

# Water and Power Employees' Retirement Plan (WPERP) Investment Portfolio

# **Quarterly Report Executive Summary**

Creation Date: February 11, 2011

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**EXECUTIVE SUMMARY** 

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#### PERFORMANCE SUMMARY OF MAJOR WPERP INVESTMENT PLANS

As of December 31, 2010, the WPERP Total Retirement Plan had an aggregate value of \$7.0 billion. This represents a \$361.5 million increase in value over the last quarter. During the most recent 1-year period, the WPERP Total Retirement Plan increased by \$633.7 million. During the 4th quarter, U.S. stocks rallied impressively on the back of the Federal Reserve's second round of quantitative easing erasing the losses since the failure of Lehman Brothers. A wide variety of U.S. economic indicators confirm that the turbulence experienced in the summer months of 2010 has dissipated. The economy and markets clearly gained traction, accelerating through the fall and into the early winter months. In contrast, European structural problems linked to real estate and government excesses in peripheral European nations continue to weigh on European markets and the euro.

As of December 31, 2010, the WPERP Total Health Plan had an aggregate value of \$1.1 billion.

### **Strategic Allocation Trends**

The Retirement Plan strategic allocation targets reflect the allocation targets for the 2010-2011 fiscal year (effective 10/1/2010). As of December 31, 2010, the WPERP Total Retirement Plan had a 60% allocation in Equities, 33% in Fixed Income, 3% in Real Return, and 1% each in Private Equity and Real Estate, and 2% in Cash. The Health Plan strategic allocation targets reflect the allocation targets for the 2010-2011 fiscal year (effective 7/1/2010). The WPERP Total Health Plan had a 55% allocation in Equities, 40% in Fixed Income, 3% in Real Return, 2% in Cash, and less than 1% each in Private Equity and Real Estate. Staff restructured both the Retirement and Health Plan portfolios in early October 2010 to bring them into alignment with the new fiscal year interim policy targets.

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

Period ending December 31, 2010

#### **WPERP Total Retirement Plan**

	Quarter	1 Year	3 Year	5 Year	10 Year
Total Portfolio <sup>1</sup>	5.9	11.6	0.4	4.5	4.5
Policy Benchmark <sup>2</sup>	5.5	12.3	0.1	4.3	4.4
Excess Return	0.4	-0.7	0.3	0.2	0.1
Reference: Median Fund <sup>3</sup>	6.0	13.2	0.5	4.4	4.9
Reference: Net of Fees <sup>4</sup>	5.8	11.4	0.2	4.3	4.3

#### WPERP Total Health Plan

	Quarter	1 Year	3 Year
Total Portfolio <sup>1</sup> Policy Benchmark <sup>2</sup>	5.4 5.0	10.9 12.1	2.1
Excess Return	0.4	-1.2	1.1

<sup>&</sup>lt;sup>1</sup> Gross of fees.

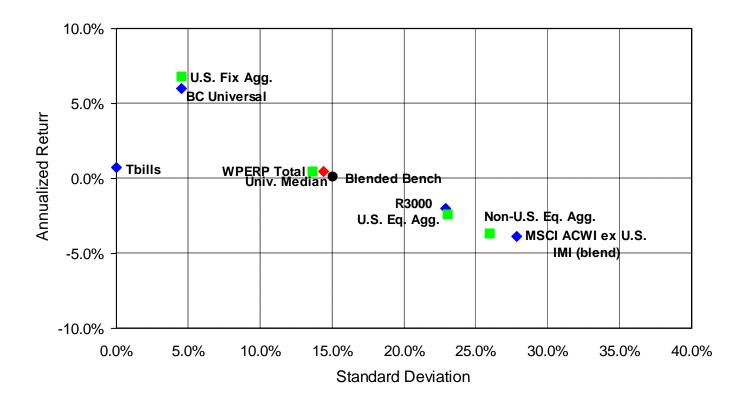
<sup>&</sup>lt;sup>2</sup> See appendix for policy benchmark descriptions.

<sup>&</sup>lt;sup>3</sup> Mellon Total Funds Public Universe

<sup>&</sup>lt;sup>4</sup> Net of Fee returns are estimated based on existing WPERP manager fee schedule.

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

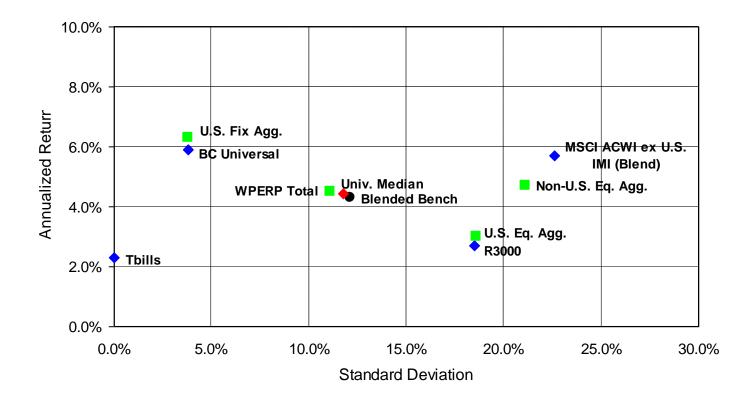
Period ending December 31, 2010



<sup>\*</sup>Median Fund in the Mellon Total Fund Public Universe.

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

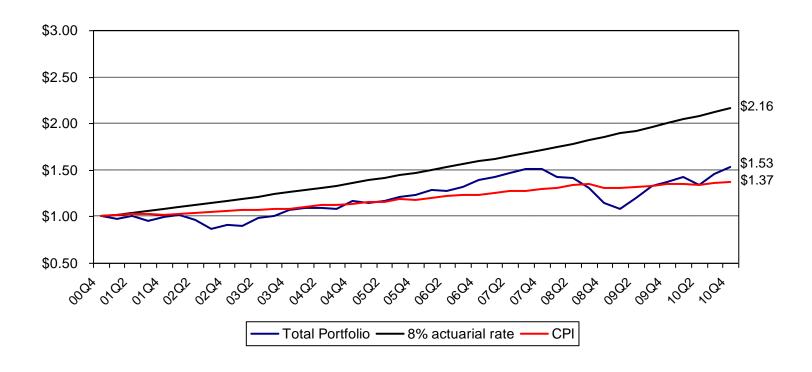
Period ending December 31, 2010



<sup>\*</sup>Median Fund in the Mellon Total Fund Public Universe.

# WPERP Retirement Plan Growth of a Dollar - Latest 10 Years

Period ending December 31, 2010



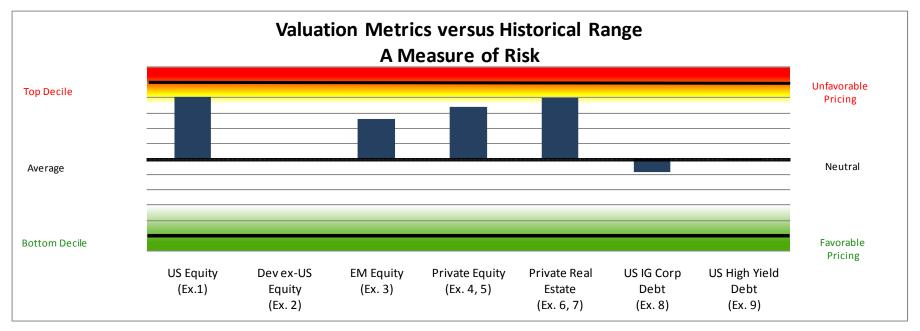
INVESTMENT MARKET RISK METRICS1

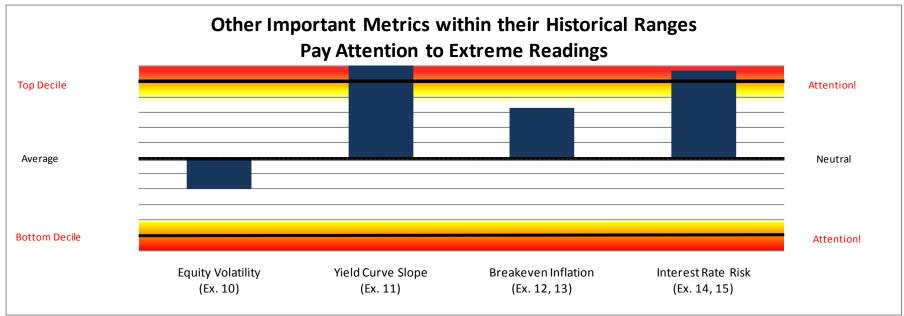
# **Investment Market Risk Metrics**

# **Takeaways**

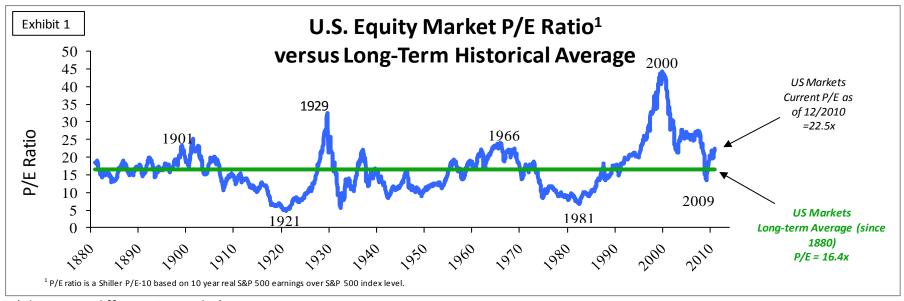
- The big story continues to be a rapid rise in U.S. interest rates.
- From Nov 1 to Jan 5, the 10-year Treasury yield rose from 2.7% to 3.5%. Commensurately, its price declined by (6.6%).
- Duration (price risk) of the 10-year Treasury remains high relative to its historical average, but lower than October highs.
- Inflation expectations are accelerating with commodity prices continuing on an upward trajectory.
- The yield curve is steepening, portending expansion.
- U.S. equity volatility (short-term risk) declined further, below its long-term average level.
- Public equity pricing is inching higher, but is not at extremes.
- Pricing of Non-U.S. developed market equities remains subdued.

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

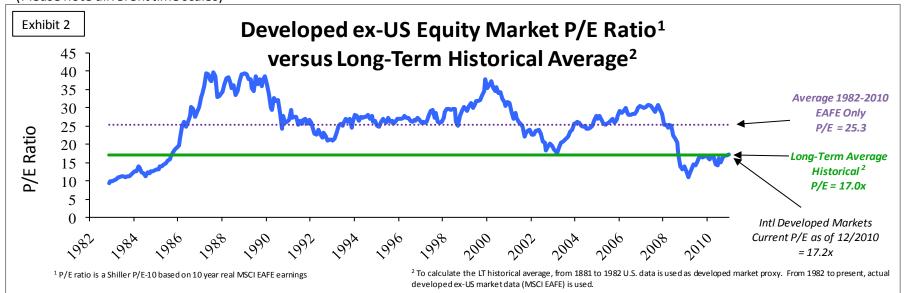




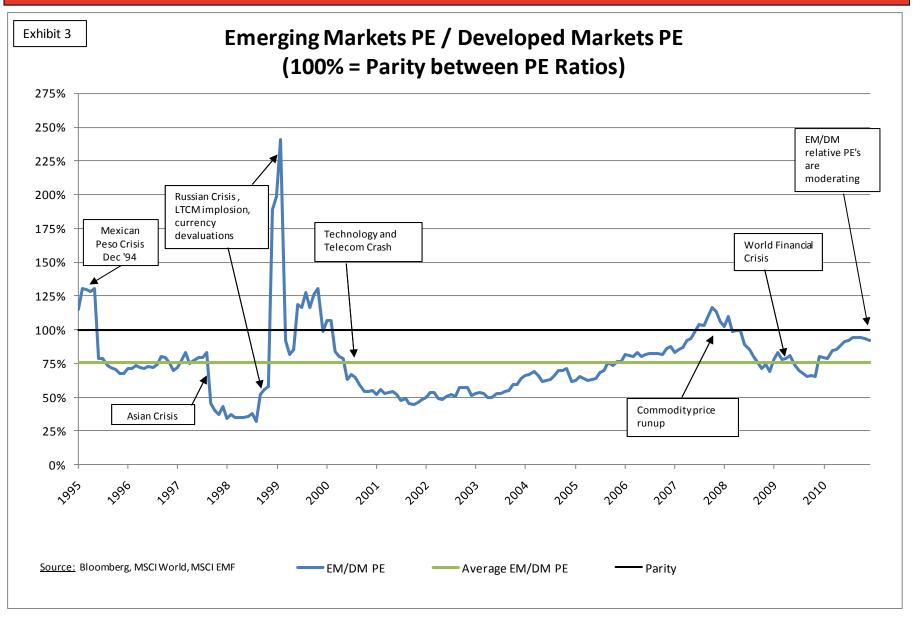
# **Developed Public Equity Markets**



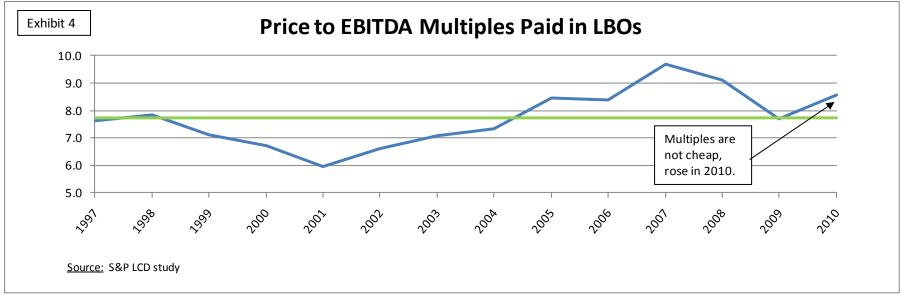




# **Emerging Market Public Equity Markets**

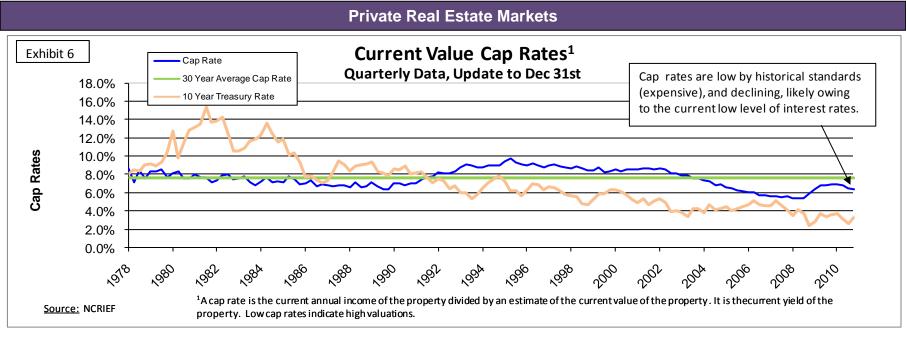


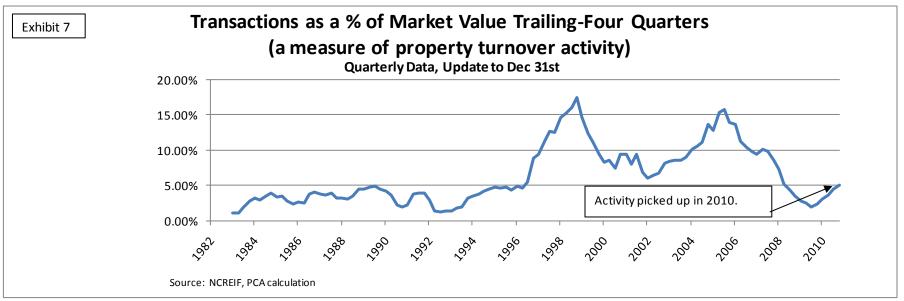
# **US Private Equity Markets**



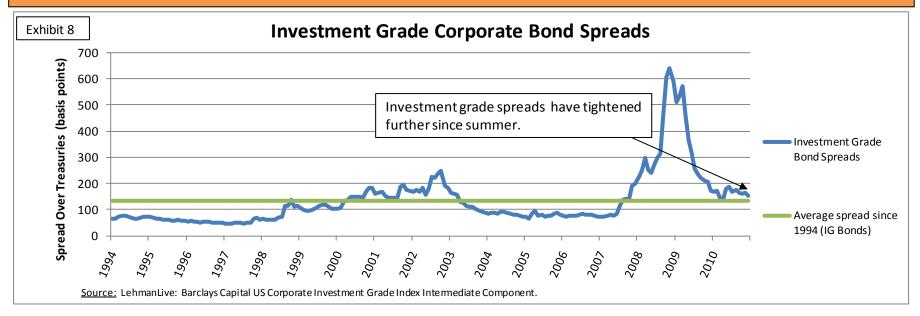
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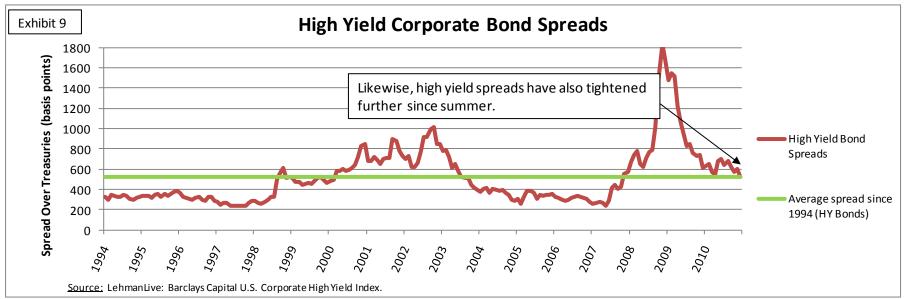




