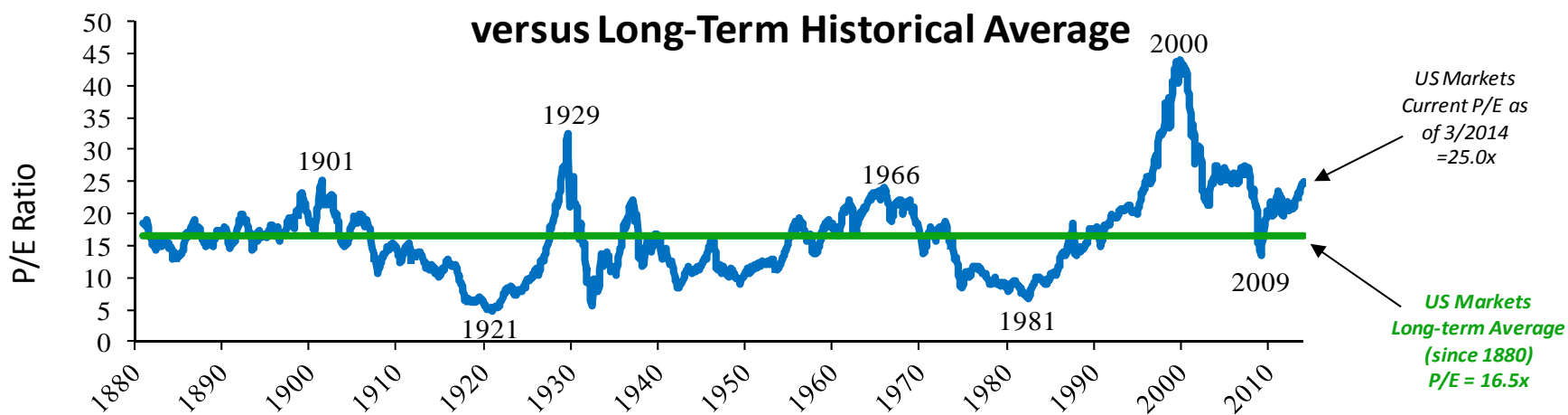




## Developed Public Equity Markets

Exhibit 1

### U.S. Equity Market P/E Ratio<sup>1</sup> versus Long-Term Historical Average

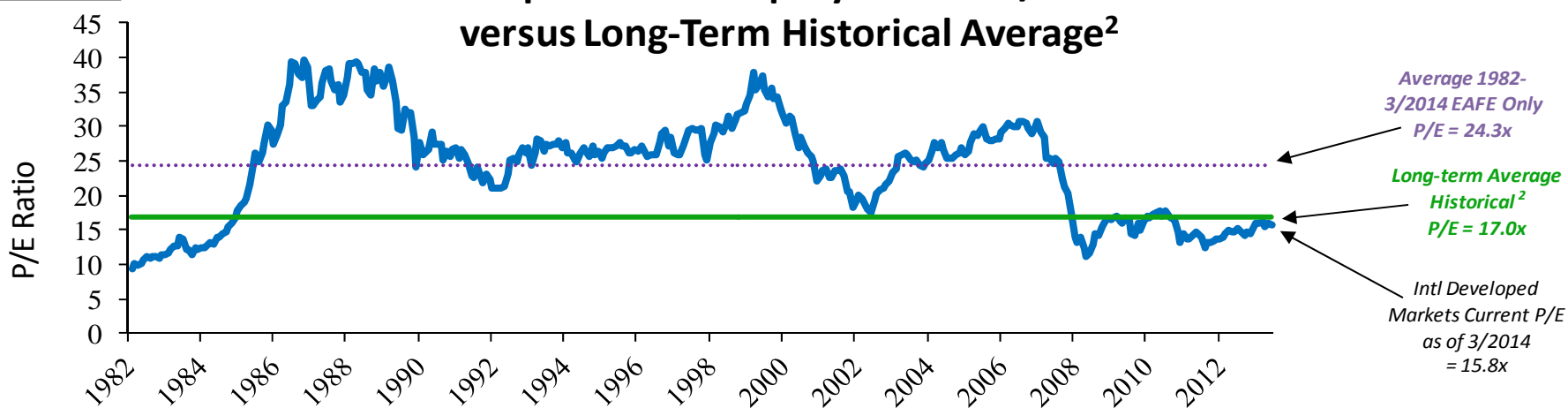


<sup>1</sup> P/E ratio is a Shiller P/E-10 based on 10 year real S&P 500 earnings over S&P 500 index level.

(Please note different time scales)

Exhibit 2

### Developed ex-U.S. Equity Market P/E Ratio<sup>1</sup> versus Long-Term Historical Average<sup>2</sup>



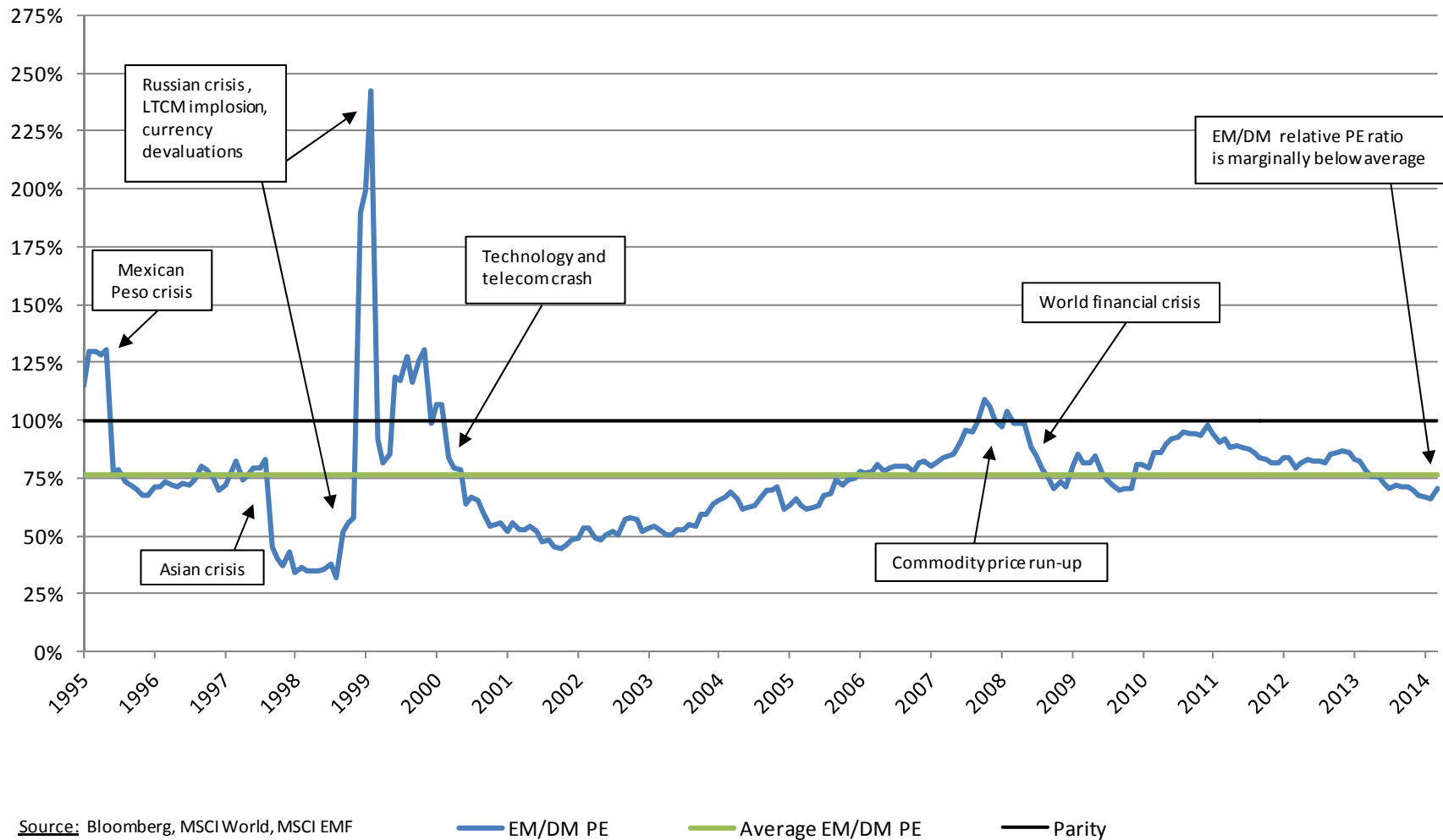
<sup>1</sup> P/E ratio is a Shiller P/E-10 based on 10 year real MSCI EAFE earnings over EAFE index level.

<sup>2</sup> To calculate the LT historical average, from 1881 to 1982 U.S. data is used as developed market proxy. From 1982 to present, actual developed ex-US market data (MSCI EAFE) is used.



## Emerging Markets Public Equity Markets

Exhibit 3

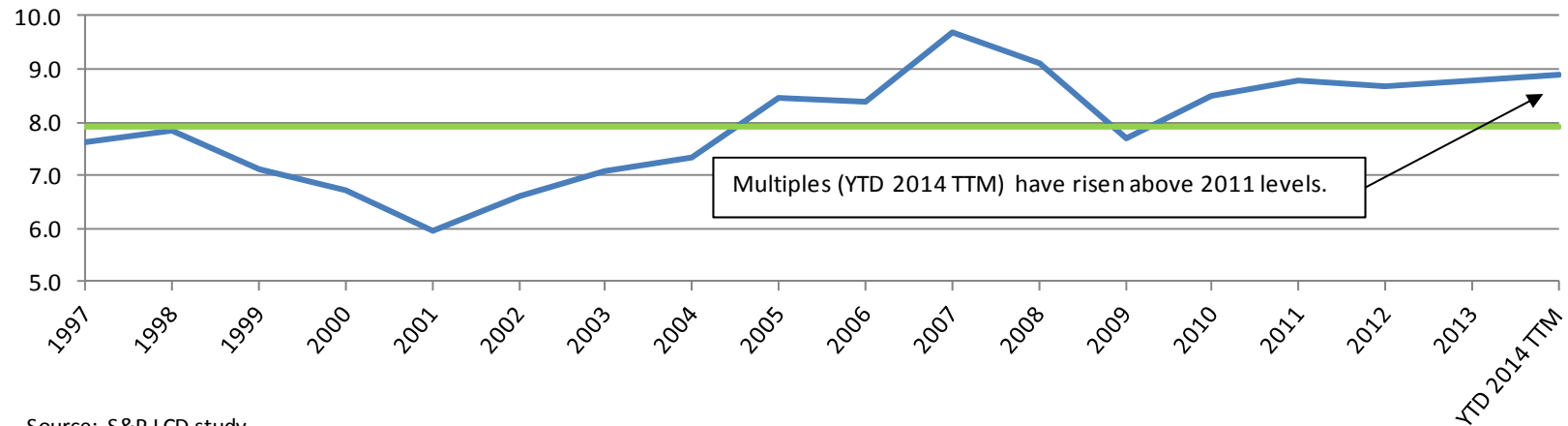
**Emerging Markets PE / Developed Markets PE  
(100% = Parity between PE Ratios)**



## U.S. Private Equity Markets

Exhibit 4

## Price to EBITDA Multiples Paid in LBOs

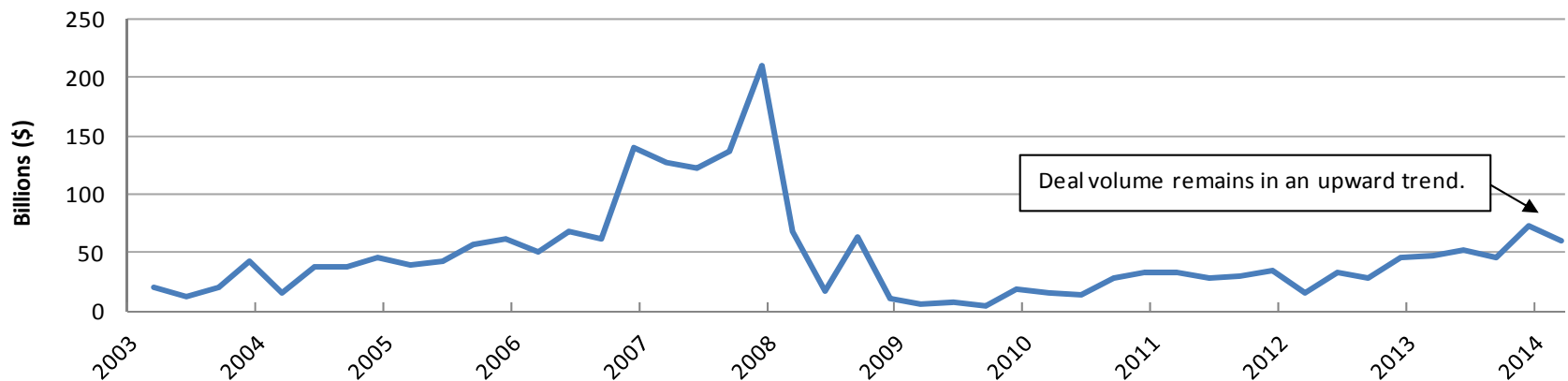


Source: S&amp;P LCD study

(Please note different time scales)

Exhibit 5

## Disclosed U.S. Quarterly Deal Volume\*



Source: Thomson Reuters Buyouts

\* quarterly total deal size (both equity and debt)



## Private Real Estate Markets

Exhibit 6

### Current Value Cap Rates<sup>1</sup>

Quarterly Data, Updated to March 31<sup>st</sup>

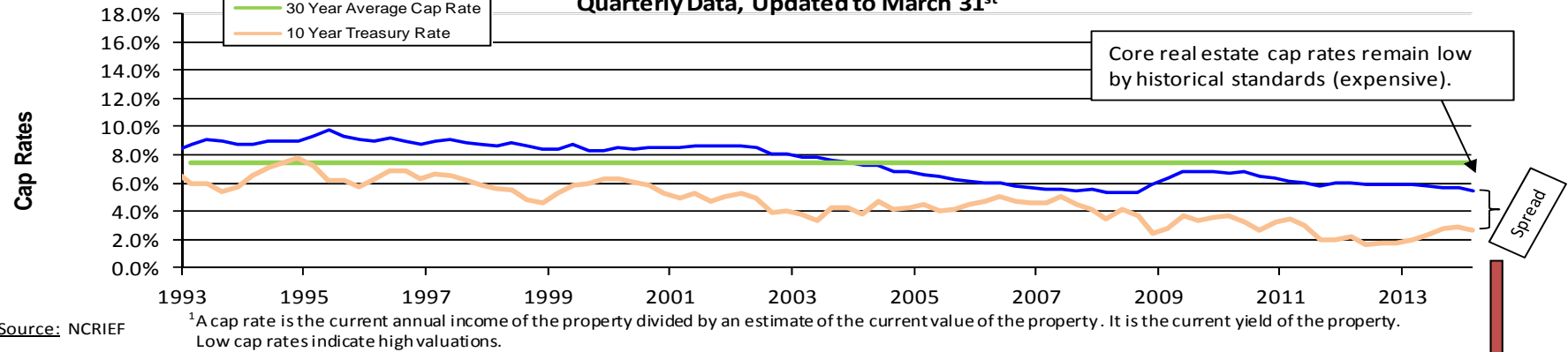


Exhibit 7

### Core Cap Rate Spread over 10-Year Treasury Interest Rate

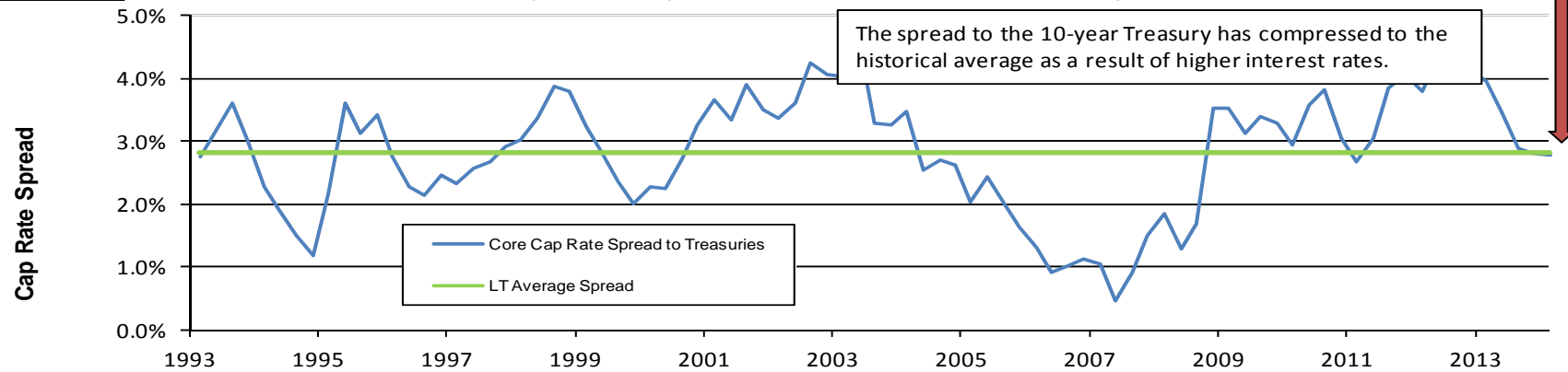
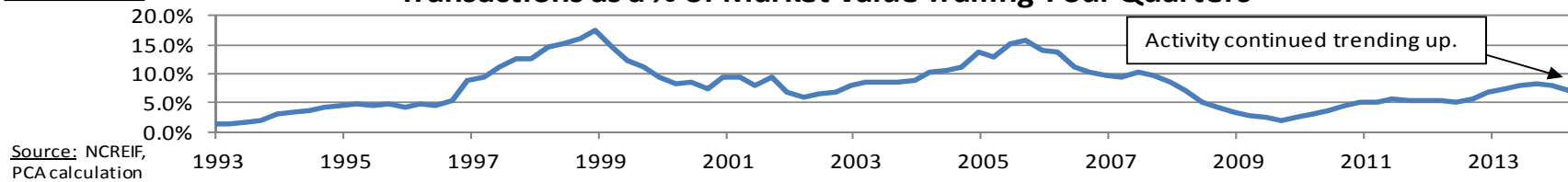


Exhibit 8

### Transactions as a % of Market Value Trailing-Four Quarters

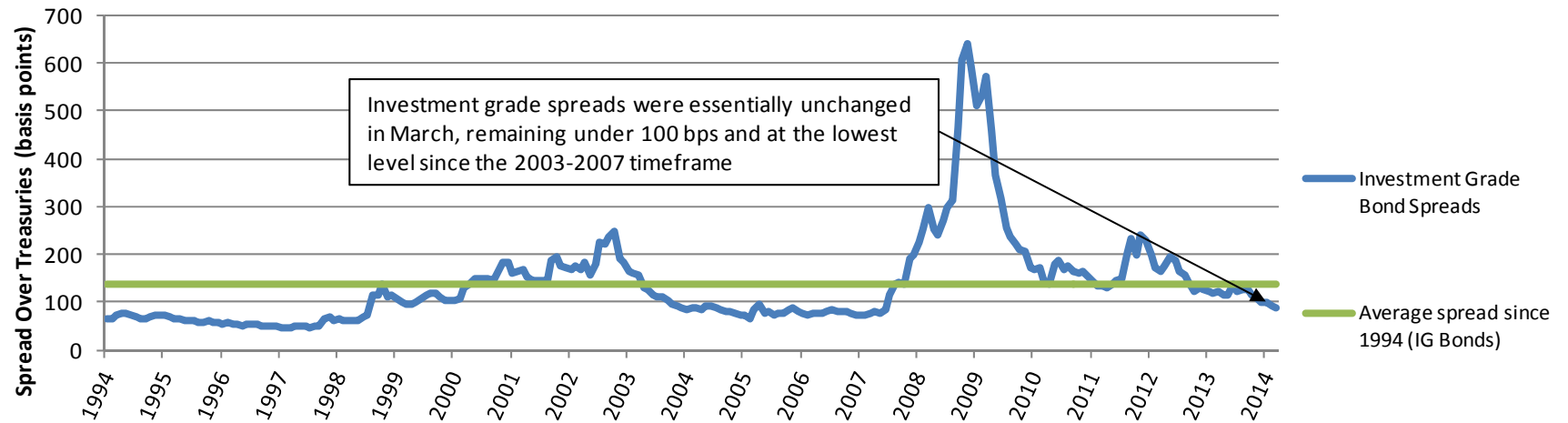




## Credit Markets U.S. Fixed Income

Exhibit 9

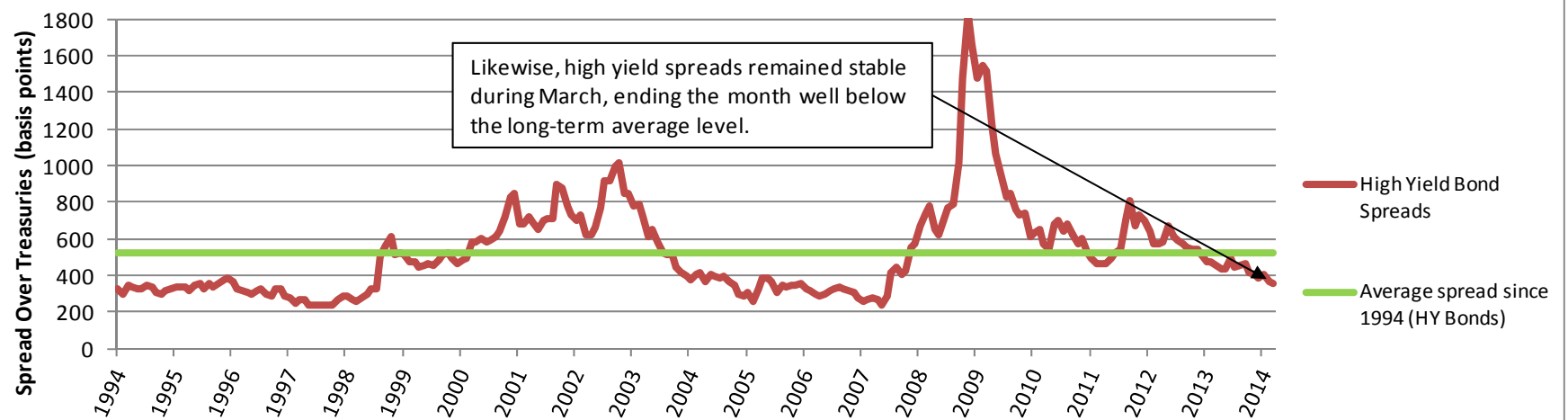
## Investment Grade Corporate Bond Spreads



Source: LehmanLive: Barclays Capital US Corporate Investment Grade Index Intermediate Component.

Exhibit 10

## High Yield Corporate Bond Spreads

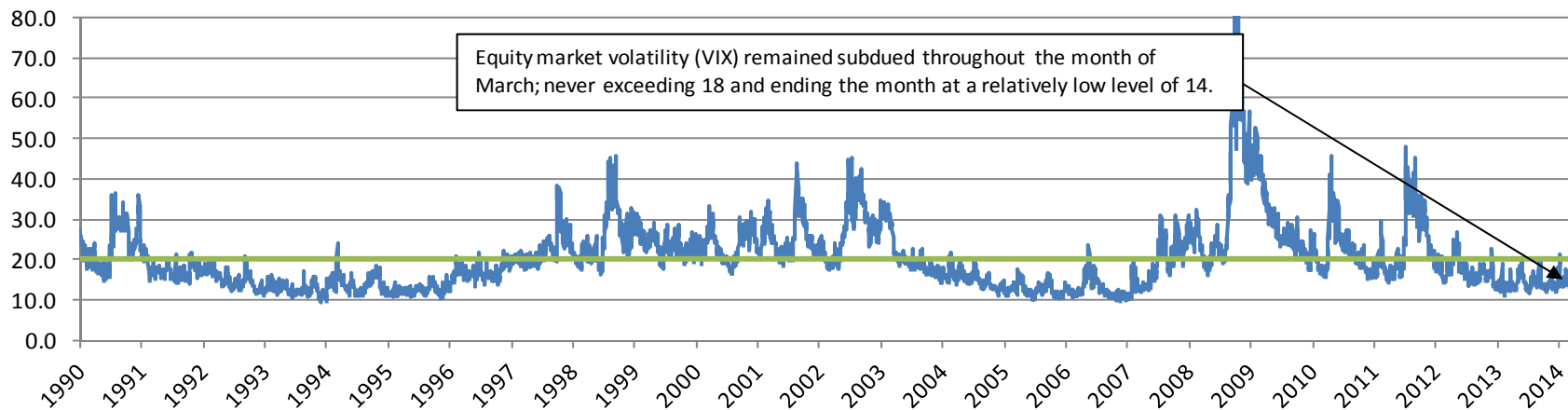


Source: LehmanLive: Barclays Capital U.S. Corporate High Yield Index.



## Other Market Metrics

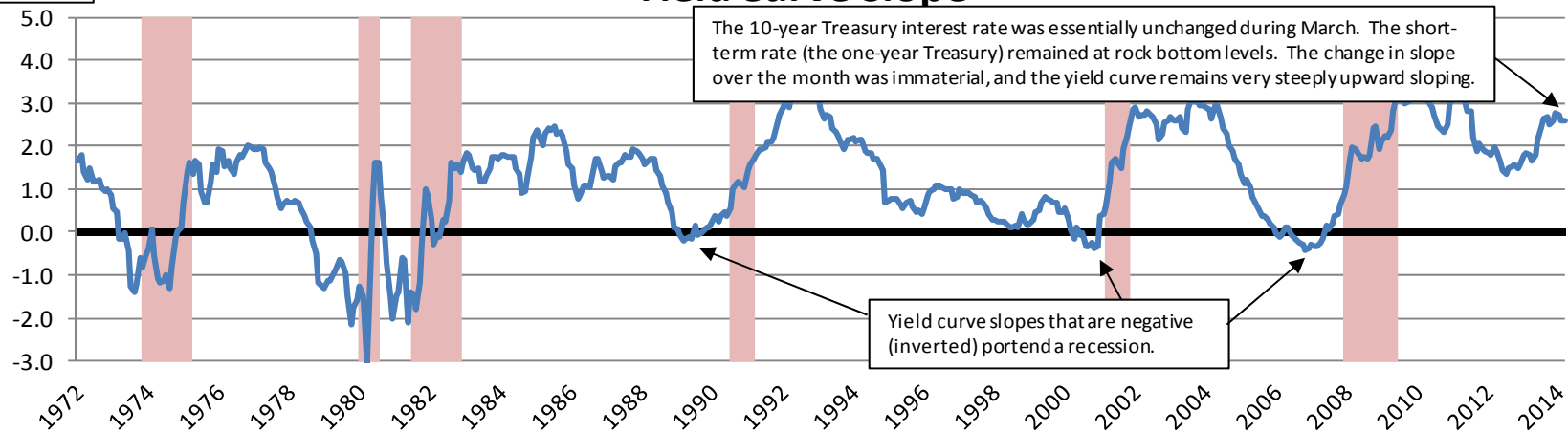
Exhibit 11

**VIX - a measure of equity market fear / uncertainty**

Source: <http://www.cboe.com/micro/vix/historical.aspx>

(Please note different time scales)

Exhibit 12

**Yield Curve Slope**

Source: [www.ustreas.gov](http://www.ustreas.gov) (10-year treasury yield minus 1-year treasury yield)

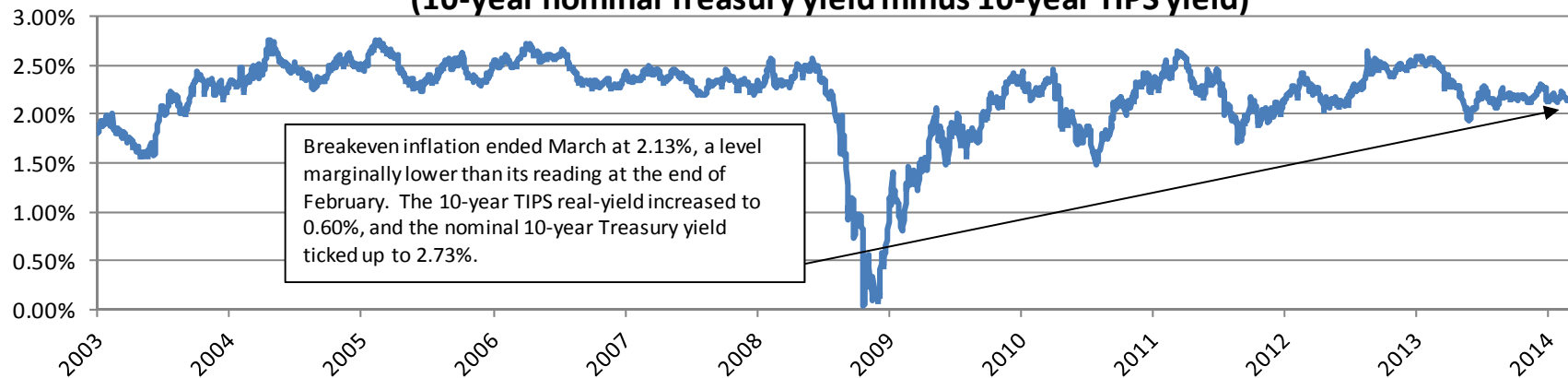
Recession Dating: NBER <http://www.nber.org/cycles.html>



## Measures of Inflation Expectations

Exhibit 13

### 10-Year Breakeven Inflation (10-year nominal Treasury yield minus 10-year TIPS yield)



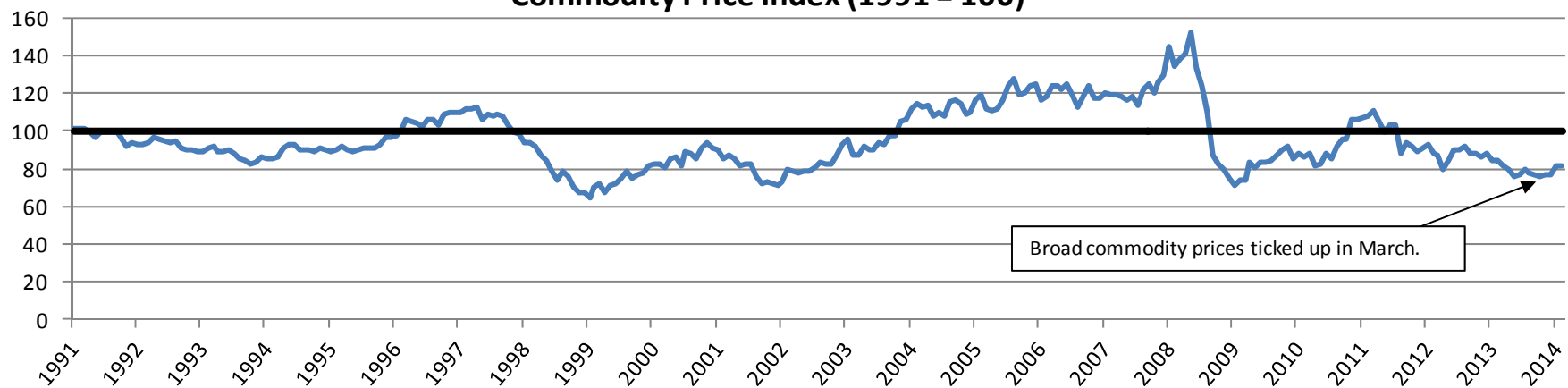
Source: [www.ustreas.gov](http://www.ustreas.gov)

Daily Yield Curve Rates (10-year nominal treasury yield minus 10-year TIPS yield)

(Please note different time scales)

Exhibit 14

### Inflation Adjusted Dow Jones UBS Commodity Price Index (1991 = 100)



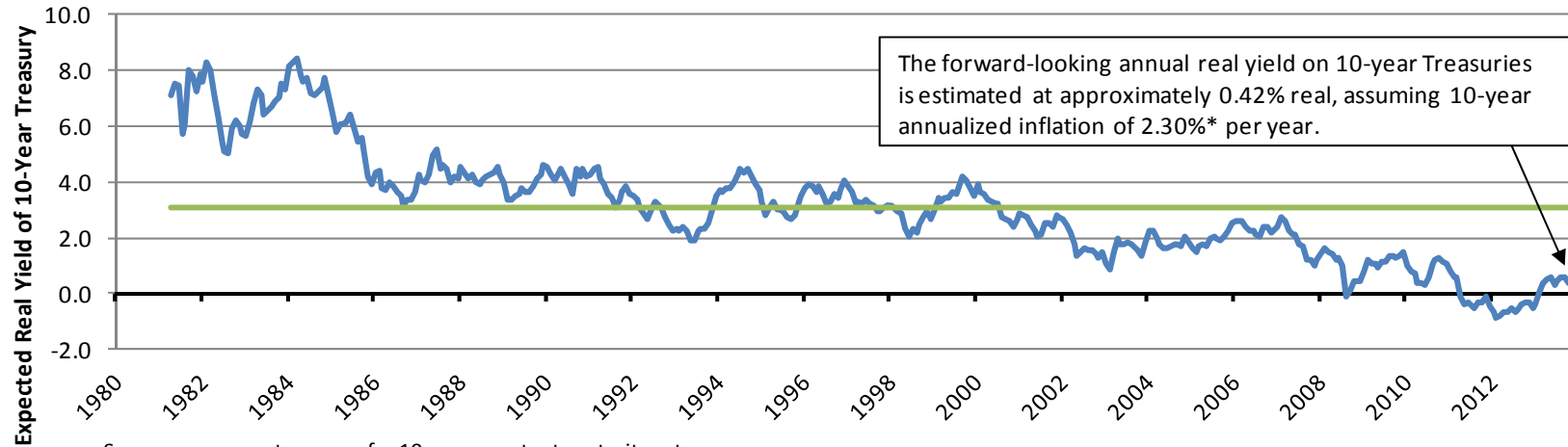
Source: Bloomberg DJUBS Index, St. Louis Fed for US CPI all urban consumers.



