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## City of Hartford Municipal Employees' Retirement Fund

### Third Quarter 2012 Investment Performance Analysis

November 16, 2012

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# Executive Summary

# Investment Summary

## Portfolio Commentary

### Goals & Objectives

- The portfolios investment objective is to achieve a rate of return consistent that of the set asset allocation, while maintaining a long term investment horizon for the Fund
- As of September, 2012 the target allocation of the fund is 32% equities, 32% fixed income, 7% GAA, and 29% alternatives.

### Recent Decisions and Ongoing Activities

- NEPC's thoughts on the framework for MERF to manage their annual plan liquidity.
- Real Estate Strategic Plan delivered mid July.
- Core Real Estate manager presentations November 13.
- Value Add Real Estate presentation December.
- ING Small Cap Growth funded in August.
- Global Asset Allocation managers have been a positive contributor to total plan performance during their first quarter.

### Total Fund Performance

- The Fund returned 5.0% for the Quarter, which ranked in the 34<sup>th</sup> percentile in the ICC Public Fund Universe.
- Trailing performance ranks above the median for the last quarter, and five and ten year period, but trails the median over the last one and three year periods.

### Total Fund Asset Allocation

- Currently, the Fund is overweight to International Equities and Fixed income, and underweight to Alternative Strategies, and Emerging Markets Equity relative to long term targets.

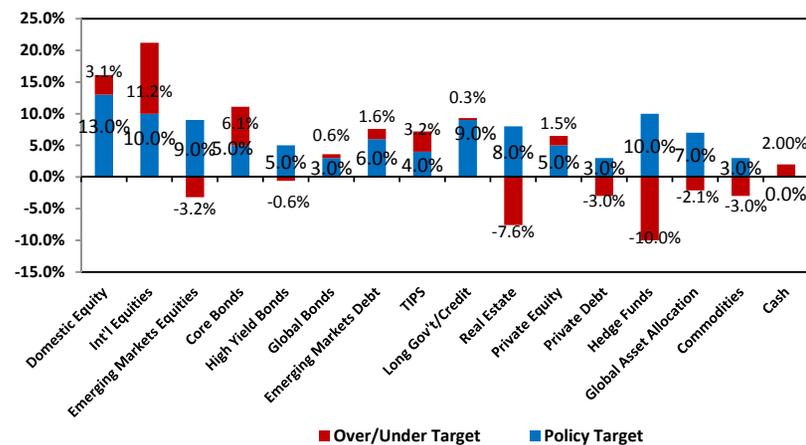
## Total Return

	Last Quarter	YTD	Last Year	Last 3 Years	Last 5 Years
Total Composite	5.0	10.5	14.6	8.9	3.3
Rank	34	55	71	60	28
Median Public Funds	4.7	10.5	16.3	9.3	2.5
Policy Index	5.0	10.5	16.4	9.3	4.0

Periods longer than one year are annualized

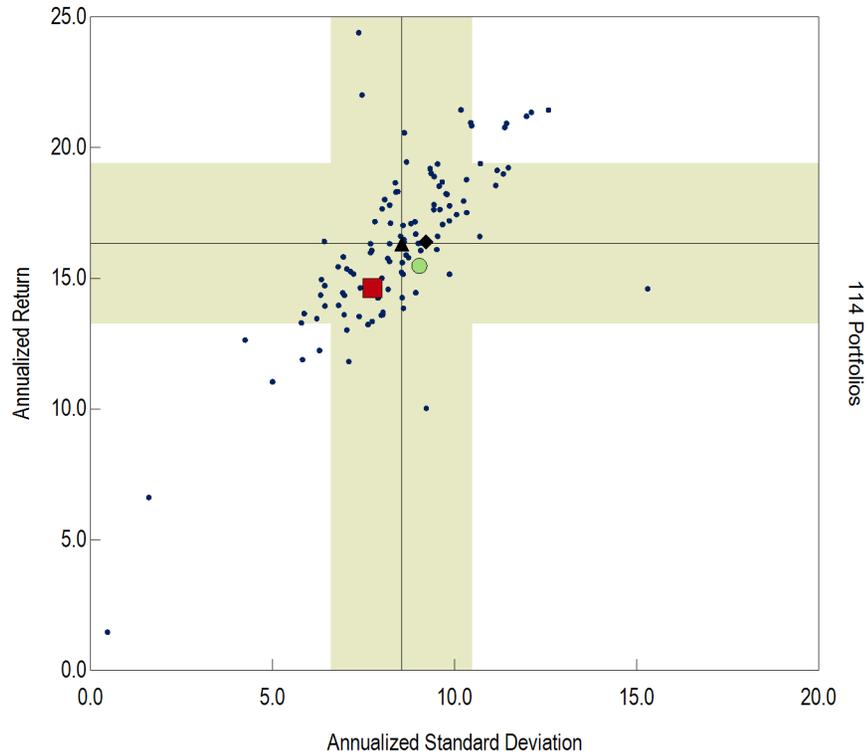
\*Rankings versus total Public Funds 1=best, 100=worst