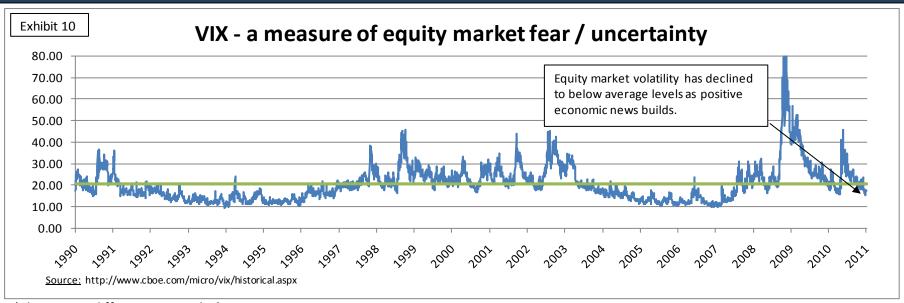


# **Credit Markets US Fixed Income**

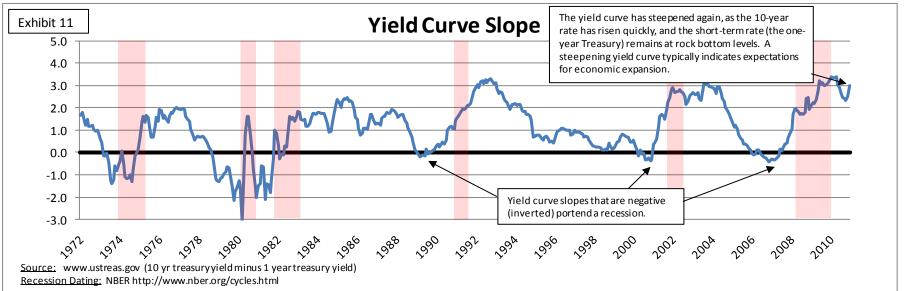




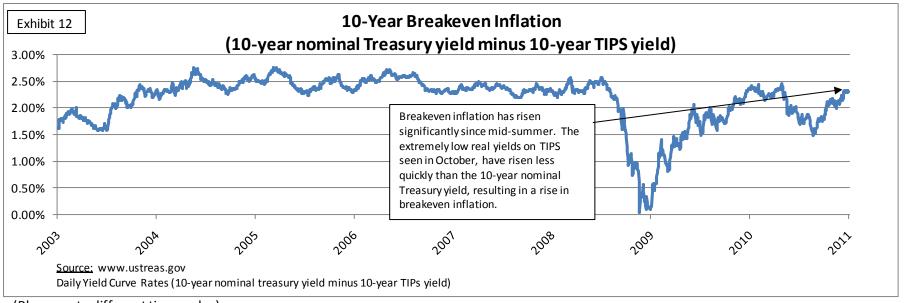
### **Other Market Metrics**



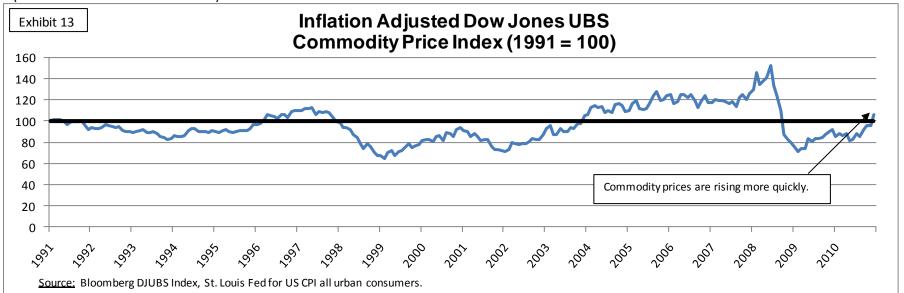
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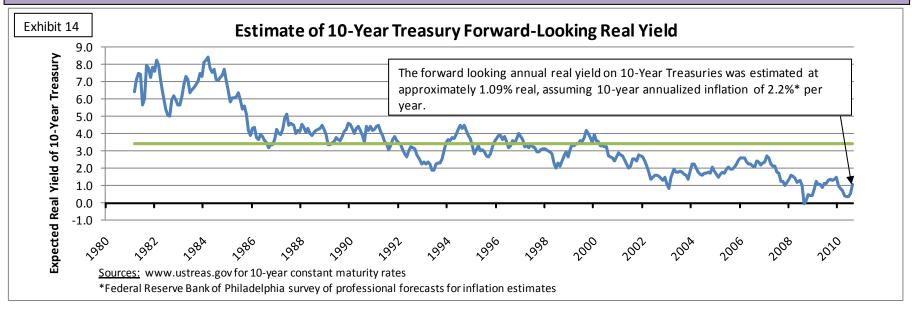
# **Measures of Inflation Expectations**

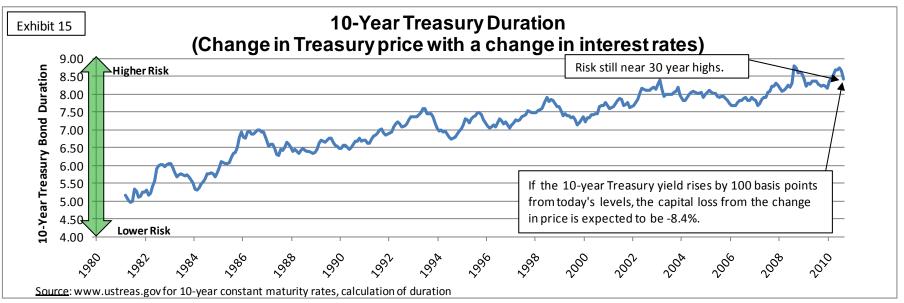


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# Measures of U.S. Treasury Interest Rate Risk





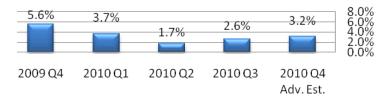
#### **ECONOMIC OVERVIEW**

**Overview:** The global equity markets generated a solid performance in the fourth quarter and a strong finish for 2010. During the fourth quarter, the global financial markets focused mainly on the improving economic indicators, despite an amalgamation of international events including military tensions on the Korean peninsula, the Irish debt crisis, and China's monetary tightening that threatened investors' confidence. Within the U.S., strong corporate earnings and the Fed's \$600 billion quantitative easing program (QE2), as well as a stabilizing and improving economic and capital market outlook for 2011 eased worries and ultimately drove equity market performance.

#### **Economic Growth**

- The "advance" estimate of real GDP grew at an annualized rate of 3.2 percent in the fourth quarter of 2010. Real GDP rose 2.9 percent in 2010 but declined 2.6 percent in 2009.
- GDP growth reflected positive contributions from increases in consumer spending, net exports, and residential fixed investment.
- GDP growth was partially offset by a decrease in inventory investment.

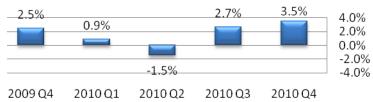
### Annualized Quarterly GDP Growth



#### Inflation

- The Consumer Price Index for All Urban Consumers (CPI-U) increased by 3.5 percent in the guarter on an annualized basis, after seasonal adjustment.
- Core CPI-U increased 0.7 percent for the guarter.
- Over the last 12 months, CPI-U increased 1.5 percent before seasonal adjustment.

### CPI-U After Seasonal Adjustment



#### Unemployment

- The U.S. economy gained 293,000 jobs in the quarter.
- The official unemployment rate fell from 9.6 to 9.4 percent in December.
- The majority of jobs gained were in temporary help services, leisure & hospitality, and health care.

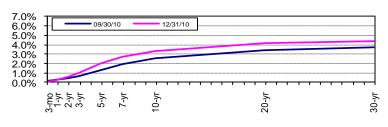
### **Unemployment Rate**



#### Interest Rates & U.S. Dollar

- Except for the 3- and 6-month T-bills, the U.S. Treasury yields rose across the maturity spectrum during the most recent quarter.
- The Federal Reserve has maintained the Federal Funds rate between 0.00% and 0.25% since December 2008.
- The U.S. dollar appreciated against the Euro and the Sterling by 1.8% and 0.7%, respectively, while depreciating against the Yen by (2.9%).

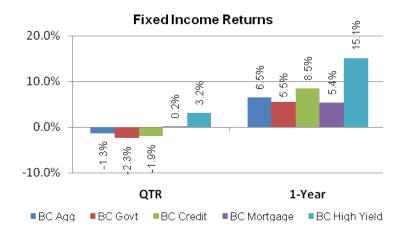
### **Treasury Yield Curve Changes**



Source: U.S. Treasury Department

#### **Fixed Income**

- Despite weak performance in the fourth quarter, the bond markets generated solid gains in 2010. Stabilization of the global economy, low interest rate environment plus subdued inflation, and two rounds of quantitative easing from the Federal Reserve provided strong support for the bond markets. However, the large scale of the Federal Reserve's monetary expansion policy spiked renewed concerns about inflation which sent major government yields higher in November and December.
- High Yield continued to outperform other sectors during both the current quarter and trailing 1-year period.

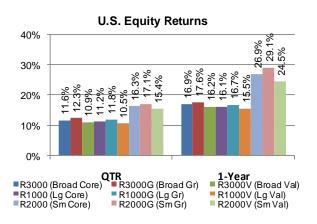


U.S. Fixed Income Sector Performance (BC Aggregate Index)								
Sector	Weight	QTR	1 Year					
Governments*	37.3%	-2.3%	5.5%					
Agencies	8.4%	-1.1%	4.6%					
MBS	32.7%	0.2%	5.4%					
ABS	0.3%	-1.5%	5.9%					
CMBS	2.5%	0.9%	20.9%					
Inv. Grade Credit	18.8%	-1.9%	8.5%					

\*U.S. Treasuries and Government Related

### **U.S.** Equities

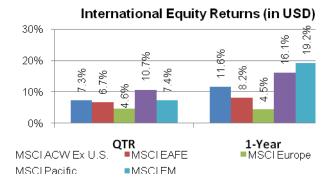
- The U.S. stock market rallied strongly based on the rebounding economic recovery, strong corporate earnings, extension of the Bush-era tax cuts after the November mid-term election, and positive forecast on economic and capital market growth in 2011. However, employment data and the housing market remained weak.
- Major U.S. equity indices outperformed major international equity indices for the most part during the current quarter and trailing 1-year period. Growth indices trumped value while small stocks excelled over large stocks.
- Within sectors, some of the cyclical sectors generated the strongest performance during the current quarter and trailing 1-year period.



U.S. Equity Sector Performance (Russell 3000 Index)								
Sector	Weight	QTR	1 Year					
Energy	11.3%	22.3%	21.8%					
Materials	4.3%	19.4%	25.2%					
Industrials	11.6%	13.6%	27.3%					
Consumer Disc	11.5%	13.5%	30.1%					
Information Tech	18.4%	11.4%	12.8%					
Financials	16.4%	11.2%	13.7%					
Telecom Svc	2.8%	7.0%	17.8%					
Consumer Staples	9.1%	6.4%	14.4%					
Health Care	11.3%	5.1%	6.0%					
Utilities	3.4%	2.2%	7.3%					

# International Equities

- The international equity markets generated respectable performance, showing remarkable resilience as investors were undeterred by the European debt woes and Asian market growth concerns in November. MSCI Europe lagged as currency weakness and looming debt fears over the 16-country euro zone continued to invoke caution in investors.
- Emerging Markets continued to outpace Developed Markets during the trailing 1-year period, as 13 out of the 21 emerging market countries posted quarterly returns in excess of 20%.



International Equity Region Performance (in USD) (MSCI ACW Index ex U.S.)								
Sector	Weight	QTR	1 Year					
United Kingdom	14.5%	6.1%	8.8%					
Europe Ex. UK	28.8%	3.8%	2.4%					
Japan	15.0%	12.1%	15.6%					
Pacific Ex. Japan	9.2%	8.3%	17.1%					
Canada	8.0%	12.3%	21.2%					
Emerging Markets	24.1%	7.4%	19.2%					

Market Summary – Long-term Performance\*

Indexes	1 Year	3 Year	5 Year	10 Year
Global Equity				
MSCI All Country World	13.2%	-3.8%	4.0%	3.7%
Domestic Equity				
S&P 500	15.1%	-2.9%	2.3%	1.4%
Russell 3000	16.9%	-2.0%	2.7%	2.2%
Russell 3000 Growth	17.6%	-0.3%	3.9%	0.3%
Russell 3000 Value	16.2%	-3.9%	1.5%	3.6%
Russell 1000	16.1%	-2.4%	2.6%	1.8%
Russell 1000 Growth	16.7%	-0.5%	3.8%	0.0%
Russell 1000 Value	15.5%	-4.4%	1.3%	3.3%
Russell 2000	26.9%	2.2%	4.5%	6.3%
Russell 2000 Growth	29.1%	2.2%	5.3%	3.8%
Russell 2000 Value	24.5%	2.2%	3.5%	8.4%
International Equity				
MSCI All Country World ex US	11.6%	-4.6%	5.3%	6.0%
MSCI EAFE	8.2%	-6.5%	2.9%	3.9%
MSCI Pacific	16.1%	-2.7%	1.8%	4.3%
MSCI Europe	4.5%	-8.3%	3.4%	3.8%
MSCI EM (Emerging Markets)	19.2%	0.0%	13.1%	16.2%
Fixed Income				
BC Aggregate Bond	6.5%	5.9%	5.8%	5.8%
BC Government	5.5%	5.1%	5.5%	5.4%
BC Credit Bond	8.5%	6.9%	6.0%	6.5%
BC Mortgage Backed Securities	5.4%	6.5%	6.3%	5.9%
BC High Yield Corporate Bond	15.1%	10.4%	8.9%	8.9%
Real Estate				
NCREIF (Private RE)	13.1%	-4.2%	3.5%	7.4%
NAREIT (Public RE)	27.6%	0.6%	2.4%	10.3%
Commodity Index				
DJ-UBS Commodity	16.8%	-3.7%	1.2%	5.8%

<sup>\*</sup> Performance is annualized for periods greater than one year.

WPERP RETIREMENT PLAN REVIEW

# **Actual vs. Target Allocations**

The strategic allocation targets reflect the allocation targets for the 2010-2011 fiscal year.

With respect to policy targets, the Total Retirement Portfolio ended the latest quarter *overweight Domestic Equity, International Equity, and Cash* while *underweight Real Return Private Equity, and Real Estate*. *Fixed Income* was right on target. The Total Portfolio started new policy targets beginning 10/1/2010, as the portfolio shifted to the next phase of implementing its longer-term policy.

### As of December 31, 2010

Segment	Actual (\$MM)	Actual %	Target% <sup>1</sup>	Variance	Min.	Max.
Total Portfolio <sup>2</sup>	8,160	100	100			
Total Retirement <sup>3</sup>	7,043	100	100			
Domestic Equity	2,612	38	34	4	29	39
International Equity	1,520	22	20	2	16	24
Fixed Income	2,276	33	33	0	28	38
Real Return	201	3	5	-2		
Private Equity	78	1	3	-2		
Real Estate	106	1	4	-3		
Cash	114	2	1	1	0.5	1.5

<sup>&</sup>lt;sup>1</sup> 2010-2011 strategic allocation policy targets.

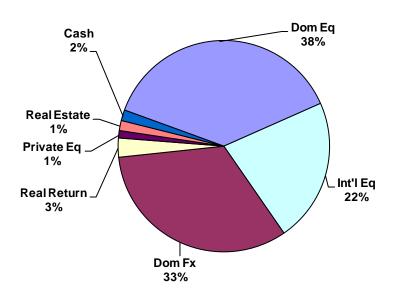
<sup>&</sup>lt;sup>2</sup> Total Portfolio includes assets from the Retirement, Health, Disability, and Death Plans.