## Measures of U.S. Treasury Interest Rate Risk

Exhibit 15

## Estimate of 10-Year Treasury Forward-Looking Real Yield

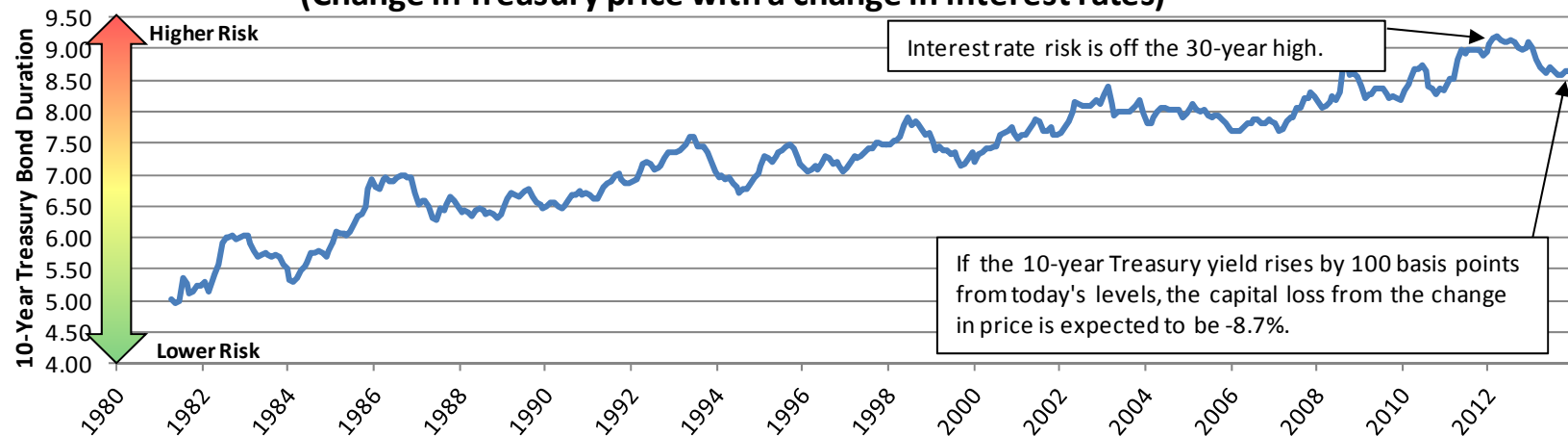


Sources: [www.ustreas.gov](http://www.ustreas.gov) for 10-year constant maturity rates

\*Federal Reserve Bank of Philadelphia survey of professional forecasts for inflation estimates

Exhibit 16

### 10-Year Treasury Duration (Change in Treasury price with a change in interest rates)



Source: [www.ustreas.gov](http://www.ustreas.gov) for 10-year constant maturity rates, calculation of duration



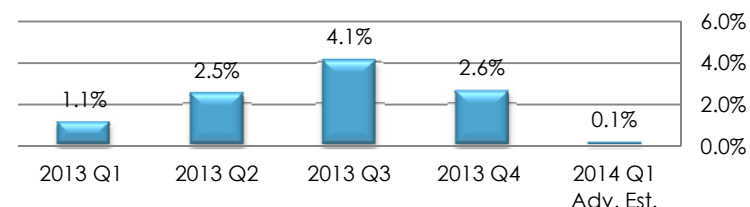
## ECONOMIC &amp; MARKET OVERVIEW

**Overview:** During the first quarter of 2014, equity markets managed small gains while digesting concerns regarding the Federal Reserve's continued tapering of bond purchases. GDP growth slowed significantly during the quarter (to almost 0%), as intense winter storms on the east coast impacted economic growth. Despite the decrease in growth, the Fed announced a reduction in the degree of monthly bond purchases to \$45 billion at the April 2014 meeting, down from the original \$85 billion monthly level of last year. The Fed backed off the 6.5% unemployment hurdle in regards to continued quantitative easing and indicated it will turn its focus to a range of indicators looking forward. Unemployment remained unchanged at 6.7% in the first quarter. Inflation crept up slightly on a quarter-to-quarter basis, while remaining under 2.0% for the trailing 12-month period. Returns for developed Non-US equity markets were in-line with US equities during the quarter, generating slight gains. Worldwide inflation data continued to be below target, while emerging markets continued to struggle on weaker growth readings. US Bond markets delivered gains in-line with equities during the first quarter, as the Barclays Aggregate Bond Index posted its best quarterly return since the second quarter of 2012.

Economic Growth

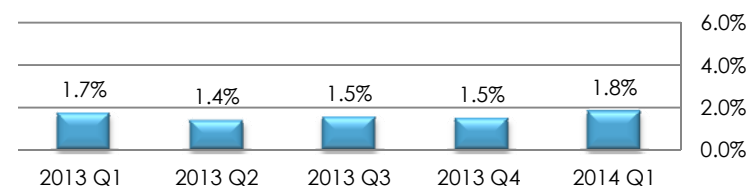
- Real GDP increased at an annualized rate of 0.1 percent in the first quarter of 2014 after increasing at an annualized rate of 2.6 in the fourth quarter of 2013.
- A downturn in exports, business investment, and a larger decrease in inventory investment were reflected in the slowdown in real GDP growth during the quarter.
- These decreases in growth were partly offset by faster growth in utilities and health care.

Annualized Quarterly GDP Growth

Inflation

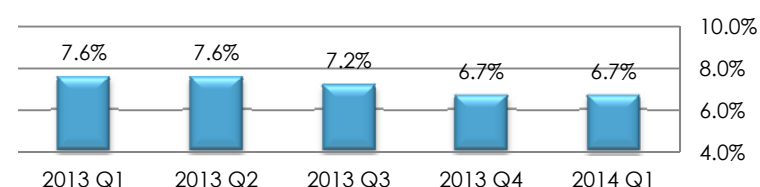
- The Consumer Price Index for All Urban Consumers (CPI-U) increased by 1.8 percent in the quarter on an annualized basis, after seasonal adjustment.
- Quarterly percent changes may be adjusted between data publications due to periodic updates in seasonal factors.
- Core CPI-U increased by 1.8 percent for the quarter on an annualized basis.
- Over the last 12 months, CPI-U increased 1.5 percent before seasonal adjustment.

CPI-U After Seasonal Adjustment

Unemployment

- The US economy gained 480,000 jobs in the quarter.
- The official unemployment rate remained unchanged at 6.7% at quarter end.
- The majority of jobs gained occurred in professional and business services, construction, and food services & drinking places.

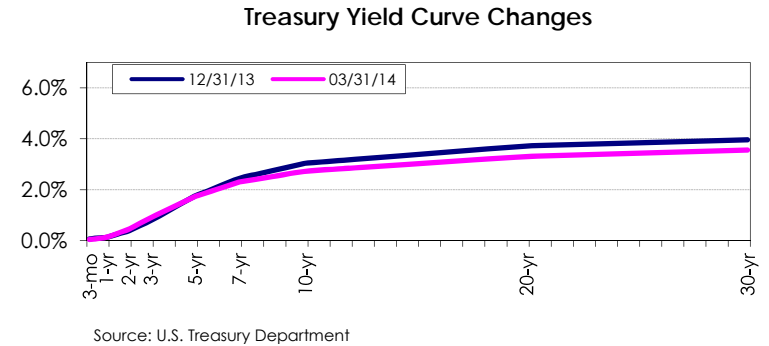
Unemployment Rate





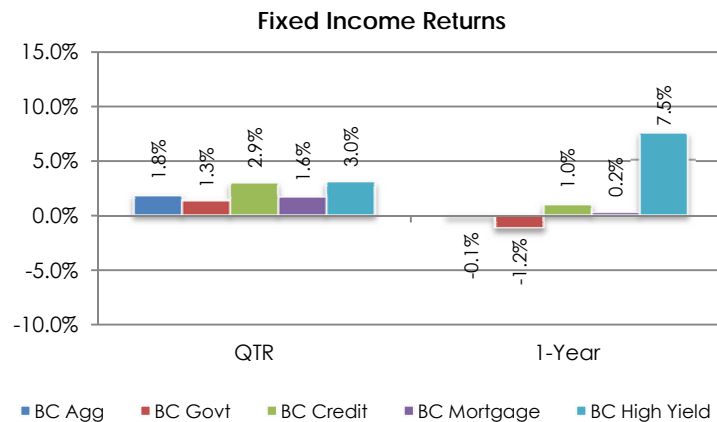
### Interest Rates & U.S. Dollar

- U.S. Treasury yields decreased over the quarter.
- The Federal Reserve has maintained the federal funds rate between 0.00% and 0.25% since December 2008.
- The U.S. dollar depreciated against the Yen, Euro and Sterling by (0.2%), (2.0%) and (0.6%), respectively.
- As of quarter end rates remained near low historic levels.



### Fixed Income

- Most bond markets produced strong results posting their best returns since the second quarter of 2012.
- During the trailing 1-year period, bond markets continued to show poor performance as only High Yield produced significantly positive results.



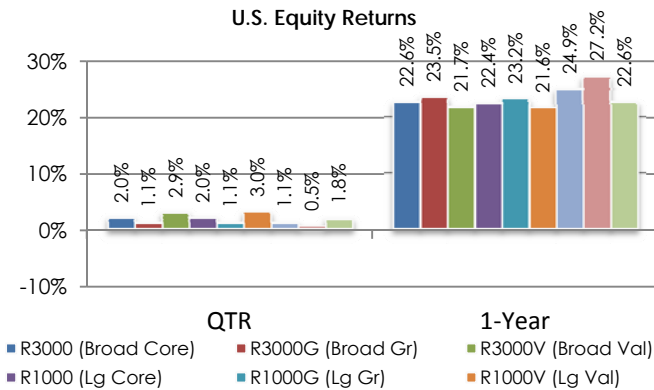
U.S. Fixed Income Sector Performance (BC Aggregate Index)			
Sector	Weight	QTR	1 Year
Governments*	40.1%	1.3%	-1.2%
Agencies	5.5%	1.2%	-0.6%
Inv. Grade Credit	23.0%	2.9%	1.0%
MBS	29.2%	1.6%	0.2%
ABS	0.5%	0.5%	0.2%
CMBS	1.7%	1.3%	1.4%

\*U.S. Treasuries and Government Related



U.S. Equities

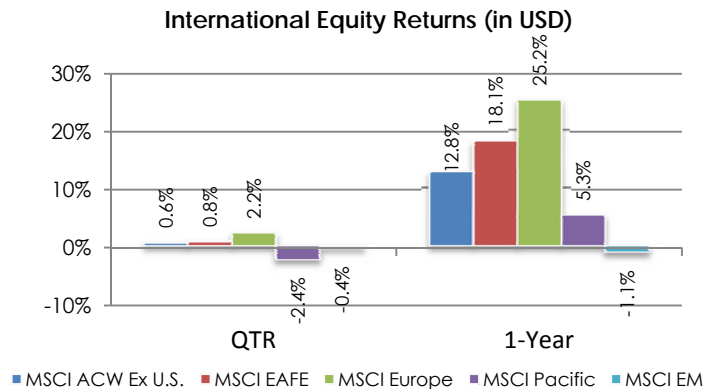
- US equities began the year tentatively but continued to produce strong trailing 1-year results as returns were positive during the quarter.
- During the quarter, value indices outperformed growth throughout large & mid-cap stocks. All sectors produced strong results during the trailing 1-year period and only Consumer Discretionary was negative during the quarter.



U.S. Equity Sector Performance (Russell 3000 Index)			
Sector	Weight	QTR	1 Year
Information Tech.	18.2%	2.2%	26.9%
Financials	17.6%	2.8%	21.8%
Health Care	13.0%	5.7%	30.4%
Consumer Disc.	12.9%	-2.1%	26.0%
Industrials	11.5%	0.5%	27.4%
Energy	9.3%	1.5%	15.6%
Consumer Staples	8.4%	0.6%	12.0%
Materials	3.8%	3.0%	21.5%
Utilities	3.1%	9.5%	11.0%
Telecomm. Serv.	2.2%	0.4%	6.2%

International Equities

- International developed equity markets struggled to start the year as disappointing earnings in the U.K. hurt developed market returns and poor macroeconomic data continued to be a headwind for emerging markets.



International Equity Region Performance (in USD) (MSCI ACW Index ex U.S.)			
Sector	Weight	QTR	1 Year
Europe Ex. UK	33.5%	3.1%	25.5%
Emerging Markets	20.6%	-0.4%	-1.1%
United Kingdom	15.3%	-1.8%	12.5%
Japan	14.3%	-6.4%	5.7%
Pacific Ex. Japan	8.9%	2.0%	-2.4%
Canada	7.4%	1.0%	4.0%



Market Summary – Long-term Performance\*

Indexes	1 Year	3 Year	5 Year	10 Year	20 Year
<b>Global Equity</b>					
MSCI All Country World	17.2%	9.1%	18.4%	7.5%	7.5%
<b>Domestic Equity</b>					
S&P 500	21.9%	14.7%	21.2%	7.4%	9.5%
Russell 3000	22.6%	14.6%	21.9%	7.9%	9.6%
Russell 3000 Growth	23.5%	14.5%	21.9%	7.9%	8.7%
Russell 3000 Value	21.7%	14.6%	21.9%	7.6%	10.1%
Russell 1000	22.4%	14.7%	21.7%	7.8%	9.7%
Russell 1000 Growth	23.2%	14.6%	21.7%	7.9%	8.8%
Russell 1000 Value	21.6%	14.8%	21.8%	7.6%	10.1%
Russell 2000	24.9%	13.2%	24.3%	8.5%	9.5%
Russell 2000 Growth	27.2%	13.6%	25.2%	8.9%	7.7%
Russell 2000 Value	22.6%	12.7%	23.3%	8.1%	10.8%
CBOE BXM	10.7%	8.3%	12.0%	5.1%	8.2%
<b>International Equity</b>					
MSCI All Country World ex US	12.8%	4.6%	16.0%	7.6%	6.2%
MSCI EAFE	18.1%	7.7%	16.6%	7.0%	5.9%
MSCI Pacific	5.3%	5.3%	13.6%	5.0%	2.2%
MSCI Europe	25.2%	9.0%	18.2%	8.0%	8.7%
MSCI EM (Emerging Markets)	-1.1%	-2.5%	14.8%	10.5%	6.2%
<b>Fixed Income</b>					
BC Universal Bond	0.5%	4.2%	5.7%	4.8%	6.2%
BC Global Agg – Hedged	1.3%	4.4%	4.5%	4.4%	6.0%
BC Aggregate Bond	-0.1%	3.7%	4.8%	4.5%	6.0%
BC Government	-1.2%	3.2%	2.7%	4.0%	5.7%
BC Credit Bond	1.0%	5.8%	8.9%	5.2%	6.7%
BC Mortgage Backed Securities	0.2%	2.8%	3.6%	4.6%	6.0%
BC High Yield Corporate Bond	7.5%	9.0%	18.2%	8.7%	8.0%
BC WGILB - Hedged	-4.9%	3.9%	5.0%	4.6%	NA
BC Emerging Markets	0.0%	7.0%	12.5%	8.5%	10.6%
<b>Real Estate</b>					
NCREIF (Private RE)	11.2%	11.7%	7.9%	8.7%	9.4%
NAREIT (Public RE)	2.7%	10.6%	27.3%	7.4%	10.2%
<b>Commodity Index</b>					
DJ-UBS Commodity	-2.1%	-7.4%	4.2%	0.4%	5.1%

\* Performance is annualized for periods greater than one year.



## WPERP RETIREMENT PLAN REVIEW

**Actual vs. Target Allocations**

The strategic allocation targets reflect the current long-term policy allocation, effective 7/1/2013.

With respect to its strategic allocation targets, the Total Retirement Portfolio ended the latest quarter ***overweight Domestic Equity, International Equity, and Covered Calls***, while ***underweight Fixed Income, Private Equity, and Real Estate***. ***Real Return and Cash*** were in-line with target allocations. Following the 2011 Asset Allocation study, WPERP utilized a series of phased allocation targets, beginning in 4Q 2011, to transition towards the long-term policy targets. The Retirement Plan reached the long-term policy targets as of 7/1/2013.

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As of March 31, 2014

Segment	Actual (\$MM)	Actual % <sup>1</sup>	Target% <sup>2</sup>	Variance	Min.	Max.
Total Portfolio <sup>3</sup>	10,910	100	100	---	---	---
Total Retirement <sup>4</sup>	9,288	100	100	---	---	---
Domestic Equity	3,506	38	33	5	29	39
International Equity	2,096	23	21	2	17	25
Fixed Income	1,947	21	24	-3	21	29
Covered Calls	671	7	5	2	4	6
Real Return	518	6	6	---	---	---
Private Equity	164	2	5	-3	---	---
Real Estate	293	3	5	-2	---	---
Cash	83	1	1	---	0.5	1.5

---

<sup>1</sup> Differences due to rounding.

<sup>2</sup> Long-term policy targets, effective 7/1/2013.

<sup>3</sup> Total Portfolio includes assets from the Retirement, Health, Disability, and Death Plans.

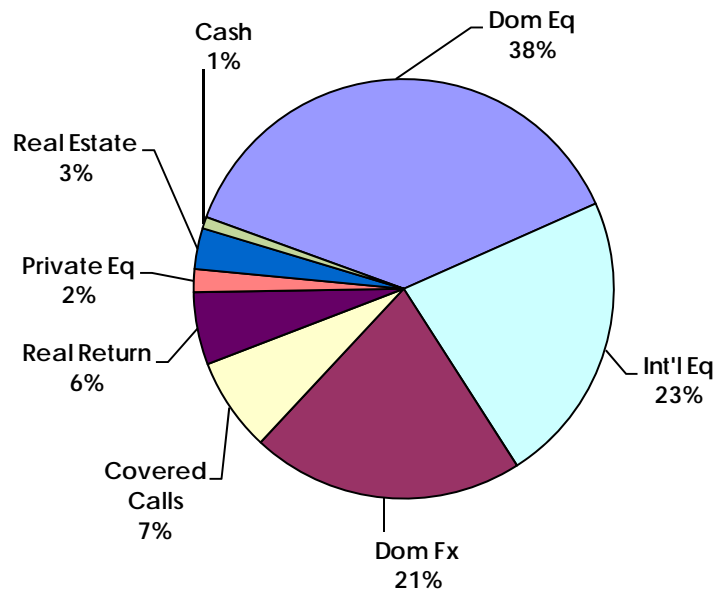
<sup>4</sup> Including a balance of \$13.4 million in transition accounts and a negative balance of (\$3.3) million in securities lending.



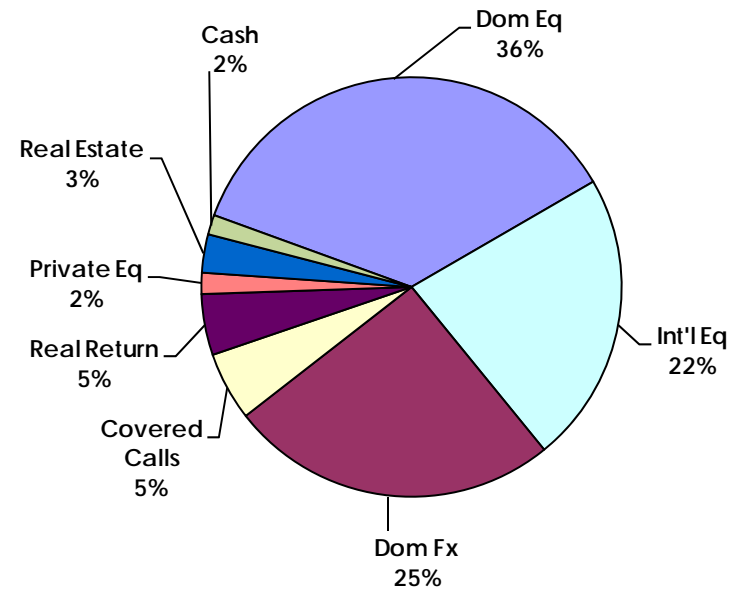
### Actual Strategic Allocation Comparison

As of March 31, 2014, the WPERP Total Retirement Portfolio had a 61% allocation in Equities, 21% in Fixed Income, 7% in Covered Calls, 6% in Real Return, 2% in Private Equity, 3% in Real Estate, and 1% in Cash. During the latest 1-year period, the actual weightings of Domestic Equity, International Equity, Covered Calls, and Real Return increased by 2%, 1%, 2%, and 1%, respectively. The actual weightings of Fixed Income and Cash decreased by (4%) and (1%), respectively. The actual weightings of Private Equity and Real Estate remained the same. The allocation changes are primarily a result of the evolving investment policy, along with strong equity market performance. The Board approved its current long-term investment policy in June 2011 as a result of the 2011 Asset Allocation study. The new policy was implemented over a series of phased asset allocation targets that initially began in 4Q 2011 (see Appendix for a description of the policy benchmark composition). The Retirement Plan reached the long-term policy target as of 7/1/2013.

March 31, 2014



March 31, 2013





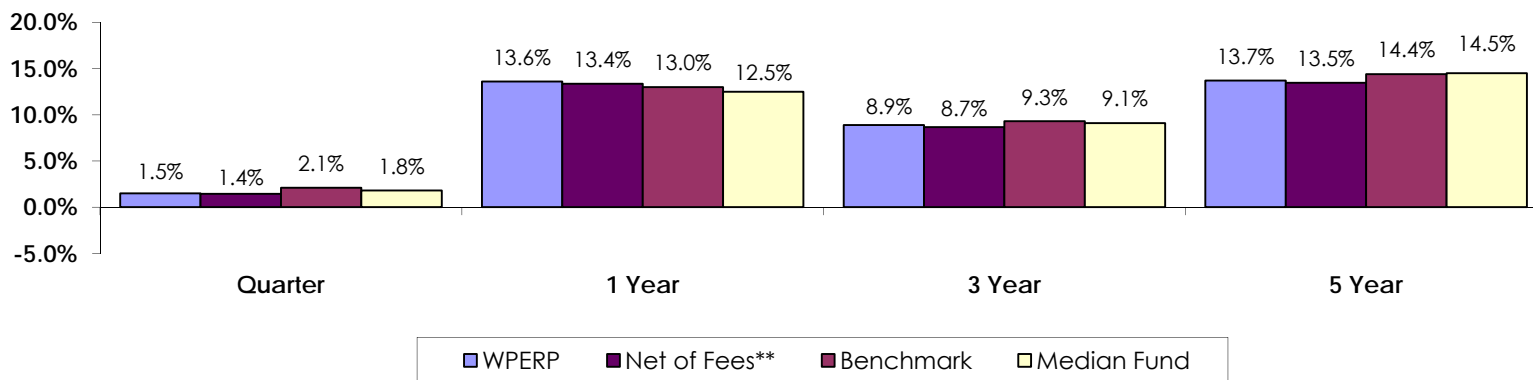
## WPERP RETIREMENT PLAN PERFORMANCE

This section includes an overview of the performance of WPERP's Total Retirement Portfolio and a detailed analysis of strategic classes and specific mandates.

**Portfolio Performance Overview (Gross of Fees)**

The Total Retirement Portfolio underperformed its policy benchmark over the most recent quarter by (60) basis points. Over the latest 1-year period, the Total Retirement Portfolio bested its policy benchmark by 60 basis points with a 13.6% return. Over the trailing 3-year period, the Total Retirement Portfolio lagged its policy benchmark by (40) basis points with an 8.9% return. Over the trailing 5-year period, the Total Retirement Portfolio trailed its policy benchmark by (70) basis points, generating a 13.7% return.

The Total Retirement Portfolio underperformed the Median Public Fund over the most recent quarter by (30) basis points, but outperformed over the trailing 1-year period by 1.1%. Over the latest 3-year period, the Total Retirement Portfolio lagged the Median Public Fund by (20) basis points. Over the trailing 5-year period, the Total Retirement Portfolio underperformed the Median Public Fund by (80) basis points.

**Periods ending March 31, 2014 (annualized)\***

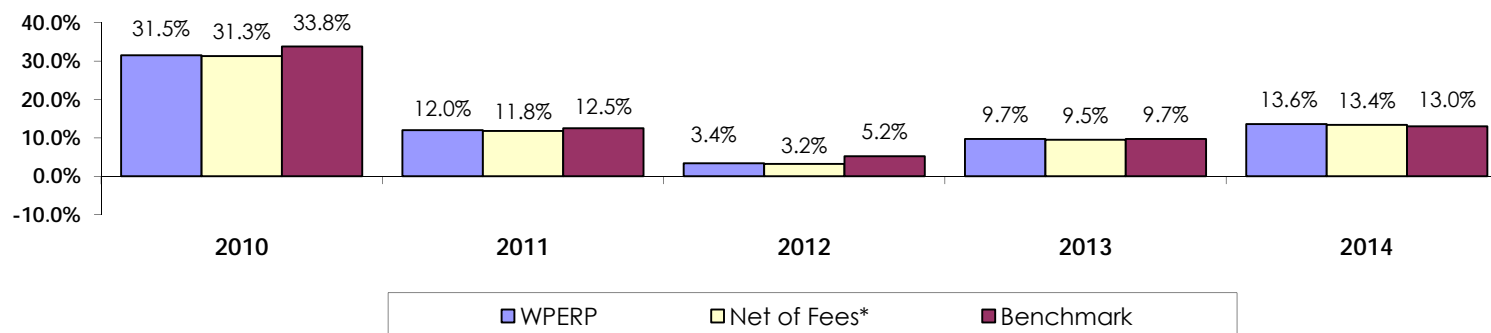
\* WPERP performance reported gross of fees.

\*\*Net of Fees performance estimated based on existing WPERP manager fee schedule.



The Total Retirement Portfolio generated positive absolute performance results over all five trailing 12-month periods. The Total Retirement Portfolio matched or outperformed its policy benchmark twice over the same 12-month periods, gross of fees.

### 12-month Performance – Periods ending March 31



\*Net of Fees performance estimated based on existing WPERP manager fee schedule.

### Portfolio Valuation

As of March 31, 2014, the WPERP Total Retirement Plan had an aggregate value of \$9.3 billion. This represents a \$122.3 million increase in value over the last quarter. During the most recent 1-year period, the WPERP Total Retirement Plan increased by \$1,075.8 million.

### Portfolio Valuation as of March 31, 2014, Gross of Fees\*

#### Cash Flow Performance

	1Q 2014		1-Year		3-Year		5-Year
Beginning Market Value	\$9,165.4		\$8,211.9		\$7,308.3		\$5,142.9
Net Flow	-16.0		-41.0		-150.8		-484.9
<b>Investment Return in \$ (in%)</b>	<b>138.3</b>	<b>1.5%</b>	<b>1,116.8</b>	<b>13.6%</b>	<b>2,130.1</b>	<b>8.9%</b>	<b>4,629.7</b>
Ending Market Value	\$9,287.7		\$9,287.7		\$9,287.7		\$9,287.7

\* Dollar figures in millions (\$), differences due to rounding

\*\* Recent Quarter net flow per Mellon. 1-year, 3-year, 5-year net flows estimated per PCA



## PERFORMANCE ATTRIBUTION – RETIREMENT PLAN VS. POLICY BENCHMARK

**Performance Attribution - 1Q 2014**

	Policy		Portfolio		Impact on Return			
	Allocation	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.0%	2.0	37.9%	1.7	(0.0)	(0.1)	(0.0)	(0.1)
International Equity	21.0%	0.9	22.8%	0.7	(0.0)	(0.0)	(0.0)	(0.1)
Fixed Income	24.0%	2.0	21.0%	2.0	0.0	0.0	0.0	0.0
Covered Calls	5.0%	2.4	7.2%	2.1	0.0	(0.0)	(0.0)	(0.0)
Real Return	6.0%	0.3	5.7%	(0.8)	0.0	(0.1)	0.0	(0.1)
Private Equity	5.0%	10.9	1.6%	2.2	(0.3)	(0.4)	0.3	(0.4)
Real Estate	5.0%	2.5	3.0%	4.3	(0.0)	0.1	(0.0)	0.0
Cash	1.0%	0.0	0.8%	0.0	0.0	0.0	(0.0)	0.0
Total	100.0%	2.1	100.0%	1.5	(0.3)	(0.6)	0.2	(0.6)

\*Portfolio allocation utilizes beginning-of-the period market v alues.

**Performance Attribution - Trailing 12-month**

	Policy		Portfolio		Impact on Return			
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.3%	22.6	37.2%	25.9	0.3	1.0	0.1	1.4
International Equity	21.0%	12.8	22.6%	14.2	(0.0)	0.3	0.0	0.3
Fixed Income	24.3%	0.5	22.1%	0.9	0.1	0.1	(0.0)	0.2
Covered Calls	5.0%	10.7	6.7%	10.5	0.0	0.0	(0.0)	0.0
Real Return	6.0%	3.1	5.6%	(4.5)	0.0	(0.5)	(0.0)	(0.4)
Private Equity	4.8%	37.5	1.7%	12.1	(0.7)	(1.1)	0.7	(1.0)
Real Estate	4.8%	11.0	3.0%	16.7	0.1	0.3	(0.1)	0.2
Cash	1.0%	0.0	1.1%	0.2	(0.0)	0.0	0.0	(0.0)
Total	100.0%	13.0	100.0%	13.6	(0.2)	0.1	0.7	0.6

\*Portfolio allocation utilizes av erage market v alues ov er the trailing four quarters; Policy allocation utilizes av erage target allocations ov er the trailing four quarters.

- During the most recent quarter, the Total Retirement Portfolio underperformed its policy benchmark. Private Equity was the largest detractor from the relative performance. In the aggregate, the majority of the portfolio's strategic classes were insignificant contributors/detractors versus the Policy Benchmark.
- During the trailing 12-month period, the Total Retirement Portfolio outperformed its policy benchmark. Selection within Domestic and International Equity were significant contributors to the relative outperformance. An overweight to Domestic Equity, as well as selection and weighting within Fixed Income and Real Estate, also aided performance during the period. The Private Equity class (weighting and selection), along with selection in Real Return, were the primary detractors from the relative performance.



PERFORMANCE ATTRIBUTION – RETIREMENT PLAN VS. MEDIAN PUBLIC FUND<sup>1</sup>

## Performance Attribution - 1Q 2014

	Median Public Fund		Portfolio		Impact on Return			
	Allocation	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	32.7%	1.9	37.9%	1.7	0.0	(0.1)	(0.0)	(0.1)
International Equity	18.9%	0.7	22.8%	0.7	(0.0)	0.0	0.0	(0.0)
Fixed Income	23.1%	2.1	21.0%	2.0	(0.0)	(0.0)	0.0	(0.0)
Covered Calls	0.0%	2.4	7.2%	2.1	0.0	0.0	(0.0)	0.0
Real Estate	6.2%	2.1	3.0%	4.3	(0.0)	0.1	(0.1)	0.1
Alternative Investments	17.0%	2.5	7.3%	(0.1)	(0.1)	(0.4)	0.3	(0.3)
Cash	2.1%	0.0	0.8%	0.0	0.0	0.0	0.0	0.0
Total	100.0%	1.8	100.0%	1.5	(0.1)	(0.4)	0.2	(0.3)

\*Portfolio allocation utilizes beginning-of-the period market v values.

## Performance Attribution - Trailing 12-month

	Median Public Fund		Portfolio		Impact on Return			
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.5%	22.8	37.2%	25.9	0.4	1.0	0.1	1.5
International Equity	18.9%	14.7	22.6%	14.2	0.1	(0.1)	(0.0)	(0.1)
Fixed Income	24.3%	0.4	22.1%	0.9	0.3	0.1	(0.0)	0.4
Covered Calls	0.0%	10.7	6.7%	10.5	(0.1)	0.0	(0.0)	(0.1)
Real Estate	6.0%	10.5	3.0%	16.7	0.1	0.4	(0.2)	0.2
Alternative Investments	15.1%	11.0	7.3%	(0.7)	0.1	(1.8)	0.9	(0.7)
Cash	2.2%	0.2	1.1%	0.2	0.1	(0.0)	0.0	0.1
Total	100.0%	12.5	100.0%	13.6	0.9	(0.4)	0.8	1.3

\*Portfolio allocation utilizes average market v values over the trailing four quarters; Median allocation utilizes average market v values over the trailing four quarters.

- During the most recent quarter, the Total Retirement Portfolio underperformed the Median Public Fund. Alternative Investments was the largest detractor from the relative performance. In the aggregate, the majority of the portfolio's strategic classes were insignificant contributors/detractors versus the Median Public fund.
- During the trailing 12-month period, the Total Retirement Portfolio outperformed the Median Public Fund. The Domestic Equity class (weighting and selection) provided the bulk of the outperformance. The Fixed Income class and selection within Real Estate were also meaningful contributors to the relative outperformance. Selection within Alternative Investments was the primary detractor from relative performance over the period.

<sup>1</sup> Mellon Total Funds Public Universe. For the Median Public Fund: Alternative Investments include allocations to Private Equity, Hedge Funds, and other investments; for WPERP, the asset class includes Private Equity and Real Return.



## WPERP RETIREMENT PLAN STRATEGIC CLASS PERFORMANCE

The **Domestic Equity** portfolio underperformed its policy benchmark during the quarter by (30) basis points with a 1.7% return. Over the latest 1-year period, the portfolio outperformed its policy benchmark by 3.3% with a very strong 25.9% return. Outperformance over the latest 1-year period was due to strong returns by the Plan's six active domestic equity managers. Over the trailing 3-year period, the portfolio bested its benchmark by 20 basis points. Over the latest 5-year period, the portfolio matched its benchmark with a 21.9% return.

The **International Equity** portfolio lagged its policy benchmark during the quarter by (20) basis points with a 0.7% return. Over the latest 1-year period, the portfolio bested its policy benchmark by 1.4%. Performance by the portfolio's two active developed international equity managers resulted in the outperformance. The portfolio outperformed its benchmark over the latest 3-year period by 20 basis points, but underperformed by (1.0%) over the trailing 5-year period due to former active managers. The portfolio has since been restructured.

The **Fixed Income** portfolio matched or outperformed its policy benchmark across all trailing time periods. Both of the Plan's core fixed income managers, as well as one of the Plan's high yield managers, matched or outperformed their benchmarks across all longer time periods. The Plan's other high yield manager underperformed its benchmark across all time periods, due in large part to its more conservative holdings relative to its benchmark.

The **Covered Calls** portfolio produced its seventh full quarter of performance, lagging the benchmark over the most recent quarter and trailing 1-year period by (30) and (20) basis points, respectively.

## Periods ending March 31, 2014

Asset Class	Quarter	1 Year	3 Year	5 Year
Total Retirement	1.5	13.6	8.9	13.7
<i>Policy Benchmark<sup>1</sup></i>	<i>2.1</i>	<i>13.0</i>	<i>9.3</i>	<i>14.4</i>
Domestic Equity	1.7	25.9	14.8	21.9
<i>Russell 3000 (blend)<sup>3</sup></i>	<i>2.0</i>	<i>22.6</i>	<i>14.6</i>	<i>21.9</i>
International Equity	0.7	14.2	4.4	15.1
<i>MSCI ACWI ex U.S. IMI ND (blend)<sup>4</sup></i>	<i>0.9</i>	<i>12.8</i>	<i>4.2</i>	<i>16.1</i>
Fixed Income	2.0	0.9	5.1	7.6
<i>BC Universal</i>	<i>2.0</i>	<i>0.5</i>	<i>4.2</i>	<i>5.7</i>
Covered Calls	2.1	10.5	---	---
<i>CBOE BXM</i>	<i>2.4</i>	<i>10.7</i>	<i>---</i>	<i>---</i>
Real Return <sup>2</sup>	-0.8	-4.5	3.4	6.3
<i>CPI + 3% (blend)<sup>2,5</sup></i>	<i>0.3</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>
Private Equity <sup>2</sup>	2.2	12.1	12.1	13.9
<i>Russell 3000 + 3% (PE blend)<sup>2,6</sup></i>	<i>10.9</i>	<i>37.5</i>	<i>20.6</i>	<i>18.5</i>
Real Estate <sup>2</sup>	4.3	16.7	16.9	5.4
<i>NCREIF<sup>2</sup></i>	<i>2.5</i>	<i>11.0</i>	<i>11.9</i>	<i>5.7</i>
Cash	0.0	0.2	0.2	0.3
<i>Citigroup T-bills</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>0.1</i>

<sup>1</sup> See Appendix for a description of the Retirement Plan policy benchmark.