## Current Allocation Total Composite



Total Fund Risk/Return - 1 Years

1 Years Ending September 30, 2012



- Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- ICC Public DB

1 Years Ending September 30, 2012

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Composite	14.63%	71	7.74%	31
Policy Index	16.39%	47	9.21%	69
Allocation Index	15.48%	61	9.03%	65

1 Years Ending September 30, 2012

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Composite	1.88	53	2.85	8
Policy Index	1.77	74	2.32	40
Allocation Index	1.71	86	2.28	45

# Investment Market Update: As of September 30, 2012

		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Domestic Equity Benchmarks</b>							
S&P 500	Large Core	6.4%	16.4%	30.2%	13.2%	1.1%	8.0%
Russell 2000	Small Core	5.3%	14.2%	31.9%	13.0%	2.2%	10.2%
Russell 2000 Growth	Small Growth	4.8%	14.1%	31.2%	14.2%	3.0%	10.5%
Russell 2000 Value	Small Value	5.7%	14.4%	32.6%	11.7%	1.3%	9.7%
Russell 1000	Large Core	6.3%	16.3%	30.1%	13.3%	1.2%	8.4%
Russell 1000 Growth	Large Growth	6.1%	16.8%	29.2%	14.7%	3.2%	8.4%
Russell 1000 Value	Large Value	6.5%	15.7%	30.9%	11.8%	-0.9%	8.2%
S&P Mid Cap 400	Mid Core	5.4%	13.8%	28.5%	14.3%	3.8%	10.8%
NAREIT Composite	REIT	2.0%	17.5%	34.0%	20.4%	2.4%	10.8%
		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Int'l Equity Benchmarks</b>							
MSCI EAFE	International Developed	6.9%	10.1%	13.8%	2.1%	-5.2%	8.2%
MSCI EM	Emerging Equity	7.7%	12.0%	16.9%	5.6%	-1.3%	17.0%
S&P EPAC SmallCap	Small Cap Int'l	7.9%	13.6%	13.9%	4.8%	-3.5%	11.7%
MSCI ACWI ex-US	World ex-US	7.4%	10.4%	14.5%	3.2%	-4.1%	9.8%
		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Domestic Fixed Income Benchmarks</b>							
Barclays Aggregate	Core Bonds	1.6%	4.0%	5.2%	6.2%	6.5%	5.3%
Barclays 1-10 Yr Muni.	Municipal Bond	1.4%	3.2%	5.1%	4.6%	5.4%	4.3%
Barclays US High Yield	High Yield	4.5%	12.1%	19.4%	12.9%	9.3%	11.0%
Barclays US TIPS 1-10 Yr	Inflation	1.7%	4.6%	6.3%	7.0%	6.6%	5.7%
Barclays Interm. Gov/Credit	Intermediate Gov/Cred	1.4%	3.5%	4.4%	5.2%	5.7%	4.8%
Barclays Long Gov/Credit	Long Gov/Credit	3.1%	8.3%	11.1%	12.5%	10.9%	8.1%
Barclays Long Credit	Long Credit	5.2%	11.3%	14.9%	12.7%	10.6%	8.6%
Barclays US 20+ Yr Treas	Long Treasuries	0.1%	4.3%	6.3%	12.2%	11.3%	7.9%
BofA ML US 3-Month T-Bill	Cash	0.0%	0.1%	0.1%	0.1%	0.7%	1.8%
Barclays 20+ Yr STRIPS	STRIPS	-0.6%	4.7%	7.1%	16.9%	15.4%	N/A
		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Global Fixed Income Benchmarks</b>							
Citigroup WGBI	World Gov. Bonds	3.0%	3.4%	3.3%	4.3%	6.5%	6.7%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local)	4.8%	12.1%	12.7%	9.4%	8.7%	N/A
		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Diversified Benchmark</b>							
Balanced Index*	Balanced	4.6%	11.3%	20.0%	9.8%	2.4%	8.1%
		<u>Qtr.</u>	<u>Ytd</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
<b>Alternative Benchmarks</b>							
DJ UBS Commodity Index	Commodity	9.7%	5.6%	3.8%	5.3%	-3.0%	5.2%
DJCS HF Composite	Hedge Fund	3.3%	5.6%	6.4%	5.6%	2.3%	6.9%
HFRI Fund of Funds	Fund of Funds	2.3%	3.3%	2.8%	1.5%	-1.6%	3.6%
NCREIF Property Index**	Real Estate	2.7%	12.0%	12.0%	8.8%	2.5%	8.3%
DJCS Equity Market Neutral	Hedge Fund	1.4%	0.0%	2.4%	0.8%	-8.0%	-0.4%
DJCS Event Driven	Hedge Fund	3.6%	7.2%	7.9%	4.8%	2.0%	8.2%
DJCS Long-Short	Hedge Fund	3.7%	6.0%	8.1%	3.2%	1.0%	6.9%