<sup>&</sup>lt;sup>3</sup> Including \$141.8 million in transition assets and a negative balance of (\$6.4) million in securities lending.

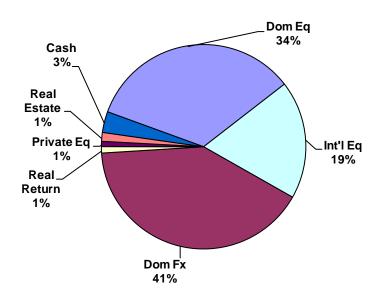
# **Actual Strategic Allocation Comparison**

As of December 31, 2010, the Total Retirement Portfolio had a 60% allocation in Equities, 33% in Fixed Income, 3% in Real Return, 1% each in Private Equity and Real Estate, and 2% in Cash. During the latest 1-year period, the actual weighting of Domestic Equity, International Equity, and Real Return increased by 4%, 3% and 2%, respectively, while Fixed Income and Cash decreased (8%) and (1%), respectively. The Total Portfolio implemented new policy targets beginning 10/1/2010, as the portfolio shifted to the next phase of its longer-term policy (see Appendix for a description of the new policy benchmark composition).

**December 31, 2010** 



**December 31, 2009** 



#### WPERP RETIREMENT PLAN PERFORMANCE

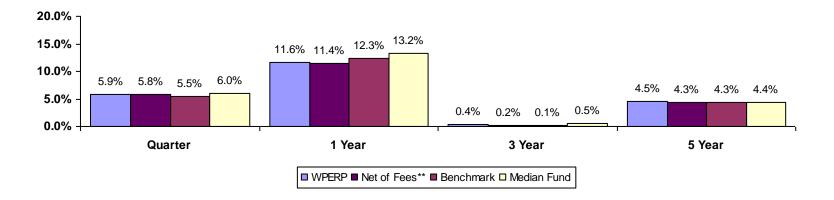
This section includes an overview of the performance of WPERP's Total Retirement Portfolio and a detailed analysis of strategic classes and specific mandates.

#### Portfolio Performance Overview

The Total Retirement Portfolio outperformed its policy benchmark over the current quarter and the trailing 3- and 5-year periods, gross of fees. The Total Retirement Portfolio trailed its policy benchmark over the latest 1-year period by (70) basis points, gross of fees.

The Total Retirement Portfolio closely matched the Median Public Fund over the current quarter and the trailing 3- and 5-year periods, gross of fees. The Total Portfolio trailed the Median Public Fund over the latest 1-year period by (1.6%), gross of fees. Relative underperformance by the Plan's Domestic and International Equity portfolios with respect to the Median Public Fund detracted from performance.

### Periods Ending December 31, 2010 (annualized)\*

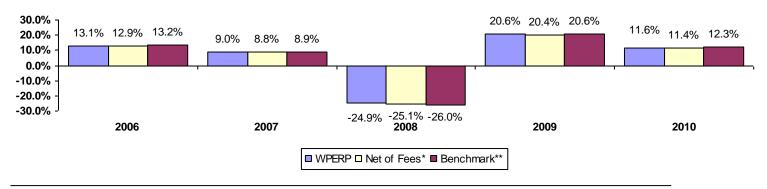


<sup>\*</sup> WPERP performance reported gross of fees.

<sup>\*\*</sup>Net of Fees Performance estimated based on existing WPERP manager fee schedule.

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

### 12-month Performance - Periods Ending December 31



<sup>\*</sup>Net of Fees estimated based on existing WPERP manager fee schedule

#### **Portfolio Valuation**

As of December 31, 2010, the Total Retirement Portfolio had an aggregate value of \$7.0 billion. This represents a \$361.5 million increase in value over last quarter including minus (\$31.0) million in net withdrawals. During the previous one-year period, the Total Retirement Portfolio increased by \$633.7 million.

### Portfolio Valuation as of December 31, 2010, Gross of Fees

	4Q 2010	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	
Beginning Market Value	\$6,681.1	\$6,408.9	\$7,497.7	\$6,412.7	
Net Flow	-31.0	-109.7	-122.7	-647.6	
Investment Return in \$ (in%)	<u>392.5</u>	5.9% <u>743.4</u>	11.6% <u>-332.4</u>	0.4% <u>1,277.5</u>	4.5%
Ending Market Value	\$7,042.6	\$7,042.6	\$7,042.6	\$7,042.6	

<sup>\*</sup>Dollar figures in millions (\$), differences due to rounding

<sup>\*\*</sup>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 - 4Q 2010

	Policy		Portfolio		Impact on Return			
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	34.0%	11.6	37.0%	11.9	0.2	0.1	0.0	0.3
International Equity	20.0%	7.7	19.5%	7.5	(0.0)	(0.0)	0.0	(0.1)
Fixed Income	33.0%	(1.0)	36.8%	(0.4)	(0.2)	0.2	0.0	(0.0)
Real Return	5.0%	0.8	2.4%	2.3	0.1	0.1	(0.0)	0.2
Private Equity	3.0%	4.9	1.1%	4.1	0.0	(0.0)	0.0	0.0
Real Estate	4.0%	3.9	1.4%	5.4	0.0	0.1	(0.0)	0.1
Cash	1.0%	0.0	1.9%	0.2	(0.1)	0.0	0.0	(0.0)
Total	100.0%	5.5	100.0%	5.9	0.1	0.4	(0.0)	0.4

<sup>\*</sup>Policy allocation utilizes beginning-of-the period target allocations; Portfolio allocation utilizes beginning-of-the period market values.

### **Performance Attribution - Trailing 12-month**

	Poli	Policy		Portfolio		Impact on Return		
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	33.3%	16.9	36.4%	15.9	0.1	(0.3)	(0.0)	(0.2)
International Equity	17.8%	12.7	19.3%	9.8	(0.1)	(0.6)	(0.0)	(0.7)
Fixed Income	38.3%	7.2	37.4%	8.9	(0.5)	0.6	0.0	0.2
Real Return	3.5%	3.1	2.0%	9.1	0.2	0.2	(0.1)	0.3
Private Equity	2.3%	16.3	1.0%	20.1	0.1	0.1	(0.0)	0.2
Real Estate	3.3%	5.8	1.4%	8.0	(0.0)	0.1	(0.0)	(0.0)
Cash	1.8%	0.1	2.4%	0.5	(0.1)	0.0	0.0	(0.1)
Total	100.0%	12.3	100.0%	11.6	(0.3)	0.1	(0.2)	(0.4)

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

- During the most recent quarter, the Total Retirement Portfolio outperformed its policy benchmark, due primarily to an overweight position and security selection from Domestic Equity (+0.3%). An underweight position and security selection in Real Return also added to the Total Portfolio's relative outperformance (+0.2%).
- During the trailing 12-month period, The Total Portfolio underperformed its policy benchmark. Among asset classes, Domestic and International Equities detracted the most (-0.2% and -0.7% respectively) from overall portfolio performance.

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

#### Performance Attribution - 4Q 2010

	Median Public Fund		Portfolio		Impact on Return			
	Allocation	Return	Allocation*	Return	Weighting	Selection	Interaction	Total
Domestic Equity	41.2%	11.8	37.0%	11.9	(0.2)	0.0	(0.0)	(0.2)
International Equity	16.4%	7.5	19.5%	7.5	0.0	0.0	0.0	0.0
Fixed Income	25.9%	(0.8)	36.8%	(0.4)	(0.7)	0.1	0.0	(0.6)
Real Estate	5.3%	3.9	2.4%	4.0	0.1	0.0	(0.0)	0.1
Alternative Investments*	9.2%	0.5	2.4%	2.5	0.4	0.2	(0.1)	0.4
Cash	2.0%	0.0	1.9%	0.2	0.0	0.0	(0.0)	0.0
	100.0%	6.0	100.0%	5.9	(0.5)	0.3	(0.1)	(0.2)

<sup>\*</sup>Portfolio allocation utilizes beginning-of-the period market values.

# **Performance Attribution - Trailing 12-month**

	Median Pul	olic Fund	Portf	olio	Impact on Return					
	Average		Average							
	Allocation	Return	Allocation	Return	Weighting	Selection	Interaction	Total		
Domestic Equity	38.5%	18.1	36.4%	15.9	(0.1)	(8.0)	0.0	(0.9)		
International Equity	17.3%	12.3	19.3%	9.8	(0.0)	(0.4)	(0.0)	(0.5)		
Fixed Income	25.3%	8.1	37.4%	8.9	(0.6)	0.2	0.1	(0.3)		
Real Estate	6.6%	11.0	1.4%	8.0	0.1	(0.2)	0.2	0.1		
Alternative Investments*	10.3%	13.0	3.0%	17.0	0.0	0.4	(0.3)	0.1		
Cash	2.0%	0.1	2.4%	0.5	(0.1)	0.0	0.0	(0.0)		
	100%	13.2	100%	11.6	(0.7)	(0.9)	(0.0)	(1.6)		

<sup>\*</sup>Median Publicd Fund allocation utilizes average target allocations over the trailing four quarters; Portfolio allocation utilizes average market values over the trailing four quarters.

- During the most recent quarter, the Total Retirement Portfolio slightly underperformed the Median Public Fund. An overweight position in Fixed Income detracted from while Alternative Investments enhanced the Total Portfolio's relative performance.
- During the trailing 12-month period, The Total Portfolio underperformed the Median Public Fund. Among asset classes, Domestic and International Equities detracted the most (-0.9% and -0.5% respectively) from overall portfolio performance. An overweight position in Fixed Income also negatively impacted relative performance.

<sup>&</sup>lt;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 estate.

#### WPERP RETIREMENT PLAN STRATEGIC CLASS PERFORMANCE

The **Domestic Equity** portfolio outperformed its policy benchmark during the quarter by 30 basis points, with an 11.9% return. Over the latest 1-year period, the portfolio trailed its policy benchmark by (1.0%), as three out of the Plan's five reporting Domestic Equity managers underperformed their respective benchmarks. The portfolio trailed its policy benchmark by (50) basis points over the latest 3-year period but outperformed it by 30 basis points over the latest 5-year period.

The **International Equity** portfolio posted a 7.5% quarterly return underperforming its policy benchmark by (20) basis points. Over the latest 1-year period, the portfolio trailed its policy benchmark by (2.9%), as four out of the Plan's five International Equity managers underperformed their respective benchmarks. The portfolio outperformed its policy benchmark by 20 basis points over the latest 3-year period but underperformed it by (1.0%) over the latest 5-year period. Underperformance during the trailing 5-year period can be mainly attributed to one of the Plan's developed markets manager and one emerging markets manager.

The **Fixed Income** portfolio outperformed its policy benchmark over all time periods under observation. Both the Plan's core fixed income managers outperformed their respective benchmarks over all time periods under observation. One of the Plan's high yield managers also outperformed its benchmark across all time periods, while the other manager underperformed all periods.

#### Periods ending December 31, 2010

Asset Class	Quarter	1 Year	3 Year	5 Year
Total Retirement Policy Benchmark <sup>1</sup>	5.9	11.6	0.4	4.5
	5.5	<i>12.3</i>	<i>0.1</i>	<i>4.3</i>
Domestic Equity	11.9	15.9	-2.5	3.0
Russell 3000 (blend) <sup>3</sup>	<i>11.6</i>	<i>16.9</i>	-2.0	2.7
International Equity MSCI ACWI ex U.S. IMI ND (blend) <sup>4</sup>	7.5	9.8	-3.7	4.7
	7.7	12.7	-3.9	5.7
Fixed Income	-0.4	8.9	6.7	6.3
BC Universal	-1.0	<i>7.2</i>	6.0	<i>5.9</i>
Real Return <sup>2</sup> Tbill + 3% <sup>2</sup>	2.3 <i>0.8</i>	9.1 <i>3.1</i>	1.7 <i>4.0</i>	
Private Equity <sup>2</sup> Cambridge USPE/USVC <sup>2,5</sup>	4.1 <i>4.9</i>	20.1 <i>16.3</i>	-0.6 <i>0.2</i>	
Real Estate <sup>2</sup>	5.4	8.0	-11.6	
NCREIF <sup>2</sup>	3.9	5.8	<i>-4.6</i>	
Cash	0.2	0.5	1.1	2.7
Citigroup T-bills	<i>0.0</i>	<i>0.1</i>	<i>0.7</i>	2.3

Note: Effective 1/1/2011, Real Return's benchmark will change to CPI + 4%, per WPERP updated investment policy (November 10, 2010).

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

<sup>&</sup>lt;sup>2</sup> Returns are lagged one quarter.

<sup>&</sup>lt;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>&</sup>lt;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>&</sup>lt;sup>5</sup>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.

#### WPERP RETIREMENT PLAN MANAGER PERFORMANCE

#### **Domestic Equity – Periods ending December 31, 2010**

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	747,005	Large Cap Core	11.3	16.3	-2.3	2.6	5.7	8/2003
Russell 1000 Index			11.2	16.1	-2.4	2.6	5.6	
MFS	401,443	Large Cap Value	9.7	12.6	-2.4	4.5	6.1	2/2004
Russell 1000 Value Index			10.5	15.5	-4.4	1.3	3.7	
T. Rowe Price	404,514	Large Cap Value	10.8	14.9	-1.8	3.6	5.3	10/2004
Russell 1000 Value Index			10.5	15.5	-4.4	1.3	3.8	
Fred Alger	421,672	Large Cap Growth	14.4	19.7	-2.1	5.5	6.4	2/2004
Russell 1000 Growth Index			11.8	16.7	-0.5	3.8	4.0	
T. Rowe Price	412,273	Large Cap Growth	11.2					4/2010
Russell 1000 Growth Index			11.8					
Earnest Partners	108,107	Small Cap Value	13.7	21.3	1.0	2.6	4.5	11/2004
Russell 2000 Value Index			15.4	24.5	2.2	3.5	4.1	
Frontier	116,477	Small Cap Growth	20.1					4/2010
Russell 2000 Growth Index			17.1					

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

#### **Latest Quarter**

During the fourth quarter of 2010, four of WPERP's seven reporting domestic equity managers either matched or outperformed their respective benchmarks.

**BlackRock**, WPERP's passive large cap core manager, slightly outperformed the Russell 1000 Index by 10 basis points with an 11.3% quarterly return. **MFS**, one of the Plan's large cap value managers, generated a 9.7% quarterly return underperforming the Russell 1000 Value Index return by (80) basis points. **T. Rowe Price LCV**, the Plan's other large cap value manager, outperformed the Russell 1000 Value Index by 30 basis points with a 10.8% quarterly return. **Fred Alger**, the Plan's active large cap growth manager, completed the quarter with a 14.4% return outperforming the Russell 1000 Growth Index by 2.6%. Stock selection in Information Technology accounted for the bulk of excess returns. **T. Rowe Price LCG**, the Plan's other large cap growth manager, posted a quarterly return of 11.2% and underperformed the Russell 1000 Growth Index by (60) basis points. **Earnest Partners**, WPERP's small cap value manager, ended the quarter with a 13.7% return underperforming the Russell 2000 Value Index by (1.7%). The portfolio's underweight in Materials and micro cap stocks negatively impacted relative performance. **Frontier**, the Plan's small cap growth manager, posted a quarterly return of 20.1% and outperformed the Russell 2000 Growth Index by 3.0%. Stock selection and overweight positions in both Energy and Producer Durables largely aided relative performance.

<sup>\*\*</sup> Inception date reflect the month when portfolio received initial funding. Since-inception returns are not shown for managers with less than one year of performance.

#### **Latest Year**

During the latest 1-year period, **BlackRock** outperformed its benchmark by 20 basis points with a 16.3% return. **MFS** posted a 12.6% return and underperformed its benchmark by (2.9%). The portfolio's larger cap and higher quality holdings detracted from relative performance as the market rewarded lower quality and smaller cap companies during the period. **T. Rowe Price LCV** generated a 14.9% return underperforming its benchmark by (60) basis points. **Fred Alger** posted a 19.7% return outperforming its benchmark by 3.0%. Stock selection in Information Technology benefited relative performance. **Earnest Partners** completed the latest 1-year period with a 21.3% return underperforming its benchmark by (3.2%). Relative underperformance can be mainly attributed to the portfolio's underweight to micro cap stocks, which appreciated significantly during the period.