<sup>2</sup> Returns are lagged one quarter.

<sup>3</sup> The policy benchmark for the Domestic Equity asset class is S&P 500 thru 3/31/03, and Russell 3000 from 4/1/03 to the present.

<sup>4</sup> The policy benchmark for the International Equity asset class is MSCI ACWI ex US thru 12/31/08, and MSCI ACWI ex US IMI ND from 1/1/09 to the present.

<sup>5</sup> The policy benchmark for the Real Return asset class is T-bills + 3% thru 6/30/13, and CPI + 3% to present.

<sup>6</sup> The policy benchmark for the PE asset class is a blended benchmark composed of Cambridge US PE Index and the Cambridge US Venture Capital Index thru 9/30/11, and Russell 3000 + 3% to present.



## WPERP RETIREMENT PLAN MANAGER PERFORMANCE

## Domestic Equity – Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	1,018,788	Large Cap Core	2.0	22.4	14.8	21.8	8.7	8/2003
<i>Russell 1000 Index</i>	---	---	<i>2.0</i>	<i>22.4</i>	<i>14.7</i>	<i>21.7</i>	<i>8.6</i>	---
MFS	534,982	Large Cap Value	1.6	23.3	15.3	20.3	9.3	2/2004
<i>Russell 1000 Value Index</i>	---	---	<i>3.0</i>	<i>21.6</i>	<i>14.8</i>	<i>21.8</i>	<i>7.4</i>	---
T. Rowe Price	538,846	Large Cap Value	2.6	24.2	15.5	22.6	9.1	9/2004
<i>Russell 1000 Value Index</i>	---	---	<i>3.0</i>	<i>21.6</i>	<i>14.8</i>	<i>21.8</i>	<i>7.1</i>	---
Fred Alger	565,945	Large Cap Growth	1.4	28.1	12.3	21.7	8.9	2/2004
<i>Russell 1000 Growth Index</i>	---	---	<i>1.1</i>	<i>23.2</i>	<i>14.6</i>	<i>21.7</i>	<i>7.6</i>	---
T. Rowe Price	563,841	Large Cap Growth	0.4	33.7	17.3	---	16.6	4/2010
<i>Russell 1000 Growth Index</i>	---	---	<i>1.1</i>	<i>23.2</i>	<i>14.6</i>	---	<i>15.5</i>	---
Earnest Partners	139,331	Small Cap Value	1.8	23.0	13.9	24.4	8.5	11/2004
<i>Russell 2000 Value Index</i>	---	---	<i>1.8</i>	<i>22.6</i>	<i>12.7</i>	<i>23.3</i>	<i>7.4</i>	---
Frontier	144,313	Small Cap Growth	3.2	31.7	12.6	---	16.4	4/2010
<i>Russell 2000 Growth Index</i>	---	---	<i>0.5</i>	<i>27.2</i>	<i>13.6</i>	---	<i>16.9</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

## Latest Quarter

During the first quarter of 2014, four of WPERP's seven reporting domestic equity managers matched or outperformed their respective benchmarks.

**BlackRock**, WPERP's passive large cap core manager, matched the Russell 1000 Index with a 2.0% quarterly return. **MFS**, one of the Plan's two active large cap value managers, generated a 1.6% quarterly return, trailing the Russell 1000 Value Index return by (1.4%). Stock selection within Financials, Utilities, and Telecommunication Services detracted from the relative performance. **T. Rowe Price LCV**, the Plan's other active large cap value manager, underperformed the Russell 1000 Value Index by (40) basis points, returning 2.6%. **Fred Alger**, one of the Plan's two active large cap growth managers, completed the quarter with a 1.4% return, outperforming the Russell 1000 Growth Index by 30 basis points. **T. Rowe Price LCG**, the Plan's other active large cap growth manager, posted a quarterly return of 0.4% and lagged the Russell 1000 Growth Index by (70) basis points. **Earnest Partners**, WPERP's active small cap value manager, ended the quarter with a 1.8% return, matching the Russell 2000 Value Index. **Frontier**, the Plan's active small cap growth manager, posted a quarterly return of 3.2%, besting the Russell 2000 Growth Index by 2.7%. Stock selection within Technology, Consumer Discretionary, Producer Durables, and Health Care aided the outperformance.



**Latest Year**

During the latest 1-year period, **BlackRock** matched its benchmark with a 22.4% return. **MFS** posted a 23.3% return and bested its benchmark by 1.7%. Selection within Energy and Financials, along with selection and an overweight to Industrials, provided the bulk of the outperformance. **T. Rowe Price LCV** generated a 24.2% return, outperforming its benchmark by 2.6%. Selection within Financials and Industrials, along with incremental weighting decisions across the majority of sectors, largely aided relative performance. **Fred Alger** posted a 28.1% return, besting its benchmark by 4.9%. Information Technology, Consumer Staples, and Financials benefitted the portfolio on a relative basis. **T. Rowe Price LCG** posted a 33.7% return and outperformed the Russell 1000 Growth Index by 10.5%. Selection within Consumer Discretionary, Health Care, Information Technology, Industrials, and Financials contributed to the relative outperformance. **Earnest Partners** completed the latest 1-year period with a 23.0% return, outperforming its benchmark by 40 basis points. **Frontier** posted a 31.7% return, outperforming the Russell 2000 Growth Index by 4.5%. Selection within Health Care, Technology, and Consumer Discretionary contributed to the outperformance.

**Latest Three Years**

During the latest 3-year period, **BlackRock** performed in-line with its benchmark, producing a 14.8% return. **MFS** outperformed its benchmark by 50 basis points with a return of 15.3% per annum during the period. **T. Rowe Price LCV** outperformed its benchmark by 70 basis points with a 15.5% return. **Fred Alger** posted a 12.3% return, underperforming its benchmark by (2.3%). The Energy, Materials, and Information Technology sectors detracted from relative performance. **T. Rowe Price LCG** outperformed its benchmark by 2.7% with a return of 17.3%. Selection within six of the ten GICS sectors contributed to the relative outperformance. **Earnest Partners'** latest 3-year return of 13.9% bested its benchmark by 1.2%. Selection within Energy, Industrials, Health Care, and Telecommunication Services aided relative outperformance. **Frontier** posted a 12.6% return, underperforming the Russell 2000 Growth Index by (1.0%). Weighting differences throughout the portfolio, as well as selection within Consumer Discretionary and Energy, detracted from relative performance.

**Latest Five Years**

During the latest 5-year period, **BlackRock** performed in-line with its benchmark with a return of 21.8%. **MFS** finished the period trailing the Russell 1000 Value Index return by (1.5%). Selection within Financials, Information Technology, and Health Care detracted from relative performance. **T. Rowe Price LCV** outperformed its benchmark by 80 basis points with a 22.6% return. **Fred Alger** posted a 21.7% return, matching its benchmark. **Earnest Partners** generated a 24.4% return, outperforming its benchmark by 1.1%. Outperformance can be largely attributed to active decisions within the Energy, Telecommunication Services, Health Care, and Industrials sectors.



## International Equity – Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	553,422	Developed Markets	1.2	17.3	---	---	19.4	9/2012
<i>MSCI World ex US IMI ND Index</i>	---	---	<i>1.1</i>	<i>17.0</i>	---	---	<i>19.1</i>	---
Invesco <sup>^</sup>	20	Developed Markets	---	---	---	---	---	6/2004
MFS	545,032	Developed Markets	1.2	22.0	---	---	24.3	7/2012
<i>MSCI World ex US IMI ND Index</i>	---	---	<i>1.1</i>	<i>17.0</i>	---	---	<i>21.3</i>	---
The Boston Company <sup>^</sup>	65	Developed Markets	---	---	---	---	---	3/2005
<i>MSCI World ex US IMI ND Index</i>	---	---	---	---	---	---	---	---
Pyramis	552,396	Developed Markets	-0.4	19.9	8.4	17.7	7.3	11/2004
<i>MSCI World ex US IMI ND Index (blend – Pyramis)<sup>3</sup></i>	---	---	<i>1.1</i>	<i>17.0</i>	<i>6.4</i>	<i>16.5</i>	<i>6.3</i>	---
L.A. Capital	219,350	Emerging Markets	-1.1	-2.5	---	---	2.4	9/2012
<i>MSCI EMF IMI ND Index</i>	---	---	<i>0.1</i>	<i>-1.2</i>	---	---	<i>2.2</i>	---
Vontobel	225,912	Emerging Markets	2.5	-5.0	---	---	-2.3	12/2012
<i>MSCI EMF IMI ND Index</i>	---	---	<i>0.1</i>	<i>-1.2</i>	---	---	<i>-1.7</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

<sup>^</sup> In process of liquidation/transfer.

As a result of the 2011 International Equity Structure Review, significant changes have been implemented with regard to WPERP's International Equity portfolio; the emerging markets portion has been brought to a market weighting, Invesco has been replaced with a passive manager (BlackRock), MFS has replaced The Boston Company for developed markets, L.A. Capital has replaced The Boston Company for emerging markets, and T. Rowe Price has been terminated and replaced with Vontobel for emerging markets. Residual amounts still remain in old accounts.

## Latest Quarter

During the first quarter of 2014, two of WPERP's four reporting active international equity managers outperformed their respective benchmarks.

**BlackRock**, the Plan's passive developed international manager, performed in-line with the benchmark, generating a 1.2% quarterly return. **MFS**, the Plan's active international relative value manager, also performed in-line with the benchmark, producing a 1.2% quarterly return. **Pyramis**, the Plan's active international growth manager, trailed the MSCI World ex US IMI ND Index (blend) by (1.5%) due primarily to positioning within the Consumer Staples, Financials, and Consumer Discretionary sectors. **L.A. Capital**, one of the Plan's active emerging markets managers, underperformed the MSCI Emerging Markets IMI ND Index by (1.2%) with a minus (1.1%) quarterly return. Fundamental factors and country tilts drove the underperformance. **Vontobel**, the Plan's other active emerging markets manager, bested the MSCI Emerging Markets IMI ND Index by 2.4% with a 2.5% quarterly return. Stock selection within Financials was a significant contributor to the outperformance.

<sup>3</sup> Pyramis' benchmark is MSCI EAFE ND thru 12/31/08, and MSCI World ex US IMI ND from 1/1/09 to the present.



**Latest Year**

During the latest 1-year period, **BlackRock** slightly outperformed its benchmark by 30 basis points with a return of 17.3%. **MFS** bested its benchmark by 5.0%, returning 22.0% for the period. Active weighting and stock selection within Materials, Telecommunication Services, and Information Technology aided relative performance. **Pyramis** completed the period with a 19.9% return, outperforming its benchmark by 2.9%. The Industrials and Financials sectors contributed to the relative outperformance. **L.A. Capital** trailed its benchmark by (1.3%), generating a minus (2.5%) return over the year. Currency and country tilts detracted from relative performance. **Vontobel** lagged its benchmark by (3.8%) with a minus (5.0%) return. Active weighting and stock selection within Mexico and Information Technology contributed to the underperformance.

**Latest Three Years**

**Pyramis** bested its benchmark by 2.0%, returning 8.4% for the period. The regional portfolios in Europe, Japan, and Canada aided the relative outperformance.

**Latest Five Years**

**Pyramis** returned 17.7%, outperforming its benchmark by 1.2%. The regional portfolios in Europe, Japan, and Canada aided the relative outperformance.



## Fixed Income – Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
JP Morgan	886,047	Core	1.8	0.2	4.2	---	4.6	4/2010
<i>BC Aggregate Index</i>	---	---	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	---	<i>3.9</i>	---
Wells	880,370	Core	1.9	0.1	4.9	6.4	5.9	7/2004
<i>BC Aggregate Index</i>	---	---	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	<i>4.8</i>	<i>4.8</i>	---
Loomis	101,662	High Yield	3.9	7.7	9.7	19.9	9.9	3/2005
<i>BC High Yield Index</i>	---	---	<i>3.0</i>	<i>7.5</i>	<i>9.0</i>	<i>18.2</i>	<i>8.9</i>	---
Wells High Yield	99,254	High Yield	2.9	6.7	7.8	15.0	7.8	11/2004
<i>BC High Yield Index</i>	---	---	<i>3.0</i>	<i>7.5</i>	<i>9.0</i>	<i>18.2</i>	<i>8.5</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

## Latest Quarter

During the first quarter of 2014, three of WPERP's four reporting fixed income managers matched or outperformed their respective benchmarks.

**JP Morgan**, one of the Plan's two core fixed income managers, matched the BC Aggregate Index with a 1.8% quarterly return. **Wells**, the Plan's other core fixed income manager, performed in-line with the BC Aggregate Index, generating a 1.9% quarterly return. **Loomis Sayles**, one of the Plan's two high yield managers, outperformed the BC High Yield Index by 90 basis points with a 3.9% quarterly return. The Plan's other high yield manager, **Wells High Yield**, finished the quarter in-line with the BC High Yield Index with a 2.9% quarterly return.

## Latest Year

**JP Morgan** finished the latest 1-year period with a 0.2% return, outperforming the benchmark by 30 basis points. **Wells** generated a 0.1% return and outperformed its benchmark by 20 basis points. **Loomis Sayles** generated a 7.7% return and outperformed its benchmark by 20 basis points. **Wells High Yield** finished the period returning 6.7%, underperforming its benchmark by (80) basis points.

## Latest Three Years

**JP Morgan** finished the latest 3-year period with a 4.2% return, outperforming the benchmark by 50 basis points. **Wells** finished the latest 3-year period posting a 4.9% return and outperformed its benchmark by 1.2%, due primarily to security selection and sector positioning. **Loomis Sayles** generated a 9.7% return and outperformed its benchmark by 70 basis points. **Wells High Yield** posted a 7.8% return, underperforming its benchmark by (1.2%). The portfolio's relative underperformance was largely driven by its more conservative holdings than the broad market.



### Latest Five Years

**Wells** finished the latest 5-year period with a 6.4% return and outperformed its benchmark by 1.6%. Strong security selection and sector positioning aided the relative outperformance. **Loomis Sayles** completed the period with a 19.9% return, outperforming its benchmark by 1.7%. Strong security selection, and specifically a lower credit quality bias, contributed to the relative outperformance. **Wells** High Yield posted a 15.0% return, underperforming its benchmark by (3.2%). The portfolio's relative underperformance was largely driven by its more conservative holdings than the broad market.

### Covered Calls – Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Gateway (replication)	335,436	Covered Calls	2.3	10.7	---	---	10.7	5/2012
Gateway (non-replication)	335,095	Covered Calls	1.8	11.3	---	---	13.0	5/2012
<i>CBOE BXM Index</i>	---	---	<i>2.4</i>	<i>10.7</i>	---	---	<i>10.8</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

### Latest Quarter

During the first quarter of 2014, Gateway's replication portfolio performed in-line with the benchmark, while the active portfolio underperformed by (60) basis points.

### Latest Year

Over the latest 1-year period, Gateway performed in-line with expectations. The replication portfolio performed in-line with the benchmark, while the active portfolio outperformed by 60 basis points.



## Real Return – Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception**	Inception Date***
Aetos Capital* (net of fees)	41,783	Hedge FOFs	3.3	11.3	5.7	7.6	3.8	2/2007
<i>T-Bills + 3%*</i>	---	---	<i>0.7</i>	<i>3.0</i>	<i>3.1</i>	<i>3.1</i>	<i>3.9</i>	---
GAM*^ (net of fees)	80,912	Hedge FOFs	---	---	---	---	---	11/2013
<i>T-Bills + 3%*</i>	---	---	---	---	---	---	---	---
WAMCO* (gross of fees)	296,183	GILS	-1.3	-5.6	3.3	---	3.2	4/2010
<i>BC WGILB Index* ****</i>	---	---	<i>-1.4</i>	<i>-5.5</i>	<i>3.5</i>	---	<i>3.6</i>	---
Invesco* (gross of fees)	99,049	Commodities	-3.2	---	---	---	-6.1	8/2013
<i>DJ-UBS Commodity Index*</i>	---	---	<i>-1.1</i>	---	---	---	<i>-3.6</i>	---

\* Returns are lagged one quarter.

\*\* Performance is calculated based on the first full month of performance since funding.

\*\*\* Inception date reflects the month when portfolio received initial funding.

\*\*\*\* Barclays Capital World Govt Inflation-Linked All Maturities USA Hedged Bond Index (series L).

^ Funded during the period

The WPERP Board recently selected a Timber manager (Hancock) who will be added to the Real Return class. Hancock will call capital at some point during 2014. Additionally, the Plan funded a newly selected Divergent Hedge Fund-of-Funds manager (GAM) during the fourth quarter. Furthermore, Aetos has been terminated and will be replaced by the newly selected Convergent Hedge Fund-of-Funds manager (Morgan Stanley) in the second quarter performance report.

## Latest Quarter

**Aetos** posted a 3.3% return for the quarter, outperforming the Tbill+3% by 2.6%. **WAMCO**, the Plan's GILS (Global Inflation-Linked Securities) manager, posted a quarterly return of minus (1.3%), performing in-line with the BC WGILB Index. **Invesco**, the Plan's commodities manager, underperformed its benchmark by (2.1%) with a minus (3.2%) quarterly return.

## Latest Year

Over the latest 1-year period, **Aetos** returned 11.3%, outperforming the Tbill+3% by 8.3%. **WAMCO** generated a minus (5.6%) return, performing in-line with the benchmark.

## Latest Three Years

**Aetos** finished the latest 3-year period with a 5.7% return, outperforming the Tbill+3% by 2.6%. **WAMCO** generated a 3.3% return for the period, lagging its benchmark by (20) basis points.

## Latest Five Years

**Aetos** finished the latest 5-year period with a 7.6% return, outperforming the Tbill+3% by 4.5%.



## Private Equity and Real Estate - Periods ending March 31, 2014

Asset Class	Mkt Value (\$000)	Quarter	1 YR	3 YR	5 YR	Since Inception***	Inception Date****
Private Equity*	164,208	2.2	12.1	12.1	13.9	9.8	6/2006
<i>Russell 3000 + 3% (PE blend)* **</i>	---	<i>10.9</i>	<i>37.5</i>	<i>20.6</i>	<i>18.5</i>	<i>12.9</i>	---
Real Estate*	292,581	4.3	16.7	16.9	5.4	4.6	1/2007
<i>NCREIF*</i>	---	<i>2.5</i>	<i>11.0</i>	<i>11.9</i>	<i>5.7</i>	<i>5.2</i>	---

\* Returns are lagged one quarter and net of fees.

\*\* The policy benchmark for the Private Equity asset class is a blended benchmark composed of Cambridge US Private Equity Index and the Cambridge US Venture Capital Index thru 9/30/11, and Russell 3000 + 3% to present.

\*\*\* Performance is calculated based on the first full period of performance since funding.

\*\*\*\* Inception date reflects the month when portfolio received initial funding.

The **Private Equity** portfolio consists of thirteen investments including **Lexington VI, Lexington VII, Landmark XIII, Landmark XIV, Capital Dynamics** (previously HRJ Capital), **Fisher Lynch, Oaktree V, Energy Cap, Audax Mezz, Vista Equity IV, Ares IV, Energy Cap IX, and Silver Lake IV**. The Private Equity portfolio trailed the Russell 3000 + 3% (PE Blend) over all time periods, due in large part to strong performance within the public markets.

The **Real Estate** portfolio currently consists of eighteen investments including **Prisa, Prisa II, JP Morgan Strategic, CB Richard Ellis, Mesa West, Lone Star II, Lone Star VII, Invesco, DRA, AG Core, PCCP, Blackstone, ARS VI, Bristol II, DFA, Mesa West III, Torchlight Debt IV, and Heitman**. The portfolio outperformed the NCREIF Index during the previous quarter and trailing 1- and 3-year periods, but underperformed the benchmark over the latest 5-year period.



## WPERP RETIREMENT PLAN MANAGERS ON WATCH

**Return vs. Benchmark Since Watch**

As of March 31, 2014

Portfolio	Style Group	Concern	Begin Watch Status	Last Reviewed	Performance Since Begin Watch Status*					
					First Month	First 3 Months	First 6 Months	First 9 Months	First 12 Months	Since Placed on Watch
Frontier	Small Cap Growth	Performance	6/1/2012	11/13/2013	2.7	4.1	7.5	18.4	29.5	30.0
Russell 2000 Growth					5.2	7.0	7.6	19.3	30.9	29.0
Frontier vs. Target	Russell 2000 Growth				(2.5)	(2.9)	(0.1)	(0.9)	(1.4)	1.0
Pyramis	Developed International	Organizational	5/1/2013	5/15/2013	(1.9)	0.3	9.7	8.5	---	13.1
MSCI World ex US IMI					(2.3)	(0.8)	8.6	6.8	---	12.1
Pyramis vs. Target	MSCI World ex US IMI				0.4	1.1	1.1	1.7	---	1.0

\*Performance data provided by Mellon and LDZ.

Periods marked as '---' do not indicate that returns are not available for these periods; only that the manager in question has not been on watch status for these periods.



**Managers on Watch**

**Frontier** was placed on watch status beginning 6/1/2012 due to short-term performance. Watch status was extended at the 3/27/2013 Board meeting. WPERP will begin a formal RFP process to review the mandate in the near-term.

**Pyramis** was placed on watch status beginning 5/1/2013 due to organizational concerns. Subsequent to quarter end, Pyramis has been removed from watch status.

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**Managers Removed/Terminated from Watch Status (Latest 1-year period)**

**Fred Alger** was placed on watch status beginning 6/1/2012 due to short-term performance. Watch status was extended at the 3/27/2013 Board meeting. Fred Alger was removed from watch status in November 2013.

**MFS LCV** was placed on watch status beginning 9/1/2012 due to medium-term performance. Watch status was extended at the 5/15/2013 Board meeting. MFS LCV was removed from watch status in November 2013.

**Aetos** was placed on watch status beginning 12/1/2011 due to long-term performance, and ultimately terminated during the HFOF manager search process.

**Gateway** was placed on watch status beginning 4/1/2013 due to organizational concerns. Gateway was removed from watch status in February 2014.



**WPERP Retirement Plan Estimated Performance Results**  
**Net and Gross of Fees Comparison**  
**For Quarter Ending 3/31/2014**

			Performance, % <sup>2</sup>		Difference	
Asset Class	Manager	Market Value <sup>2</sup>	Net	Gross	Percentage	Market Value
Domestic Equity						
Large Core Passive	BlackRock	1,018,787,801	1.99%	2.00%	-0.01%	-101,879
Large Value	MFS	534,981,986	1.52%	1.60%	-0.08%	-422,636
Large Value	T. Rowe Price	538,845,544	2.51%	2.60%	-0.09%	-471,490
Large Growth	Fred Alger	565,944,603	1.32%	1.40%	-0.08%	-466,904
Large Growth	T. Rowe Price	563,841,471	0.31%	0.40%	-0.09%	-493,361
Small Value	Earnest Partners	139,330,941	1.64%	1.80%	-0.16%	-222,930
Small Growth	Frontier	144,313,475	2.95%	3.20%	-0.25%	-360,784
		\$3,506,045,821				
International Equity						
Developed Passive	BlackRock	553,422,113	1.19%	1.20%	-0.01%	-55,342
Developed Markets	MFS	545,031,808	1.10%	1.20%	-0.10%	-564,108
Developed Markets	Pyramis	552,396,390	-0.49%	-0.40%	-0.09%	-469,537
Emerging Markets	L.A. Capital	219,349,841	-1.29%	-1.10%	-0.19%	-411,281
Emerging Markets	Vontobel	225,912,210	2.28%	2.50%	-0.23%	-508,302
	Interim / residual	214,197	---	---	---	---
		\$2,096,326,559				
Domestic Fixed Income						
Core	JP Morgan	866,047,475	1.78%	1.80%	-0.03%	-216,512
Core	Wells	880,369,995	1.87%	1.90%	-0.03%	-264,111
High Yield	Loomis Sayles	101,661,777	3.78%	3.90%	-0.13%	-127,077
High Yield	Wells	99,254,000	2.79%	2.90%	-0.12%	-114,142
		\$1,947,333,247				
Covered Calls						
Replication	Gateway	335,436,401	2.25%	2.30%	-0.05%	-167,718
Non-replication	Gateway	335,095,294	1.70%	1.80%	-0.10%	-335,095
		\$670,531,695				
Real Return <sup>3</sup>						
	Aetos	41,782,816	3.30%	3.49%	-0.19%	-78,490
	GAM	80,912,000	---	---	---	---
	WAMCO	296,183,380	-1.35%	-1.30%	-0.05%	-148,092
	Invesco	99,048,881	-3.25%	-3.20%	-0.05%	-49,524
		\$517,927,077				
Private Equity <sup>3</sup>						
	Aggregate*	164,208,005	2.20%	2.51%	-0.31%	-510,169
		\$164,208,005				
Real Estate <sup>3</sup>						
	Aggregate	292,581,398	4.30%	4.53%	-0.23%	-665,344
		\$292,581,398				
Cash		\$82,768,699	---	0.00%	---	---
TOTAL PORTFOLIO <sup>1</sup>		\$9,287,685,264	1.42%	1.50%	-0.08%	-\$7,224,828
Total Fund Policy			---	2.10%	---	---

<sup>1</sup> Total portfolio market value includes a balance of \$13.4 million in transition accounts and a negative balance of (\$3.3) million in securities lending.

<sup>2</sup> Returns and market values calculated using data from Mellon and LDZ.

<sup>3</sup> Hedge FoFs, Private Equity, and Real Estate asset classes report net-of-fee returns.

\* Numerous partnerships are still in the investment period, and thus the true management fees are based on committed capital.



## WPERP DISABILITY PLAN REVIEW

The WPERP Disability Portfolio ended the first quarter of 2014 with an aggregate value of approximately \$37.0 million.

**Portfolio Performance Overview**

Periods ending March 31, 2014, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception**	Inception Date***
Total Portfolio	2.0	0.3	5.0	6.3	---	---
<i>Policy Benchmark*</i>	<i>1.8</i>	<i>-0.1</i>	<i>3.5</i>	<i>4.6</i>	<i>---</i>	<i>---</i>
Wells	2.0	0.2	5.0	6.8	5.9	7/2004
<i>BC Aggregate</i>	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	<i>4.8</i>	<i>4.8</i>	<i>---</i>

\* Policy benchmark consists of 95% BC Aggregate Bond Index and 5% Citigroup T-Bill.

\*\* Performance is calculated based on the first full month of performance since funding.

\*\*\* Inception date reflects the month when portfolio received initial funding.

**1Q 2014** – During the quarter, the Disability Plan posted a 2.0% return and outperformed its policy benchmark by 20 basis points. The benchmark portfolio consists of passively managed asset class portfolios held at the Disability Plan's policy weightings.

**Longer Term** – Over the latest 1-, 3-, and 5-year periods, the Disability Plan outperformed its policy benchmark by 0.4%, 1.5%, and 1.7%, respectively.

**Portfolio Strategic Allocation** (as of 3/31/14)

Segment	Actual \$(000)	Actual %	Target %	Variance
Total Portfolio	\$36,975	100	100	---
Fixed Income	36,755	99	95	4
Wells	36,755	99	95	4
Cash	219	1	5	-4

**Strategic Allocation** – The Disability Plan target allocation consists of 95% fixed income investments and 5% cash. At the close of 1Q 2014, there was one fixed income manager, Wells. The total fund was 99% invested in this manager.



## WPERP DEATH PLAN REVIEW

The WPERP Death Portfolio ended the first quarter of 2014 with an aggregate value of approximately \$27.2 million.

**Portfolio Performance Overview**

Periods ending March 31, 2014, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception**	Inception Date***
Total Portfolio	2.0	0.3	4.8	6.0	---	---
<i>Policy Benchmark*</i>	<i>1.8</i>	<i>-0.1</i>	<i>3.6</i>	<i>4.6</i>	---	---
Wells	2.0	0.2	5.0	6.8	5.9	7/2004
<i>BC Aggregate</i>	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	<i>4.8</i>	<i>4.8</i>	---

\* Policy benchmark consists of 96% BC Aggregate Bond Index and 4% Citigroup T-Bill.

\*\* Performance is calculated based on the first full month of performance since funding.

\*\*\* Inception date reflects the month when portfolio received initial funding.

**1Q 2014** – During the quarter, the Death Plan posted a 2.0% return and outperformed its policy benchmark by 20 basis points. The benchmark portfolio consists of passively managed asset class portfolios held at the Death Plan's policy weightings.

**Longer Term** – Over the latest 1-, 3-, and 5-year periods, the Death Plan outperformed its policy benchmark by 0.4%, 1.2%, and 1.4%, respectively.

**Portfolio Strategic Allocation** (as of 3/31/14)

Segment	Actual \$(000)	Actual %	Target %	Variance
Total Portfolio	\$27,201	100	100	---
Fixed Income	26,983	99	96	3
Wells	26,983	99	96	3
Cash	218	1	4	-3

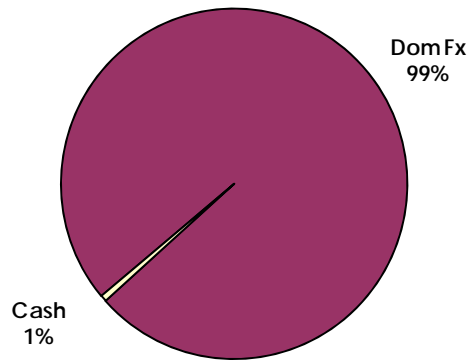
**Strategic Allocation** – The Death Benefit Plan target allocation consists of 96% fixed income investments and 4% cash. At the close of 1Q 2014, there was one fixed income manager, Wells. The total fund was 99% invested in this manager.



Actual Strategic Allocation Comparison – Disability and Death Plans

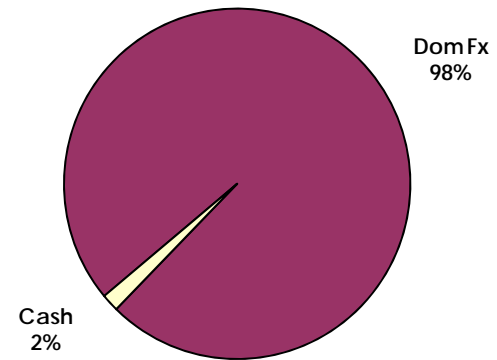
March 31, 2014

Disability

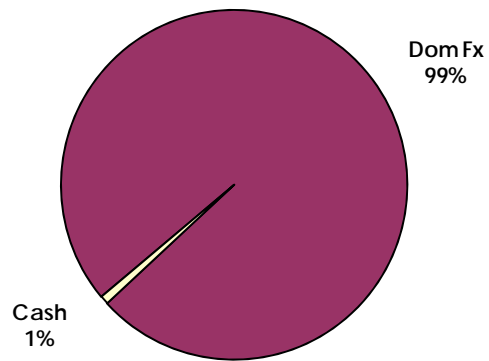


March 31, 2013

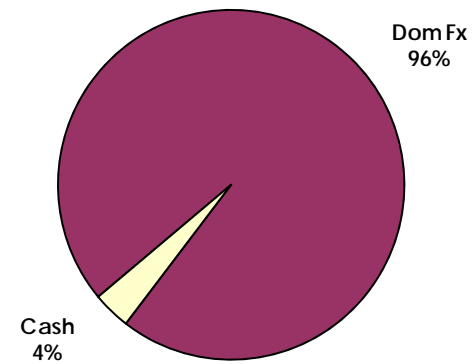
Disability



Death



Death





## HEALTH PLAN REVIEW

The WPERP Health Plan ended the first quarter of 2014 with an aggregate value of approximately \$1.6 billion.

**Portfolio Performance Overview**

Periods ending March 31, 2014, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception*	Inception Date**
Total Health	1.6	13.6	9.2	13.4	6.0	12/2006
<i>Policy Benchmark<sup>1</sup></i>	<i>2.1</i>	<i>12.9</i>	<i>9.3</i>	<i>13.8</i>	<i>5.5</i>	---
Domestic Equity	1.8	25.9	14.9	22.0	6.7	1/2007
<i>Russell 3000 (blend)<sup>2</sup></i>	<i>2.0</i>	<i>22.6</i>	<i>14.6</i>	<i>21.8</i>	<i>6.6</i>	---
International Equity	0.7	13.9	4.3	---	6.2	9/2009
<i>MSCI ACWI ex U.S. IMI ND</i>	<i>0.9</i>	<i>12.8</i>	<i>4.2</i>	---	<i>7.2</i>	---
Fixed Income	2.0	0.8	4.9	6.6	6.6	1/2007
<i>BC Universal (blend)<sup>3</sup></i>	<i>2.0</i>	<i>0.5</i>	<i>4.2</i>	<i>5.3</i>	<i>5.4</i>	---
Covered Calls	2.1	10.4	---	---	10.9	5/2012
<i>CBOE BXM</i>	<i>2.4</i>	<i>10.7</i>	---	---	<i>10.8</i>	---
Real Return <sup>4</sup>	-0.8	-4.0	3.7	---	4.3	7/2010
<i>CPI + 3% (blend)<sup>4,5</sup></i>	<i>0.3</i>	<i>3.1</i>	<i>3.1</i>	---	<i>3.1</i>	---
Private Equity <sup>4</sup>	3.0	11.7	13.5	22.6	20.6	9/2008
<i>Russell 3000 + 3% (PE blend)<sup>4,6</sup></i>	<i>10.9</i>	<i>37.5</i>	<i>20.6</i>	<i>18.5</i>	<i>13.9</i>	---
Real Estate <sup>4</sup>	16.0	32.6	21.9	---	15.4	1/2010
<i>NCREIF<sup>4</sup></i>	<i>2.5</i>	<i>11.0</i>	<i>11.9</i>	---	<i>12.2</i>	---
Cash	0.0	0.1	0.1	0.2	1.2	12/2006
<i>Citigroup T-bills</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>1.0</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

The Health Plan Total Portfolio underperformed its policy benchmark over the latest quarter by (50) basis points with a 1.6% return. Over the latest 1-year period, the portfolio bested its policy benchmark by 70 basis points, returning 13.6%. Over the latest 3-year period, the portfolio performed in-line with the benchmark, generating a 9.2% return. Over the latest 5-year period, the portfolio lagged its benchmark by (40) basis points, returning 13.4%.

<sup>1</sup> See Appendix for a description of the Health Plan policy benchmark.

<sup>2</sup> The policy benchmark for the Domestic Equity asset class is Russell 1000 thru 9/30/09, and Russell 3000 from 10/1/09 to the present.

<sup>3</sup> The policy benchmark for the Fixed Income asset class is BC Aggregate thru 9/30/09, and BC Universal from 10/1/09 to the present.

<sup>4</sup> Returns are lagged one quarter.

<sup>5</sup> The policy benchmark for the Real Return asset class is T-bills + 3% thru 6/30/13, and CPI + 3% to present.

<sup>6</sup> The policy benchmark PE is a blended benchmark composed of Cambridge US PE Index and the Cambridge US Venture Capital Index thru 9/30/11, and Russell 3000 + 3% to present.