\* 35% LC, 10% SC, 12% Int'l, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

\*\*As of 6/30/2012

# Investment Market Update: As of September 30, 2012

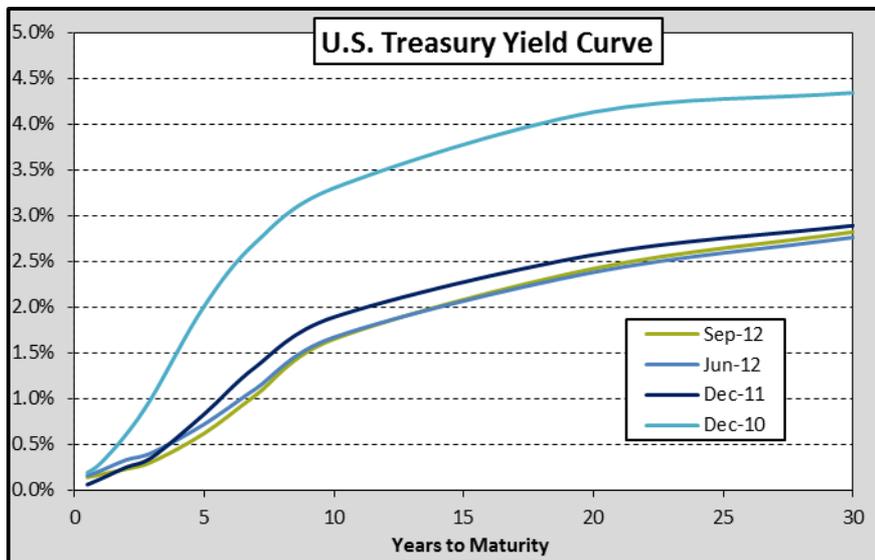
## PERFORMANCE THROUGH 9/30/2012

Sector	Index	2008	2009	2010	2011	QTR 1	QTR 2	Jul	Aug	Sep	QTR 3	2012
Large Cap Growth	R1000 Growth	-38.4%	37.2%	16.7%	2.6%	14.7%	-4.0%	1.3%	2.7%	2.0%	6.1%	16.8%
Large Cap	S&P 500	-37.0%	26.5%	15.1%	2.1%	12.6%	-2.8%	1.4%	2.3%	2.6%	6.4%	16.4%
Large Cap	Russell 1000	-37.6%	28.4%	16.1%	1.5%	12.9%	-3.1%	1.2%	2.4%	2.6%	6.3%	16.3%
Large Cap Value	R1000 Value	-36.8%	19.7%	15.5%	0.4%	11.1%	-2.2%	1.0%	2.2%	3.2%	6.5%	15.7%
REITS	Wilshire REIT	-39.2%	28.6%	28.6%	9.2%	10.8%	3.7%	1.9%	-0.2%	-1.8%	-0.2%	14.7%
Small Cap Value	R2000 Value	-28.9%	20.6%	24.5%	-5.5%	11.6%	-3.0%	-1.0%	3.1%	3.6%	5.7%	14.4%
SMID Cap	R2500	-36.8%	34.4%	26.7%	-2.5%	13.0%	-4.1%	-0.7%	3.5%	2.6%	5.6%	14.3%
Small Cap	Russell 2000	-33.8%	27.2%	26.9%	-4.2%	12.4%	-3.5%	-1.4%	3.3%	3.3%	5.3%	14.2%
Emerging FI	BC Emerging (\$US)	-14.8%	34.2%	12.8%	7.0%	5.5%	1.4%	3.8%	1.5%	1.8%	6.8%	14.1%
Small Cap Growth	R2000 Growth	-38.5%	34.5%	29.1%	-2.9%	13.3%	-3.9%	-1.7%	3.6%	3.0%	4.8%	14.1%
High Yield	BC HY	-26.2%	58.2%	15.1%	5.0%	5.3%	1.8%	1.9%	1.2%	1.4%	4.5%	12.1%