#### **Latest Three Years**

During the latest 3-year period, **BlackRock** slightly outperformed its benchmark by 10 basis points with a minus (2.3%) return. **MFS** surpassed its benchmark by 2.0% with a minus (2.4%) return. Allocation differences and stock selection in Financials, Information Technology, and Industrials benefited relative performance. **T. Rowe Price LCV** posted a minus (1.8%) return outperforming its benchmark by 2.6%. The portfolio's underweight position and stock selection in Financials, as well as stock selection in Consumer Staples and Industrials, drove the relative outperformance. **Fred Alger** posted a minus (2.1%) return underperforming its benchmark by (1.6%). The portfolio's overweight to Financials and stock selection in Consumer Stapes detracted from relative performance. **Earnest Partners**' latest 3-year return of 1.0% lagged its benchmark by (1.2%). The portfolio's value bias detracted from relative performance as the market largely rewarded smaller issues.

#### **Latest Five Years**

During the latest 5-year period, **BlackRock** matched its benchmark return of 2.6%. **MFS** finished the period surpassing the Russell 1000 Value Index return by 3.2%, with a 4.5% return. Allocation differences and stock selection in Financials, Information Technology, and Industrials benefited relative performance. **T. Rowe Price LCV** outperformed its benchmark by 2.3% with a 3.6% return, due primarily to an underweight and stock selection in Financials. **Fred Alger** posted a 5.5% return outperforming its benchmark by 1.7%. Stock selection in Energy, Industrials, Information Technology, and Materials contributed the most to relative performance. **Earnest Partners** generated a 2.6% return underperforming its benchmark by (90) basis points.

### International Equity - Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Invesco	415,041	Developed Markets	7.6	7.3	-4.5	3.6	6.6	6/2004
MSCI World ex US IMI ND Index (blend – Invesco) <sup>1</sup>			7.8	10.7	-5.4	3.6	7.3	
The Boston Company	411,327	Developed Markets	7.5	6.0	-3.3	3.1	4.5	3/2005
MSCI World ex US IMI ND Index (blend – Boston) <sup>2</sup>			7.8	10.7	-5.4	4.0	5.8	
Pyramis	419,771	Developed Markets	8.7	12.0	-5.0	3.9	6.5	11/2004
MSCI World ex US IMI ND Index (blend – Pyramis) <sup>3</sup>			7.8	10.7	-5.3	3.6	5.8	
The Boston Company	137,558	Emerging Markets	7.1	17.3	5.1	13.9	17.1	3/2005
T. Rowe Price	136,199	Emerging Markets	6.2	19.8	-3.8	11.5	16.2	3/2005
MSCI EMF IMI ND Index (blend) <sup>4</sup>			7.4	19.9	0.8	13.7	17.3	

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

#### **Latest Quarter**

During the fourth quarter of 2010, one of WPERP's five reporting international equity managers outperformed its respective benchmark.

Invesco, WPERP's active core international manager, generated a quarterly return of 7.6% and underperformed the MSCI World ex US IMI ND Index (blend) return by (20) basis points. The Boston Company, the Plan's active international value manager, completed the quarter with a 7.5% return underperforming the MSCI World ex US IMI ND Index (blend) return by (30) basis points. Pyramis, the Plan's active international growth manager, outperformed the MSCI World ex US IMI ND Index (blend) by 90 basis points, with an 8.7% quarterly return. The Boston Company, one of WPERP's two emerging markets managers, finished the quarter with a 7.1% return, underperforming the MSCI Emerging Markets IMI ND Index (blend) by (30) basis points. T. Rowe Price, the Plan's other emerging markets manager, completed the quarter with a 6.2% return, underperforming the MSCI Emerging Markets IMI ND Index (blend) by (1.2%). Stock selection and underweight to Taiwan was the largest detractor from relative performance.

<sup>\*\*</sup> Inception date reflect the month when portfolio received initial funding.

<sup>&</sup>lt;sup>1</sup> Invesco's benchmark is MSCI EAFE + Canada ND thru12/31/08, and MSCI World ex US IMI ND from 1/1/09 to the present.

<sup>&</sup>lt;sup>2</sup> Boston's benchmark is MSCI EAFE + Canada Value ND thru 6/30/07, MSCI EAFE + Canada ND from 7/1/07 to 12/31/08, and MSCI World ex US IMI ND from 1/1/09 to the present.

<sup>&</sup>lt;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.

<sup>&</sup>lt;sup>4</sup> Boston (EM) and T. Rowe Price's benchmark is MSCI EMF thru 12/31/08, and MSCI EMF IMI ND from 1/1/09 to the present.

#### **Latest Year**

**Invesco** finished its latest 1-year period with a 7.3% return, trailing its benchmark by (3.4%). Stock selection in the United Kingdom and France detracted from relative performance. From a sector perspective, the portfolio struggled in cyclical segments such as Industrials, Consumer Discretionary, and Energy. **The Boston Company** completed the period underperforming its benchmark by (4.7%), with a 6.0% return. United Kingdom and France were the worst performers. From a sector perspective, stock selection in Consumer Discretionary, Energy, and Materials detracted the most from relative performance. **Pyramis** completed the period with a 12.0% return and bested its benchmark by 1.3%. Regional portfolios in Europe, Japan, and Canada outperformed. From a sector perspective, Industrials, Health Care and Financials contributed relative outperformance. **The Boston Company** emerging markets portfolio produced a 17.3% return but trailed its benchmark by (2.6%). Stock selection in South Korea largely detracted from relative performance. **T. Rowe Price** generated a 19.8% return and slightly underperformed its benchmark by (10) basis points.

#### **Latest Three Years**

**Invesco** finished its latest 3-year period with a minus (4.5%) return, outperforming its benchmark by 90 basis points. **The Boston Company** completed the period returning minus (3.3%) outperforming its benchmark by 2.1%. Stock selection in Germany and Japan benefited relative performance. From a sector perspective, stock selection in Consumer Staples and Utilities aided relative performance. **Pyramis** returned minus (5.0%) and outperformed its benchmark by 30 basis points. **The Boston Company** emerging markets portfolio produced a 5.1% return and outperformed its benchmark by 4.3%. Allocation differences and stock selection in China, Taiwan, and Thailand contributed the most to relative performance. **T. Rowe Price** generated a minus (3.8%) return and trailed its benchmark by (4.6%). Stock selection in Financials accounted for the bulk of the underperformance.

#### **Latest Five Years**

**Invesco** finished its latest 5-year period matching its benchmark with a 3.6% return. **The Boston Company** completed the period posting a 3.1% return, underperforming its benchmark by (90) basis points. **Pyramis** returned 3.9% outperforming its benchmark by 30 basis points. **The Boston Company** emerging markets portfolio produced a 13.9% return and bested its benchmark by 20 basis points. **T. Rowe Price** returned 11.5% and underperformed its benchmark return by (2.2%). Stock selection in Consumer Discretionary detracted the most from relative performance.

#### Fixed Income – Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
JP Morgan	1,022,214	Core	-0.5					4/2010
BC Aggregate Index			-1.3					
Wells	1,019,036	Core	-1.1	7.9	8.0	7.1	6.5	7/2004
BC Aggregate Index			-1.3	6.5	5.9	5.8	5.4	
Loomis	119,240	High Yield	4.3	17.9	10.8	9.4	9.4	3/2005
BC High Yield Index			3.2	15.1	10.4	8.9	8.5	
Wells	115,867	High Yield	2.4	13.1	9.4	8.5	7.5	11/2004
BC High Yield Index			3.2	15.1	10.4	8.9	8.0	

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

#### **Latest Quarter**

During the fourth quarter of 2010, three of WPERP's four reporting fixed income managers outperformed their respective benchmarks. **JP Morgan**, the Plan's new core fixed income manager, posted a quarterly return of minus (0.5%) and outperformed the BC Aggregate Index by 80 basis points. **Wells**, the Plan's other core fixed income manager, outperformed the BC Aggregate Index by 20 basis points with a quarterly return of minus (1.1%). **Loomis Sayles**, one of the portfolio's two high yield managers, delivered a quarterly return of 4.3% outperforming the BC High Yield Index by 1.1%. The portfolio benefited mainly from holdings in convertible bonds as they mirrored strong equity returns, and in high yield bonds. The other high yield manager **Wells** finished the quarter underperforming the BC High Yield Index by (80) basis points with a 2.4% return.

#### **Latest Year**

**Wells** finished its latest 1-year period with a 7.9% return and outperformed its benchmark by 1.4%, due primarily to security selection in the corporate sector. **Loomis Sayles** generated a 17.9% return and outperformed its benchmark by 2.8%, due primarily to yield curve positioning and security selection in convertible and high yield bonds. **Wells** High Yield finished the period returning 13.1%, but trailed its benchmark by (2.0%). The portfolio was focused on absolute portfolio risk rather that relative risk versus the benchmark. As the market rewarded risk-taking in lower-quality issues, Wells portfolio's lower exposure to these securities hurt relative performance.

#### **Latest Three Years**

**Wells** finished its latest 3-year period posting an 8.0% return and outperformed its benchmark by 2.1%, due primarily to security selection. **Loomis Sayles** generated a 10.8% return and outperformed its benchmark by 40 basis points. **Wells** High Yield posted a 9.4% return underperforming its benchmark by (1.0%). The portfolio relative underperformance was driven by its more conservative holdings than the broad market.

#### **Latest Five Years**

**Wells** finished its latest 5-year period with a 7.1% return and outperformed its benchmark by 1.3%, driven mainly by security selection. **Loomis** completed the period with a 9.4% return outperforming its benchmark by 50 basis points. **Wells** High Yield generated an 8.5% return underperforming its benchmark by (40) basis points.

<sup>\*\*</sup> Inception date reflect the month when portfolio received initial funding.

### Real Return – Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception**	Inception Date***
Aetos Capital*	35,111	Hedge FOFs	3.2	7.9	1.4		1.8	2/2007
PAAMCO*	36,179	Hedge FOFs	2.3	6.2	0.7		3.4	2/2007
Tbills + 3 %*			0.8	3.1	4.0		4.8	
HFRI FOF Diversified Index*		Hedge FOFs	2.8	3.5	-2.9		-1.8	
WAMCO*	130,058	GILS	2.0					4/2010
BC WGILB Index* ****			2.7					

<sup>\*</sup> Returns are lagged one quarter and net-of-fees, if applicable.

#### **Latest Quarter**

The WPERP Board is considering adding timber and commodities to the real return asset class. In addition, PCA made a presentation to the Board on the covered calls strategy. No decision has been made on either discussion. On 10/28/10, the Board terminated **PAAMCO** due to organizational changes. During the quarter, the Plan adopted WAMCO's benchmark for its GILS portfolio. The Barclays Capital World Govt Inflation-Linked All Maturities USA Hedged Bond Index (series B) replaced the Tbills + 3% Index from the inception of the portfolio.

**Aetos** outperformed the Tbill+3% by 2.4% and the HFRI FOF Diversified Index by 40 basis points. **PAAMCO** outperformed the Tbill+3% 1.5% but underperformed the HFRI FOF Diversified Index by (50) basis points. **WAMCO**, the Plan's GILS (Global Inflation-Linked Securities) manager, posted a quarterly return of 2.0% underperforming the BC WGILB Index by (70) basis points.

#### **Latest Year**

Over the latest 1-year period, **Aetos** outperformed the Tbill+3% by 4.8% and the HFRI FOF Diversified Index by 4.4%. **PAAMCO** outperformed the Tbill+3% by 3.1% and the HFRI FOF Diversified Index by 2.7%.

#### **Latest Three Years**

**Aetos** finished its latest 3-year period with a 1.4% return underperforming the Tbill+3% by (2.6%), but outperforming the HFRI FOF Diversified Index by 4.3%. **PAAMCO** posted a 0.7% return trailing the Tbill+3% by (3.3%), while outperforming the HFRI FOF Diversified Index by 3.6%.

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

<sup>\*\*\*</sup> Inception date reflect the month when portfolio received initial funding.

<sup>\*\*\*\*</sup> Barclays Capital World Govt Inflation-Linked All Maturities USA Hedged Bond Index (series B)

### Private Equity and Real Estate - Periods ending December 31, 2010

Asset Class	Mkt Value (\$000)	Quarter	1 YR	3 YR	5 YR	Since Inception***	Inception Date***
Private Equity*	78,290	4.1	20.1	-0.6		4.7	9/2006
Cambridge USPE/USVC***		4.9	16.3	0.2		7.3	
Real Estate*	106,064	5.4	8.0	-11.6		-6.0	3/2007
NCREIF*		3.9	5.8	-4.6		-0.7	

<sup>\*</sup> Returns are lagged one quarter and net of fees.

The **Private Equity** portfolio currently consists of seven investments including **Lexington VI, Lexington VII, Landmark XIV, Capital Dynamics** (previously HRJ Capital), **Fisher Lynch**, and **Oaktree V**. The portfolio underperformed the Cambridge USPE/USVC Index during the current quarter by (80) basis points. The portfolio outpaced its benchmark by 3.8% over the latest 1-year period but underperformed it by (80) basis points over the latest 3-year period.

The Real Estate portfolio currently consists of five investments including Prisa, Prisa II, JP Morgan Strategic, CB Richard Ellis, and Mesa West. The portfolio outperformed the NCREIF Index during the current quarter and the latest 1-year period by 1.5% and 2.2%, respectively. Four out of the five managers outperformed the NCREIF Index during the quarter, while four out of four either matched or outperformed during the 1-year period. Over the latest 3-year period, the portfolio trailed its benchmark by (7.0%). All three reporting manager underperformed the benchmark during period.

<sup>\*\*</sup> 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.

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

<sup>\*\*\*\*</sup> Inception date reflect the month when portfolio received initial funding.

### WPERP RETIREMENT PLAN MANAGERS ON WATCH

#### **Return vs. Benchmark Since Watch**

As of December 31, 2010

					Performance Since Begin Watch Status*							
Portfolio	Style Group	Concern	Begin Watch Status	Last Reviewed	First Month	First 3 Months	First 6 Months	First 9 Months	First 12 Months	Since Placed on Watch		
T. Rowe Price	Emerging Markets	Performance	5/1/2009	10/10/2010	20.7	33.3	45.4	48.4	64.3	47.4		
MSCI EMF IMI Index (blended)	Emerging Markets				17.8	29.8	41.5	45.8	60.4	44.3		
T. Rowe Price vs. Target	MSCI EMF IMI Index (blended)				N/M	N/M	N/M	N/M	3.9	3.1		
Wells**	Core	Organizational	2/1/2010		0.5	1.6	5.9	7.7		6.0		
BC Aggregate Index	Core				0.4	1.3	4.9	6.7		4.9		
Wells vs. Target	BC Aggregate Index				N/M	N/M	N/M	N/M		N/M		
Wells	High Yield	Performance	2/1/2010		0.3	4.8	6.1	11.0		11.5		
BC High Yield Index	High Yield				0.2	5.7	6.9	13.0		13.7		
Wells vs. Target	BC High Yield Index				N/M	N/M	N/M	N/M		N/M		
Pyramis	Developed Markets	Performance	5/1/2010		-10.8	-4.2	6.4			11.2		
MSCI Wid ex US IMI ND Index	Developed Markets				-11.2	-4.4	5.6			9.9		
Pyramis vs. Target	MSCI WId ex US IMI ND Index				N/M	N/M	N/M	N/M		N/M		
Invesco	Developed Markets	Organizational	9/1/2010		8.4	7.7				16.6		
MSCI Wid ex US IMI ND Index	Developed Markets				9.8	9.2				18.4		
Invesco vs. Target	MSCI WId ex US IMI ND Index				N/M	N/M	N/M	N/M		N/M		
MFS	Large Cap Value	Performance	9/1/2010		8.0	10.7				18.5		
Russell 1000 Value Index	Large Cap Value				7.8	10.4				19.1		
MFS vs. Target	Russell 1000 Value Index				N/M	N/M	N/M	N/M		N/M		
Boston Company	Developed Markets	Performance	12/1/2010		8.3					8.3		
MSCI Wld ex US IMI ND Index	Developed Markets				8.4					8.4		
Boston vs. Target	MSCI Wld ex US IMI ND Index				N/M	N/M	N/M	N/M		N/M		

<sup>\*</sup>Performance data provided by Mellon.

<sup>\*\*</sup>Wells (Core) was removed from watch status, subsequent to year end (1/2010).

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.

Periods marked as "N/M" indicate returns are not meaningful enough to fairly judge investment performance.

#### **Managers on Watch**

**T. Rowe Price (Emerging Markets)** was placed on watch status beginning 5/1/2009 due to short-term performance. Watch status was extended 6 months due to continued performance concerns in April 2010 and October 2010.

Wells was placed on watch status beginning 2/1/2010 due to short-term performance.