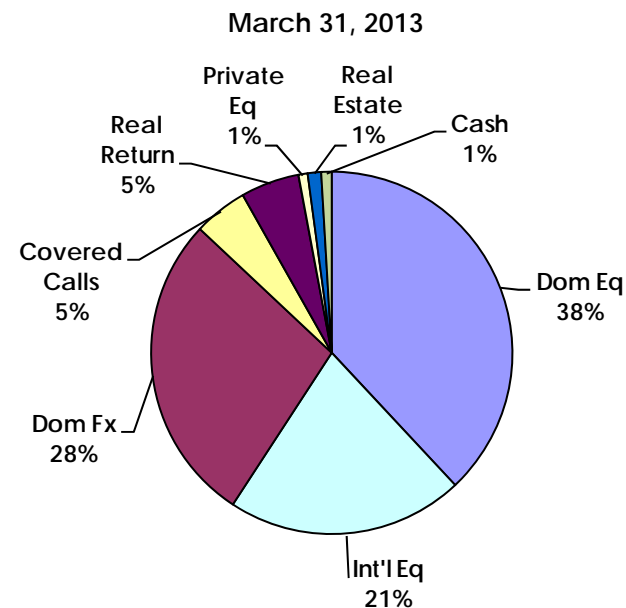
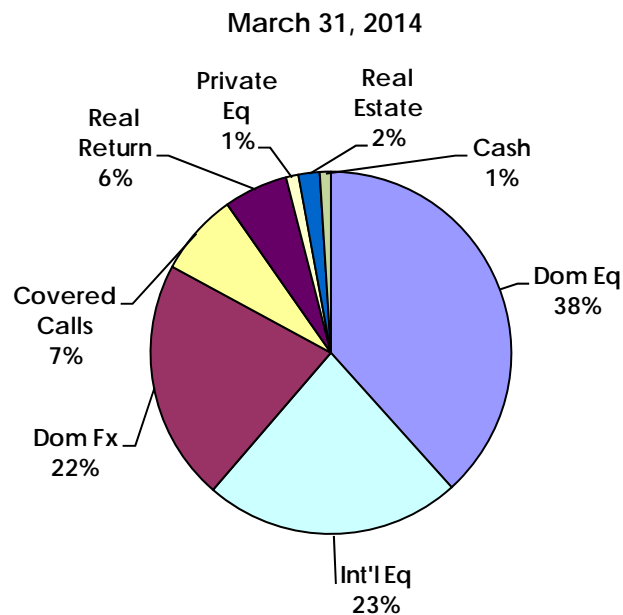


## Portfolio Strategic Allocation (as of 3/31/14)

Segment	Actual (\$MM)	Actual %	Target %	Variance
Health Plan*	1,558	100	100	---
Domestic Equity	596	38	33	5
International Equity	358	23	21	2
Fixed Income	335	22	24	-2
Covered Calls	115	7	5	2
Real Return	89	6	6	---
Private Equity	17	1	5	-4
Real Estate	29	2	5	-3
Cash	15	1	1	---

\* Includes a balance of \$3.9 million in transition assets and a negative balance of (\$21,469) in securities lending.

As of March 31, 2014, the Total Health Portfolio had a 61% allocation in Equities, 22% in Fixed Income, 7% in Covered Calls, 6% in Real Return, 1% in Private Equity, 2% in Real Estate, and 1% in Cash. During the latest 1-year period, the actual weighting of Fixed Income decreased by (6%), while the actual weightings of International Equity, Covered Calls, Real Return, and Real Estate increased by 2%, 2%, 1%, and 1%, respectively. The Domestic Equity, Private Equity, and Cash allocations remained unchanged.





## PERFORMANCE ATTRIBUTION – HEALTH PLAN

## Performance Attribution - 1Q 2014

	Policy		Portfolio		Impact on Return			
	Allocation	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.0%	2.0	38.9%	1.8	(0.0)	(0.1)	(0.0)	(0.1)
International Equity	21.0%	0.9	23.2%	0.7	(0.0)	(0.0)	(0.0)	(0.1)
Fixed Income	24.0%	2.0	21.6%	2.0	0.0	0.0	0.0	0.0
Covered Calls	5.0%	2.4	7.3%	2.1	0.0	(0.0)	(0.0)	(0.0)
Real Return	6.0%	0.3	5.9%	(0.8)	0.0	(0.1)	0.0	(0.1)
Private Equity	5.0%	10.9	0.9%	3.0	(0.4)	(0.4)	0.3	(0.4)
Real Estate	5.0%	2.5	1.6%	16.0	(0.0)	0.7	(0.5)	0.2
Cash	1.0%	0.0	0.4%	0.0	0.0	0.0	(0.0)	0.0
Total	100.0%	2.1	100.0%	1.6	(0.4)	0.1	(0.2)	(0.4)

\* Portfolio allocation utilizes beginning-of-the period market values.

## Performance Attribution - Trailing 12-month

	Policy		Portfolio		Impact on Return			
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.5%	22.6	38.5%	25.9	0.4	1.0	0.1	1.6
International Equity	21.0%	12.8	22.8%	13.9	(0.1)	0.2	0.0	0.2
Fixed Income	24.5%	0.5	23.2%	0.8	(0.1)	0.1	0.0	(0.0)
Covered Calls	5.0%	10.7	6.8%	10.4	0.1	(0.0)	(0.0)	0.0
Real Return	6.0%	3.1	5.5%	(4.0)	0.1	(0.4)	0.0	(0.3)
Private Equity	4.5%	37.5	1.0%	11.7	(0.7)	(1.0)	0.8	(0.9)
Real Estate	4.5%	11.0	1.6%	32.6	0.1	1.0	(0.7)	0.4
Cash	1.0%	0.0	0.8%	0.1	0.0	0.0	(0.0)	0.0
Total	100.0%	12.9	100.0%	13.6	(0.2)	0.9	0.3	1.0

\* Portfolio allocation utilizes average market values over the trailing four quarters; Policy allocation utilizes average target allocations over the trailing four quarters.

- During the most recent quarter, the Total Health Portfolio underperformed its policy benchmark. Private Equity was the largest detractor from relative performance, while Real Estate was the largest contributor to relative performance. Excluding the private markets classes, the majority of the portfolio's strategic classes were insignificant contributors/detractors versus the Policy Benchmark.
- During the trailing 12-month period, the Total Health Portfolio outperformed its policy benchmark. Selection and weighting within Domestic Equity were significant contributors to the relative outperformance. Selection within Real Estate and International Equity also aided performance during the period. The Private Equity class (weighting and selection), along with selection in Real Return, were the primary detractors from the relative performance.



## WPERP HEALTH PLAN MANAGER PERFORMANCE

## Domestic Equity - Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	172,825	Large Cap Core	2.1	22.5	14.9	21.9	6.4	1/2007
<i>Russell 1000 Index</i>	---	---	<i>2.0</i>	<i>22.4</i>	<i>14.7</i>	<i>21.7</i>	<i>6.3</i>	---
MFS	91,567	Large Cap Value	1.6	23.3	15.3	---	15.6	9/2009
<i>Russell 1000 Value Index</i>	---	---	<i>3.0</i>	<i>21.6</i>	<i>14.8</i>	---	<i>15.8</i>	---
T. Rowe Price	92,173	Large Cap Value	2.6	24.3	15.4	---	16.6	9/2009
<i>Russell 1000 Value Index</i>	---	---	<i>3.0</i>	<i>21.6</i>	<i>14.8</i>	---	<i>15.8</i>	---
Fred Alger	96,962	Large Cap Growth	1.5	28.2	12.4	---	16.4	9/2009
<i>Russell 1000 Growth Index</i>	---	---	<i>1.1</i>	<i>23.2</i>	<i>14.6</i>	---	<i>16.8</i>	---
T. Rowe Price	93,679	Large Cap Growth	0.4	33.7	17.3	---	16.6	4/2010
<i>Russell 1000 Growth Index</i>	---	---	<i>1.1</i>	<i>23.2</i>	<i>14.6</i>	---	<i>15.5</i>	---
Earnest Partners	23,728	Small Cap Value	1.8	23.0	13.2	---	17.6	9/2009
<i>Russell 2000 Value Index</i>	---	---	<i>1.8</i>	<i>22.6</i>	<i>12.7</i>	---	<i>16.3</i>	---
Frontier	24,586	Small Cap Growth	3.2	31.7	12.6	---	16.4	4/2010
<i>Russell 2000 Growth Index</i>	---	---	<i>0.5</i>	<i>27.2</i>	<i>13.6</i>	---	<i>16.9</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.



## International Equity - Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	94,139	Developed Markets	1.2	17.5	---	---	19.6	9/2012
<i>MSCI World ex US IMI ND Index</i>	---	---	<i>1.1</i>	<i>17.0</i>	---	---	<i>19.1</i>	---
Invesco^	3	Developed Markets	---	---	---	---	---	9/2009
MFS	93,553	Developed Markets	1.2	22.0	---	---	24.3	7/2012
<i>MSCI World ex US IMI ND Index</i>	---	---	<i>1.1</i>	<i>17.0</i>	---	---	<i>21.3</i>	---
The Boston Company^	3	Developed Markets	---	---	---	---	---	9/2009
Pyramis	93,927	Developed Markets	-0.4	19.4	8.3	---	9.7	9/2009
<i>MSCI World ex US IMI ND Index</i>	---	---	<i>1.1</i>	<i>17.0</i>	<i>6.4</i>	---	<i>8.0</i>	---
L.A. Capital	37,526	Emerging Markets	-1.1	-2.5	---	---	2.4	9/2012
<i>MSCI EMF IMI ND Index</i>	---	---	<i>0.1</i>	<i>-1.2</i>	---	---	<i>2.2</i>	---
Vontobel	38,663	Emerging Markets	2.5	-5.0	---	---	-2.3	12/2012
<i>MSCI EMF IMI ND Index</i>	---	---	<i>0.1</i>	<i>-1.2</i>	---	---	<i>-1.7</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

^ In process of liquidation/transfer.

## Fixed Income - Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
JP Morgan	149,625	Core	1.8	0.2	4.2	---	4.5	4/2010
<i>BC Aggregate Index</i>	---	---	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	---	<i>3.9</i>	---
Wells	150,816	Core	1.9	0.1	4.9	6.4	6.5	1/2007
<i>BC Aggregate Index</i>	---	---	<i>1.8</i>	<i>-0.1</i>	<i>3.7</i>	<i>4.8</i>	<i>5.0</i>	---
Wells High Yield	34,347	High Yield	2.9	6.8	8.0	---	9.6	9/2009
<i>BC High Yield Index</i>	---	---	<i>3.0</i>	<i>7.5</i>	<i>9.0</i>	---	<i>11.7</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.



## Covered Calls - Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Gateway (replication)	57,347	Covered Calls	2.3	10.7	---	---	10.7	5/2012
Gateway (non-replication)	57,321	Covered Calls	1.8	11.4	---	---	12.9	5/2012
<i>CBOE BXM Index</i>	---	---	<i>2.4</i>	<i>10.7</i>	---	---	<i>10.8</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

## Real Return - Periods ending March 31, 2014

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception**	Inception Date***
Aetos Capital* (net of fees)	9,067	Hedge FOFs	3.3	11.3	5.7	---	6.1	9/2010
<i>T-Bills + 3%*</i>	---	---	<i>0.7</i>	<i>3.0</i>	<i>3.1</i>	---	<i>3.1</i>	---
GAM*^ (net of fees)	13,148	Hedge FOFs	---	---	---	---	---	11/2013
<i>T-Bills + 3%*</i>	---	---	---	---	---	---	---	---
WAMCO* (gross of fees)	49,475	GILS	-1.3	-5.6	3.3	---	3.2	4/2010
<i>BC WGILB Index****</i>	---	---	<i>-1.4</i>	<i>-5.5</i>	<i>3.5</i>	---	<i>3.6</i>	---
Invesco* (gross of fees)	17,366	Commodities	-3.1	---	---	---	-5.9	8/2013
<i>DJ-UBS Commodity Index*</i>	---	---	<i>-1.1</i>	---	---	---	<i>-3.6</i>	---

\* Returns are lagged one quarter.

\*\* Performance is calculated based on the first full month of performance since funding.

\*\*\* Inception date reflects the month when portfolio received initial funding.

\*\*\*\* Barclays Capital World Govt Inflation-Linked All Maturities USA Hedged Bond Index (series L).

^ Funded during the period

## Private Equity and Real Estate - Periods ending March 31, 2014

Asset Class	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Private Equity***	17,355	Private Equity	3.0	11.7	13.5	22.6	20.6	9/2008
<i>R3000 + 3% (PE blend) ***, ****</i>	---	---	<i>10.9</i>	<i>37.5</i>	<i>20.6</i>	<i>18.5</i>	<i>13.9</i>	---
Real Estate***	29,499	Real Estate	16.0	32.6	21.9	---	15.4	1/2010
<i>NCREIF***</i>	---	---	<i>2.5</i>	<i>11.0</i>	<i>11.9</i>	---	<i>12.2</i>	---

\* Performance is calculated based on the first full month of performance since funding.

\*\* Inception date reflects the month when portfolio received initial funding.

\*\*\* Returns are lagged one quarter and net of fees.

\*\*\*\* The policy benchmark for the Private Equity asset class is a blended benchmark composed of Cambridge US Private Equity Index and the Cambridge US Venture Capital Index thru 9/30/11, and Russell 3000 + 3% to present.

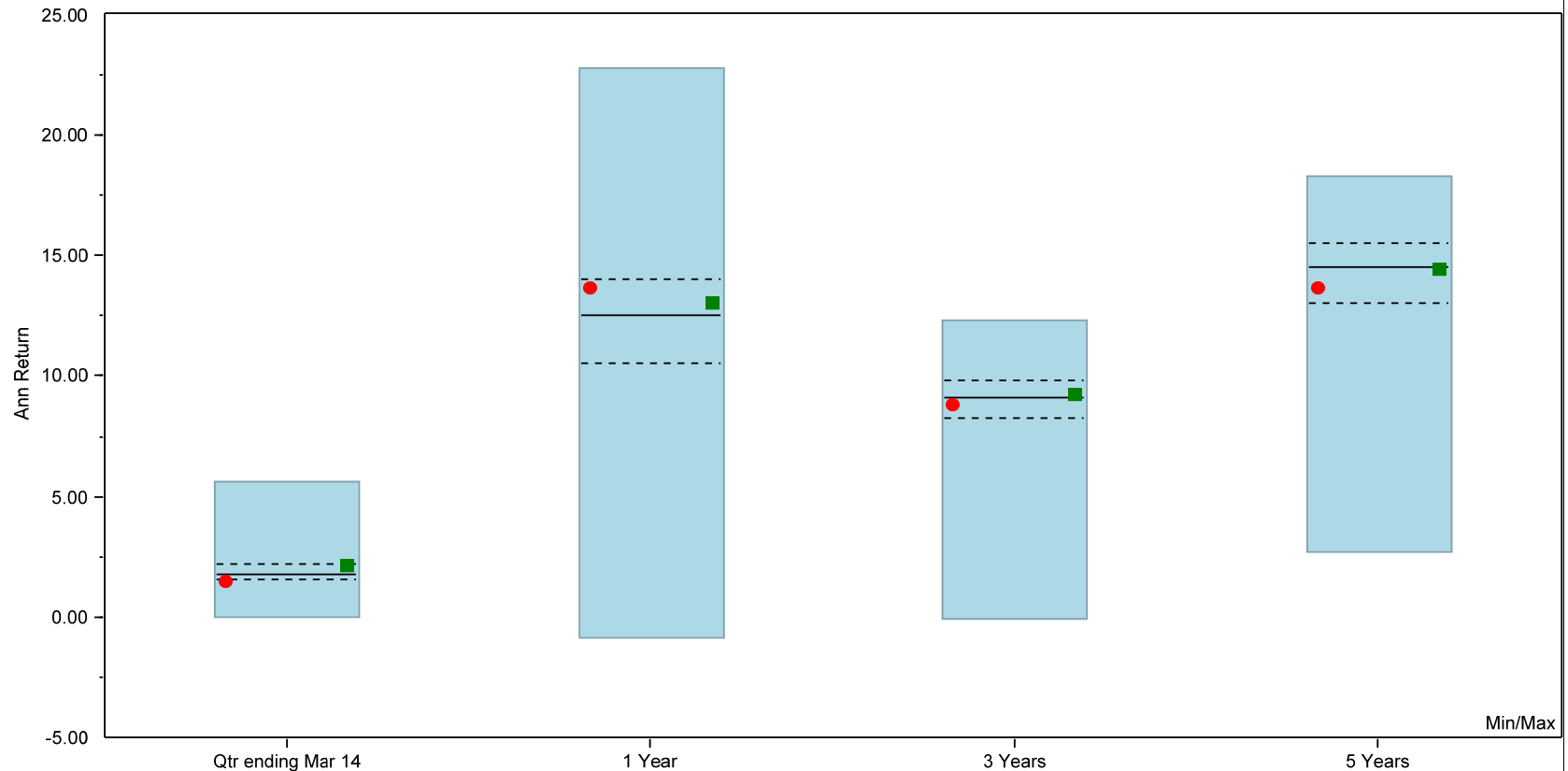


## Water and Power Employees' Retirement Plan

TOTAL FUNDS - PUBLIC (USD) - Monthly

As of March 31, 2014

### Cumulative Performance Comparisons



	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank
<b>Maximum</b>	5.65			22.82			12.30			18.31		
<b>25th Percentile</b>	2.20			14.02			9.84			15.51		
<b>Median Percentile</b>	1.78			12.51			9.11			14.54		
<b>75th Percentile</b>	1.56			10.54			8.26			13.05		
<b>Minimum</b>	0.00			-0.86			-0.12			2.71		
<b># of Portfolios</b>	115			109			92			89		
<b>● Total Fund</b>	1.49	80	92	13.64	30	33	8.85	62	57	13.68	67	61
<b>■ Policy Benchmark</b>	2.15	28	32	13.03	39	42	9.26	45	41	14.45	52	47

Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final

#### Notes:

Performance and related statistics calculated using Mellon's Workbench E-Chart  
All performance is shown **gross of fees**.

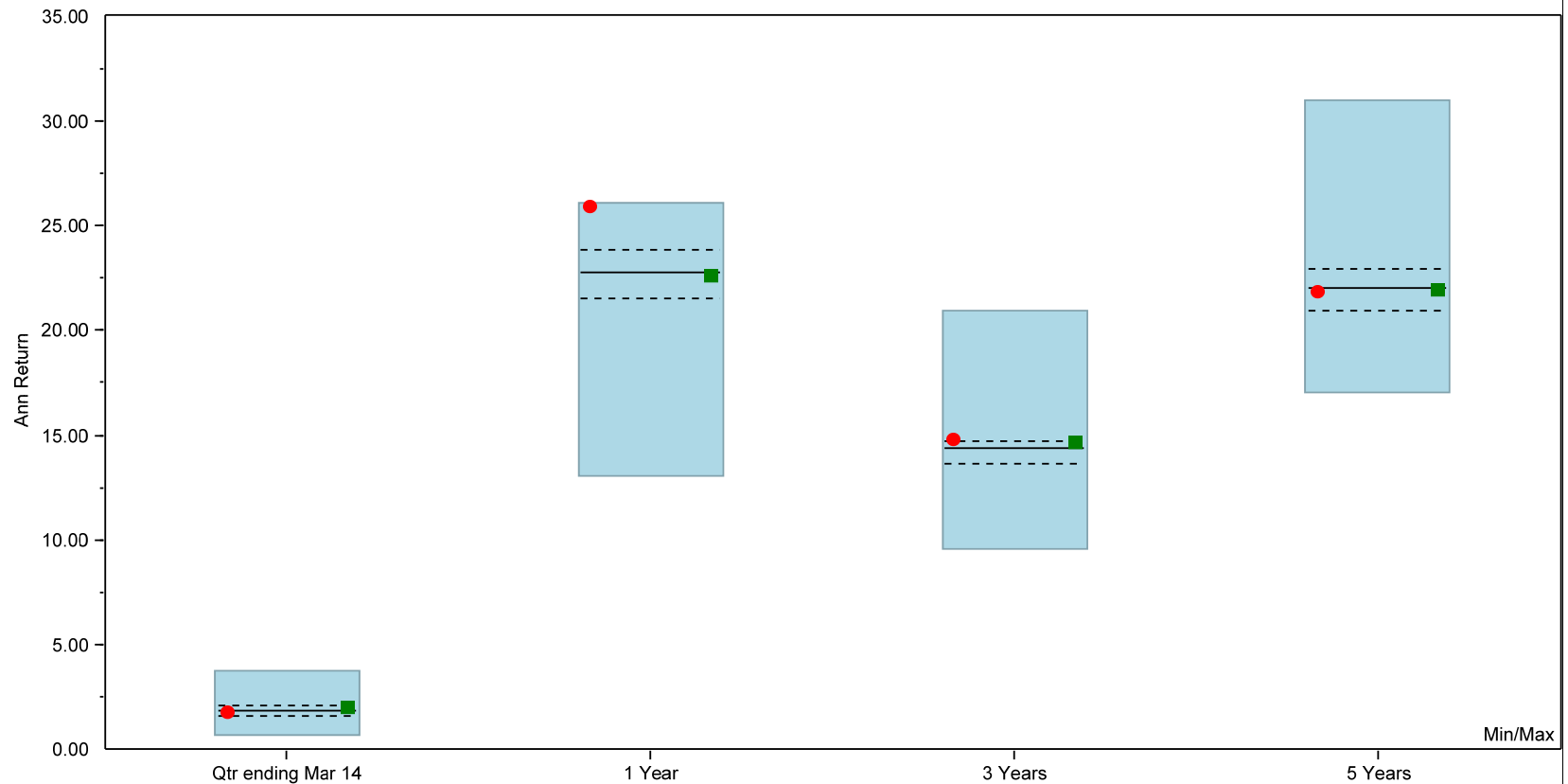


## Water and Power Employees' Retirement Plan

US Equity Segment - Public (USD) - Monthly

As of March 31, 2014

### Cumulative Performance Comparisons



	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank
Maximum	3.75			26.10			20.98			31.01		
25th Percentile	2.04			23.86			14.73			22.92		
Median Percentile	1.85			22.75			14.40			22.06		
75th Percentile	1.60			21.53			13.60			20.96		
Minimum	0.63			13.09			9.60			17.08		
# of Portfolios	85			82			72			58		
● Domestic Equity	1.74	65	56	25.95	2	2	14.81	22	16	21.85	59	35
■ Russell 3000 (blend)	1.97	33	29	22.61	55	46	14.62	32	23	21.93	58	35

Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final

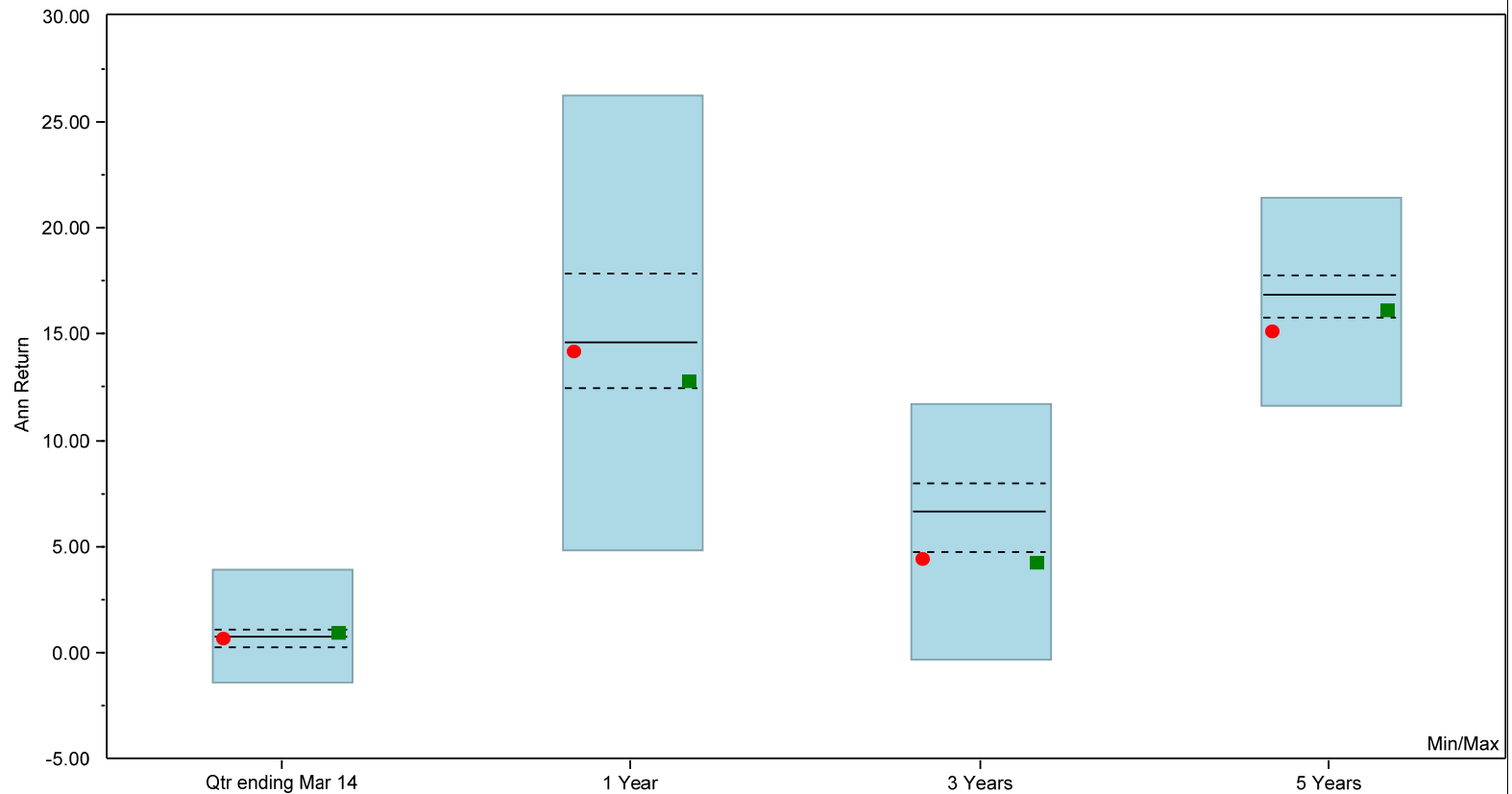


## Water and Power Employees' Retirement Plan

Non-US Equity Segment - Public (USD) - Monthly

As of March 31, 2014

### Cumulative Performance Comparisons



	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank
Maximum	3.90			26.24			11.71			21.42		
25th Percentile	1.11			17.89			8.01			17.76		
Median Percentile	0.72			14.66			6.64			16.84		
75th Percentile	0.27			12.45			4.76			15.82		
Minimum	-1.41			4.77			-0.34			11.64		
# of Portfolios	81			78			65			53		
● International Equity	0.68	56	46	14.21	55	43	4.38	85	57	15.10	89	49
■ MSCI ACWI ex US IMI (blend)	0.87	39	32	12.80	73	58	4.20	86	57	16.08	67	36

Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final

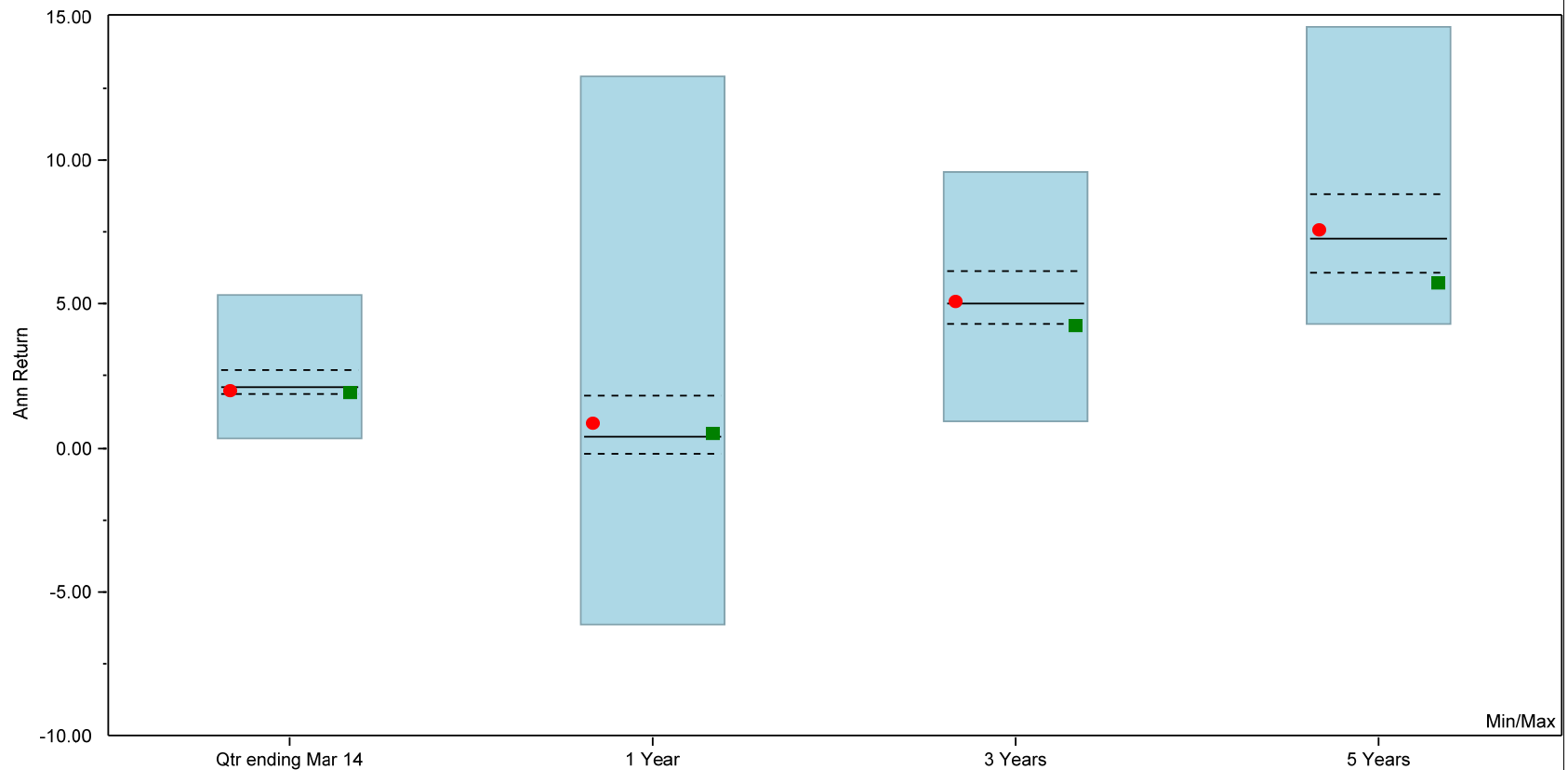


## Water and Power Employees' Retirement Plan

US Fixed Income Segment - Public (USD) - Monthly

As of March 31, 2014

Cumulative Performance Comparisons

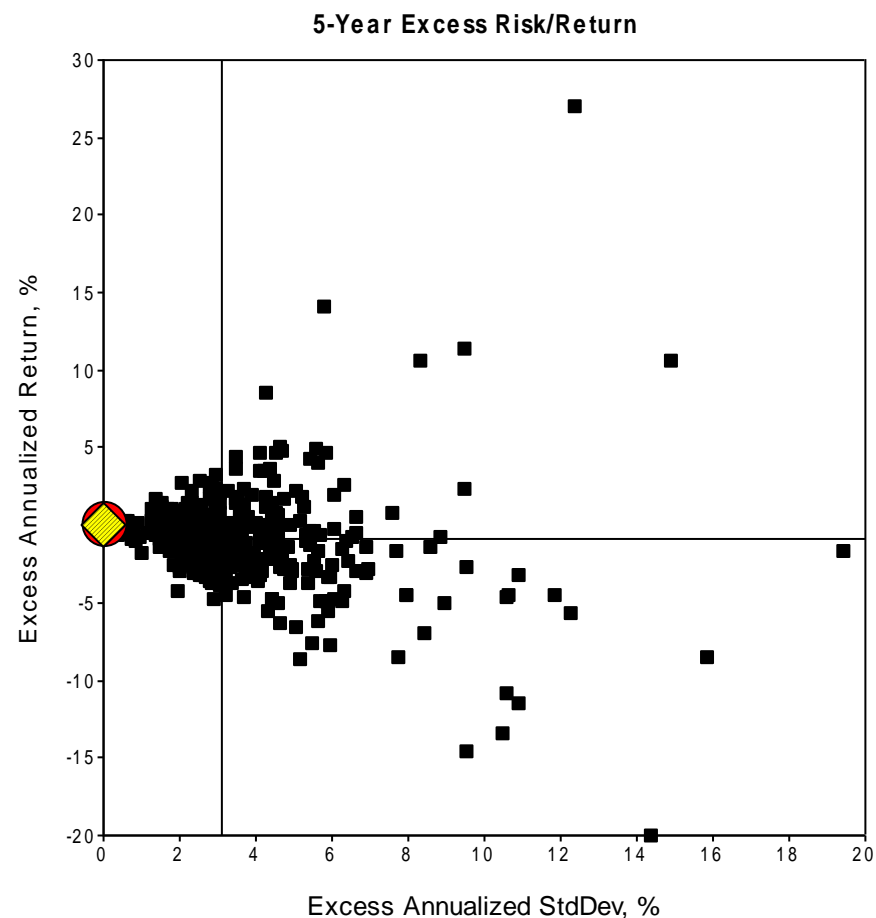
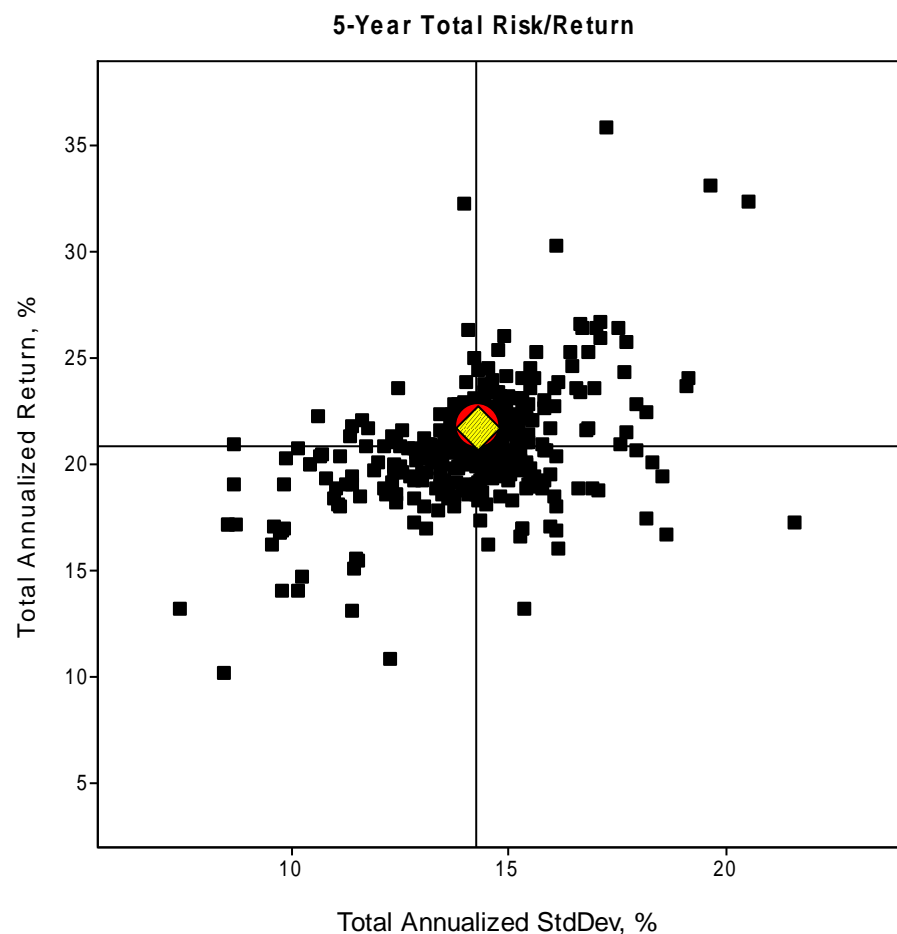