EMD Loc.	GBI-EM Glob. Div.	-5.2%	22.0%	15.7%	-1.8%	8.3%	-1.2%	2.2%	-0.1%	2.6%	4.8%	12.1%
Emerging	EM (net)	-53.3%	78.5%	18.9%	-18.4%	14.1%	-8.9%	2.0%	-0.3%	6.0%	7.7%	12.0%
Long Credit	BC Long Credit	-3.9%	16.8%	10.7%	17.1%	0.8%	5.0%	5.4%	-0.5%	0.3%	5.2%	11.3%
Diversified	Diversified*	-24.6%	24.1%	13.5%	1.3%	8.2%	-1.6%	1.1%	1.5%	1.8%	4.6%	11.3%
Int. Equity	EAFE (net)	-43.4%	31.8%	7.8%	-12.1%	10.9%	-7.1%	1.1%	2.7%	3.0%	6.9%	10.1%
Long Gov/Credit	BC Long Gov/Credit	8.4%	1.9%	10.2%	22.5%	-2.1%	7.3%	4.4%	-0.7%	-0.6%	3.1%	8.3%
Muni Bonds	BC Muni (unadj)	-2.5%	12.9%	2.4%	10.7%	1.7%	1.9%	1.6%	0.1%	0.6%	2.3%	6.1%
Commodities	DJ UBS Commodity	-35.7%	18.9%	16.8%	-13.3%	0.9%	-4.6%	6.5%	1.3%	1.7%	9.7%	5.6%
Treasury STRIPS	BC 20+ STRIPS	59.5%	-36.0%	10.9%	58.5%	-11.3%	18.8%	5.9%	-2.3%	-4.0%	-0.6%	4.7%
Core FI	BC Aggregate	5.2%	5.9%	6.5%	7.8%	0.3%	2.1%	1.4%	0.1%	0.1%	1.6%	4.0%
Int. Gov/Credit	BC Intermediate GC	5.1%	5.2%	5.9%	5.8%	0.6%	1.5%	1.0%	0.2%	0.2%	1.4%	3.5%
Global FI	Citigroup WGBI	10.9%	2.6%	5.2%	6.4%	-0.5%	0.9%	1.0%	0.7%	1.3%	3.0%	3.4%
Int. Core FI	BC Intermediate Agg	4.9%	6.5%	6.2%	6.0%	0.7%	1.3%	0.9%	0.2%	0.2%	1.4%	3.4%
Gov/Credit	BC 1-5 Yr Gov/Cred	5.1%	4.6%	4.1%	3.1%	0.5%	0.6%	0.6%	0.2%	0.2%	0.9%	2.0%
Gov/Credit	BC 1-3 Yr Gov/Cred	5.0%	3.8%	2.8%	1.6%	0.4%	0.2%	0.3%	0.1%	0.1%	0.5%	1.1%