Wells HY was placed on watch status beginning 2/1/2010 due to short-term performance.

**Pyramis** was placed on watch status beginning 5/1/2010 due to short-term performance.

**Invesco** was placed on watch status beginning 9/1/2010 due to organizational issues.

MFS was placed on watch status beginning 9/1/2010 due to short-term performance.

The Boston Company (Developed Markets) was placed on watch status beginning 12/1/2010 due to short-term performance.

#### Managers Removed/Terminated from Watch Status

**The Boston Company (Developed Markets)** was removed from watch on 8/19/09 due to strong relative performance and lack of any material impact from organizational changes. The Boston Company was originally placed on watch status on 8/1/2007 due to organizational changes.

**The Boston Company (Emerging Markets)** was removed from watch on 8/19/09 due to strong relative performance and lack of any material impact from organizational changes. The Boston Company was originally placed on watch status on 3/1/2009 due to organizational changes.

**Intech** was terminated on 8/19/09. Intech was originally placed on watch status on 12/31/2007 due to short-term performance.

**ING** was terminated on 10/7/09 but the account is currently pending transition. ING was originally placed on watch status on 8/1/2008 due to short-term performance.

Paradigm was terminated on 1/27/10. Paradigm was originally placed on watch status on 1/1/2009 due to short-term performance.

**Aetos** was removed from watch on 3/24/10 due to strong relative performance during the evaluation period. **Aetos** was originally placed on watch status on 3/1/2009 due to short-term performance.

**PAAMCO** was removed from watch on 3/24/10 due to strong relative performance during the evaluation period. **PAAMCO** was originally placed on watch status on 3/1/2009 due to short-term performance.

**Loomis Sayles** was removed from watch on 4/28/10 due to strong relative performance during the evaluation period. **Loomis Sayles** was originally placed on watch status on 5/1/2009 due to short-term performance.

**BlackRock** was removed from watch on 6/9/10 as the merger between BlackRock and Barclays Global Investors was examined and viewed as favorable, with key professionals remaining in place. **BlackRock** was originally place on watch status on 7/1/2009 due to organizational issues.

# WPERP Retirement Plan Estimated Performance Results Net and Gross of Fees Comparison For Quarter Ending 12/31/2010

			Performance, % 2		Diffe	rence
Asset Class	Manager	Market Value <sup>2</sup>	Net	Gross	Percentage	Market Value
Domestic Equity						
Russell 1000 Index						
Passive	BlackRock	747,004,697	11.29%	11.30%	-0.01%	-74,708
Large Value	MFS	401,442,841	9.62%	9.70%	-0.08%	-321,411
Large Value	T. Rowe Price	404,513,563	10.71%	10.80%	-0.09%	-364,390
Large Growth	Fred Alger	421,671,708	14.32%	14.40%	-0.08%	-337,607
Large Growth	T. Rowe Price	412,272,716	11.11%	11.20%	-0.09%	-371,380
Small Value	Earnest Partners	108,107,018	13.54%	13.70%	-0.16%	-173,248
Small Growth	Frontier	116,476,783	19.85%	20.10%	-0.25%	-291,922
Small Growth	Transition	45,295		20.1070	0.2070	201,022
	11811311011	\$2,611,534,621				
International Equity		φ2,011,33 <del>4</del> ,021				
Active Equities	Invesco	415,041,291	7.50%	7.60%	-0.11%	-457,048
Active Equities	The Boston Co.	411,327,264	7.39%	7.50%	-0.11%	-452,958
Active Equities	Pyramis	419,771,471	8.62%	8.70%	-0.09%	-378,135
Emerging Markets	The Boston Company	137,557,649	6.87%	7.10%	-0.23%	-317,112
Emerging Markets	T. Rowe Price	136,198,707	5.96%	6.20%	-0.25%	-341,350
	<del>-</del>	\$1,519,896,382				
Domestic Fixed Income		. , , ,				
Core	JP Morgan	1,022,214,249	-0.53%	-0.50%	-0.03%	-306,756
Core	Wells	1,019,036,235	-1.13%	-1.10%	-0.03%	-305,803
High Yield	Loomis Sayles	119,239,889	4.18%	4.30%	-0.13%	-155,214
High Yield	Wells	115,866,799	2.29%	2.40%	-0.12%	-139,207
2		\$2,276,357,172				
Real Return <sup>3</sup>						
	Aetos	35,110,878	3.20%	3.39%	-0.19%	-66,838
	PAAMCO	36,179,276	2.30%	2.55% 1.95%	-0.25% 0.05%	-90,675
	WAMCO _	130,057,734	2.00%	1.95%	0.05%	-65,061
Dulinata Familia 3		\$201,347,888				
Private Equity <sup>3</sup>	Lexington VI	20,555,879	5.00%	5.40%	-0.40%	-82,554
	Lexington VII	8,025,548	32.50%	32.90%	-0.40%	-32,231
	Landmark XIII	17,299,342	1.70%	2.10%	-0.40%	-69,475
	Cap Dynamics	19,439,205	0.70%	1.10%	-0.40%	-78,069
	Fisher Lynch	6,019,365	0.70%	1.10%	-0.40%	-24,174
	Landmark XIV	2,349,611	3.90%	4.30%	-0.40%	-9,436
	Oaktree	4,601,124	0.60%	1.00%	-0.40%	-18,478
	_	\$78,290,074				
Real Estate 3						
	Prisa	36,166,794	3.10%	3.33%	-0.23%	-83,375
	Prisa II	14,817,173	7.20%	7.43%	-0.23%	-34,158
	JP Morgan	36,598,305	4.00%	4.23%	-0.23%	-84,370
	CBRE	17,035,936	12.40%	12.63%	-0.23%	-39,273
	Mesa West	1,445,545	7.00%	7.23%	-0.23%	-3,332
		\$106,063,753				
Cash		\$113,759,263		0.20%		
TOTAL PORTFOLIO 1		7,042,605,944	5.84%	5.90%	-0.06%	-\$5,569,751
Total Fund Policy		.,,,	,	5.40%	0.0070	+=,000,.01

<sup>&</sup>lt;sup>1</sup> Total portfolio market value includes \$141.8 million in transition assets and a negative balance of (\$6.4) million in securities lending.

 $<sup>^{\</sup>rm 2}\,{\rm Returns}$  and market values calculated using data from Mellon and LDZ.

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

### **Quarterly Report**

WPERP DISABILITY PLAN REVIEW

The WPERP - Disability portfolio ended the fourth quarter of 2010 with an aggregate value of approximately \$40.6 million.

#### **Portfolio Performance Overview**

Periods ending December 31, 2010, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception**	Inception Date***
Total Portfolio Policy Benchmark*	-1.1 <i>-1.2</i>	7.4 6.2	7.0 5.7	6.6 5.6		
Wells BC Aggregate	-1.1 -1.3	8.3 <i>6.5</i>	7.9 <i>5.9</i>	7.1 <i>5.8</i>	6.5 <i>5.4</i>	7/2004 

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

**4Q 2010** – During the quarter, the Disability Plan posted a minus (1.1%) return and outperformed its policy benchmark by 10 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 1.2%, 1.3%, and 1.0%, respectively.

#### Portfolio Strategic Allocation (as of 12/31/10)

Segment		Actual \$(000)	Actual %	Target %	Variance
Total Portfolio		\$40,620	100	100	
Fixed Income		39,704	98	95	3
	Wells	39,704	98	95	3
Cash		916	2	5	-3

**Strategic allocation** – The Disability Plan target allocation consists of 95% fixed income investments and 5% cash. At the close of 4Q 2010, there was one fixed income manager, Wells. The total fund was 98% invested in this manager.

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

<sup>\*\*\*</sup> Inception date reflect the month when portfolio received initial funding.

### **Quarterly Report**

WPERP DEATH PLAN REVIEW

The WPERP – Death portfolio ended the fourth quarter of 2010 with an aggregate value of approximately \$23.6 million.

#### **Portfolio Performance Overview**

Periods ending December 31, 2010, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception**	Inception Date***
Total Portfolio Policy Benchmark*	-1.1 -1.2	6.3 6.3	6.6 5.7	6.3 5.7		
Wells BC Aggregate	-1.1 -1.3	8.2 <i>6.5</i>	7.9 <i>5.9</i>	7.1 <i>5.8</i>	6.5 <i>5.4</i>	7/2004

<sup>\*</sup>Policy benchmark consists of 96% BC Aggregate Bond Index and 4% Citigroup T-bill.

**4Q 2010** – During the quarter, the Death Plan posted a minus (1.1%) return and outperformed its policy benchmark by 10 basis points. The benchmark portfolio consists of passively managed asset class portfolios held at the Death Plan's policy weightings.

**Longer Terms** – The Death Plan matched its policy benchmark over the latest 1-year period and outperformed it by 90 and 60 basis points over the latest 3- and 5-year periods, respectively.

#### Portfolio Strategic Allocation (as of 12/31/10)

Segment		Actual \$(000)	Actual %	Target %	Variance
Total Portfolio		\$23,617	100	100	
Fixed Income	Wells	22,952 22,952	97 97	96 96	1 1
Cash		665	3	4	-1

**Strategic allocation** – The Death Benefit Plan target allocation consists of 96% fixed income investments and 4% cash. At the close of 4Q 2010, there was one fixed income manager, Wells. The total fund was 97% invested in this manager.

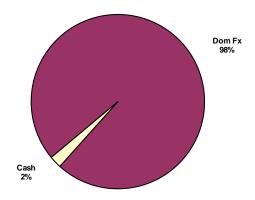
<sup>\*\*</sup> Performance is calculated based on the first full month of performance since funding.

<sup>\*\*\*</sup> Inception date reflect the month when portfolio received initial funding.

#### **Actual Strategic allocation Comparison – Disability and Death Plans**

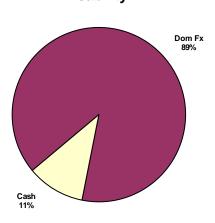
**December 31, 2010** 

#### Disability

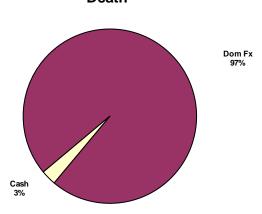


#### **December 31, 2009**

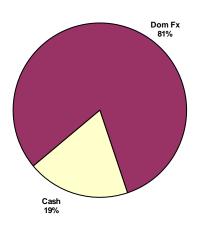
#### Disability



#### Death



#### Death



### **Quarterly Report**

**HEALTH PLAN REVIEW** 

The WPERP - Health Plan ended the fourth quarter of 2010 with an aggregate value of approximately \$1.1 billion. **PAAMCO** was terminated at the 10/28/10 Board meeting.

#### **Portfolio Performance Overview**

Periods ending December 31, 2010, Gross of Fees

Asset Class	Quarter	1 Year	3 Year	5 Year	Since Inception	Inception Date*
Total Health Policy Benchmark <sup>1</sup>	5.4 5.0	10.9 12.1	2.1 1.0		3.1 2.4	12/2006
Domestic Equity Russell 3000 (blend) <sup>2</sup>	11.8 <i>11.6</i>	16.4 <i>16.9</i>	-2.4 -2.2		-0.4 -0.3	1/2007
International Equity  MSCI ACWI ex U.S. IMI ND	8.0 7.7	8.5 12.7			10.5 <i>16.8</i>	9/2009
Fixed Income BC Universal (blend) <sup>3</sup>	-0.7 -1.0	7.8 7.1	8.2 6.2		7.9 6.4	1/2007
Real Return <sup>4</sup> Tbill + 3% <sup>4</sup>	2.7 0.8					4/2010 
Private Equity <sup>4</sup> Cambridge USPE/USVC <sup>4,5</sup>	20.9 <i>4.9</i>	23.0 <i>16.3</i>			24.8 2.2	9/2008
Real Estate <sup>4</sup> NCREIF <sup>4</sup>	7.6 3.9					4/2010 
Cash Citigroup T-bills	0.1 <i>0.0</i>	0.4 <i>0.1</i>	1.0 <i>0.7</i>		2.1 1.7	12/2006

<sup>\*</sup>Since-inception returns are not shown for managers with less than one year of performance.

The Health Plan Total Portfolio outperformed its policy benchmark over the latest quarter by 40 basis points, with a 5.4% return. Over the latest 1-year period, the portfolio trailed its policy benchmark by (1.2%), due primarily to relative underperformance by the Plan's Domestic and International Equity portfolios. Over the latest 3-year period, the portfolio outperformed its policy benchmark by 1.1%, due mainly to relative outperformance by the Plan's Fixed Income portfolio.

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

<sup>&</sup>lt;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>&</sup>lt;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>&</sup>lt;sup>4</sup> Returns are lagged one quarter.

<sup>&</sup>lt;sup>5</sup> 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.

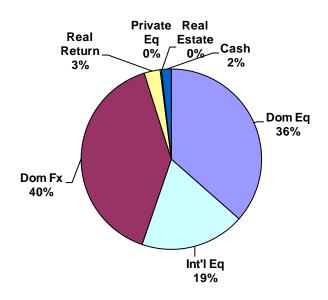
Portfolio Strategic Allocation (as of 12/31/10) – New policy target took effect on 7/1/2010.

Segment	Actual (\$MM)	Actual %	Target* %	Variance
				_
Health Plan***	1,050*	100	100	0
Domestic Equity	383	36	34	2
International Equity	197	19	18	1
Domestic Fixed	419	40	42	-2
Real Return	30	3	3	0
Private Equity	2	0	1	-1
Real Estate	0	0	0	0
Cash	18	2	2	0

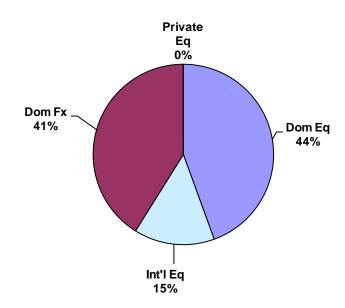
<sup>\*</sup>Includes \$802,487 in transition assets and a negative balance of (\$224,181) in securities lending.

As of December 31, 2010, the portfolio had a 55% allocation in Equities, 40% in Fixed Income, 3% in Real Return, 2% in Cash, and less than 1% each in Private Equity and Real Estate. During the latest one year, the actual weightings of Domestic Equity and Fixed Income decreased by (8%) and (1%), respectively, while International Equity increased 4%. Real Return, Real Estate, and Cash were added during the period.

**December 31, 2010** 



**December 31, 2009** 



PERFORMANCE ATTRIBUTION - HEALTH PLAN

#### Performance Attribution - 4Q 2010

	Poli	СУ	Portfo	Portfolio		Impact on Return				
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total		
Domestic Equity	34.0%	11.6	33.6%	11.8	(0.0)	0.1	(0.0)	0.0		
International Equity	18.0%	7.7	19.2%	8.0	0.0	0.1	0.0	0.1		
Fixed Income	42.0%	(1.0)	43.4%	(0.7)	(0.1)	0.1	0.0	0.0		
Real Return	3.0%	0.8	1.7%	2.7	0.1	0.1	(0.0)	0.1		
Private Equity	1.0%	4.9	0.1%	20.9	0.0	0.2	(0.1)	0.0		
Real Estate	0.0%	3.9	0.0%	7.6	(0.0)	0.0	0.0	0.0		
Cash	2.0%	0.0	2.0%	0.1	(0.0)	0.0	0.0	0.0		
Total	100.0%	5.0	100.0%	5.4	(0.0)	0.5	(0.2)	0.3		

<sup>\*</sup>Policy allocation utilizes beginning-of-the period target allocations; Portfolio allocation utilizes beginning-of-the period market values.

#### **Performance Attribution - Trailing 12-month**

	Poli	су	Portfolio		Impact on Return				
	Allocation*	Return	Allocation*	Return	Weighting	Selection	Interaction	Total	
Domestic Equity	35.5%	16.9	38.1%	16.4	(0.3)	(0.2)	(0.1)	(0.6)	
International Equity	16.5%	12.7	16.0%	8.5	(0.1)	(0.7)	0.1	(0.7)	
Fixed Income	43.5%	7.1	40.4%	7.8	(0.5)	0.3	(0.0)	(0.2)	
Real Return	1.5%	3.1	1.2%	-	0.2	0.1	(0.0)	0.3	
Private Equity	1.0%	16.3	0.1%	23.0	(0.0)	0.0	(0.0)	(0.0)	
Real Estate	0.0%	5.8	0.0%	-	(0.0)	0.0	(0.0)	(0.0)	
Cash	2.0%	0.1	4.1%	0.4	(0.3)	0.0	(0.0)	(0.3)	
Total	100.0%	12.1	100.0%	10.9	(1.0)	(0.4)	(0.1)	(1.5)	

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

- During the most recent quarter, the Total Health Plan Portfolio outperformed its policy benchmark due primarily to the overall selection effects (+0.5%).
- During the trailing 12-month period, The Total Health Plan Portfolio underperformed its policy benchmark. Among asset classes, Domestic and International and Equities detracted the most (-0.6% and -0.7% respectively) from overall portfolio performance.