	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank	Value	%Tile	Rank
Maximum	5.33			12.91			9.62			14.63		
25th Percentile	2.69			1.83			6.12			8.81		
Median Percentile	2.13			0.42			5.02			7.27		
75th Percentile	1.87			-0.20			4.29			6.09		
Minimum	0.33			-6.15			0.90			4.32		
# of Portfolios	83			80			72			56		
● Fixed Income	2.01	59	50	0.88	37	30	5.08	46	33	7.57	45	26
■ BC Universal	1.95	62	52	0.49	47	39	4.23	77	56	5.73	82	47

Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final



## WPERP Large Cap Core Manager Comparisons as of March 31, 2014

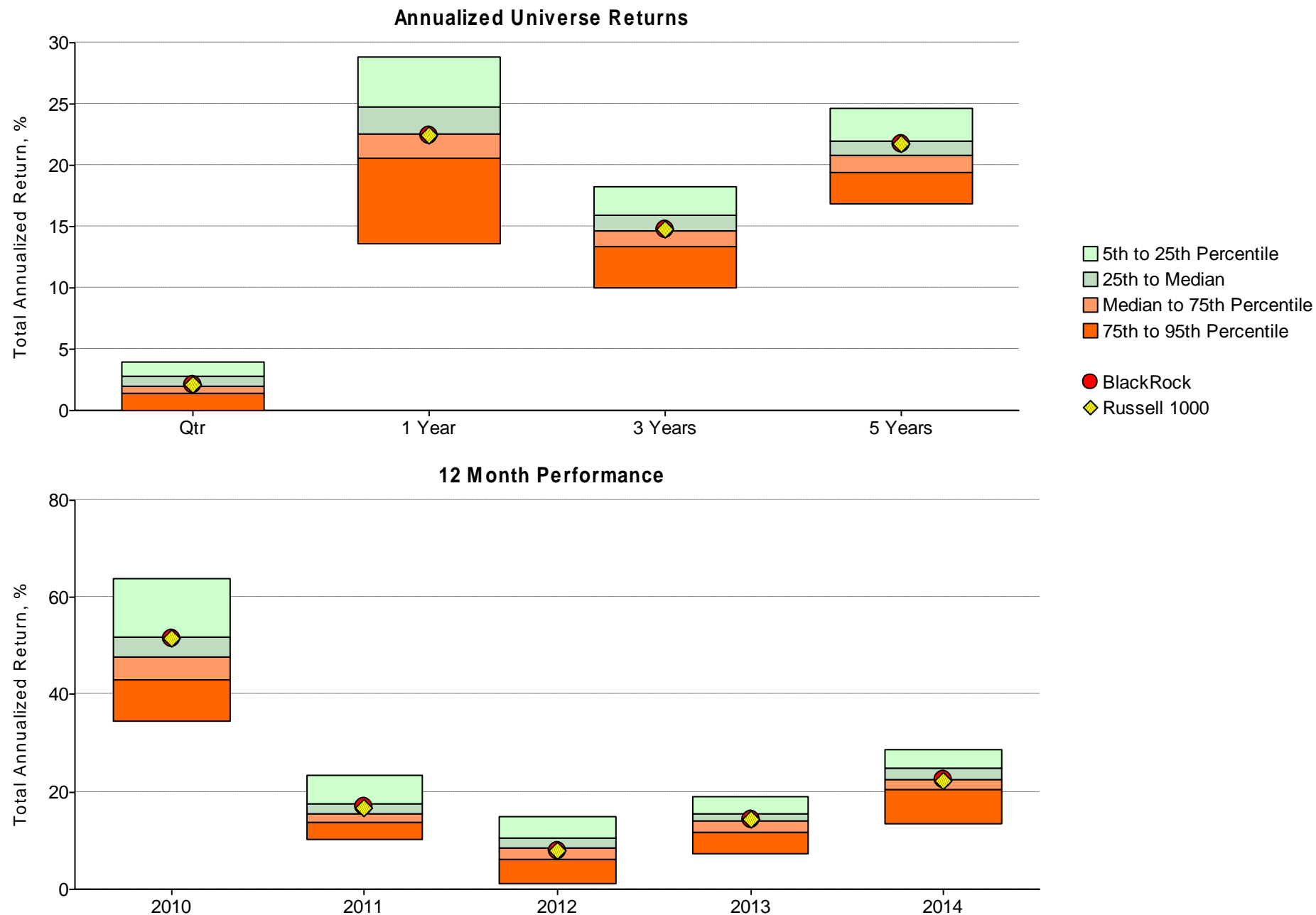


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
BlackRock	21.79	14.29	1.53
Russell 1000	21.73	14.30	1.52
Large Cap Manager Universe Median	20.86	14.22	1.50

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
BlackRock	0.06	0.07	0.83
Russell 1000	0.00	0.00	NA
Large Cap Manager Universe Median	-0.87	3.08	-0.31

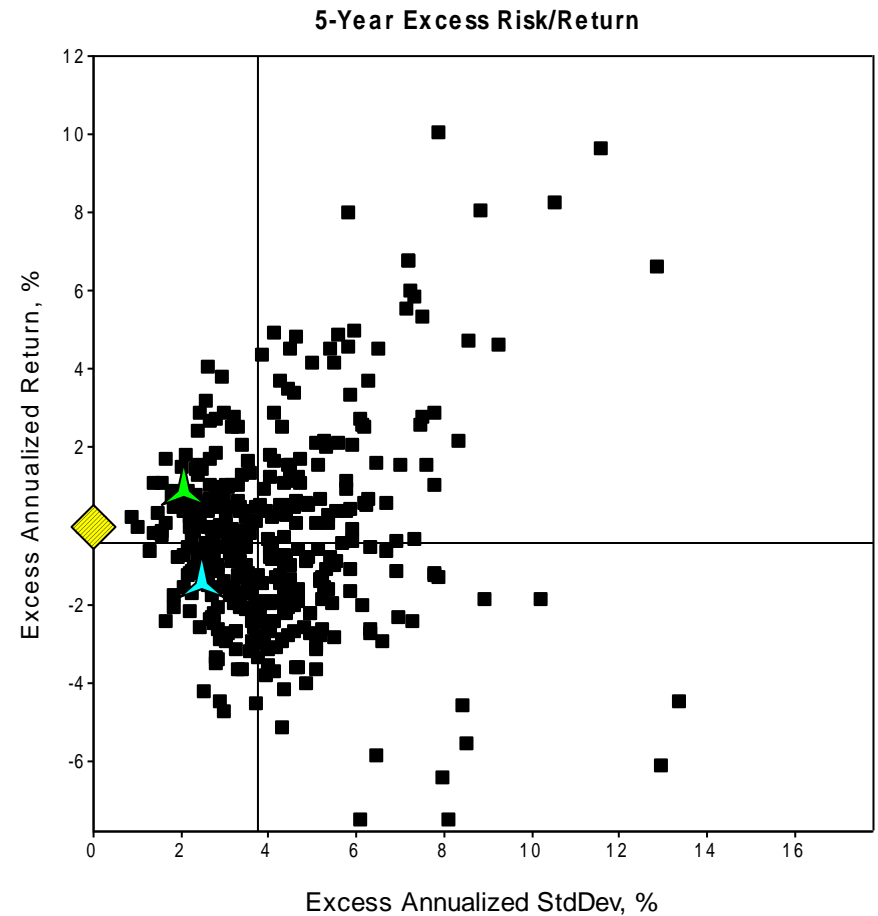
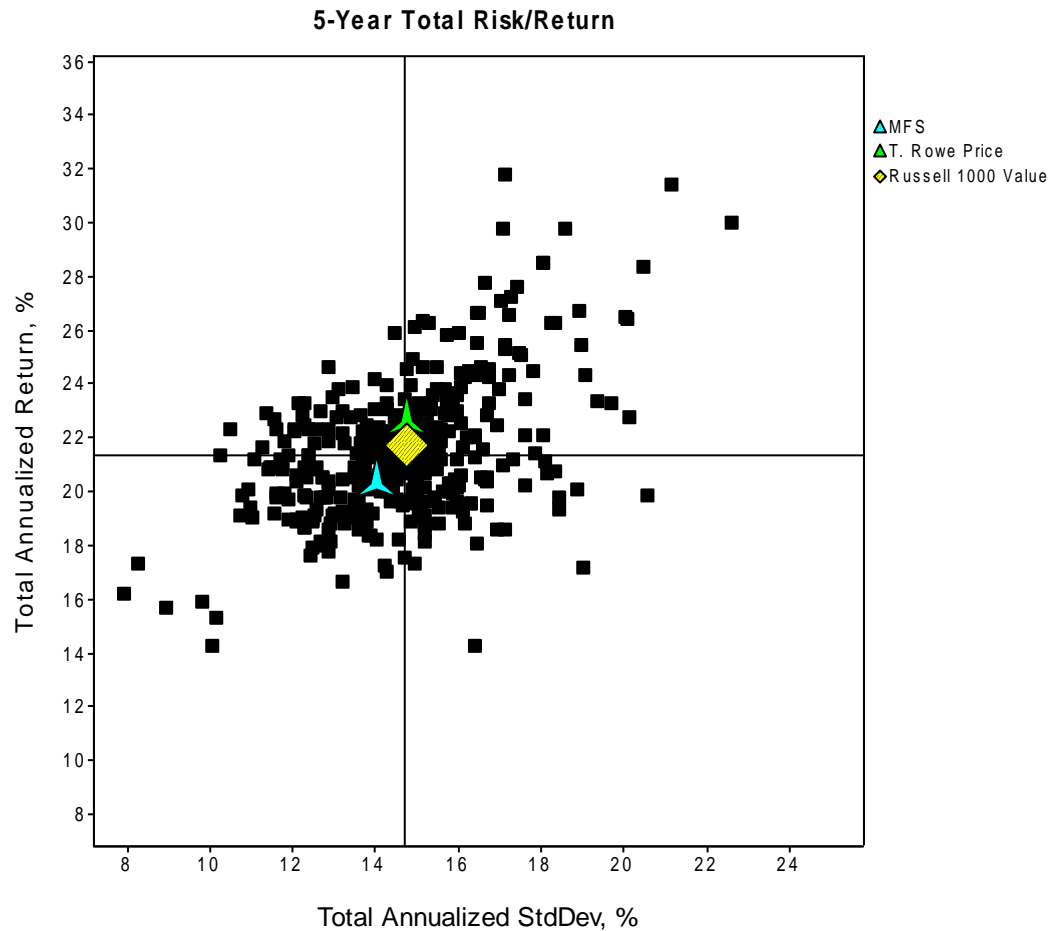


## WPERP Large Cap Core Manager Comparisons as of March 31, 2014





## WPERP Large Cap Value Manager Comparisons as of March 31, 2014

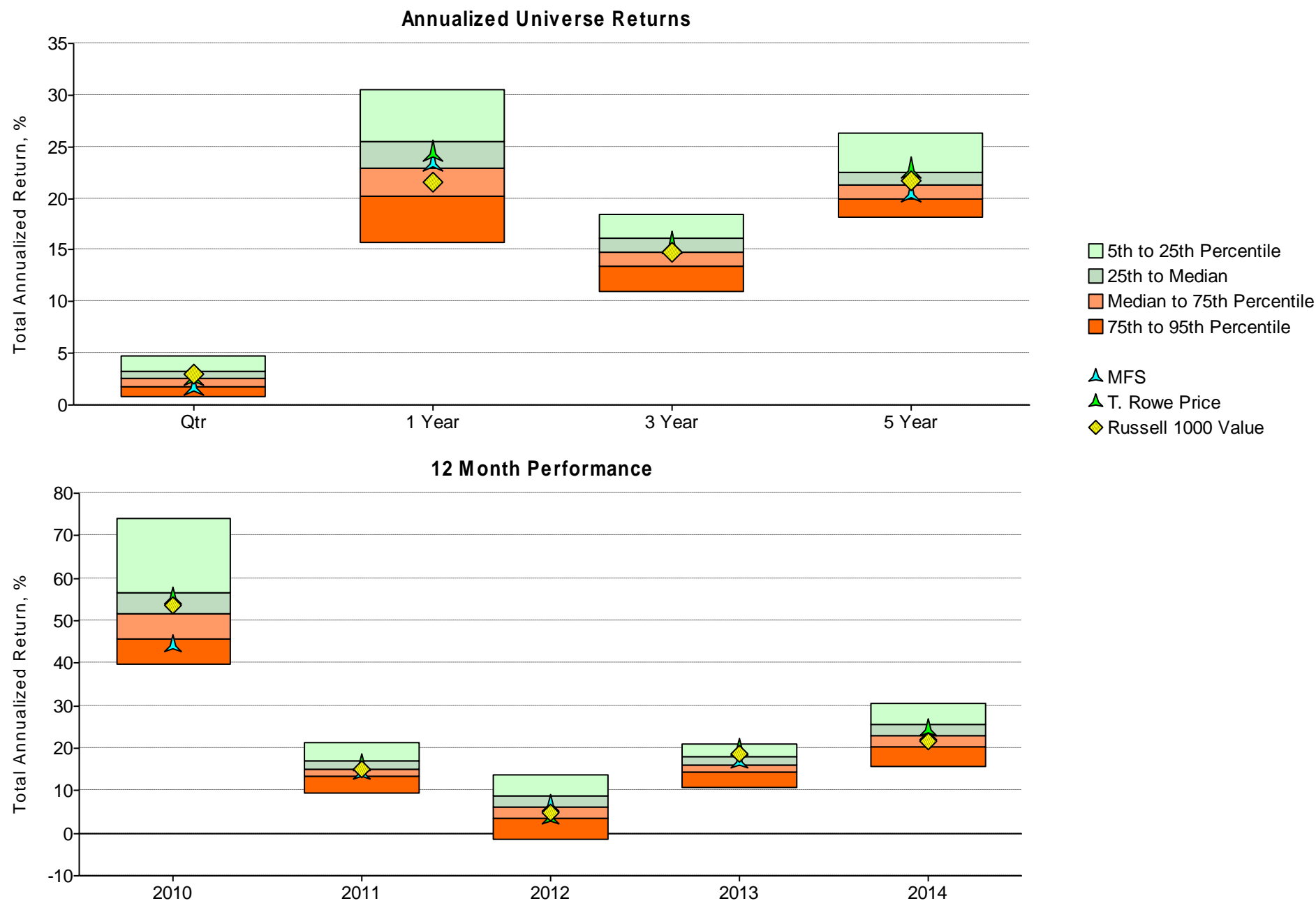


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
MFS	20.31	14.02	1.45
T. Rowe Price	22.65	14.77	1.53
Russell 1000 Value	21.75	14.75	1.47
Large Value Manager Universe Median	21.31	14.73	1.48

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
MFS	-1.44	2.47	-0.58
T. Rowe Price	0.90	2.08	0.43
Russell 1000 Value	0.00	0.00	NA
Large Value Manager Universe Median	-0.44	3.75	-0.12

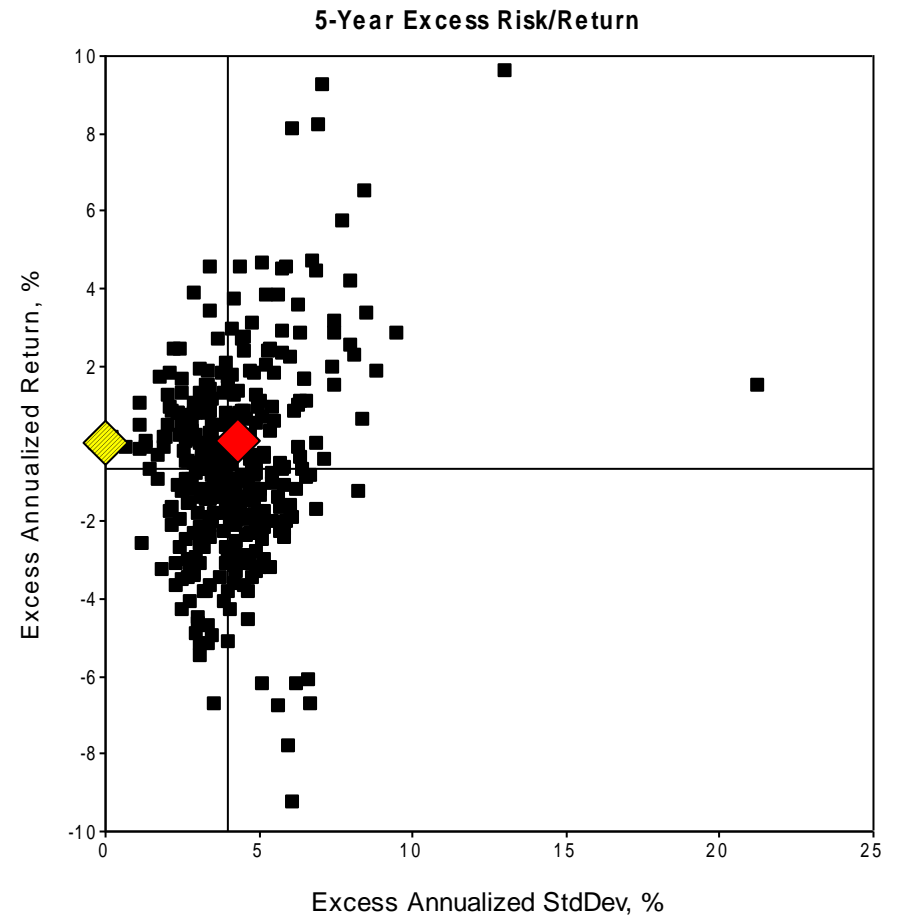
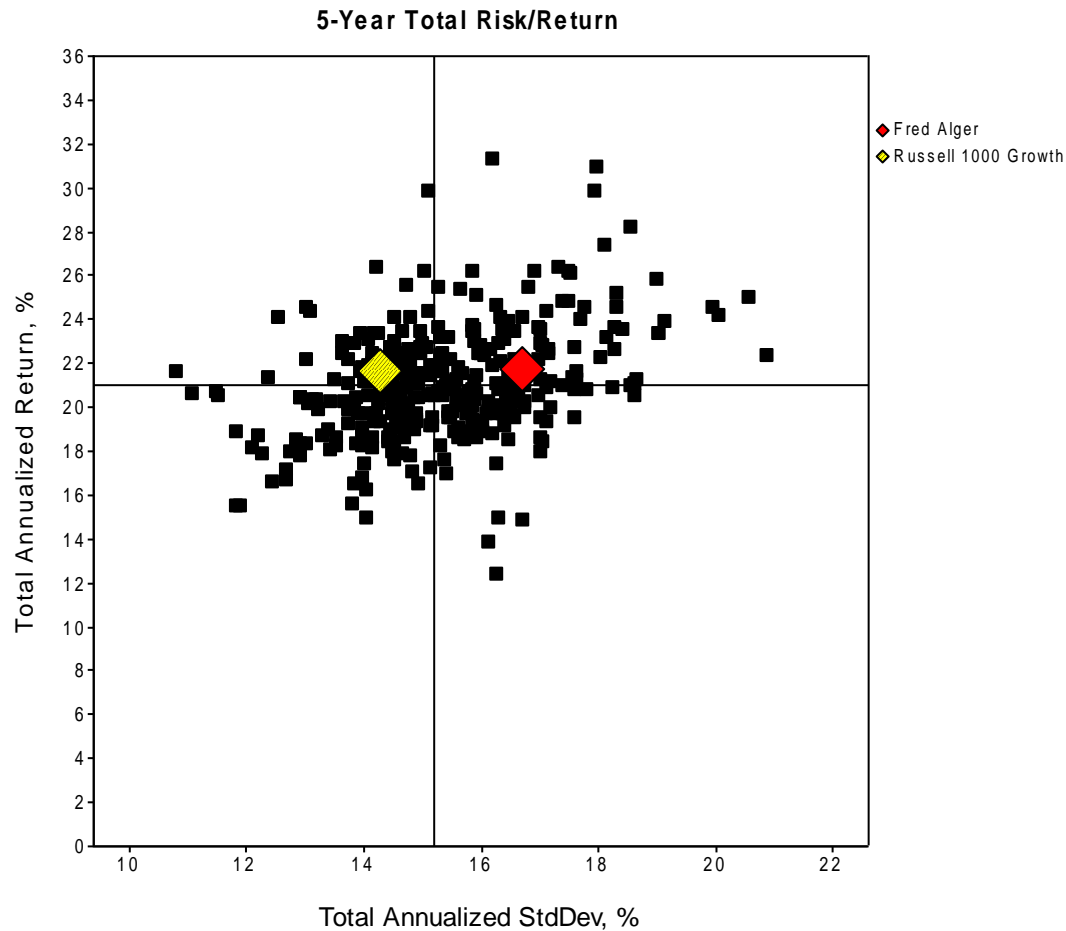


## WPERP Large Cap Value Manager Comparisons as of March 31, 2014





## WPERP Large Cap Growth Manager Comparisons as of March 31, 2014

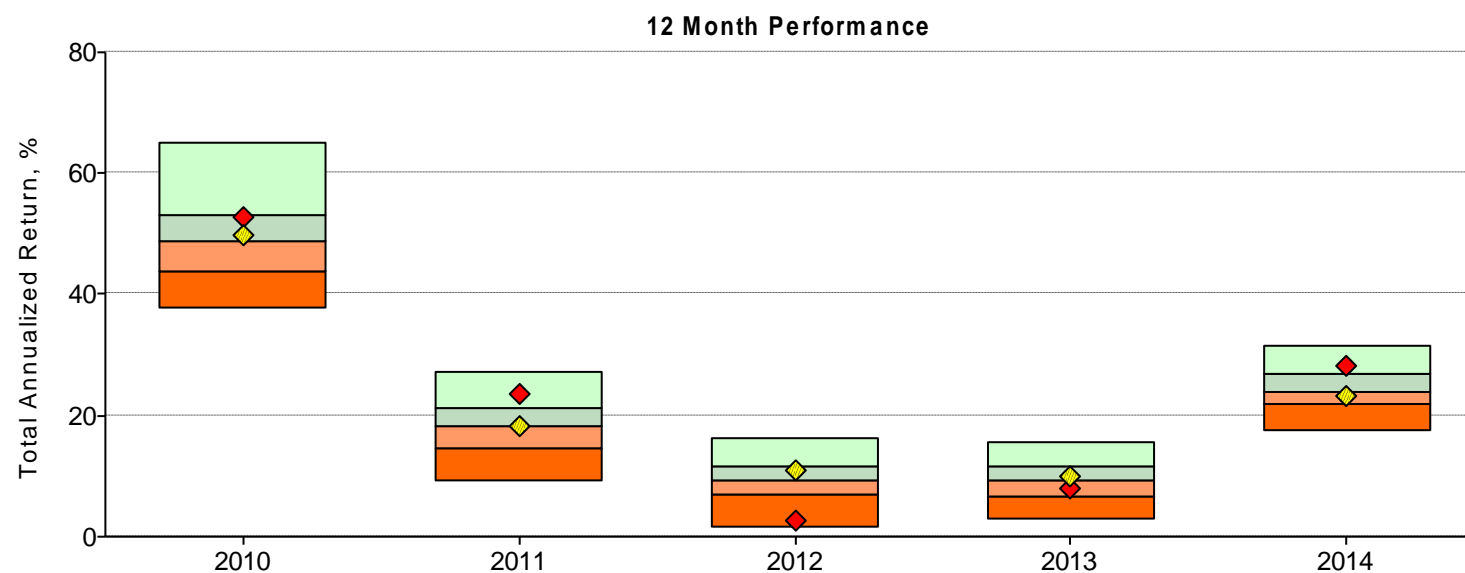
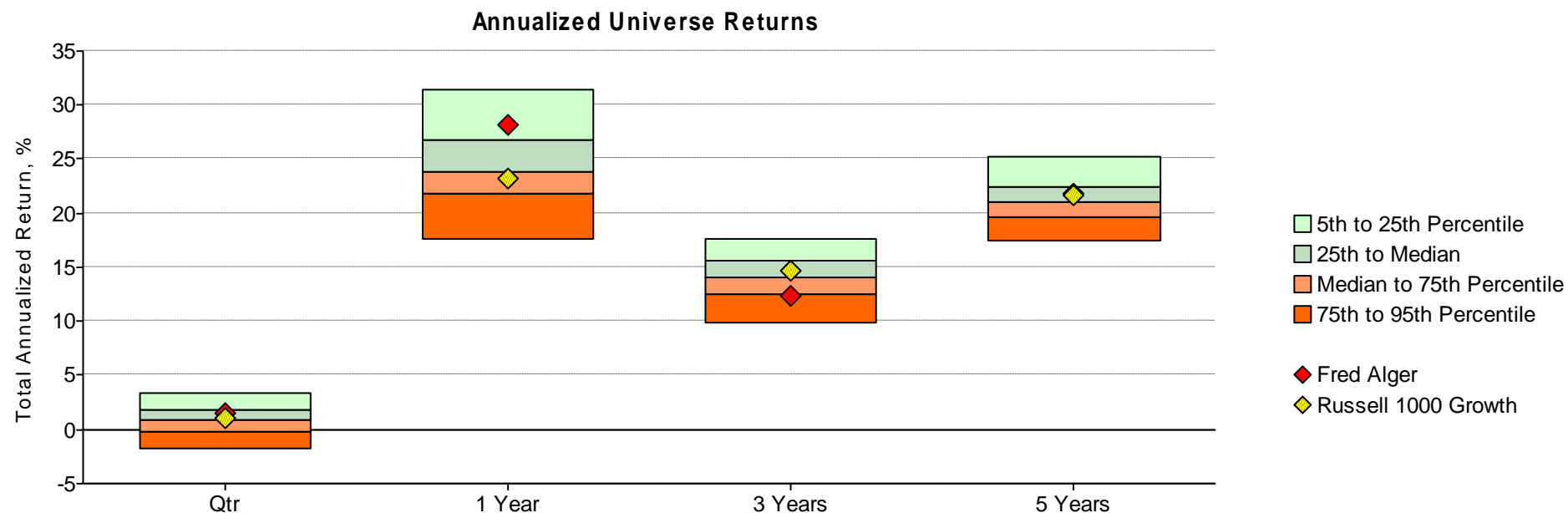


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Fred Alger	21.75	16.71	1.30
Russell 1000 Growth	21.68	14.26	1.52
Large Growth Manager Universe Median	21.04	15.21	1.37

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
Fred Alger	0.07	4.29	0.02
Russell 1000 Growth	0.00	0.00	NA
Large Growth Manager Universe Median	-0.64	3.96	-0.17

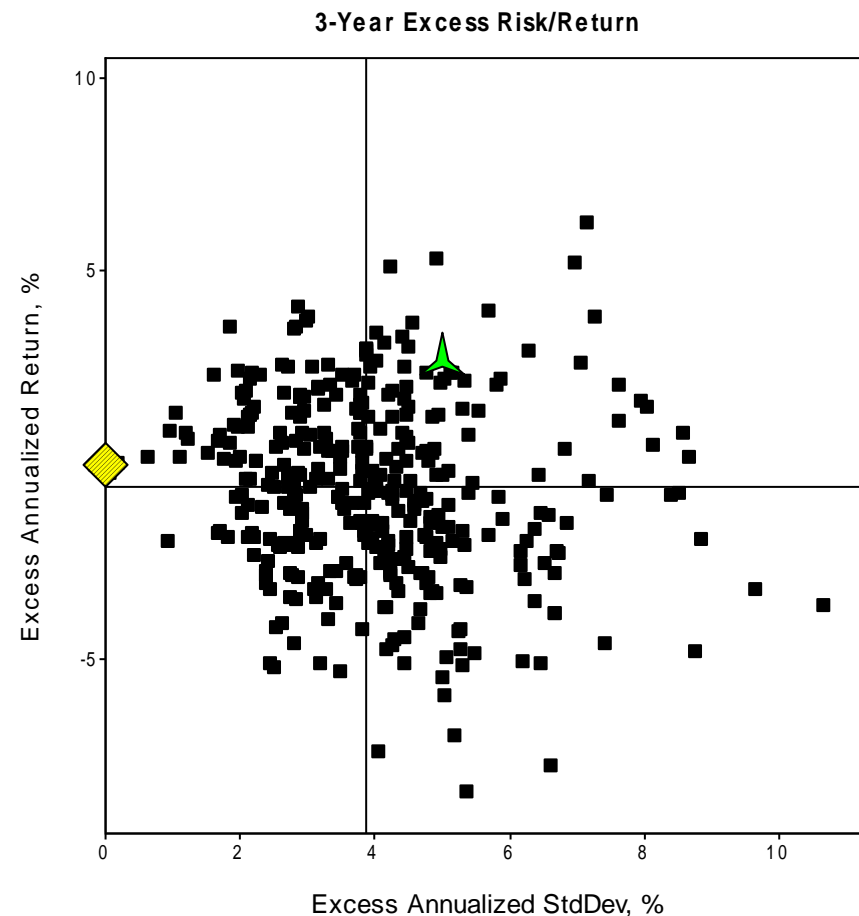
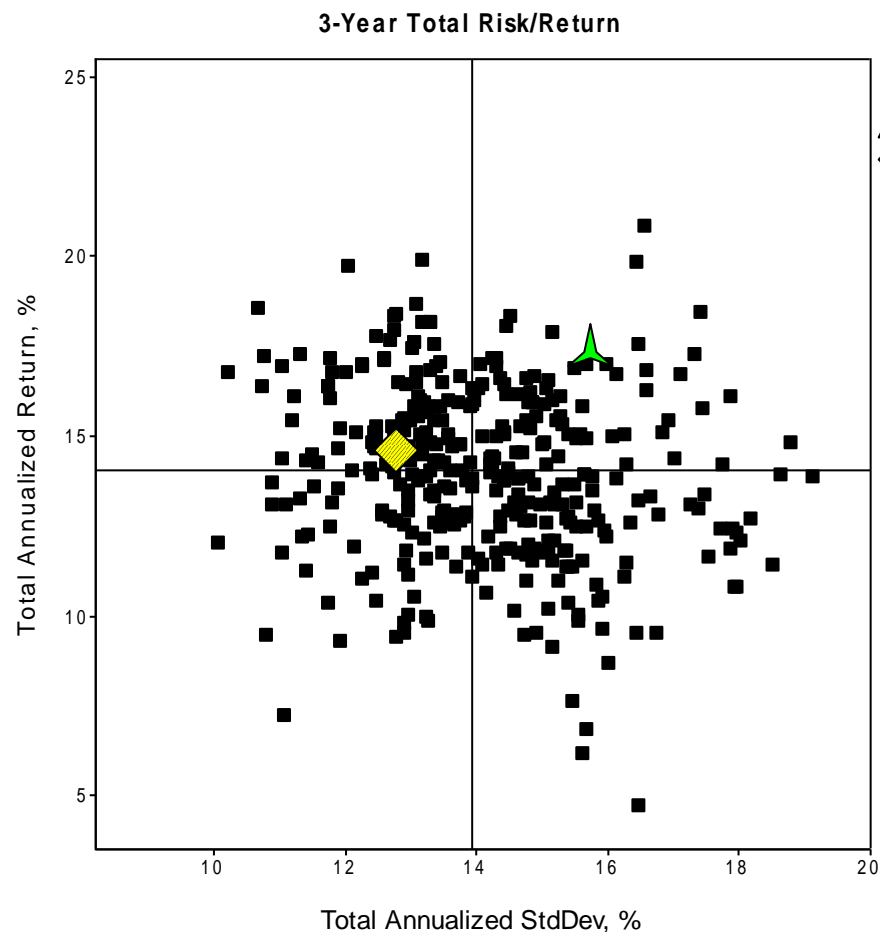


## WPERP Large Cap Growth Manager Comparisons as of March 31, 2014





## WPERP Large Cap Growth Manager Comparisons as of March 31, 2014

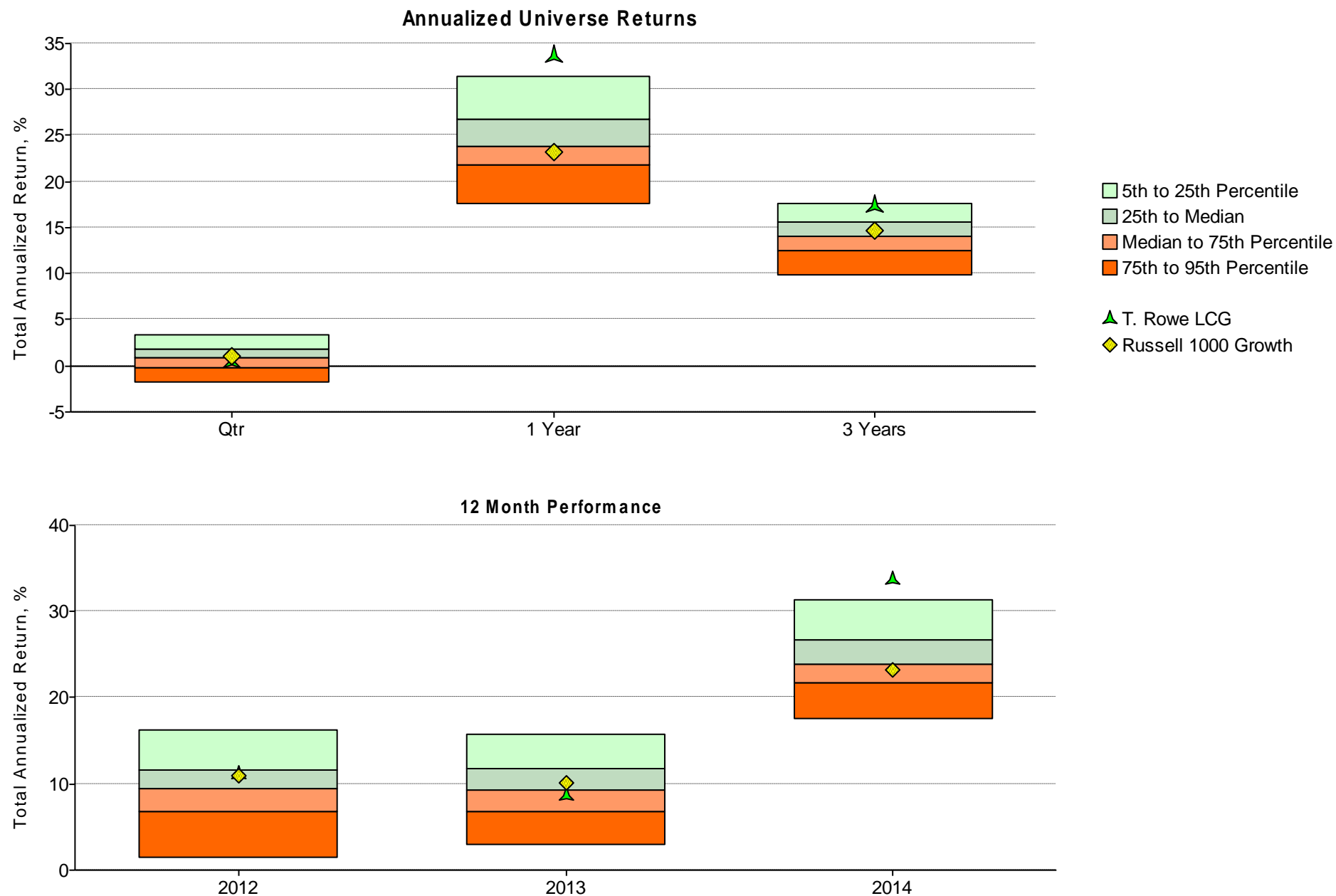


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
T. Rowe LCG	17.33	15.74	1.10
Russell 1000 Growth	14.62	12.77	1.15
Large Growth Manager Universe Median	14.05	13.94	1.01