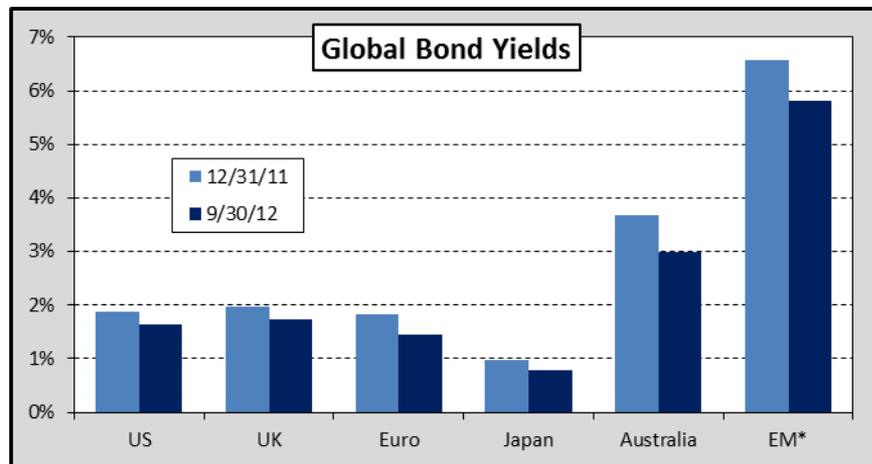
\* 35% LC, 10% SC, 12% Intl, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

Sources: Barclays, Bloomberg, Wilshire

# Market Environment – Interest Rates

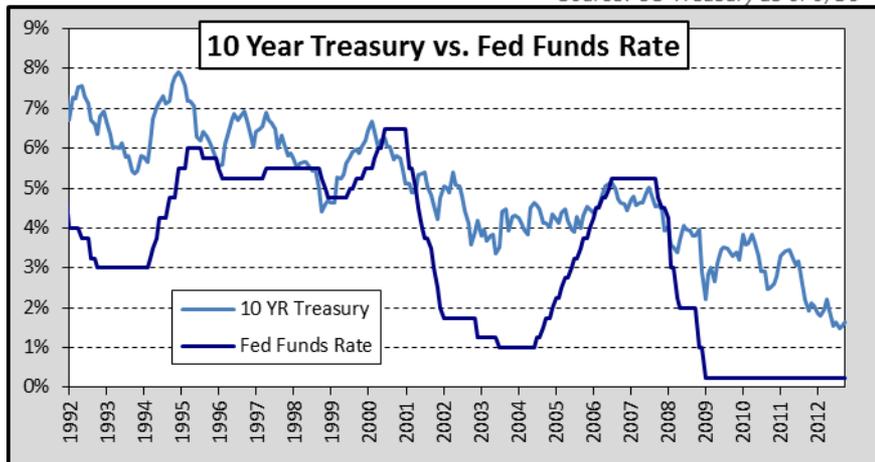


Source: US Treasury as of 9/30



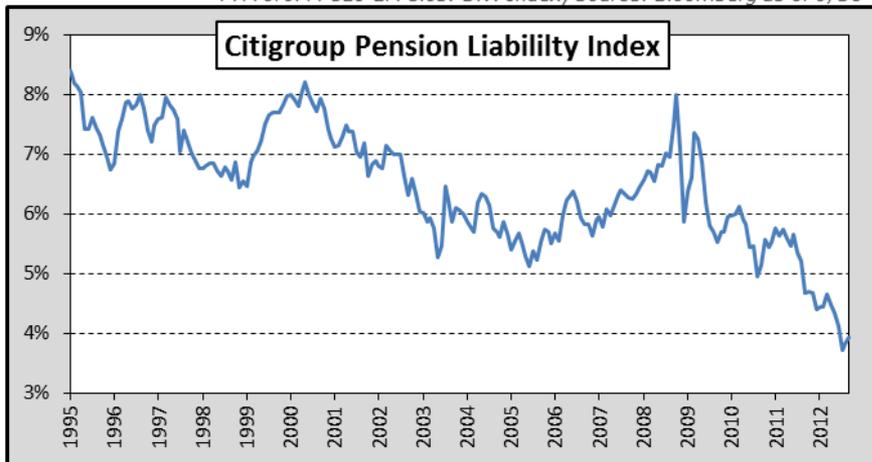
Bond yields across the globe have mostly fallen YTD