### **Quarterly Report**

#### WPERP HEALTH PLAN MANAGER PERFORMANCE

#### **Domestic Equity - Periods ending December 31, 2010**

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
BlackRock	115,594	Large Cap Core	11.2	16.2	-2.3			1/2007
Russell 1000 Index			11.2	16.1	-2.4			
MFS	57,637	Large Cap Value	9.7	12.6				9/2009
Russell 1000 Value Index			10.5	15.5				
T. Rowe Price	58,059	Large Cap Value	10.8	14.7				9/2009
Russell 1000 Value Index			10.5	15.5				
Fred Alger	60,531	Large Cap Growth	14.4	19.5				9/2009
Russell 1000 Growth Index			11.8	16.7				
T. Rowe Price	59,177	Large Cap Growth	11.2					4/2010
Russell 1000 Growth Index			11.8					
Earnest Partners	15,518	Small Cap Value	13.7	21.1				9/2009
Russell 2000 Value Index			15.4	24.5				
Frontier	16,670	Small Cap Value	20.0					4/2010
Russell 2000 Growth Index			17.1					

#### International Equity - Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Invesco	65,552	Developed Markets	7.7	7.2				9/2009
MSCI World ex US IMI ND Index			7.8	10.7				
The Boston Company	65,146	Developed Markets	7.5	6.0				9/2009
MSCI World ex US IMI ND Index			7.8	10.7				
Pyramis	66,315	Developed Markets	8.8	12.1				9/2009
MSCI World ex US IMI ND Index			7.8	10.7				

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

<sup>\*\*</sup> Inception date reflect the month when portfolio received initial funding. Since-inception returns are not shown for managers with less than one year of performance.

### **Quarterly Report**

Fixed Income - Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
JP Morgan	188,484	Core	-0.8					4/2010
BC Aggregate Index			-1.3					
Wells	187,665	Core	-1.2	7.8	8.1			1/2007
BC Aggregate Index			-1.3	6.5	5.9			
Wells	42,398	High Yield	2.3	12.5				9/2009
BC High Yield Index			3.2	15.1				

Real Return - Periods ending December 31, 2010

Manager	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
PAAMCO***	7,629	Hedge FOFs						8/2010
Tbills + 3 %***								
Aetos Captial***	7,620	Hedge FOFs						9/2010
Tbills + 3 %***								
WAMCO***	14,853	GILS	2.0					4/2010
BC WGILB Index***			2.7					

Private Equity and Real Estate - Periods ending December 31, 2010

Asset Class	Mkt Value (\$000)	Asset Class	Quarter	1 YR	3 YR	5 YR	Since Inception*	Inception Date**
Private Equity***	2,448	Private Equity	20.9	23.0				9/2008
Cambridge USPE/USVC*** ****			4.9	16.3				
Real Estate***	161	Real Estate	7.6					4/2010
NCREIF***			3.9					

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

The **Private Equity** portfolio currently consists of three investments including **Lexington VII**, **Landmark XIV**, and **Oaktree V**. The **Real Estate** portfolio currently consists of one investment **Mesa West**.

<sup>\*\*</sup> Inception date reflect the month when portfolio received initial funding. Since-inception returns are not shown for managers with less than one year of performance.

<sup>\*\*\*</sup> Returns are lagged one quarter and net of fees.

<sup>\*\*\*\*</sup> 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.

#### Water and Power Employees' Retirement Plan **TOTAL FUNDS - PUBLIC (USD) - Monthly** As of December 31, 2010 **Cumulative Performance Comparisons** 25.00 20.00 15.00 Ann Return 00.01 5.00 0.00 Min/Max -5.00 Qtr ending Dec 10 1 Year 3 Years 5 Years %Tile %Tile Value Rank Value Rank Value %Tile Rank Value %Tile Rank Maximum 10.98 21.45 5.86 6.65 25th Percentile 6.92 14.34 1.50 5.07 Median Percentile 5.99 13.17 0.47 4.44 75th Percentile 5.25 11.67 -0.70 3.80 Minimum -0.99 2.12 -2.98 2.09 # of Portfolios 120 114 108 101 Total Fund 5.88 52 63 11.59 78 89 0.36 57 63 4.49 45 46 12.29 74 0.08 63 68 56 ■ Policy Benchmark 5.45 4.32 Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final

#### Notes:

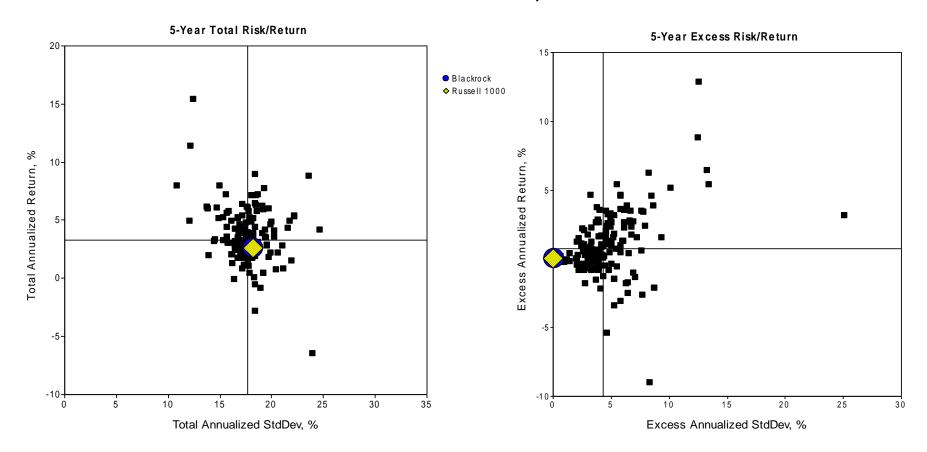
Performance and related statistics calculated using Mellon's Workbench E-Chart All performance is shown **gross of fees**.

#### Water and Power Employees' Retirement Plan **US Equity Segment - Public (USD) - Monthly** As of December 31, 2010 **Cumulative Performance Comparisons** 25.00 20.00 15.00 10.00 Ann Return 5.00 0.00 -5.00 Min/Max -10.00 Qtr ending Dec 10 1 Year 3 Years 5 Years Value %Tile Rank Value %Tile Rank Value %Tile Rank Value %Tile Rank Maximum 14.27 24.52 4.36 5.17 25th Percentile 12.51 19.65 -0.91 3.38 **Median Percentile** 11.74 18.09 -1.95 2.58 -2.72 75th Percentile 11.03 16.69 2.18 Minimum 3.76 13.42 -5.82 0.36 # of Portfolios 91 84 63 52 Domestic Equity 11.88 47 44 15.92 85 73 -2.52 69 2.95 20 Russell 3000 Composite 55 70 52 33 11.59 16.93 -2.01 2.74 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 December 31, 2010 **Cumulative Performance Comparisons** 25.00 20.00 15.00 10.00 Ann Return 5.00 0.00 -5.00 -10.00 Min/Max -15.00 Qtr ending Dec 10 3 Years 5 Years 1 Year Value %Tile Rank Value %Tile Rank Value %Tile Rank Value %Tile Rank 20.18 Maximum 10.66 0.47 8.59 25th Percentile 8.07 14.34 -3.61 5.48 **Median Percentile** 7.49 12.33 -5.16 4.64 75th Percentile 7.11 10.45 -6.60 3.15 5.04 2.16 -10.02 0.00 Minimum # of Portfolios 76 73 56 46 7.53 9.79 80 60 -3.66 4.73 International Equity 26 15 23 ■ MSCI ACWI ex US IMI (blend) 29 20 7.73 37 33 32 10 12.73 45 -3.94 18 5.71 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 December 31, 2010 **Cumulative Performance Comparisons** 20.00 15.00 10.00 Ann Return 5.00 0.00 Min/Max -5.00 Qtr ending Dec 10 1 Year 3 Years 5 Years Value %Tile Rank Value %Tile Rank Value %Tile Rank Value %Tile Rank 1.58 17.20 10.71 9.48 Maximum 6.52 25th Percentile -0.01 9.44 6.97 Median Percentile -0.82 8.11 6.14 5.88 75th Percentile -1.28 6.78 5.68 5.54 -2.51 1.00 1.59 3.28 Minimum # of Portfolios 87 79 62 52 Fixed Income -0.39 33 8.88 37 29 6.67 32 20 6.33 33 18 ■ BC Universal -1.04 55 7.15 67 54 6.01 62 39 5.90 49 26 Universe Source: The Bank of New York Mellon Corporation; Universe Status: Final

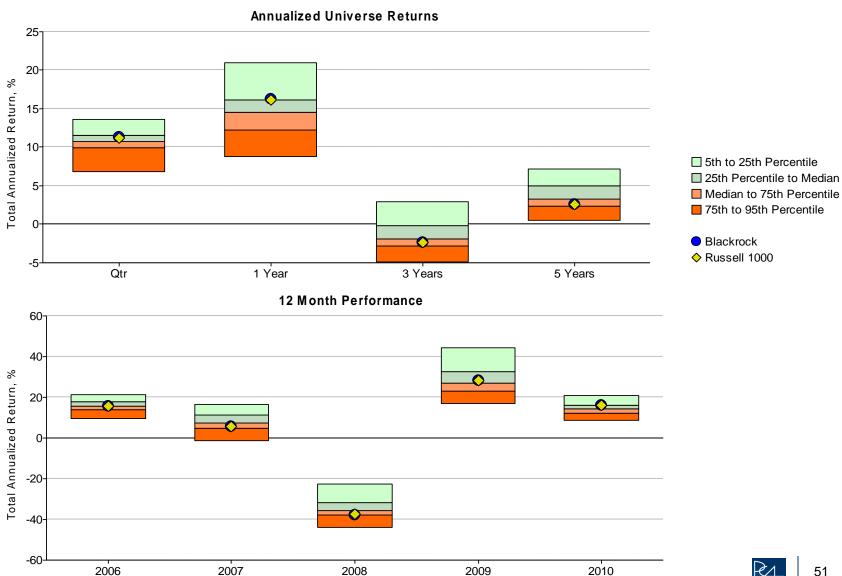
# WPERP Large Cap Core Manager Comparisons as of December 31, 2010



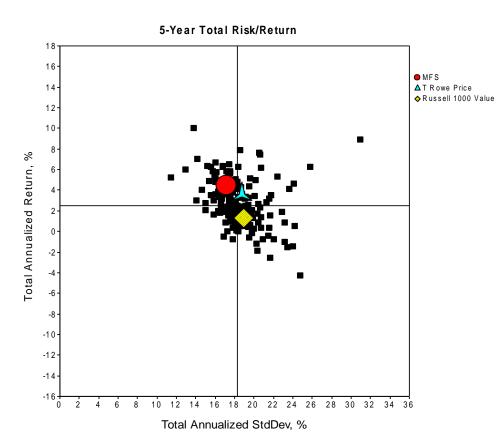
	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Blackrock	2.63	18.17	0.14
Russell 1000	2.59	18.16	0.14
Large Cap Manager Universe Median	3.31	17.70	0.19

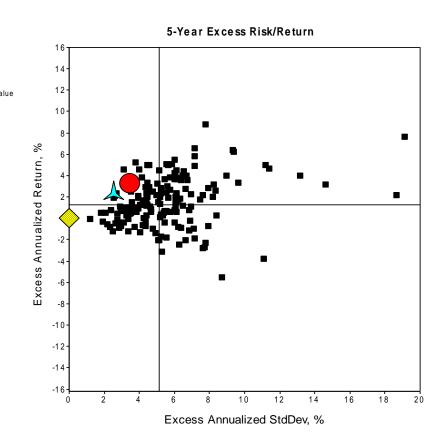
	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
Blackrock	0.04	0.11	0.38
Russell 1000	0.00	0.00	NA
Large Cap Manager Universe Median	0.72	4.33	0.19

### **WPERP Large Cap Core Manager Comparisons** as of December 31, 2010



### WPERP Large Cap Value Manager Comparisons as of December 31, 2010

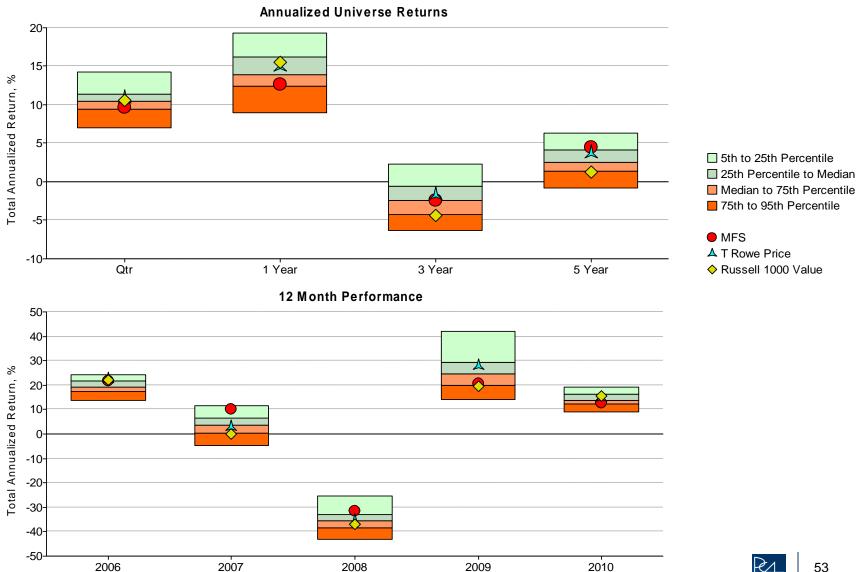




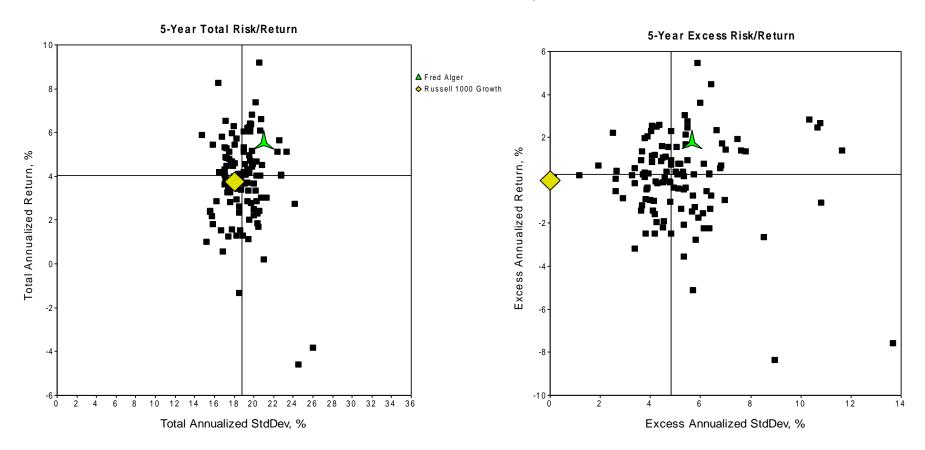
	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
MFS	4.51	17.16	0.26
T Rowe Price	3.63	18.74	0.19
Russell 1000 Value	1.28	18.98	0.07
Large Value Manager Universe Median	2.50	18.31	0.14

	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
MFS	3.23	3.45	0.94
T Rowe Price	2.36	2.55	0.93
Russell 1000 Value	0.00	0.00	NA
Large Value Manager Universe Median	1.22	5.11	0.28

### **WPERP Large Cap Value Manager Comparisons** as of December 31, 2010



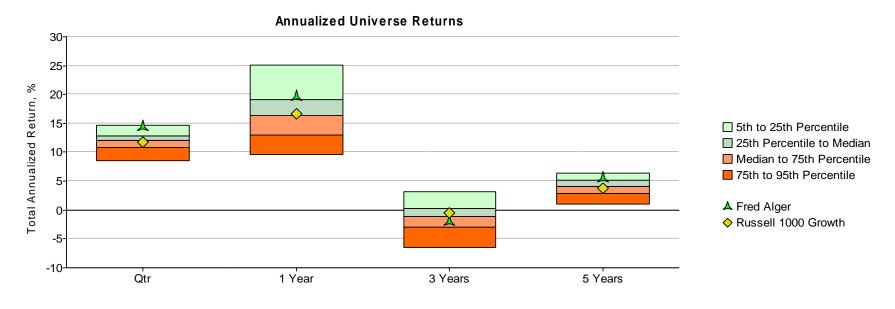
# WPERP Large Cap Growth Manager Comparisons as of December 31, 2010