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
T. Rowe LCG	2.71	5.00	0.54
Russell 1000 Growth	0.00	0.00	NA
Large Growth Manager Universe Median	-0.58	3.86	-0.16

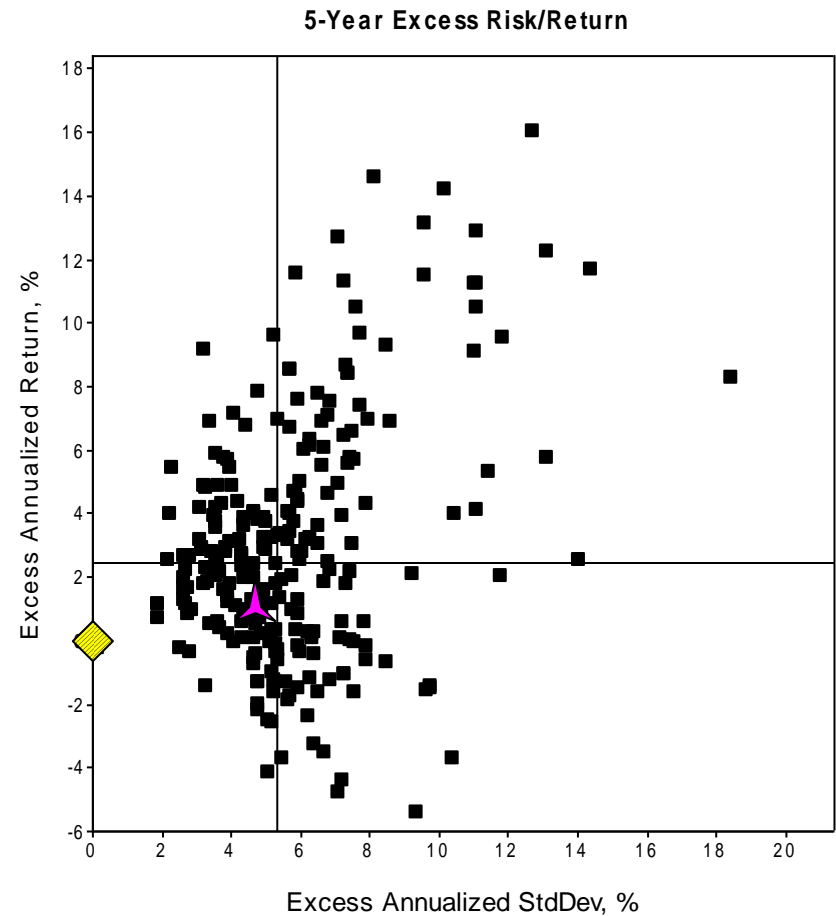
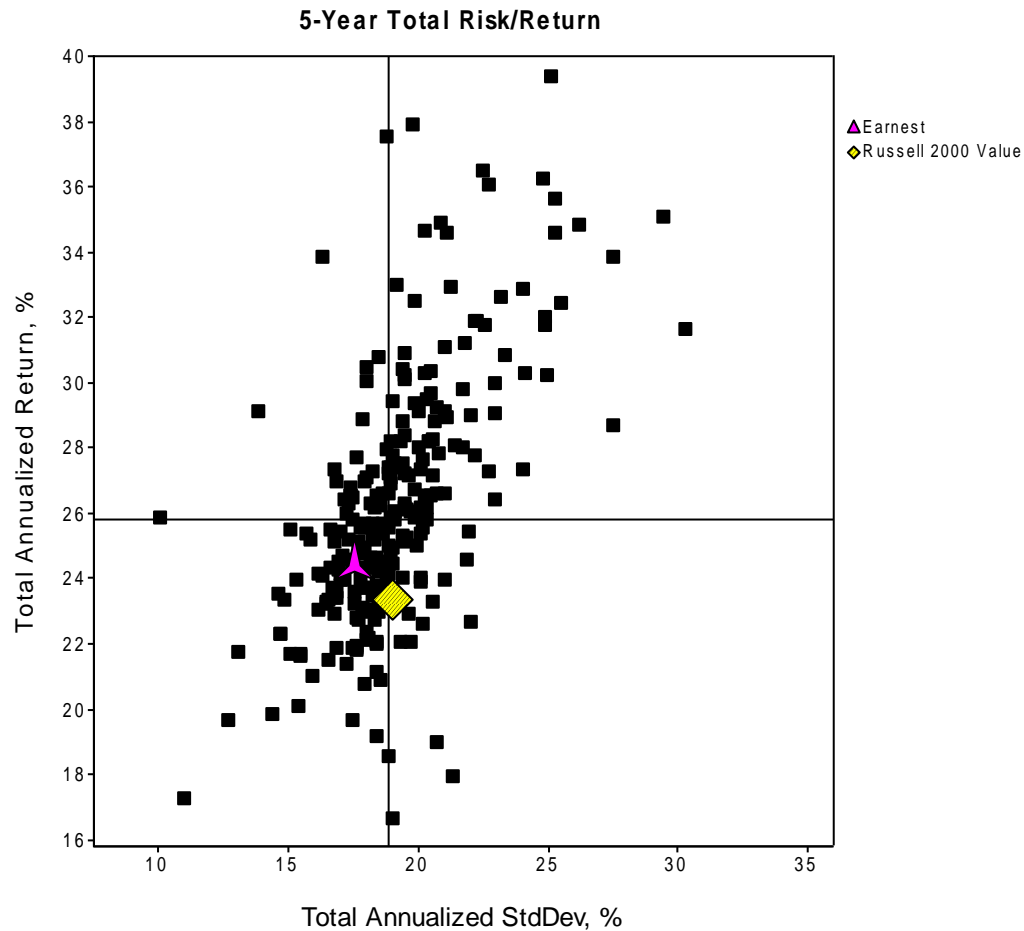


## WPERP Large Cap Growth Manager Comparisons as of March 31, 2014





## WPERP Small Cap Value Manager Comparisons as of March 31, 2014

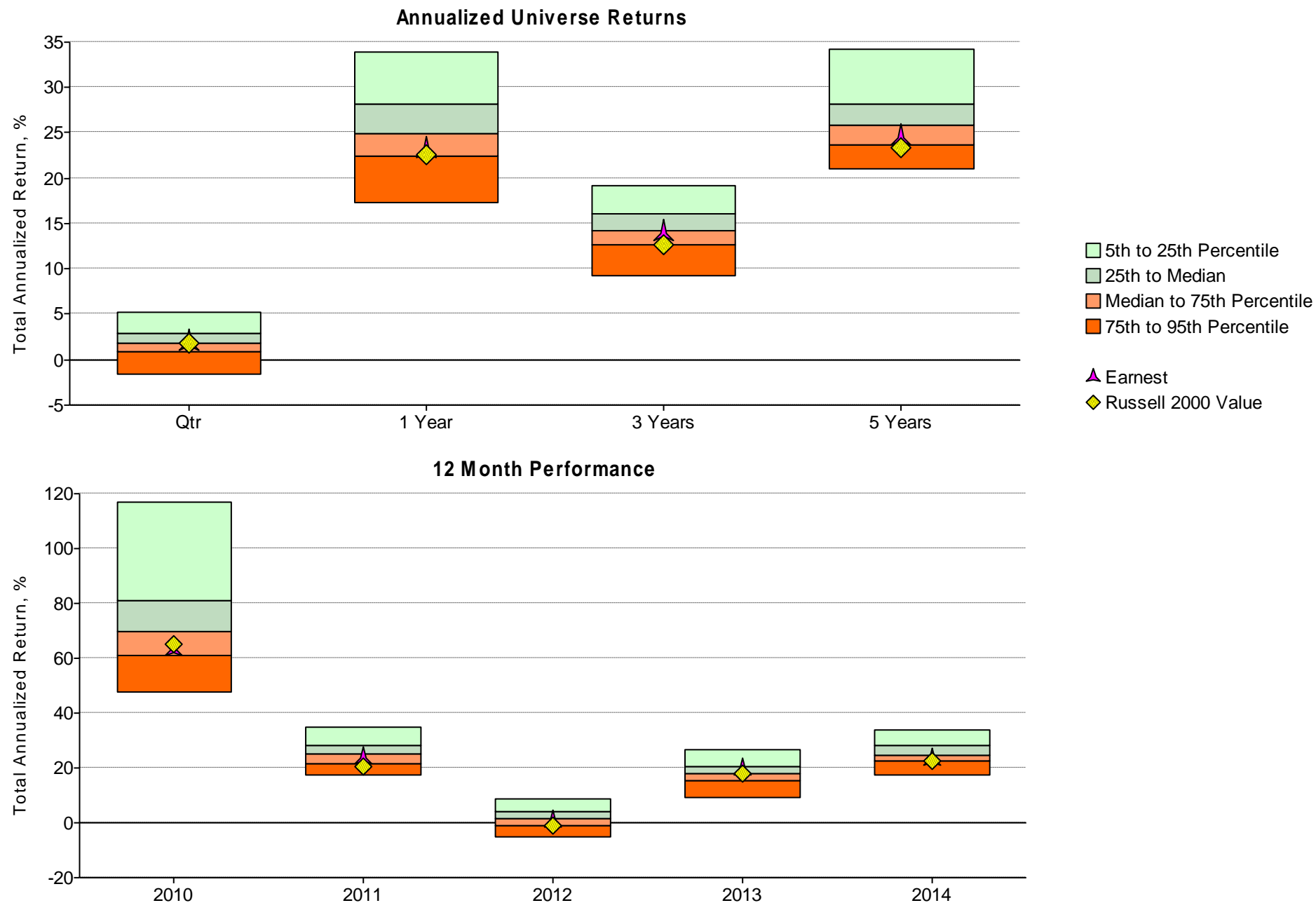


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Earnest	24.42	17.57	1.39
Russell 2000 Value	23.33	19.04	1.22
Small Cap Value Universe Median	25.80	18.88	1.38

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Earnest	1.09	4.69	0.23
Russell 2000 Value	0.00	0.00	NA
Small Cap Value Universe Median	2.47	5.32	0.52

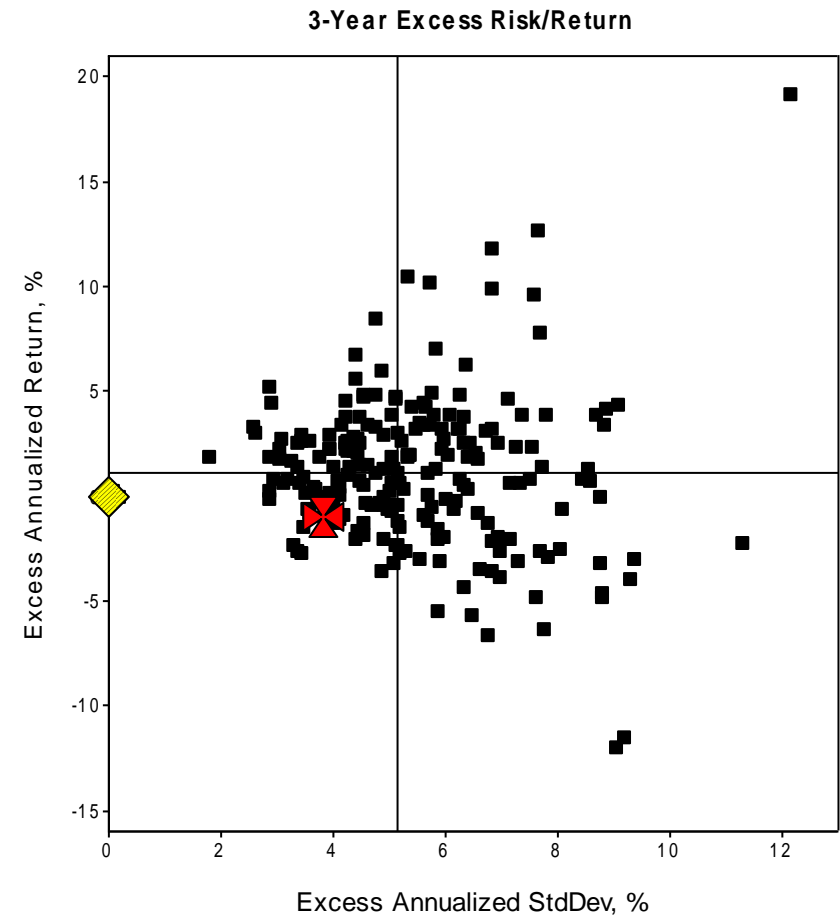
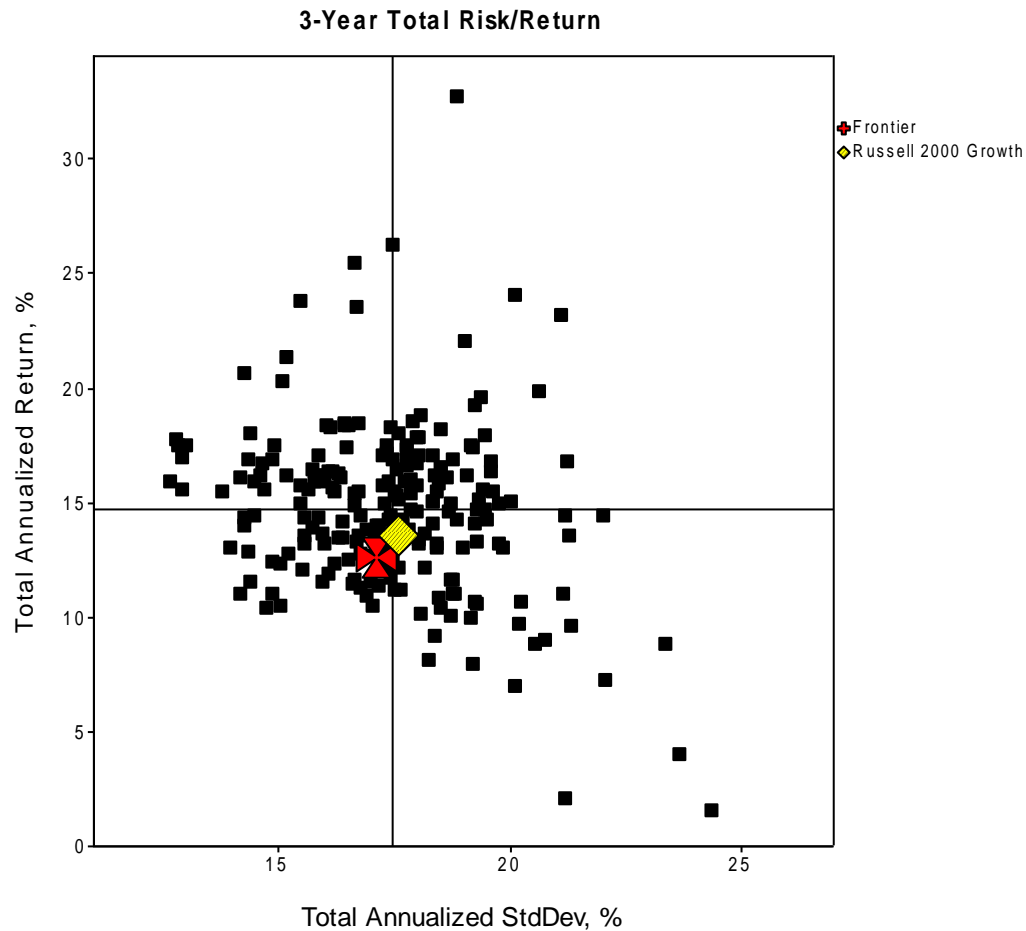


## WPERP Small Cap Value Manager Comparisons as of March 31, 2014





## WPERP Small Cap Growth Manager Comparisons as of March 31, 2014

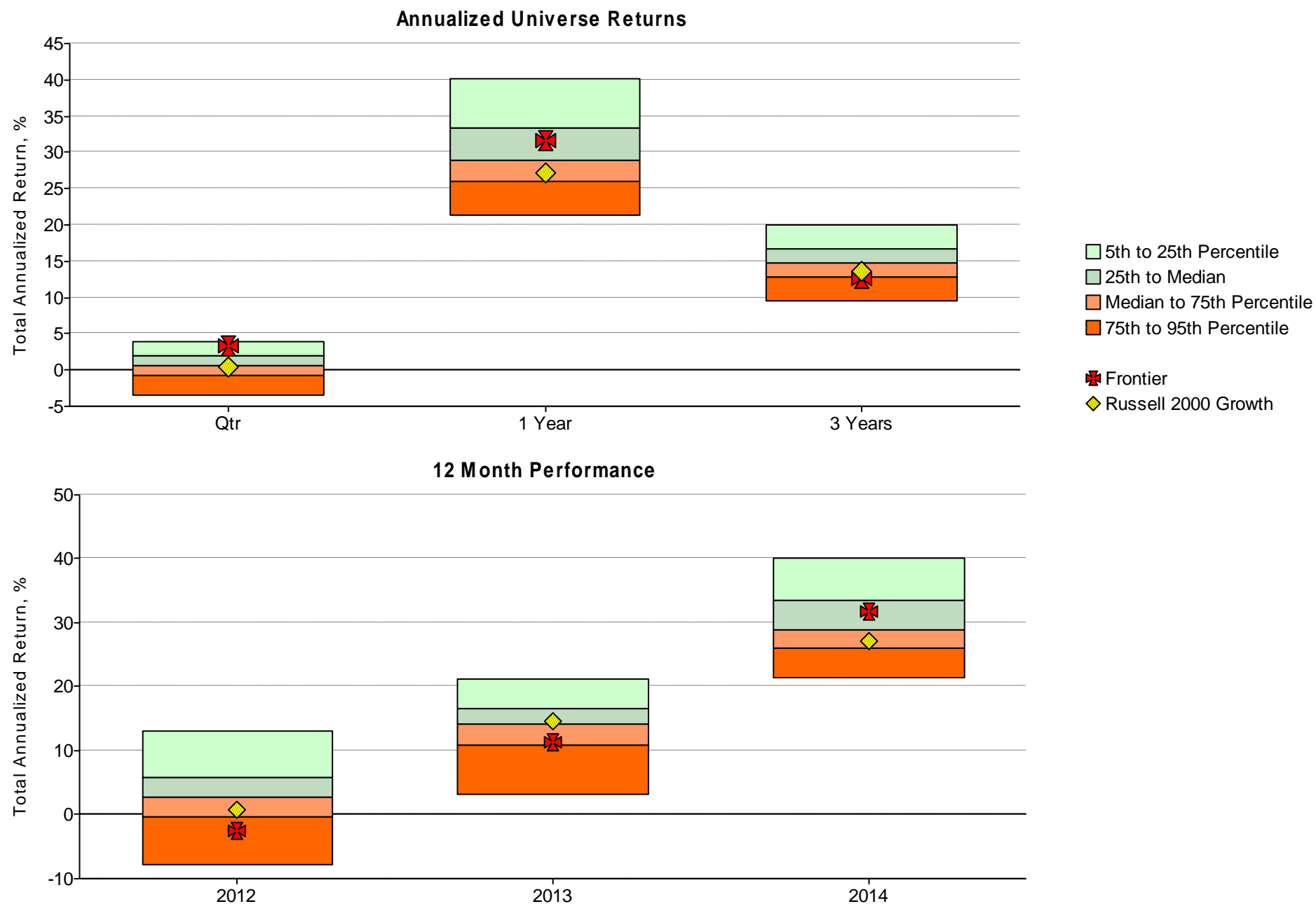


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Frontier	12.62	17.12	0.74
Russell 2000 Growth	13.61	17.57	0.77
Small Cap Growth Universe Median	14.73	17.48	0.85

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
Frontier	-0.99	3.82	-0.26
Russell 2000 Growth	0.00	0.00	NA
Small Cap Growth Universe Median	1.11	5.16	0.25

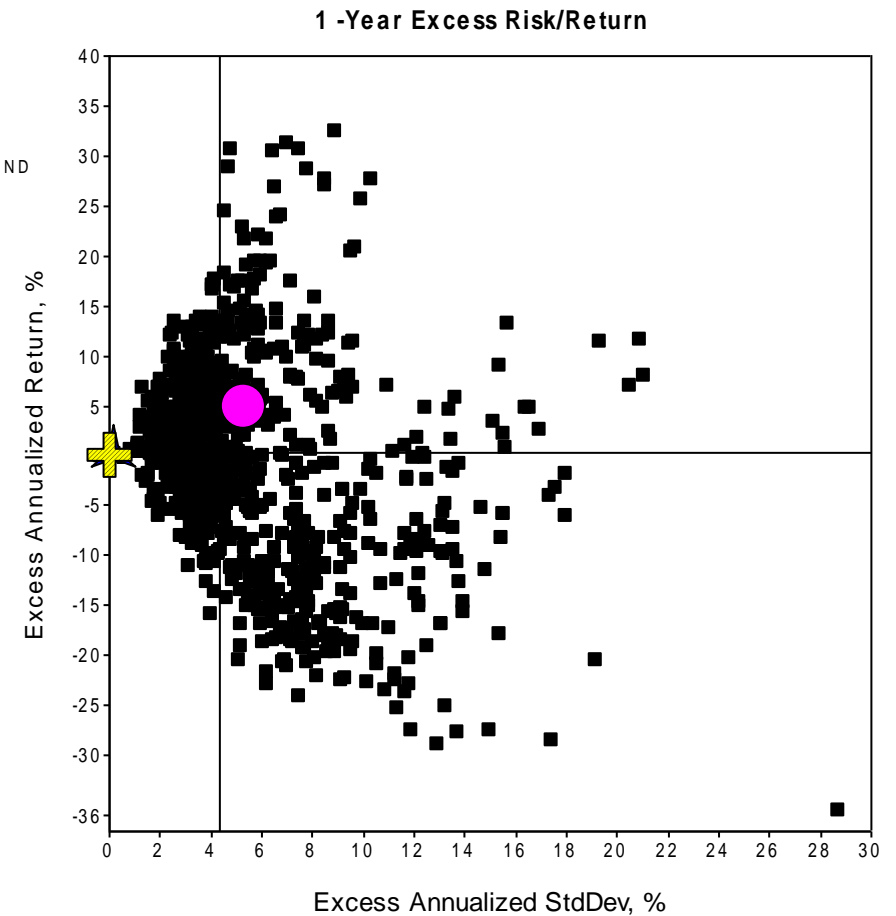
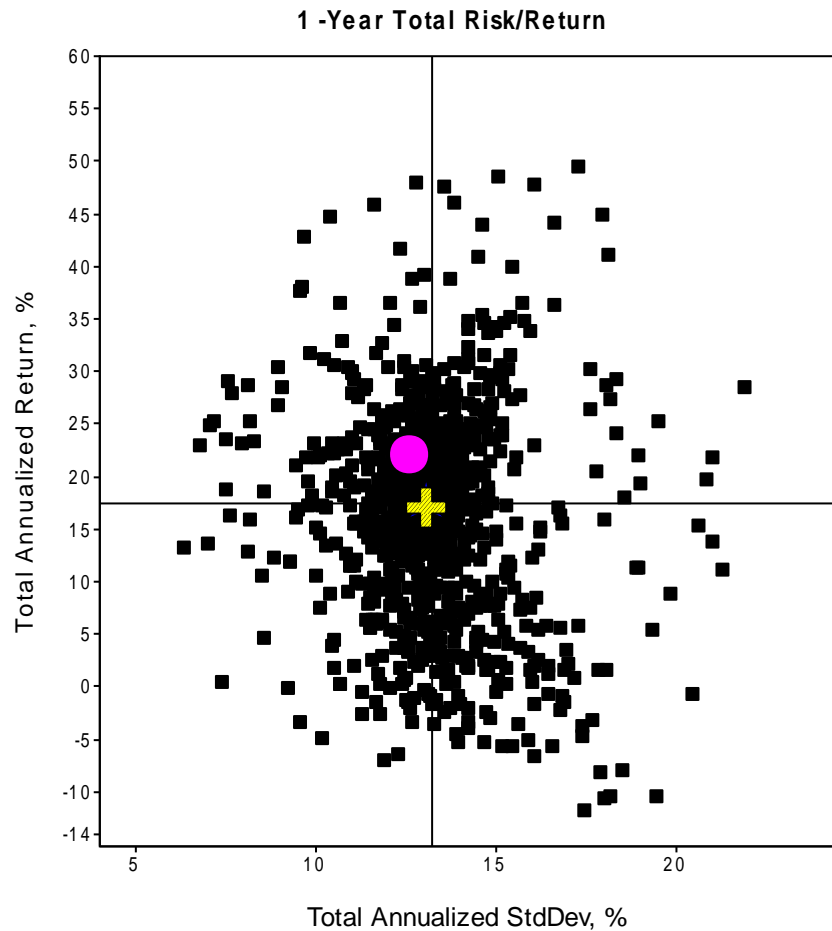


## WPERP Small Cap Growth Manager Comparisons as of March 31, 2014





## WPERP International Equity Manager Comparisons as of March 31, 2014

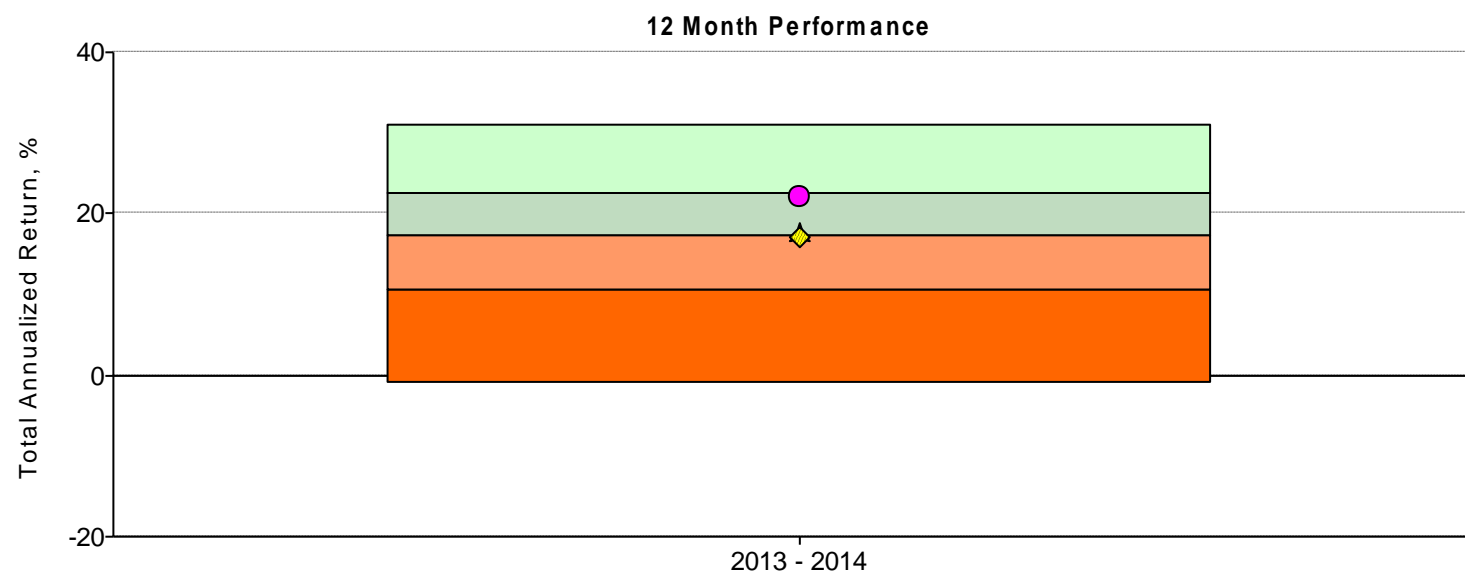
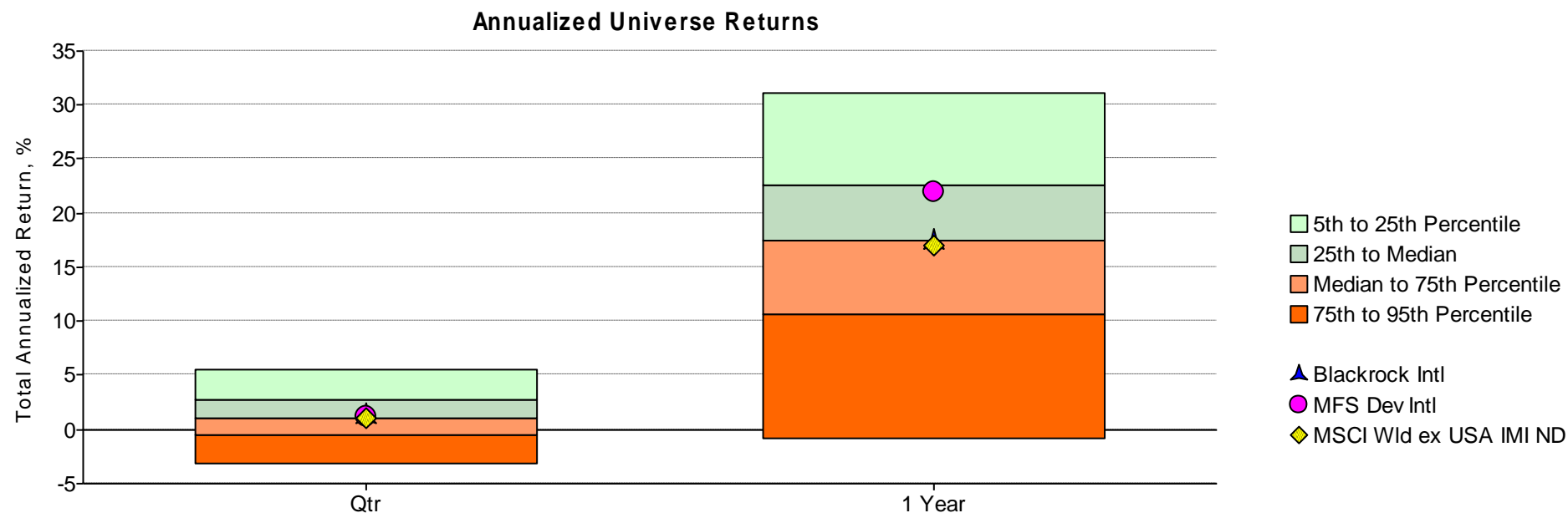


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Blackrock Intl	17.31	13.07	1.32
MFS Dev Intl	21.96	12.63	1.74
MSCI Wld ex USA IMI ND	17.03	13.07	1.30
International Equity Universe Median	17.40	13.21	1.32

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Blackrock Intl	0.28	0.14	2.06
MFS Dev Intl	4.93	5.32	0.93
MSCI Wld ex USA IMI ND	0.00	0.00	NA
International Equity Universe Median	0.38	4.31	0.10

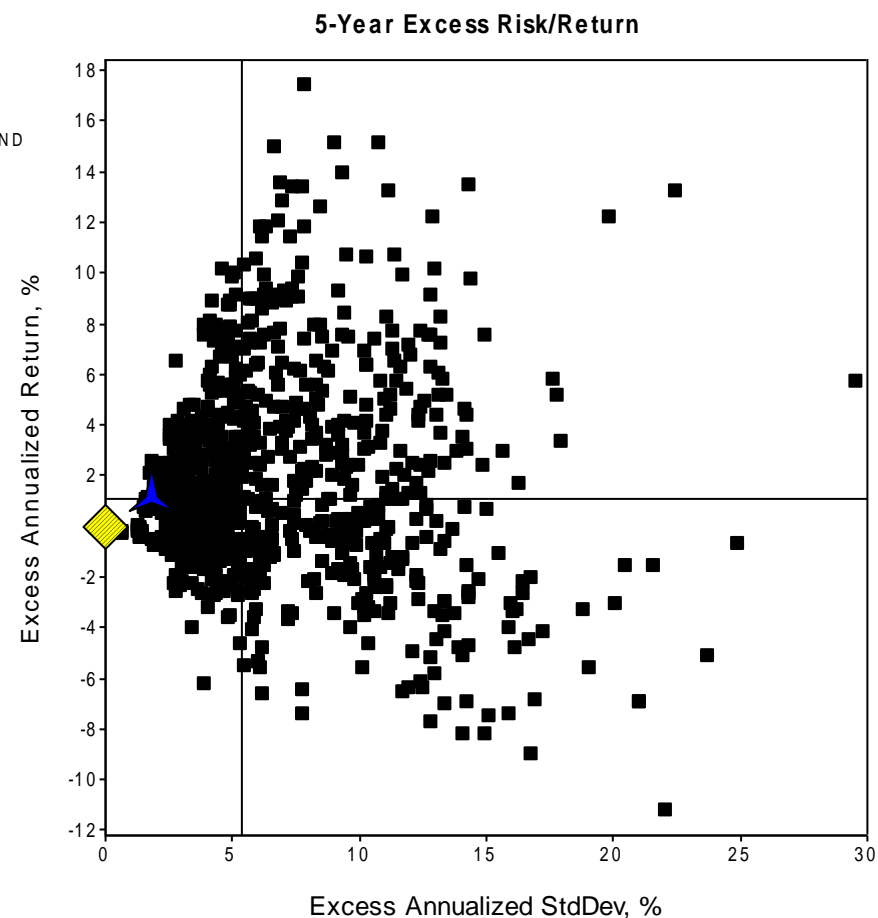
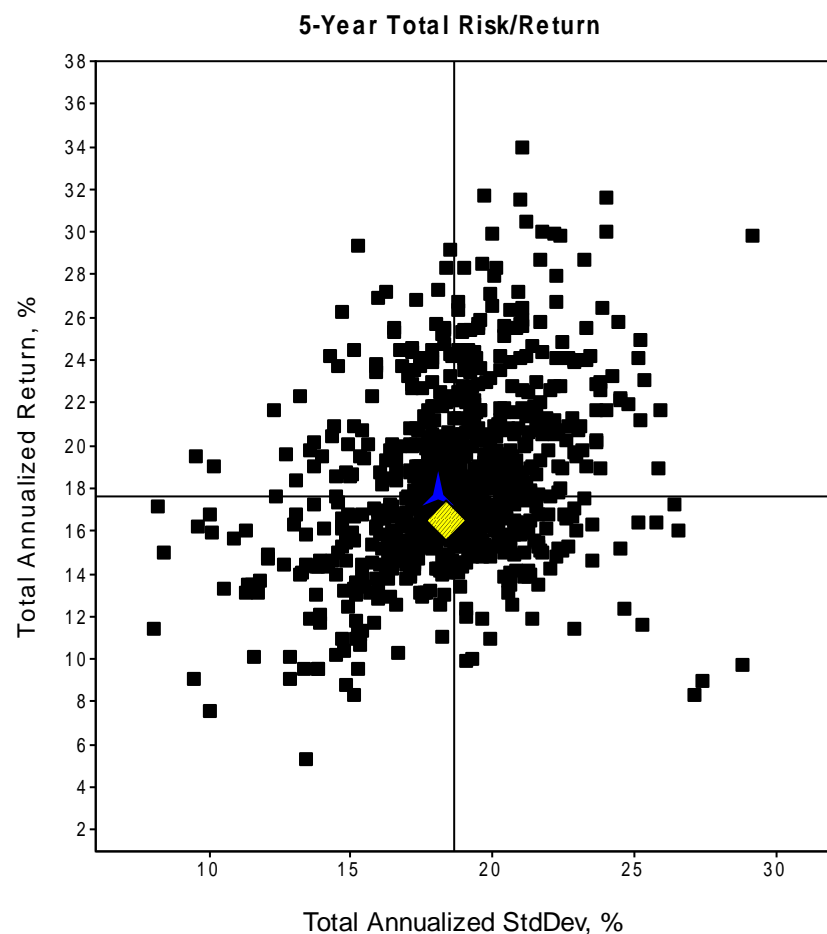