\*YTM of JPM GBI-EM Glob. Div. Index; Source: Bloomberg as of 9/30



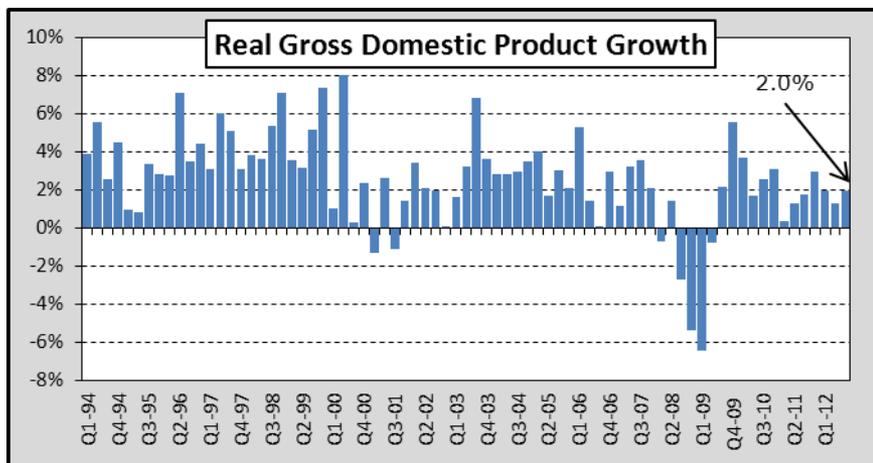
Fed Funds rate remained at 0.25% while the 10 Yr. Treasury Yield finished September at 1.63%

Source: Bloomberg as of 9/30

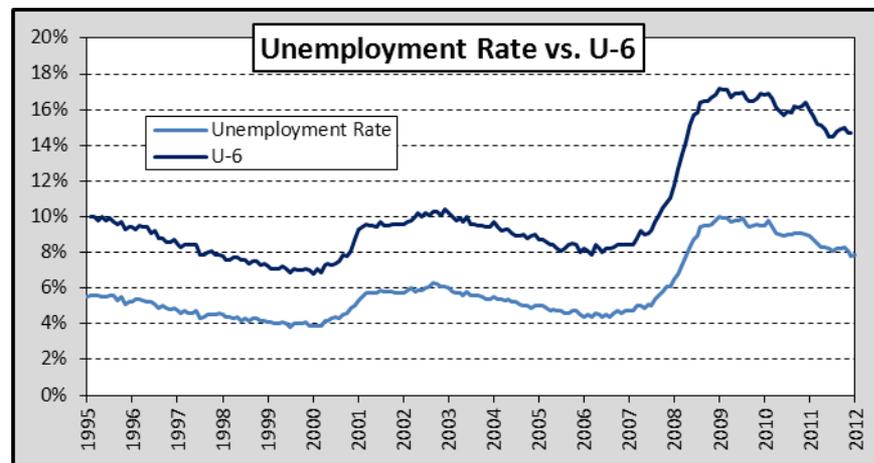


Citi Pension Discount rate rose to 3.94% in September; marking two months of increases after three consecutive months of record lows

Source: Citigroup as of 8/31

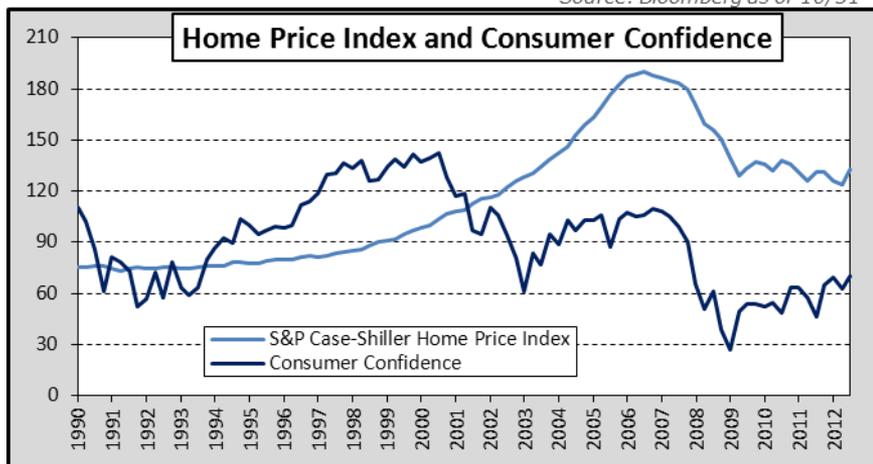


Third quarter GDP growth came in at 2.0%; following second quarter GDP growth which had been revised down to 1.3%