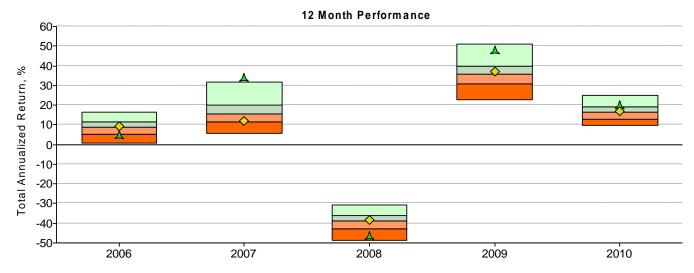


	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Fred Alger	5.52	20.98	0.26
Russell 1000 Growth	3.75	18.07	0.21
Large Growth Manager Universe Median	4.03	18.82	0.21

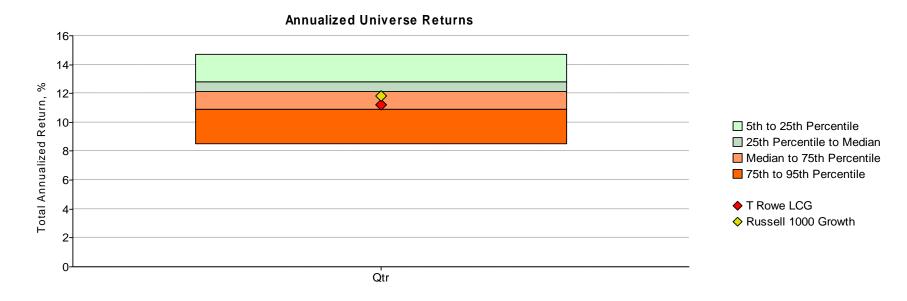
	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
Fred Alger	1.76	5.67	0.31
Russell 1000 Growth	0.00	0.00	NA
Large Growth Manager Universe Median	0.28	4.83	0.06

### WPERP Large Cap Growth Manager Comparisons as of December 31, 2010

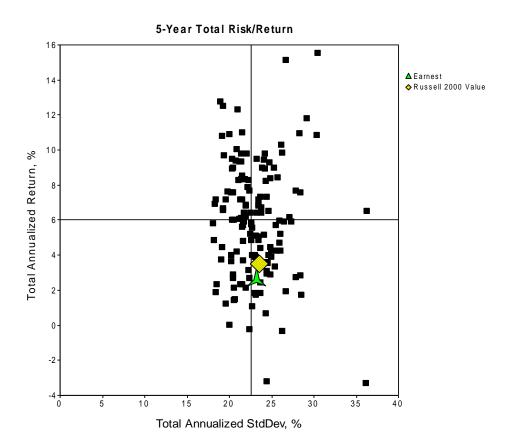


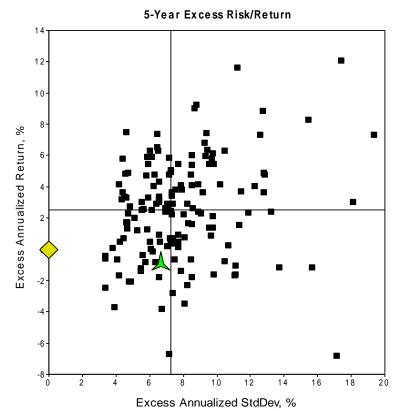


# WPERP Large Cap Growth Manager Comparisons as of December 31, 2010



# WPERP Small Cap Value Manager Comparisons as of December 31, 2010

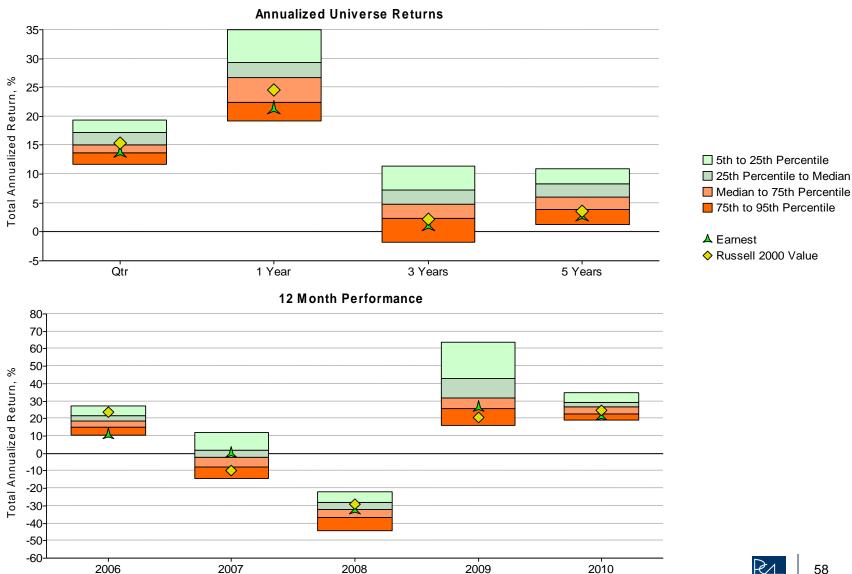




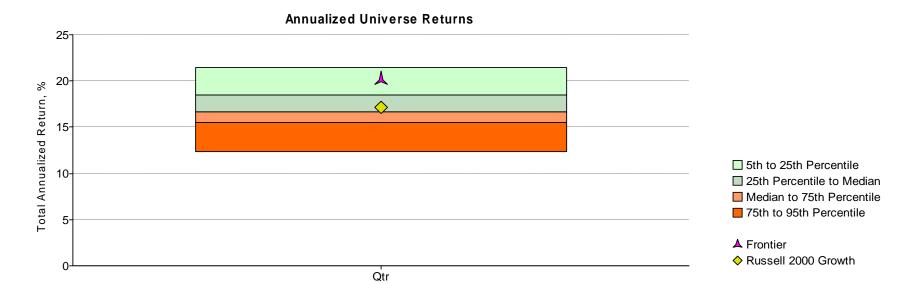
	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Earnest	2.59	23.18	0.11
Russell 2000 Value	3.52	23.54	0.15
Small Cap Value Universe Median	6.05	22.54	0.27

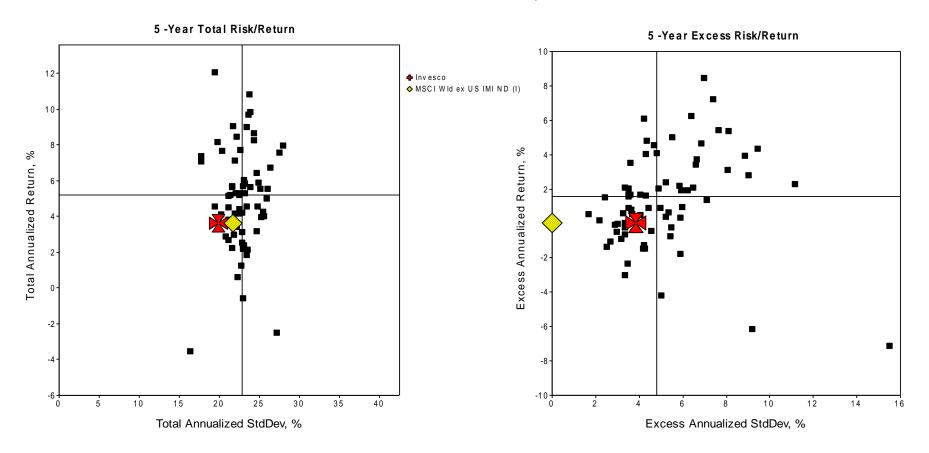
	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Earnest	-0.93	6.65	-0.14
Russell 2000 Value	0.00	0.00	NA
Small Cap Value Universe Median	2.53	7.29	0.36

### **WPERP Small Cap Value Manager Comparisons** as of December 31, 2010



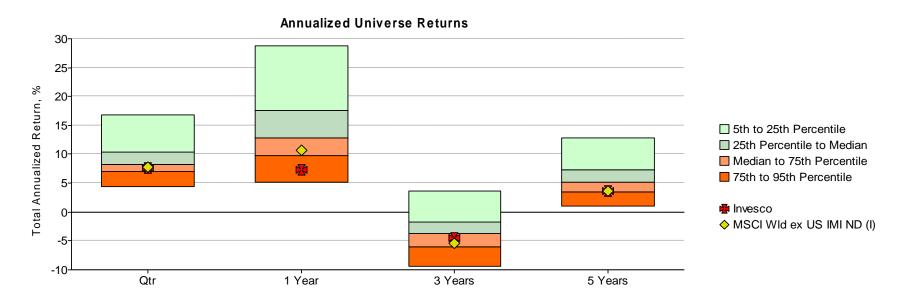
# WPERP Small Cap Growth Manager Comparisons as of December 31, 2010



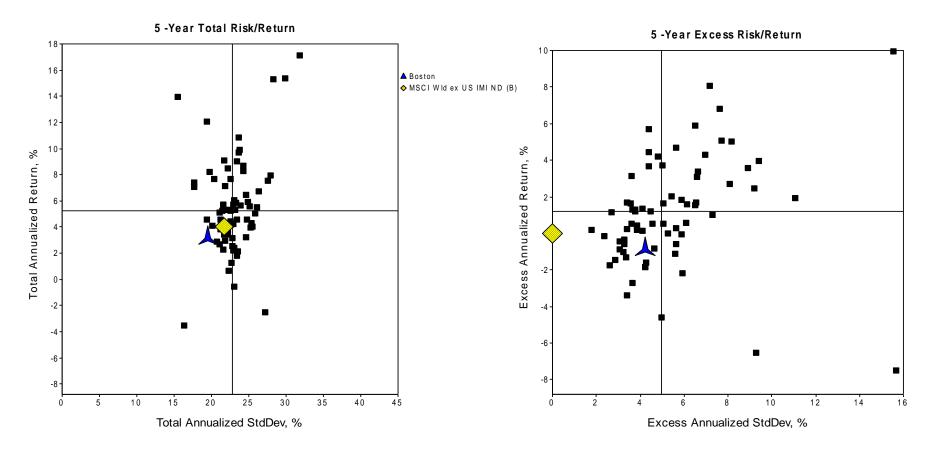


	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Invesco	3.64	19.88	0.18
MSCI Wid ex US IMI ND (I)	3.63	21.68	0.17
International Equity Universe Median	5.21	22.80	0.23

	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
Invesco	0.01	3.83	0.00
MSCI Wid ex US IMI ND (I)	0.00	0.00	NA
International Equity Universe Median	1.58	4.79	0.31

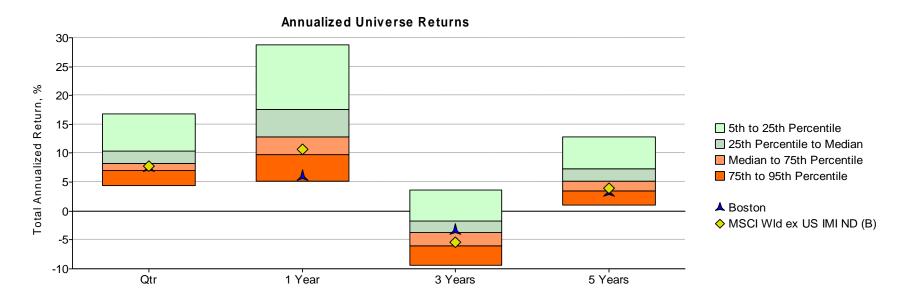




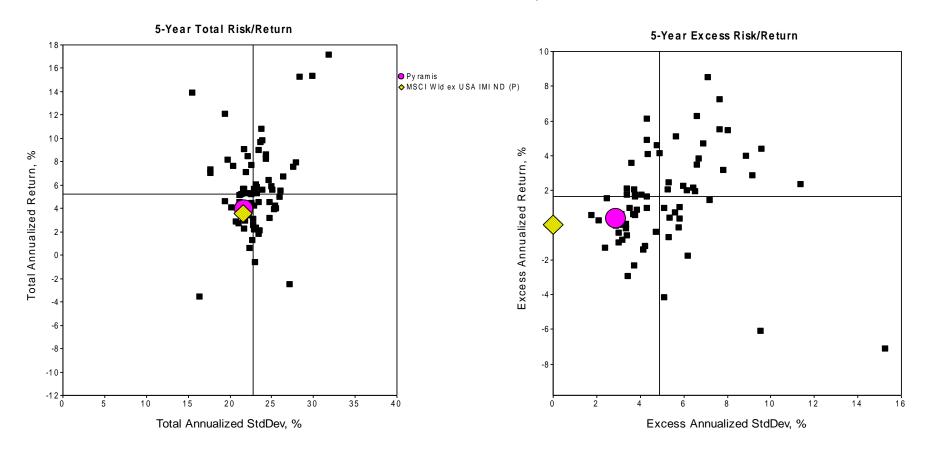


	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Boston	3.13	19.55	0.16
MSCI Wld ex US IMI ND (B)	4.00	21.66	0.18
International Equity Universe Median	5.21	22.80	0.23

	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
Boston	-0.87	4.21	-0.21
MSCI Wld ex US IMI ND (B)	0.00	0.00	NA
International Equity Universe Median	1.21	4.97	0.24

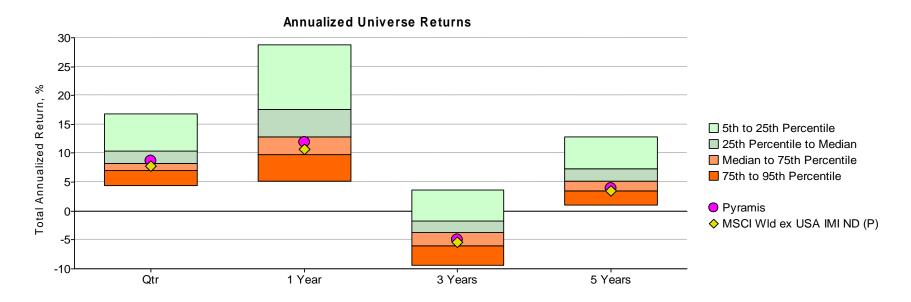


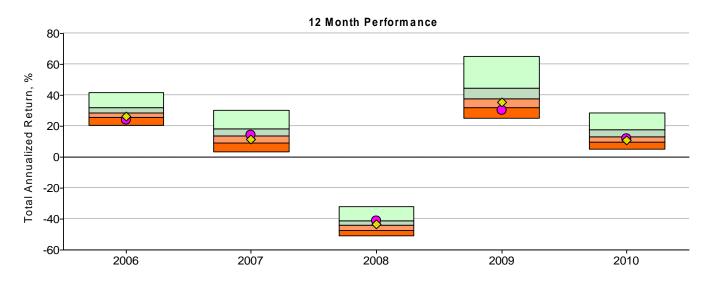




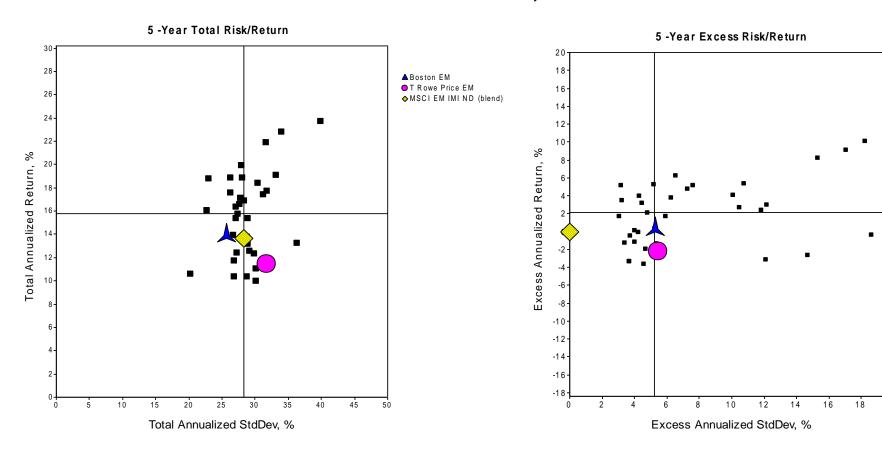
	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Pyramis	3.94	21.69	0.18
MSCI Wld ex USA IMI ND (P)	3.56	21.56	0.17
International Equity Universe Median	5.21	22.80	0.23