## WPERP International Equity Manager Comparisons as of March 31, 2014





## WPERP International Equity Manager Comparisons as of March 31, 2014

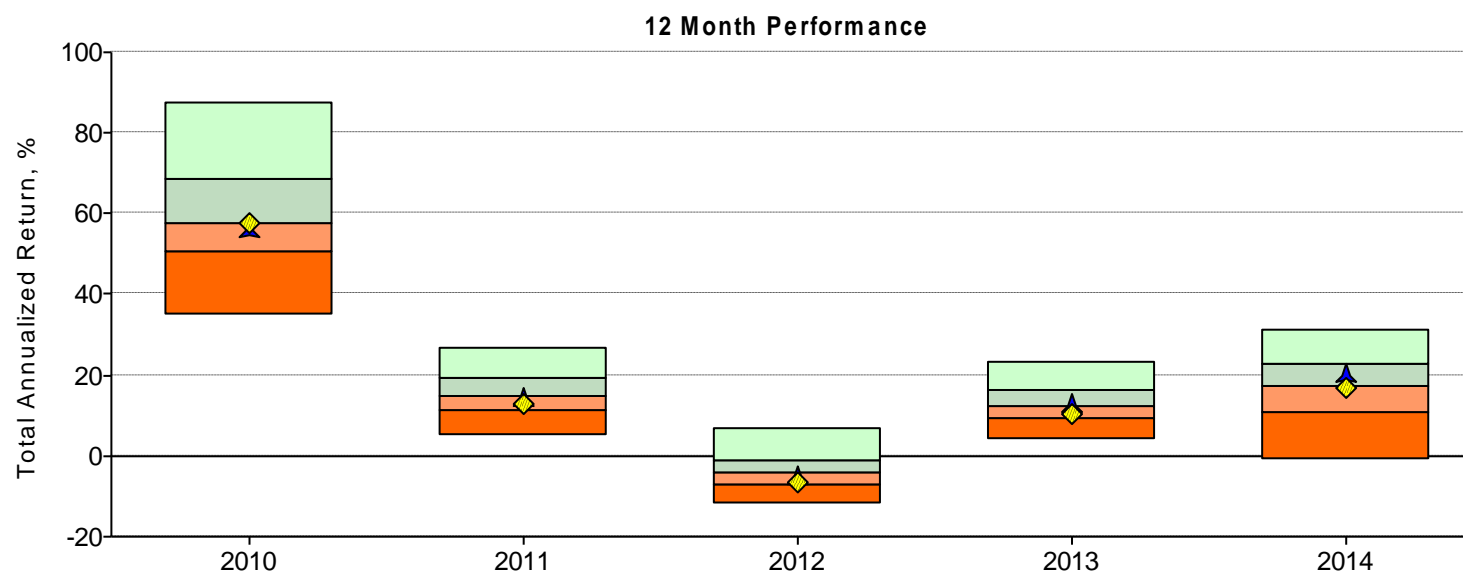
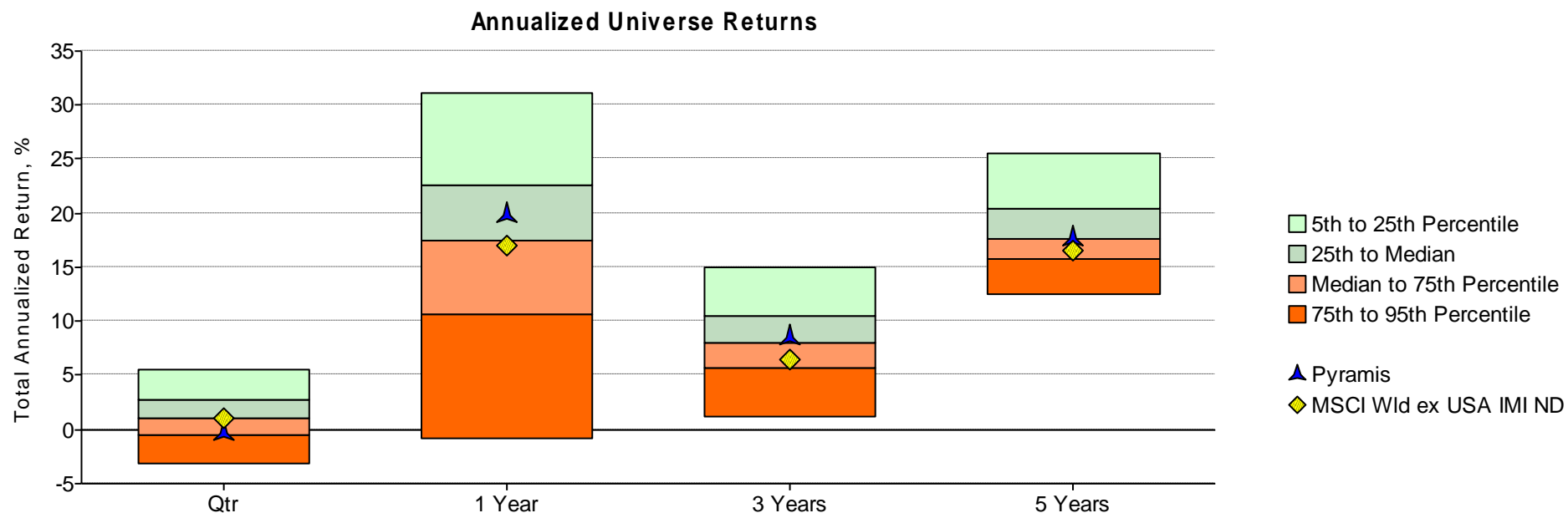


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Pyramis	17.71	18.09	0.98
MSCI Wld ex USA IMI ND	16.51	18.39	0.90
International Equity Universe Median	17.59	18.67	0.95

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
Pyramis	1.20	1.85	0.65
MSCI Wld ex USA IMI ND	0.00	0.00	NA
International Equity Universe Median	1.09	5.38	0.20

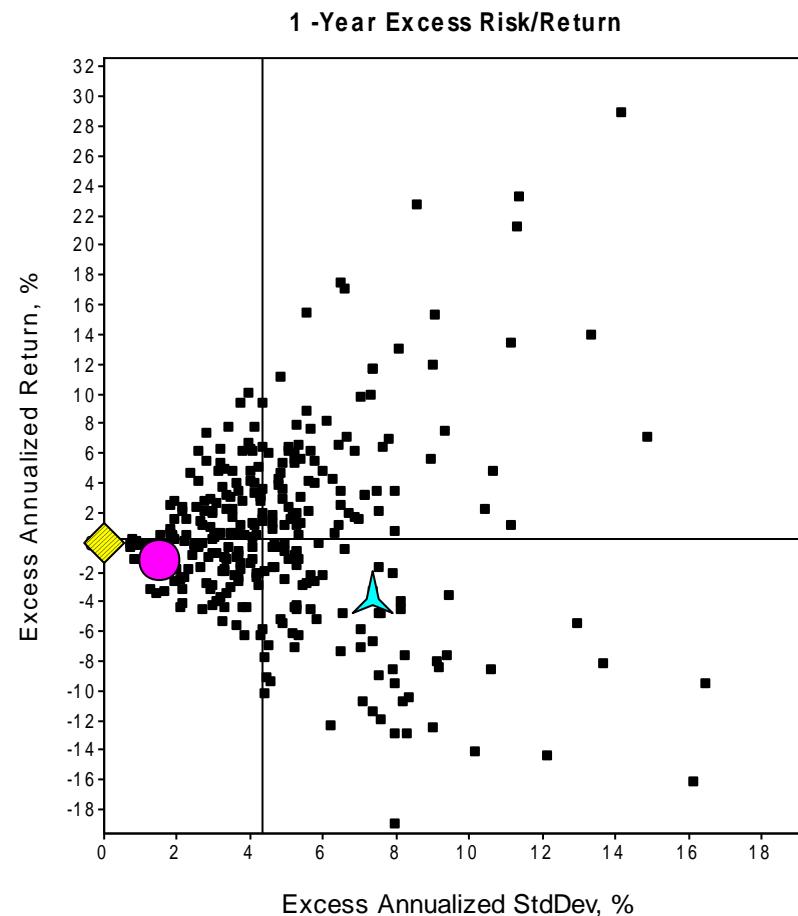
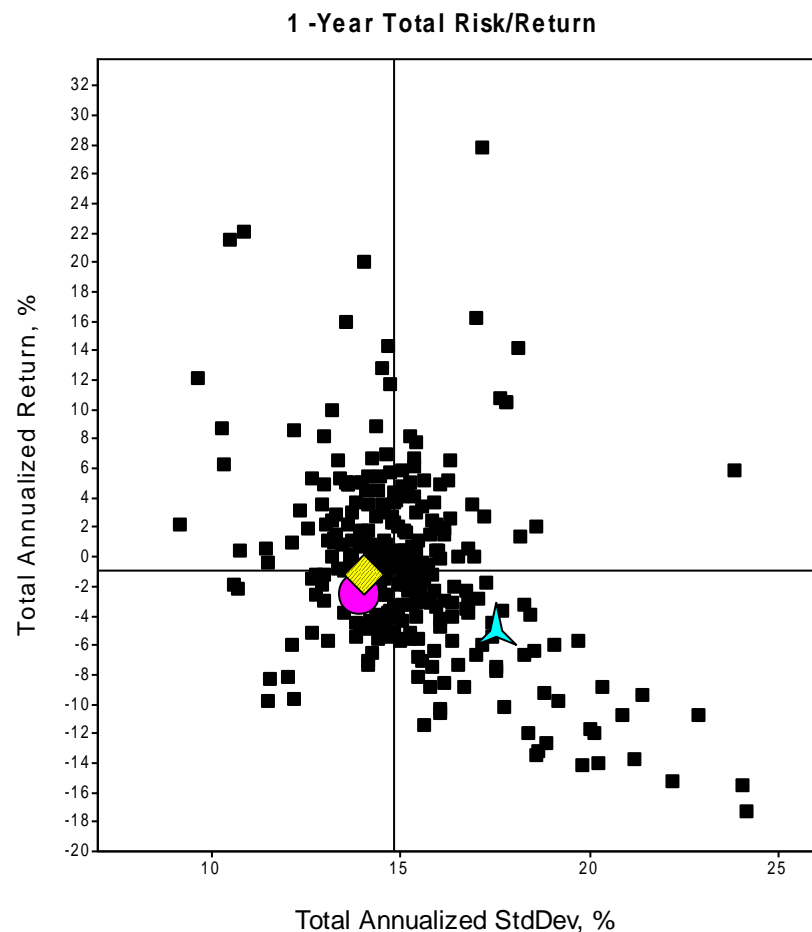


## WPERP International Equity Manager Comparisons as of March 31, 2014





## WPERP Emerging Market Equity Manager Comparisons as of March 31, 2014

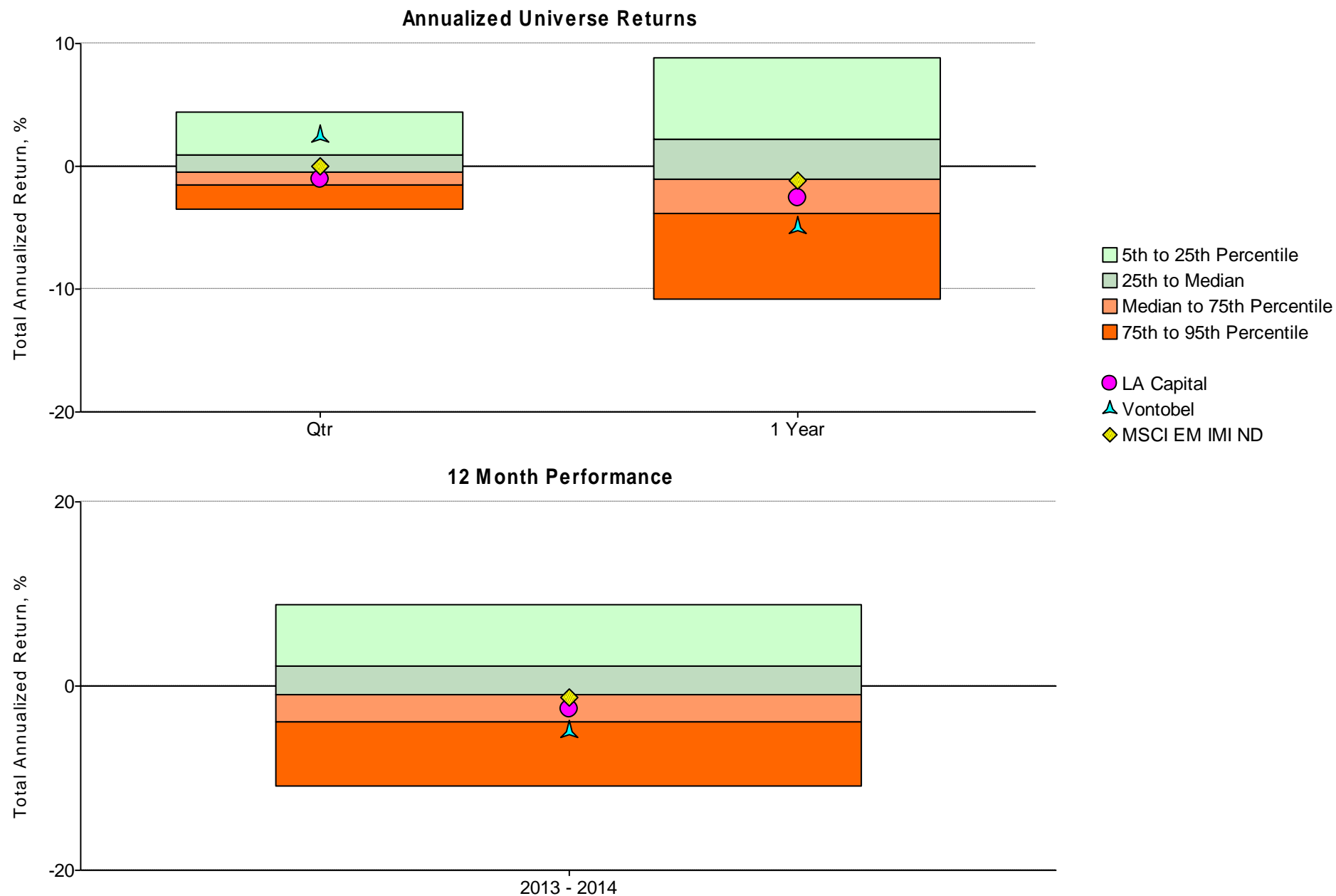


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
LA Capital	-2.51	13.93	-0.18
Vontobel	-4.99	17.54	-0.28
MSCI EM IMI ND	-1.20	14.03	-0.09
Emerging Equity Universe Median	-1.00	14.84	-0.07

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
LA Capital	-1.31	1.53	-0.86
Vontobel	-3.79	7.37	-0.51
MSCI EM IMI ND	0.00	0.00	NA
Emerging Equity Universe Median	0.20	4.33	0.10

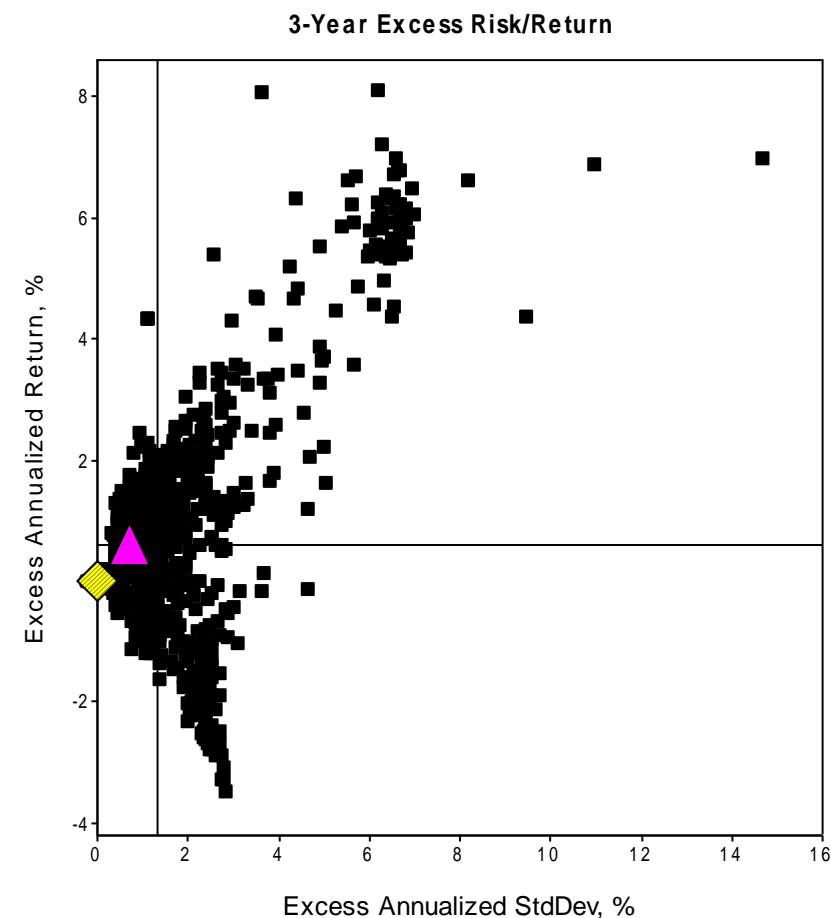
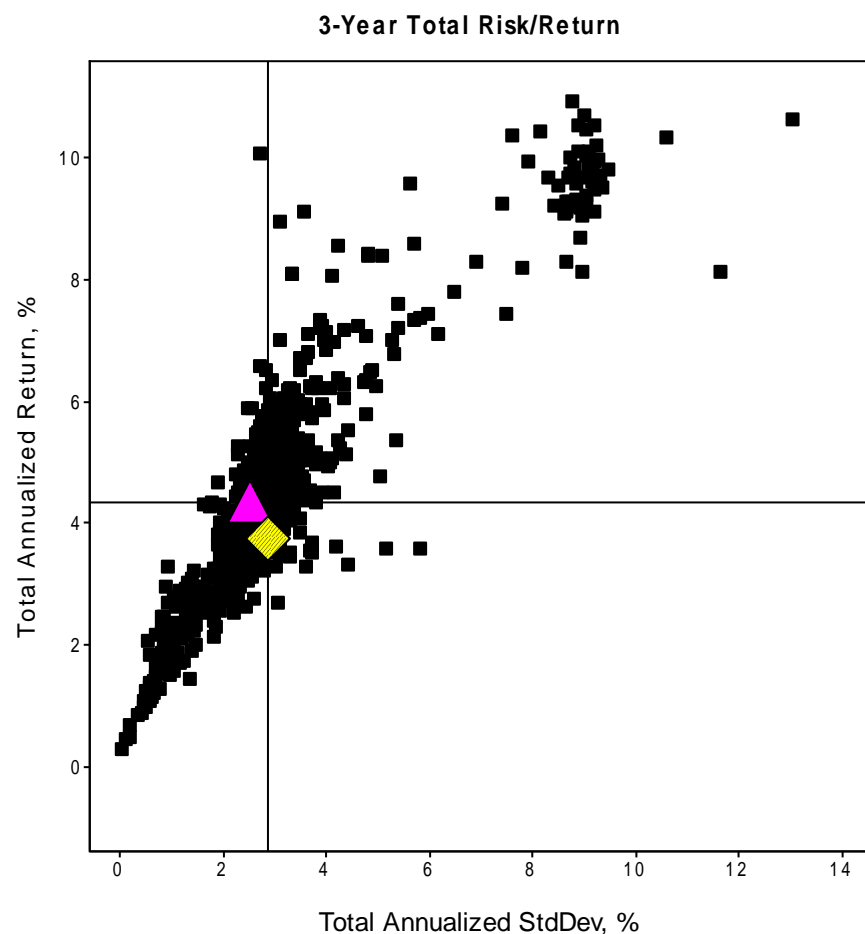


## WPERP Emerging Market Equity Manager Comparisons as of March 31, 2014





## WPERP Fixed Income Manager Comparisons as of March 31, 2014

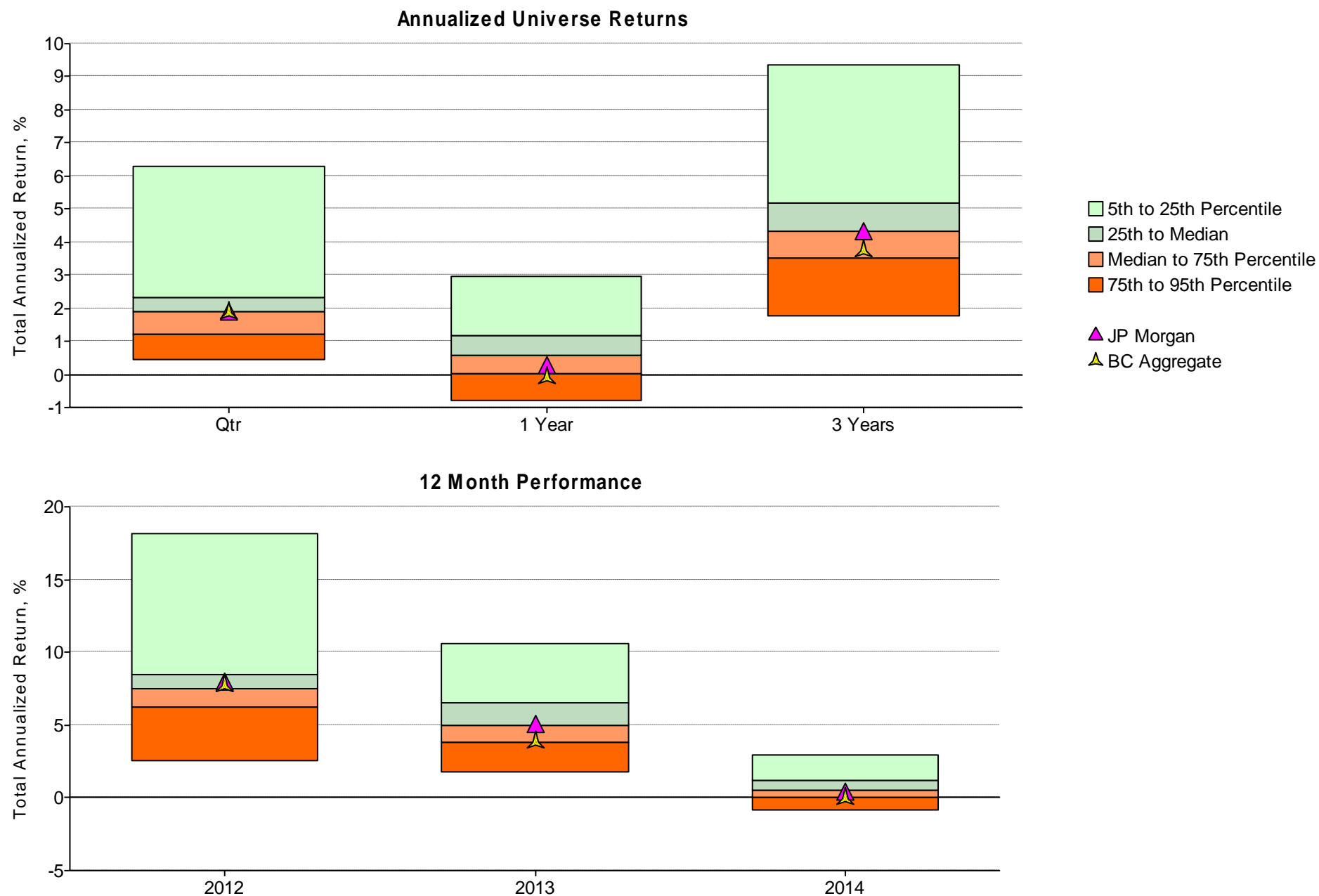


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
JP Morgan	4.23	2.51	1.69
BC Aggregate	3.75	2.84	1.32
Fixed Income Manager Universe Median	4.35	2.85	1.57

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
JP Morgan	0.49	0.73	0.67
BC Aggregate	0.00	0.00	NA
Fixed Income Manager Universe Median	0.60	1.34	0.53

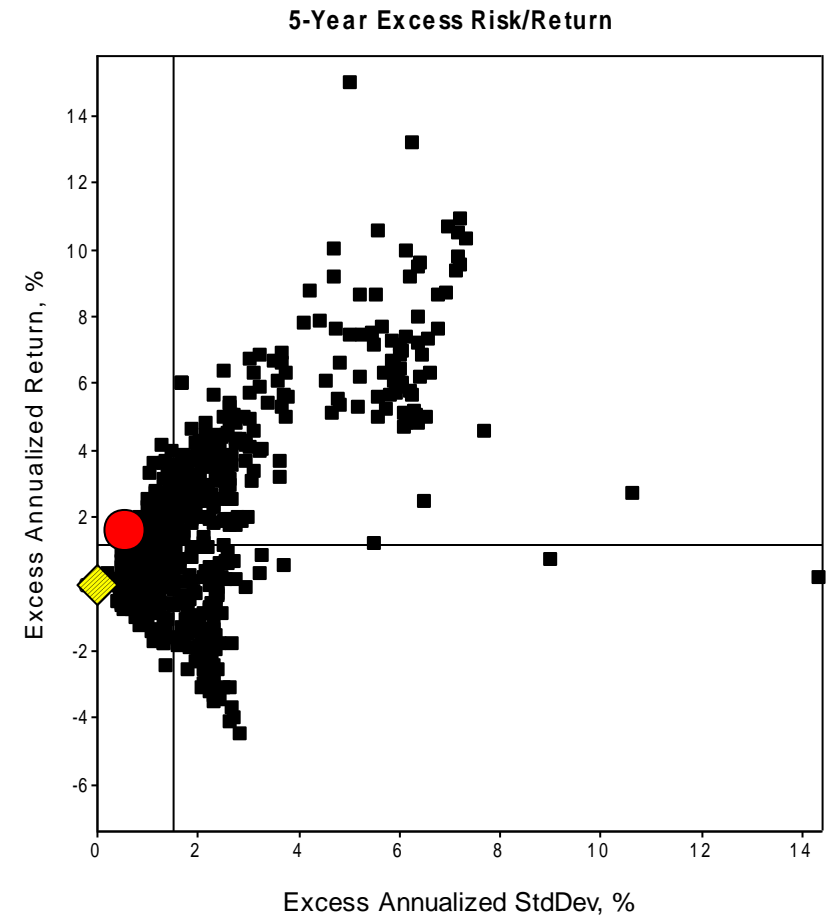
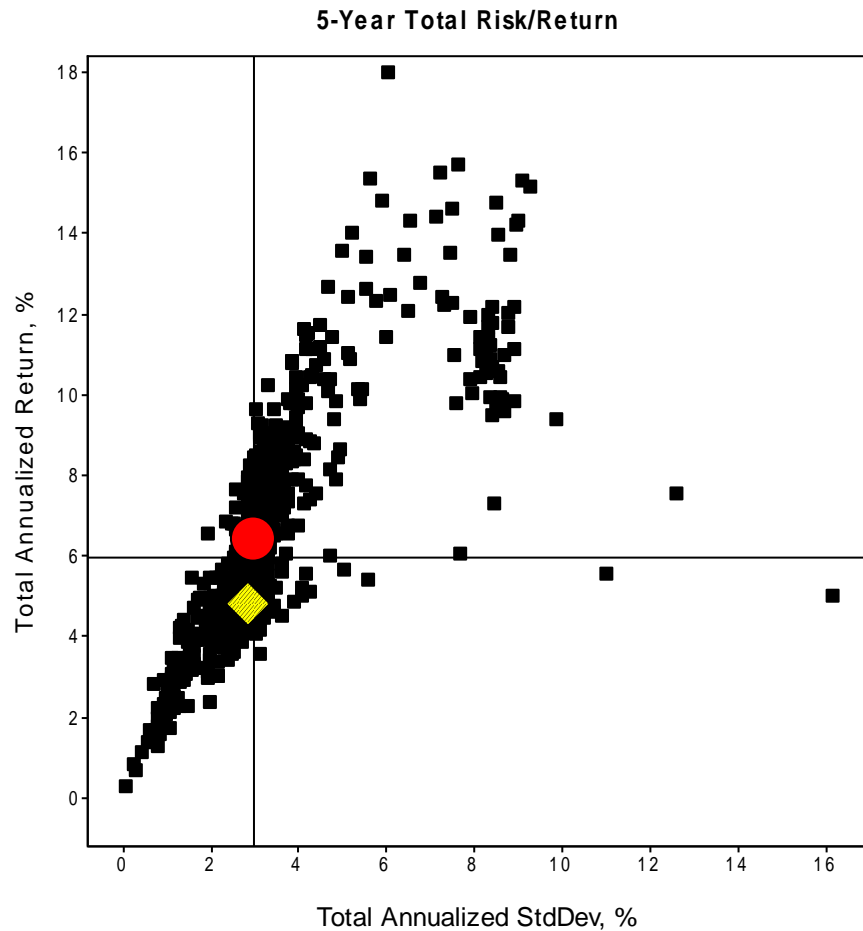


## WPERP Fixed Income Manager Comparisons as of March 31, 2014





## WPERP Fixed Income Manager Comparisons as of March 31, 2014

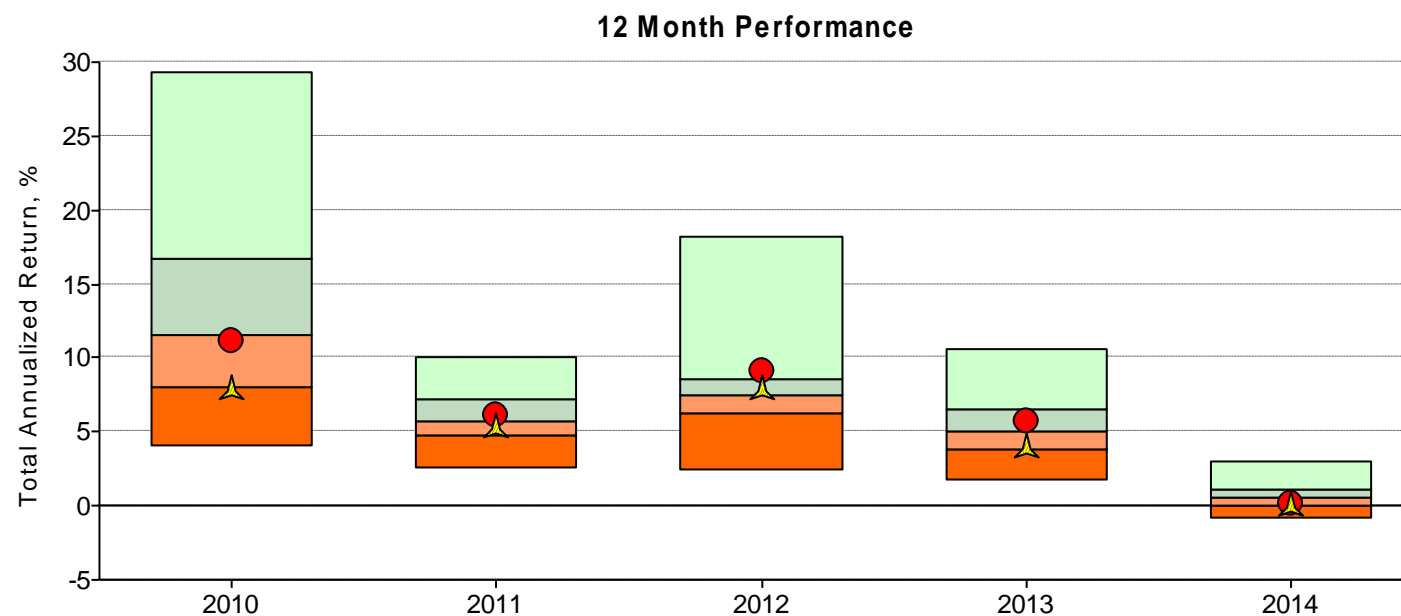
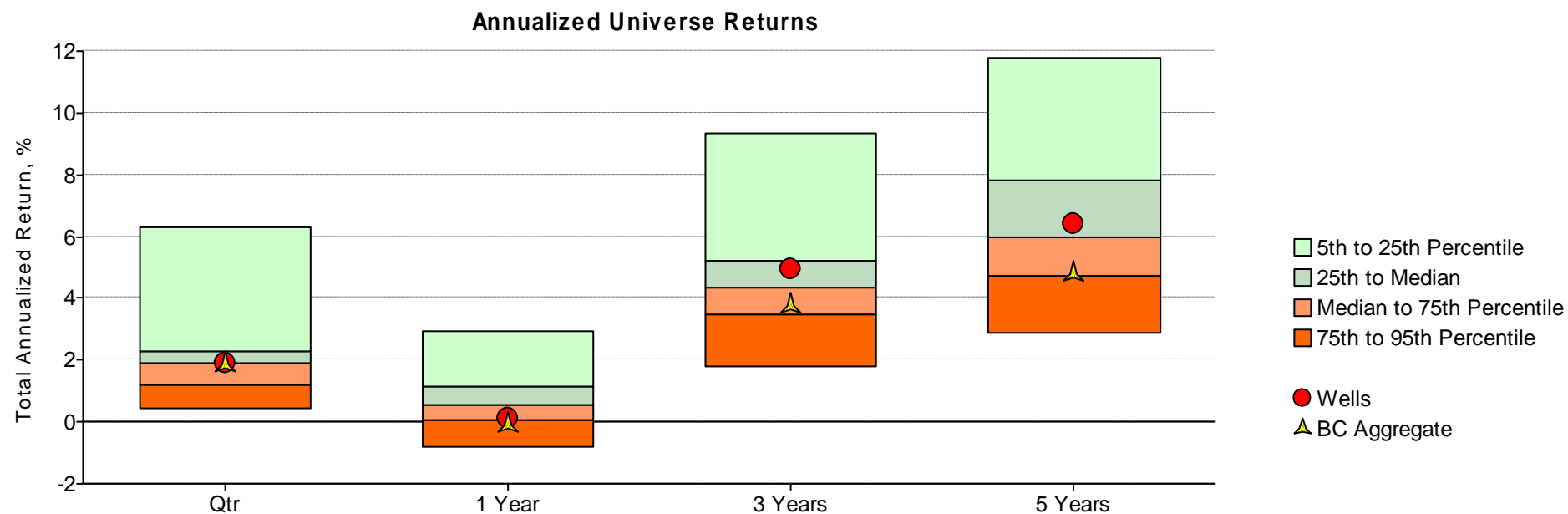