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Pyramis	0.38	2.87	0.13
MSCI Wid ex USA IMI ND (P)	0.00	0.00	NA
International Equity Universe Median	1.65	4.91	0.31





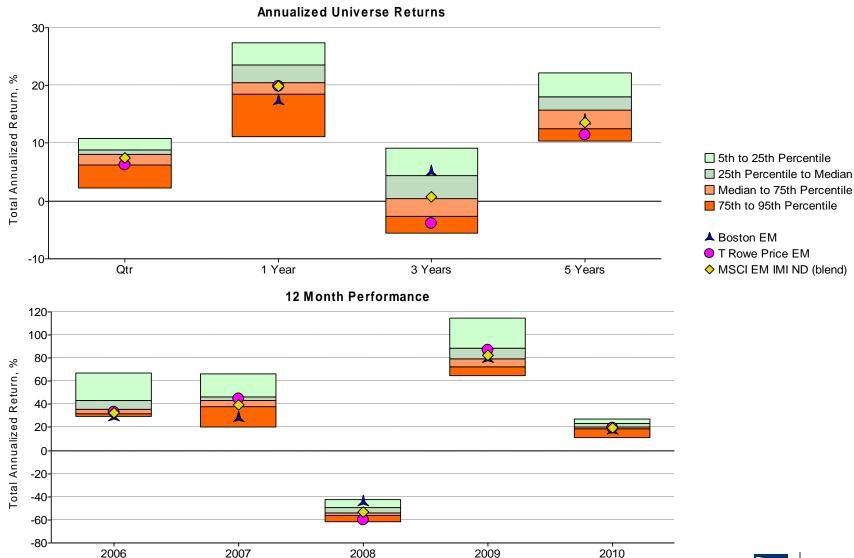
### WPERP Emerging Market Equity Manager Comparisons as of December 31, 2010



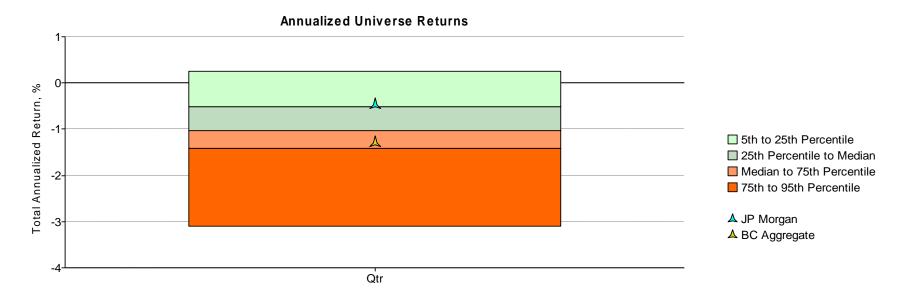
	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Boston EM	13.91	25.74	0.54
T Rowe Price EM	11.49	31.76	0.36
MSCI EM IMI ND (blend)	13.66	28.26	0.48
Emerging Equity Universe Median	15.78	28.35	0.56

	Annualized	Annualized	Sharpe
	Excess	Excess	Ratio,
	Return, %	StDev, %	Excess
Boston EM	0.25	5.26	0.05
T Rowe Price EM	-2.18	5.43	-0.40
MSCI EM IMI ND (blend)	0.00	0.00	NA
Emerging Equity Universe Median	2.12	5.22	0.26

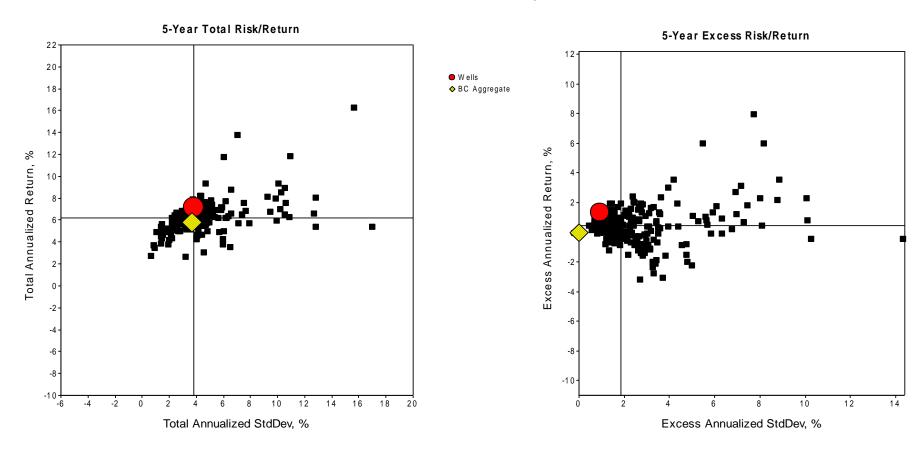
### WPERP Emerging Market Equity Manager Comparisons as of December 31, 2010



# WPERP Fixed Income Manager Comparisons as of December 31, 2010



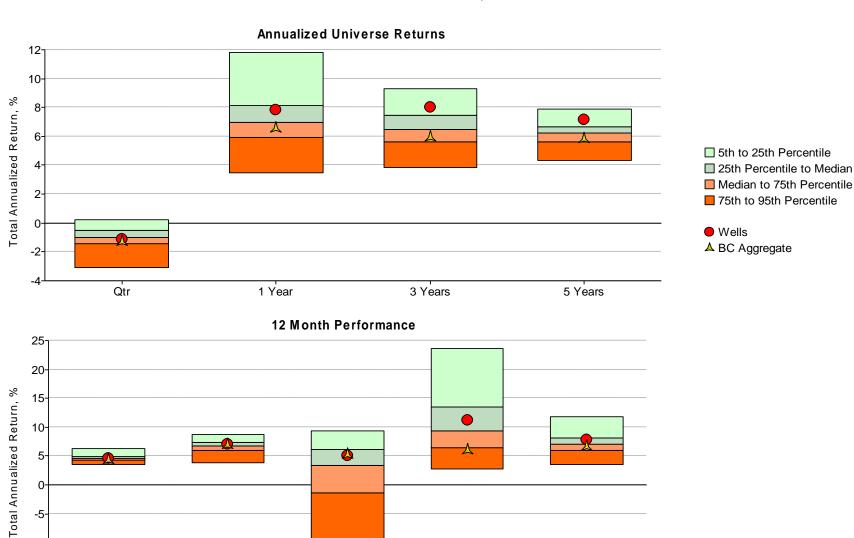
# WPERP Fixed Income Manager Comparisons as of December 31, 2010



	Annualized	Annualized	Sharpe
	Return, %	StdDev, %	Ratio
Wells	7.13	3.79	1.88
BC Aggregate	5.80	3.65	1.59
Fixed Income Manager Universe Median	6.23	3.82	1.68

	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Wells	1.33	0.93	1.44
BC Aggregate	0.00	0.00	NA
Fixed Income Manager Universe Median	0.43	1.86	0.23

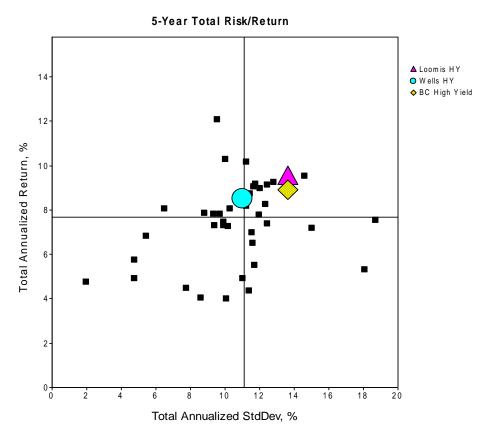
# WPERP Fixed Income Manager Comparisons as of December 31, 2010



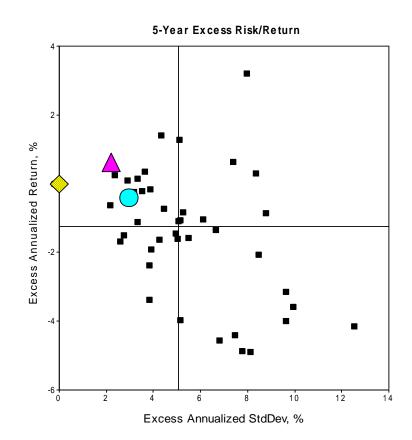
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# WPERP High Yield Manager Comparisons as of December 31, 2010

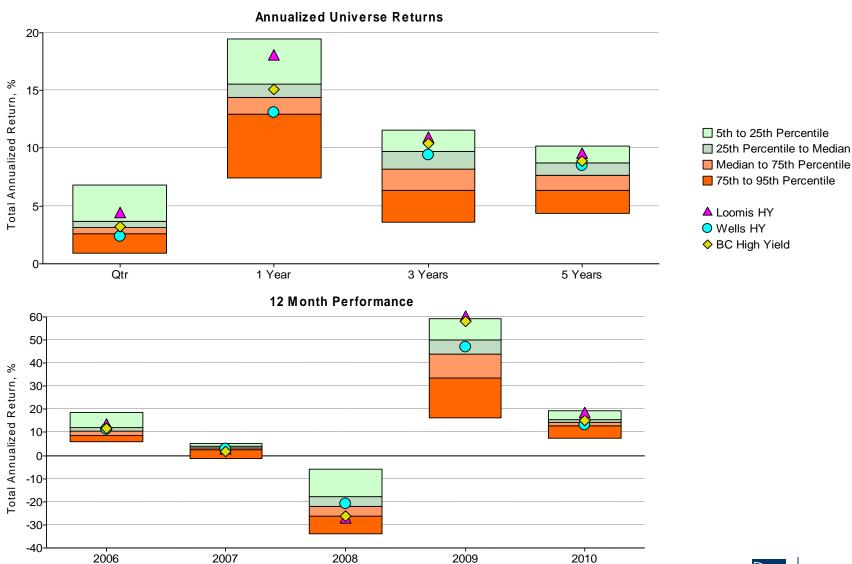


	Annualized Return, %	Annualized StdDev, %	Sharpe Ratio
Loomis HY	9.44	13.65	0.69
Wells HY	8.50	11.01	0.77
BC High Yield	8.91	13.65	0.65
U.S. High Yield Universe Median	7.68	11.11	0.74



	Annualized Excess Return, %	Annualized Excess StDev, %	Sharpe Ratio, Excess
Loomis HY	0.52	2.20	0.24
Wells HY	-0.41	2.96	-0.14
BC High Yield	0.00	0.00	NA
U.S. High Yield Universe Median	-1.23	5.07	-0.27

### WPERP High Yield Manager Comparisons as of December 31, 2010



# **APPENDIX**

# MANAGERS WATCH CRITERIA

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

<sup>\*</sup>All portfolio returns are gross of manager fees.

# SUMMARY OF WPERP RETIREMENT PLAN PORTFOLIO TRANSITIONS

Manager	Mandate	Funded	Terminated
2003			
BlackRock (formerly Merrill Lynch)	Passive Core	3Q 2003	
Northern Trust	Passive Core	3Q 2003	1Q 2005
2004			
Fred Alger	Large Cap Growth	1Q 2004	
Intech	Large Cap Growth	1Q 2004	3Q 2009
MFS	Large Cap Value	1Q 2004	
T. Rowe Price	Large Cap Value	3Q 2004	
Invesco	International	2Q 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	
2005			
Boston Company	International	1Q 2005	
Loomis Sayles	High Yield	1Q 2005	
Boston Company	Emerging Markets	1Q 2005	
T. Rowe Price	Emerging Markets	1Q 2005	
Boston Company	Large cap Active		1Q 2005
2006			
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	
2007			
Aetos	Hedge Fund	1Q 2007	
PAAMCO	Hedge Fund	1Q 2007	4Q 2010
Prisa II	Real Estate	2Q 2007	
JPM Strategic	Real Estate	3Q 2007	
2008		1.0.0	
HRJ	Private Equity	1Q 2008	
Fisher Lynch	Private Equity	2Q 2008	
CB Richard Ellis	Real Estate	2Q 2008	
Landmark XIV	Private Equity	3Q 2008	
2009			
Oaktree V	Private Equity	1Q 2009	

## (Continued)

Manager	Mandate	Funded	Terminated
	2010		
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	

# WPERP RETIREMENT PLAN POLICY BENCHMARK DESCRIPTION

Time Period	Policy Benchmarks
Thru 3/31/2003	30% Citigroup BIG 60% S&P 500 10% Citigroup T-Bill
4/1/2003-12/31/2006	35% BC Universal 40% Russell 3000 15% MSCI ACWI ex U.S. 1% T-Bill 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.
1/1/2007-2/28/2007	35% BC Universal 40% Russell 3000 15% MSCI ACWI ex U.S. 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	35% BC Universal 40% Russell 3000 15% MSCI ACWI ex U.S. 4% NCREIF Lag 3.4% Cambridge U.S. Private Equity Lag, 0.60% Cambridge U.S. Venture Capital Lag 1% T-Bill + 3% Lag 1% T-Bill
7/1/2008-6/30/2009	30% BC Universal 40% Russell 3000 24% MSCI ACWI ex U.S. IMI 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
7/1/2009-9/30/2010	40% BC Universal 33% Russell 3000 17% MSCI ACWI ex U.S. IMI 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
10/1/2010-6/30/2011	33% BC Universal 34% Russell 3000 20% MSCI ACWI ex U.S. IMI 4% NCREIF Lag 2.55% Cambridge U.S. Private Equity Lag, 0.45% Cambridge U.S. Venture Capital Lag 5% T-Bills + 3% Lag (will change to CPI + 4% Lag effective 1/1/2011) 1% T-Bill

# WPERP HEALTH PLAN POLICY BENCHMARK DESCRIPTION

Time Period	Policy Benchmarks
Thru 9/30/2009	60% Russell 1000 40% BC Aggregate Bond
10/1/2009-6/30/2010	45% BC Universal 37% Russell 3000 15% MSCI ACWI ex U.S. IMI 0% NCREIF Lag 0.85% Cambridge U.S. Private Equity Lag, 0.15% Cambridge U.S. Venture Capital Lag 0% T-Bill + 3% Lag 2% T-Bill The Plan had allocated 3% to Real Return and 3% to Real Estate asset classes. Since both of these asset classes were not funded until 3Q 2009, the policy benchmark was calculated on a pro-weighted basis (on total of 94%) during this period.
7/1/2010-6/30/2011	42% BC Universal 34% Russell 3000 18% MSCI ACWI ex U.S. IMI 0% NCREIF Lag 0.85% Cambridge U.S. Private Equity Lag, 0.15% Cambridge U.S. Venture Capital Lag 3% T-Bill + 3% Lag 2% T-Bill

# 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	Allocation $(w_i - W_i) \times (b_i - b)$	<ul> <li>w<sub>i</sub> = portfolio segment weight</li> <li>W<sub>i</sub> = benchmark segment weight</li> <li>b<sub>i</sub> = benchmark segment return</li> <li>b = total benchmark return</li> </ul>
Selection (also called within-sector selection)	The effects of portfolio manager decision to buy specific securities	Selection $(r_i - b_i) \times W_i$	r <sub>i</sub> = portfolio segment return b <sub>i</sub> = benchmark segment return W <sub>i</sub> = benchmark segment weight
Interaction (also called allocation/selection interaction)	The effects of portfolio managers decisions to security selection can inadvertently cause sector over/underweighting.	Interaction $(r_i - b_i) \times (w_i - W_i)$	$ \begin{aligned} r_i &= \text{portfolio segment return} \\ b_i &= \text{benchmark segment return} \\ w_i &= \text{portfolio segment weight} \\ W_i &= \text{benchmark segment weight} \end{aligned} $

## **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 stocks.

**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 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.

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 counties 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.

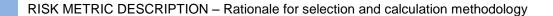
**Russell 1000 Value:** measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

**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.



## **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 <a href="http://www.econ.yale.edu/~shiller/data.htm">http://www.econ.yale.edu/~shiller/data.htm</a>. 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.

#### **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.

## **U.S Private Real Estate Markets:**

Metrics: US Cap rates and Transactions as a % of Market Value Trailing-Four Quarters

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 date is published by NCREIF. We chose to use current value cap rate. These are capitalization rates from properties that were revalued during the quarter. While this data does rely on estimates of value and therefore tends to be lagging, (estimated prices are slower to rise and slow to fall than transaction prices), the data series goes back to 1979, providing a long data series for valuation comparison. Data is published quarterly.

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

## **Credit Markets US 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.

## Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for U.S. 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.

#### 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 U.S. Treasury Bond is a measure of valuation risk for U.S. Treasuries. A low real yield means investors will accept a low rate of expected return for the certainly 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.