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Wells	6.39	3.00	2.13
BC Aggregate	4.80	2.82	1.70
Fixed Income Manager Universe Median	5.97	2.99	2.09

	Annualized Excess Return, %	Annualized Excess StdDev, %	Sharpe Ratio, Excess
Wells	1.59	0.56	2.83
BC Aggregate	0.00	0.00	NA
Fixed Income Manager Universe Median	1.17	1.52	0.98

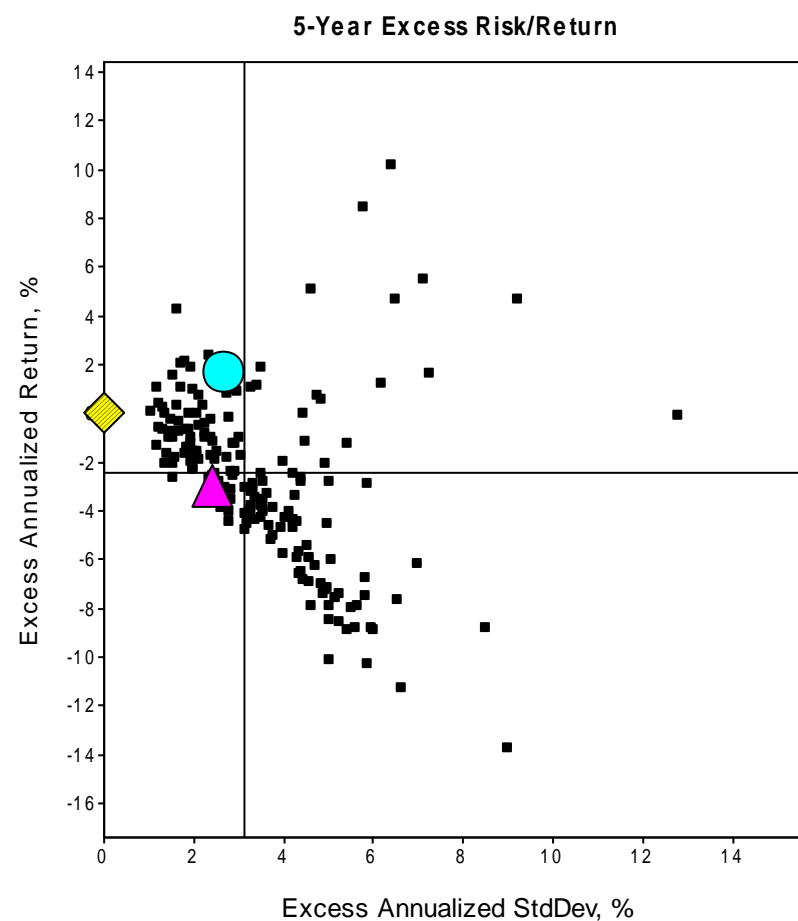
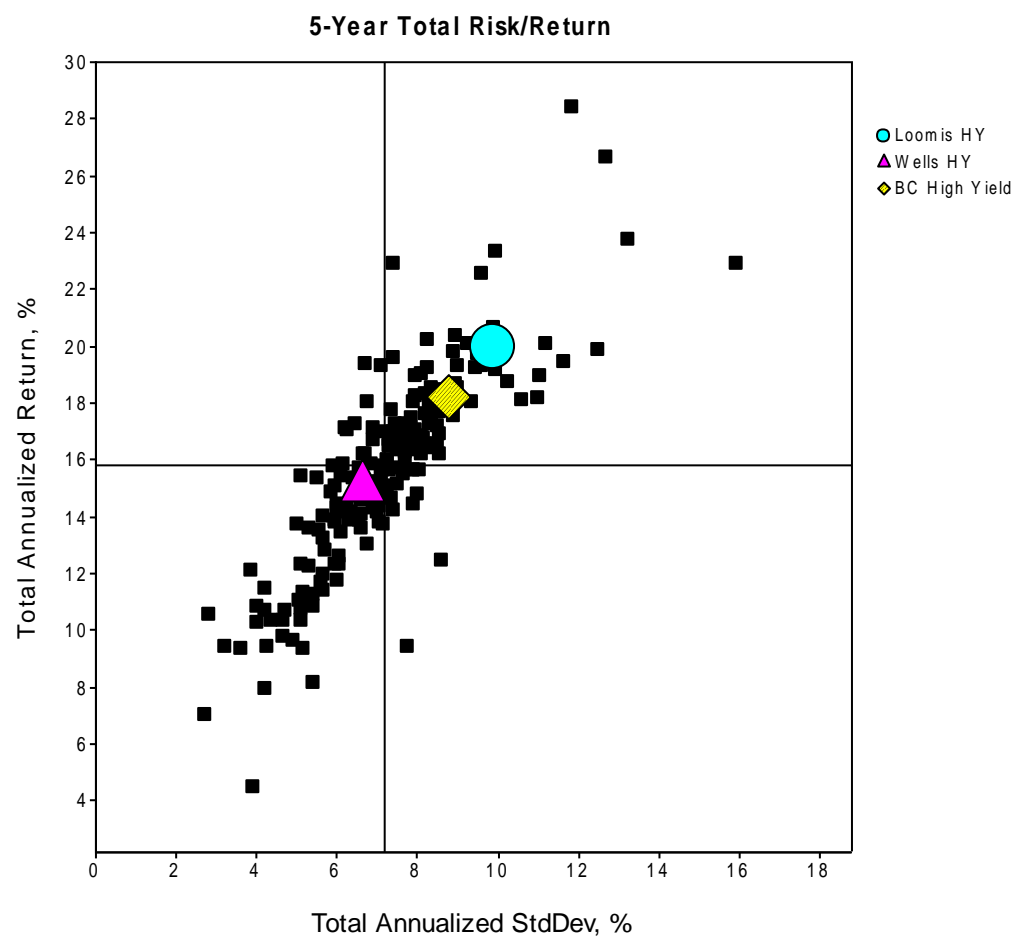


## WPERP Fixed Income Manager Comparisons as of March 31, 2014





## WPERP High Yield Manager Comparisons as of March 31, 2014

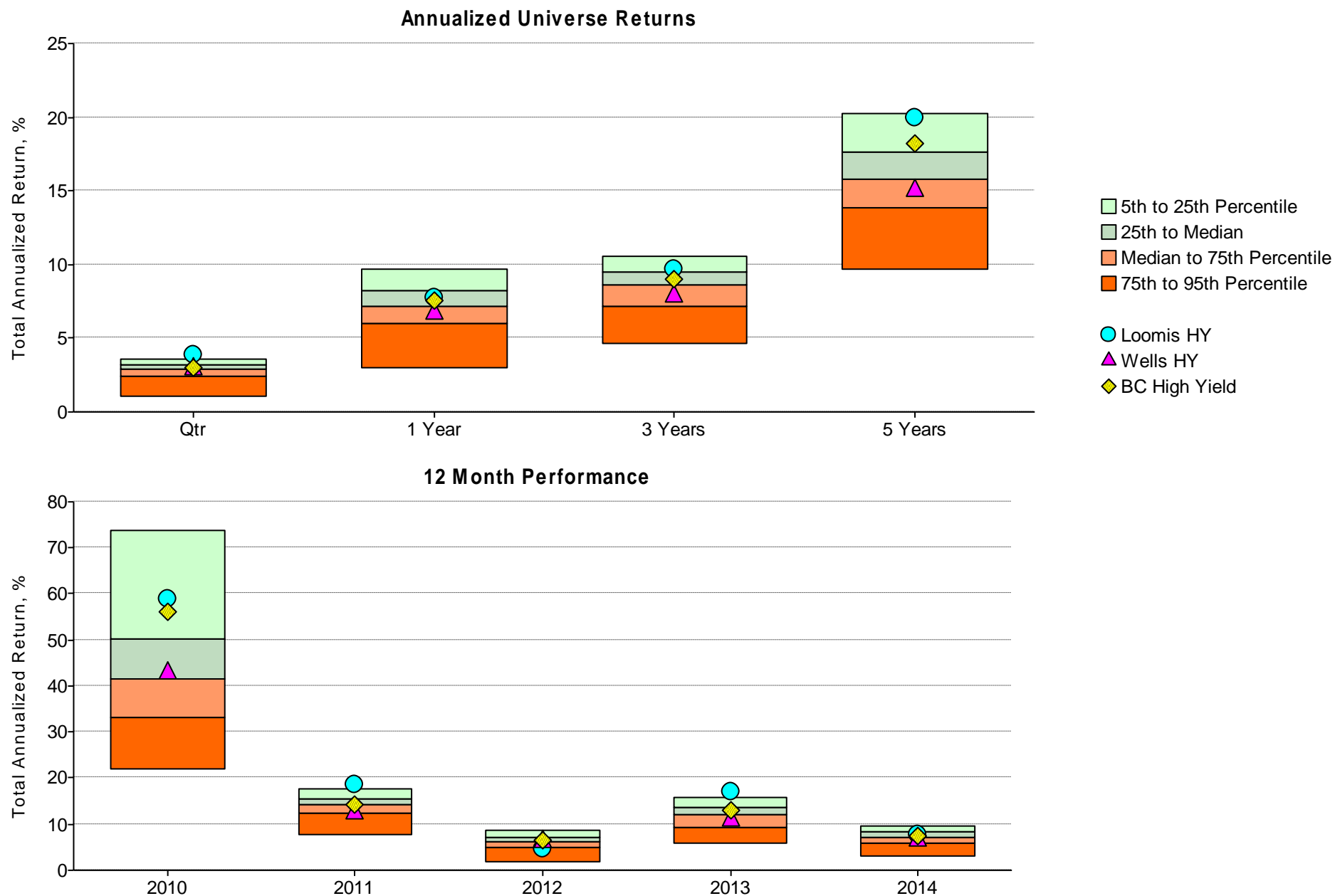


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Loomis HY	19.95	9.88	2.02
Wells HY	15.02	6.64	2.26
BC High Yield	18.25	8.76	2.08
U.S. High Yield Universe Median	15.79	7.18	2.18

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Loomis HY	1.70	2.69	0.63
Wells HY	-3.23	2.40	-1.35
BC High Yield	0.00	0.00	NA
U.S. High Yield Universe Median	-2.46	3.15	-0.90



## WPERP High Yield Manager Comparisons as of March 31, 2014





## APPENDIX



## MANAGER WATCH CRITERIA

Asset Class	Short-term (Rolling 12 month periods)	Medium-term (Rolling 36 month periods)	Long-term
Active Domestic Equity	Portfolio Return < Benchmark Return – 3.0% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 1.5% at 2 consecutive calendar qtr end dates.	VRR < 0.98 at 2 consecutive calendar qtr end dates.
Passive Domestic Equity	Tracking Error > 0.35% at 2 consecutive calendar qtr end dates	Tracking Error > 0.20% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 0.10% at 2 consecutive calendar qtr end dates.
Active International Equity	Portfolio Return < Benchmark Return – 4.5% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 2.5% for 2 consecutive calendar qtr end dates.	VRR < 0.98 at 2 consecutive calendar qtr end dates.
Active Fixed Income	Portfolio Return < Benchmark Return – 1.0% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 0.6% at 2 consecutive calendar qtr end dates.	VRR < 0.99 at 2 consecutive calendar qtrs.
Fund of Hedge Funds (Real Return)	Portfolio Return < Benchmark Return – 3.5% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 2.5% at 2 consecutive calendar qtr end dates.	VRR < 1.00 at 2 consecutive calendar qtr end dates.
Global Inflation Linked Securities (Real Return)	Portfolio Return < Benchmark Return – 2.0% at 2 consecutive calendar qtr end dates.	Portfolio Annlzd. Return < Benchmark Annlzd. Return – 1.5% at 2 consecutive calendar qtr end dates.	VRR < 0.99 at 2 consecutive calendar qtr end dates.

\*All portfolio returns are gross of manager fees.



## SUMMARY OF WPERP RETIREMENT PLAN PORTFOLIO TRANSITIONS

Manager	Mandate	Funded	Terminated
<b>2003</b>			
BlackRock (formerly Merrill Lynch)	Passive Core	3Q 2003	---
Northern Trust	Passive Core	3Q 2003	1Q 2005
<b>2004</b>			
Fred Alger	Large Cap Growth	1Q 2004	---
Intech	Large Cap Growth	1Q 2004	3Q 2009
MFS	Large Cap Value	1Q 2004	---
Invesco	International	2Q 2004	4Q 2011
T. Rowe Price	Large Cap Value	3Q 2004	---
ING/Aeltus	Core Fixed Income	3Q 2004	4Q 2009
Wells Capital	Core Fixed Income	3Q 2004	---
Bank of New York	Small Cap Growth	4Q 2004	1Q 2006
Earnest Partners	Small Cap Value	4Q 2004	---
Pyramis (formerly Fidelity)	International	4Q 2004	---
Wells Capital	High Yield	4Q 2004	---
<b>2005</b>			
Boston Company	International	1Q 2005	4Q 2011
Loomis Sayles	High Yield	1Q 2005	---
Boston Company	Emerging Markets	1Q 2005	4Q 2011
T. Rowe Price	Emerging Markets	1Q 2005	3Q 2011
Boston Company	Large Cap Active	---	1Q 2005
<b>2006</b>			
Lexington VI	Private Equity	3Q 2006	---
Northpointe	Small Cap Growth	3Q 2006	2Q 2009
Paradigm	Small Cap Growth	3Q 2006	1Q 2010
Landmark XIII	Private Equity	4Q 2006	---
Prisa	Real Estate	4Q 2006	---
<b>2007</b>			
Aetos	Hedge Fund	1Q 2007	2Q 2013
PAAMCO	Hedge Fund	1Q 2007	4Q 2010
Prisa II	Real Estate	2Q 2007	---
JPM Strategic	Real Estate	3Q 2007	---
<b>2008</b>			
HRJ	Private Equity	1Q 2008	---
Fisher Lynch	Private Equity	2Q 2008	---
CB Richard Ellis	Real Estate	2Q 2008	---
Landmark XIV	Private Equity	3Q 2008	---
<b>2009</b>			
Oaktree V	Private Equity	1Q 2009	---

(Continued)

Manager	Mandate	Funded	Terminated
<b>2010</b>			
Mesa West	Real Estate	1Q 2010	---
Lexington VII	Private Equity	1Q 2010	---
T. Rowe Price	Large Cap Growth	2Q 2010	---
Frontier	Small Cap Growth	2Q 2010	---
JP Morgan	Core Fixed Income	2Q 2010	---
WAMCO	GILS	2Q 2010	---
<b>2011</b>			
EnergyCap VIII	Private Equity	1Q 2011	---
Audax Mezz III	Private Equity	1Q 2011	---
Lone Star II	Real Estate	2Q 2011	---
Lone Star VII	Real Estate	2Q 2011	---
Invesco	Real Estate	3Q 2011	---
Vista Equity Partners IV	Private Equity	4Q 2011	---
DRA	Real Estate	4Q 2011	---
<b>2012</b>			
AG Core	Real Estate	1Q 2012	---
Gateway (replication)	Covered Calls	2Q 2012	---
Gateway (non-replication)	Covered Calls	2Q 2012	---
BlackRock	Developed International	3Q 2012	---
MFS	Developed International	3Q 2012	---
L.A. Capital	Emerging Markets	3Q 2012	---
PCCP	Real Estate	3Q 2012	---
Blackstone	Real Estate	3Q 2012	---
ARS VI	Real Estate	3Q 2012	---
Bristol Value II	Real Estate	4Q 2012	---
AresCorp. Opp. IV	Private Equity	4Q 2012	---
Vontobel	Emerging Markets	4Q 2012	---
<b>2013</b>			
EnergyCap IX	Private Equity	1Q 2013	---
DFA	Real Estate	1Q 2013	---
Torchlight Debt Opp IV	Real Estate	3Q 2013	---
Mesa West Fund III	Real Estate	3Q 2013	---
Invesco Commodity	Commodities	3Q 2013	---
Heitman	Real Estate	4Q 2013	---
Silver Lake IV	Private Equity	4Q 2013	---
GAM	Hedge Fund	4Q 2013	---



## SUMMARY OF WPERP RETIREMENT PLAN PORTFOLIO TRANSITIONS

(Continued)

Manager	Mandate	Funded	Terminated
2014			
Brep Europe IV	Real Estate	1Q 2014	---
Morgan Stanley	Hedge Fund	1Q 2014	---
Apollo VIII	Private Equity	1Q 2014	---
Landmark XV	Private Equity	1Q 2014	---



## WPERP RETIREMENT PLAN POLICY BENCHMARK DESCRIPTION

Time Period	Policy Benchmarks
Thru 3/31/2003	60% S&P 500 30% Citigroup BIG 10% Citigroup T-Bill
4/1/2003-12/31/2006	40% Russell 3000 15% MSCI ACWI ex U.S. 35% BC Universal 1% T-Bill <i>The Plan had allocated 5% to Alternatives and 4% to Real Estate asset classes. Since both of these asset classes were not funded until 1Q 2007, the policy benchmark was calculated on a pro-weighted basis (on total of 91%) during this period.</i>
1/1/2007-2/28/2007	40% Russell 3000 15% MSCI ACWI ex U.S. 35% BC Universal 4% NCREIF Lag 4.25% Cambridge U.S. Private Equity Lag , 0.75% Cambridge U.S. Venture Capital Lag 1% T-Bill
3/1/2007-6/30/2008	40% Russell 3000 15% MSCI ACWI ex U.S. 35% BC Universal 4% NCREIF Lag 3.40% Cambridge U.S. Private Equity Lag , 0.60% Cambridge U.S. Venture Capital Lag 1% T-Bill + 3% Lag 1% T-Bill
7/1/2008-12/31/2008	40% Russell 3000 24% MSCI ACWI ex U.S. 30% BC Universal 2% NCREIF Lag 0.85% Cambridge U.S. Private Equity Lag , 0.15% Cambridge U.S. Venture Capital Lag 2% T-Bill + 3% Lag 1% T-Bill
1/1/2009-6/30/2009	40% Russell 3000 24% MSCI ACWI ex U.S. IMI 30% BC Universal 2% NCREIF Lag 0.85% Cambridge U.S. Private Equity Lag , 0.15% Cambridge U.S. Venture Capital Lag 2% T-Bill + 3% Lag 1% T-Bill



## WPERP RETIREMENT PLAN POLICY BENCHMARK DESCRIPTION - CONTINUED

Time Period	Policy Benchmarks
7/1/2009-9/30/2010	33% Russell 3000 17% MSCI ACWI ex U.S. IMI 40% BC Universal 3% NCREIF Lag 1.70% Cambridge U.S. Private Equity Lag , 0.30% Cambridge U.S. Venture Capital Lag 3% T-Bills + 3% Lag 2% T-Bill
10/1/2010-9/30/2011	34% Russell 3000 20% MSCI ACWI ex U.S. IMI 33% BC Universal 4% NCREIF Lag 2.55% Cambridge U.S. Private Equity Lag , 0.45% Cambridge U.S. Venture Capital Lag 5% T-Bills + 3% Lag 1% T-Bill
10/1/2011-3/31/2012	35% Russell 3000 22% MSCI ACWI ex U.S. IMI 33% BC Universal 2% NCREIF Lag 2% Russell 3000 + 3% Lag 5% T-Bills + 3% Lag 1% T-Bill
4/1/2012-6/30/2013	34% Russell 3000 21% MSCI ACWI ex U.S. IMI 25% BC Universal 5% CBOE BXM 4% NCREIF Lag 4% Russell 3000 + 3% Lag 6% T-Bills + 3% Lag 1% T-Bill
7/1/2013 - Present	33% Russell 3000 21% MSCI ACWI ex U.S. IMI 24% BC Universal 5% CBOE BXM 5% NCREIF Lag 5% Russell 3000 + 3% Lag 6% CPI + 3% Lag 1% T-Bill



## WPERP HEALTH PLAN POLICY BENCHMARK DESCRIPTION

Time Period	Policy Benchmarks
Thru 9/30/2009	60% Russell 3000 40% BC Universal
10/1/09-6/30/10	37% Russell 3000 15% MSCI ACWI ex U.S. IMI 45% BC Universal 0.85% Cambridge U.S. Private Equity Lag , 0.15% Cambridge U.S. Venture Capital Lag 2% T-Bill
7/1/2010-9/30/2011	34% Russell 3000 18% MSCI ACWI ex U.S. IMI 42% BC Universal 0.85% Cambridge U.S. Private Equity Lag , 0.15% Cambridge U.S. Venture Capital Lag 3% T-Bill + 3% Lag 2% T-Bill
10/1/2011-3/31/2012	36% Russell 3000 20% MSCI ACWI ex U.S. IMI 36% BC Universal 1% NCREIF Lag 1% Russell 3000 + 3% Lag 5% T-Bill + 3% Lag 1% T-Bill
4/1/2012-6/30/2013	35% Russell 3000 21% MSCI ACWI ex U.S. IMI 26% BC Universal 5% CBOE BXM 3% NCREIF Lag 3% Russell 3000 + 3% Lag 6% T-Bills + 3% Lag 1% T-Bill
7/1/2013 - Present	33% Russell 3000 21% MSCI ACWI ex U.S. IMI 24% BC Universal 5% CBOE BXM 5% NCREIF Lag 5% Russell 3000 + 3% Lag 6% CPI + 3% Lag 1% T-Bill



## WPERP EVOLVING INVESTMENT POLICY

**Retirement Plan Evolving Investment Policy Allocations**

Asset Class	10/1/2011- 3/31/2012	4/1/2012- 6/30/2013	7/1/2013- 6/30/2014
Domestic Equity	35	34	33
International Equity	22	21	21
Fixed Income	33	25	24
Covered Calls	0	5	5
Real Return	5	6	6
Private Equity	2	4	5
Real Estate	2	4	5
Cash	1	1	1

**Health Plan Evolving Investment Policy Allocations**

Asset Class	10/1/2011- 3/31/2012	4/1/2012- 6/30/2013	7/1/2013- 6/30/2014
Domestic Equity	36	35	33
International Equity	20	21	21
Fixed Income	36	26	24
Covered Calls	0	5	5
Real Return	5	6	6
Private Equity	1	3	5
Real Estate	1	3	5
Cash	1	1	1



## PERFORMANCE ATTRIBUTION GLOSSARY

**Performance Attribution** - the process of comparing a portfolio's performance with its benchmark, and identify and quantify sources of differential returns (also called active returns).

**Differential Returns / Active Returns / Value Added** – The difference between the return on a portfolio and the return on the benchmark.

**Impact on Return**

Attribution Segment	Definition	Formula	Where:
Weighting (also called allocation, sector allocation, or pure sector allocation)	The effects of portfolio manager decisions to over/underweight each sector	<b>Allocation</b> $(w_i - W_i) \times (b_i - b)$	$w_i$ = portfolio segment weight $W_i$ = benchmark segment weight $b_i$ = benchmark segment return $b$ = total benchmark return
Selection (also called within-sector selection)	The effects of portfolio manager decision to buy specific securities	<b>Selection</b> $(r_i - b_i) \times W_i$	$r_i$ = portfolio segment return $b_i$ = benchmark segment return $W_i$ = benchmark segment weight
Interaction (also called allocation/selection interaction)	The effects of portfolio managers decisions to security selection can inadvertently cause sector over/underweighting.	<b>Interaction</b> $(r_i - b_i) \times (w_i - W_i)$	$r_i$ = portfolio segment return $b_i$ = benchmark segment return $w_i$ = portfolio segment weight $W_i$ = benchmark segment weight



## GLOSSARY OF TERMS

**Alpha** - The premium an investment earns above a set standard. This is usually measured in terms of a common index (i.e., how the stock performs independent of the market). An Alpha is usually generated by regressing a security's excess return on the S&P 500 excess return.

**Annualized Performance** - The annual rate of return that when compounded  $t$  times generates the same  $t$ -period holding return as actually occurred from period 1 to period  $t$ .

**Batting Average** - Percentage of periods a portfolio outperforms a given index.

**Beta** - The measure of an asset's risk in relation to the Market (for example, the S&P 500) or to an alternative benchmark or factors. Roughly speaking, a security with a Beta of 1.5 will have moved, on average, 1.5 times the market return.

**Bottom-up** - A management style that de-emphasizes the significance of economic and market cycles, focusing instead on the analysis of individual securities.

**Dividend Discount Model** - A method to value the common stock of a company that is based on the present value of the expected future dividends.

**Growth Stocks** - Common stock of a company that has an opportunity to invest money and earn more than the opportunity cost of capital.

**Information Ratio** - The ratio of annualized expected residual return to residual risk. A central measurement for active management, value added is proportional to the square of the information ratio.

**R-Squared** - Square of the correlation coefficient. The proportion of the variability in one series that can be explained by the variability of one or more other series in a regression model. A measure of the quality of fit. 100% R-square means perfect predictability.

**Standard Deviation** - The square root of the variance. A measure of dispersion of a set of data from its mean.

**Sharpe Ratio** - A measure of a portfolio's excess return relative to the total variability of the portfolio.

**Style Analysis** - A returns-based analysis using a multi-factor attribution model. The model calculates a product's average exposure to particular investment styles over time (i.e., the product's normal style benchmark).

**Top-down** - Investment style that begins with an assessment of the overall economic environment and makes a general asset allocation decision regarding various sectors of the financial markets and various industries.

**Tracking Error** - The standard deviation of the difference between the performance of a portfolio and an appropriate benchmark.

**Turnover** - For mutual funds, a measure of trading activity during the previous year, expressed as a percentage of the average total assets of the fund. A turnover rate of 25% means that the value of trades represented one-fourth of the assets of the fund.

**Value Stocks** - Stocks with low price/book ratios or price/earnings ratios. Historically, value stocks have enjoyed higher average returns than growth stocks (stocks with high price/book or P/E ratios) in a variety of countries.



## DEFINITION OF BENCHMARKS

**BC Aggregate:** an index comprised of approximately 6,000 publicly traded investment-grade bonds including U.S. Government, mortgage-backed, corporate, and yankee bonds with an approximate average maturity of 10 years.

**BC High Yield:** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must be rated high-yield (Ba1/BB+ or lower) by at least two of the following ratings agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. All issues must have at least one year to final maturity regardless of call features and have at least \$150 million par amount outstanding.

**BC Multiverse Non-US Hedged:** provides a broad-based measure of the international fixed-income bond market. The index represents the union of the BC Global Aggregate Index and the BC Global High Yield Index. In this sense, the term "Multiverse" refers to the concept of multiple universes in a single macro index.

**BC U.S. Credit:** includes publicly issued U.S. corporate and foreign debentures and secured notes that which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$250 million. Issues must be publicly issued, dollar-denominated and non-convertible.

**BC U.S. Government:** includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government).

**BC Universal:** includes market coverage by the Aggregate Bond Index fixed rate debt issues, which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$100 million) and includes exposures to high yield CMBS securities. All returns are market value weighted inclusive of accrued interest.

**BC World Govt Inflation-Linked Bond (WGILB):** measures the performance of the major government inflation-linked bond markets. The index is designed to include only those markets in which a global government linker fund is likely and able to invest. To be included a market must have aggregate issuance of \$4 billion or more and have minimum rating of A3/A- for G7 and euro-zone issuers, Aa3/AA- otherwise, using the middle rating from Moody's, S&P and Fitch ("two out of three" rule). The index is available in local currency and in most major currencies hedged or un-hedged.

**CBOE S&P 500 BuyWrite Index (BXM):** is a benchmark index designed to track the performance of a hypothetical buy-write strategy on the S&P 500 Index. Announced in April 2002, the BXM Index was developed by the CBOE in cooperation with Standard & Poor's. To help in the development of the BXM Index, the CBOE commissioned Professor Robert Whaley to compile and analyze relevant data from the time period from June 1988 through December 2001. Data on daily BXM prices now is available from June 30, 1986, to the present time (see below). The BXM is a passive total return index based on (1) buying an S&P 500 stock index portfolio, and (2) "writing" (or selling) the near-term S&P 500 Index (SPXSM) "covered" call option, generally on the third Friday of each month. The SPX call written will have about one month remaining to expiration, with an exercise price just above the prevailing index level (i.e., slightly out of the money). The SPX call is held until expiration and cash settled, at which time a new one-month, near-the-money call is written. Please visit the BXM FAQ for more information about the construction of the index.



**Citigroup 3-Month Treasury Bills (T-bills):** tracks the performance of U.S. Treasury bills with 3-month maturity.

**MSCI ACWI ex US ND:** comprises both developed and emerging markets less the United States. As of August 2008, the index consisted of 23 countries classified as developed markets and 25 classified as emerging markets. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

**MSCI EAFE Free (Europe, Australasia, Far East) ND:** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

**MSCI EM (Emerging Markets) GD:** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. This series approximates the maximum possible dividend reinvestment. The amount reinvested is the entire dividend distributed to individuals resident in the country of the company, but does not include tax credits.

**MSCI Europe** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. As of June 2007, this index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**MSCI Pacific** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region. As of June 2007, this index consisted of the following 5 Developed Market countries: Australia, Hong Kong, Japan, New Zealand, and Singapore.

**NAREIT Index:** consists of all tax-qualified REITs listed on the New York Stock Exchange, American Stock Exchange, and the NASDAQ National Market System. The data is market weighted.

**NCREIF Property Index:** the NPI contains investment-grade, non-agricultural, income-producing properties which may be financed in excess of 5% gross market value; were acquired on behalf of tax exempt institutions; and are held in a fiduciary environment. Returns are gross of fees; including income, realized gains/losses, and appreciation/depreciation; and are market value weighted. Index is lagged one quarter.

**Russell 1000:** measures the performance of the 1,000 largest securities in the Russell 3000 Index. Russell 1000 is highly correlated with the S&P 500 Index and capitalization-weighted.

**Russell 1000 Growth:** measures the performance of those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.

**Russell 1000 Value:** measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.



**Russell 2000:** measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

**Russell 2000 Growth:** measures the performance of those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-to-earnings ratios.

**Russell 2000 Value:** measures the performance of those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-to-earnings ratios.

**Russell 3000:** represents the largest 3,000 US companies based on total market capitalization, representing approximately 98% of the investable US equity market.



**RISK METRICS DESCRIPTION – Rationale for selection and calculation methodology****US Equity Markets:**

Metric: P/E ratio = Price / "Normalized" earnings for the S&P 500 Index

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price=P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power (E) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller's data and calculation of the E-10 are available on his website at <http://www.econ.yale.edu/~shiller/data.htm>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].

**Developed Equity Markets Excluding the US:**

Metric: P/E ratio = Price / "Normalized" earnings for the MSCI EAFE Index

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price=P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings (E). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.



## RISK METRICS DESCRIPTION – Rationale for selection and calculation methodology

### Emerging Market Equity Markets:

Metric: Ratio of Emerging Market P/E Ratio to Developed Market P/E Ratio

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.

### US Private Equity Markets:

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

### US Private Real Estate Markets:

Metrics: US Cap Rates, Cap Rate Spreads, and Transactions as a % of Market Value

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

Spreads between the cap rate (described above) and the 10-year nominal Treasury yield, indicate a measure of the cost of properties versus a current measure of the cost of financing.

Transactions as a % of Market Value Trailing Four Quarters is a measure of property turnover activity in the NCREIF Universe. This quarterly metric is a measure of activity in the market.

### Credit Markets Fixed Income:

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Barclays Capital US Corporate High Yield Index.



## RISK METRICS DESCRIPTION – Rationale for selection and calculation methodology

### Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for US equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

### Measure of Monetary Policy

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.

### Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates an acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPS. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.



## RISK METRICS DESCRIPTION – Rationale for selection and calculation methodology

### Measures of US Treasury Bond Interest Rate Risk

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. PCA estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.

### Definition of “extreme” metric readings

A metric reading is defined as “extreme” if the metric reading is in the top or bottom decile of its historical readings. These “extreme” reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.



**RISK METRICS DESCRIPTION – PCA Market Sentiment Indicator**What is the PCA Market Sentiment Indicator (PMSI)?

The PMSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The PMSI takes into account the momentum<sup>1</sup> (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the PCA Market Sentiment Indicator (PMSI) graph?

Simply put, the PMSI is a color coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the PMSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the PMSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

How is the PCA Market Sentiment Indicator (PMSI) Constructed?

The PMSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

1. Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
2. Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure. The color reading on the graph is determined as follows:

1. If both stock return momentum and bond spread momentum are positive = GREEN (positive)
2. If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
3. If both stock return momentum and bond spread momentum are negative = RED (negative)

What does the PCA Market Sentiment Indicator (PMSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent.<sup>2</sup> In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The PMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

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<sup>1</sup> Momentum is defined as the persistence of relative performance. There is a significant amount of academic evidence indicating that positive momentum (e.g., strong performing stocks over the recent past continue to post strong performance into the near future) exists over near-to-intermediate holding periods. See, for example, "Understanding Momentum," *Financial Analysts Journal*, Scowcroft, Sefton, March, 2005.

<sup>2</sup> "Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010 <http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf>



**BENCHMARKS USED IN ECONOMIC AND MARKET OVERVIEW**

US Equity = Russell 3000 Index

Non-US Equity = MSCI EAFE

Real Estate = NCREIF

Public Real Estate = NAREIT

US Debt = BC Universal Index

Domestic Large Cap = Russell 1000

Domestic Small Cap = Russell 2000

Growth = Russell 3000 Growth Index

Value = Russell 3000 Value Index

Pacific = MSCI Pacific

Europe = MSCI Europe

Emerging = MSCI Emerging Markets Free

Private Real Estate = NCREIF Index

Credit = BC U.S. Credit Index

Government = BC Government Index

Mortgage = BC Mortgage Index

High Yield = BC High Yield Index