Unemployment increased marginally to 7.9% in October; while U-6 decreased to 14.6%

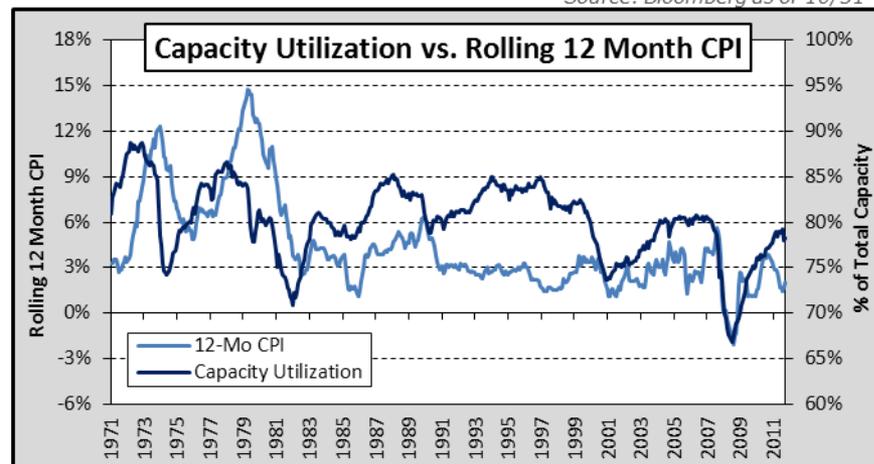
Source: Bloomberg as of 10/31



Consumer confidence rose to its highest quarterly level in Q3; the Case-Shiller home price index (as of 6/30) reached its highest mark since 2007

Source: Bloomberg as of 9/30

Source: Bloomberg as of 10/31



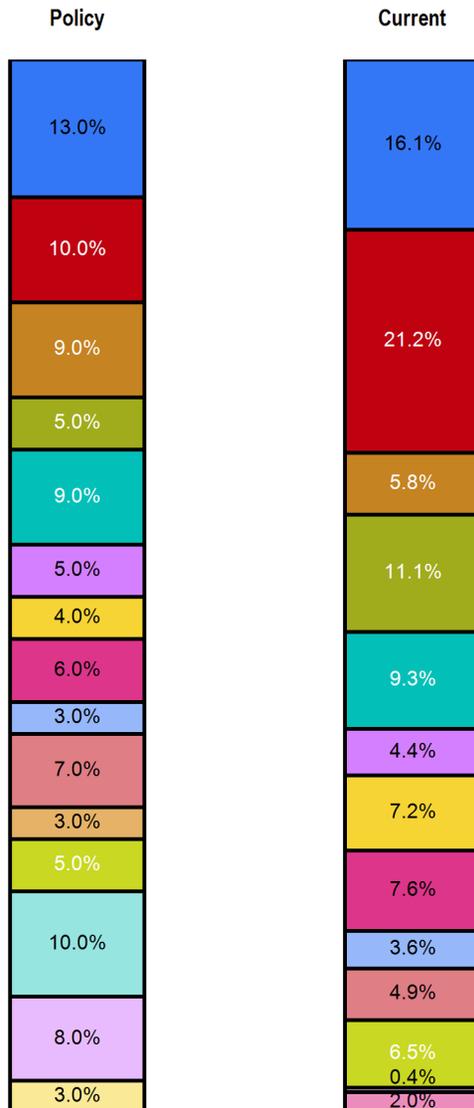
Rolling 12 month CPI increased to 2.0% at September end; capacity utilization increased slightly to 78.3% in the month

Source: Bloomberg as of 9/30



# City of Hartford Municipal Employees Retirement Fund

## Total Fund Asset Allocation vs. Policy Targets



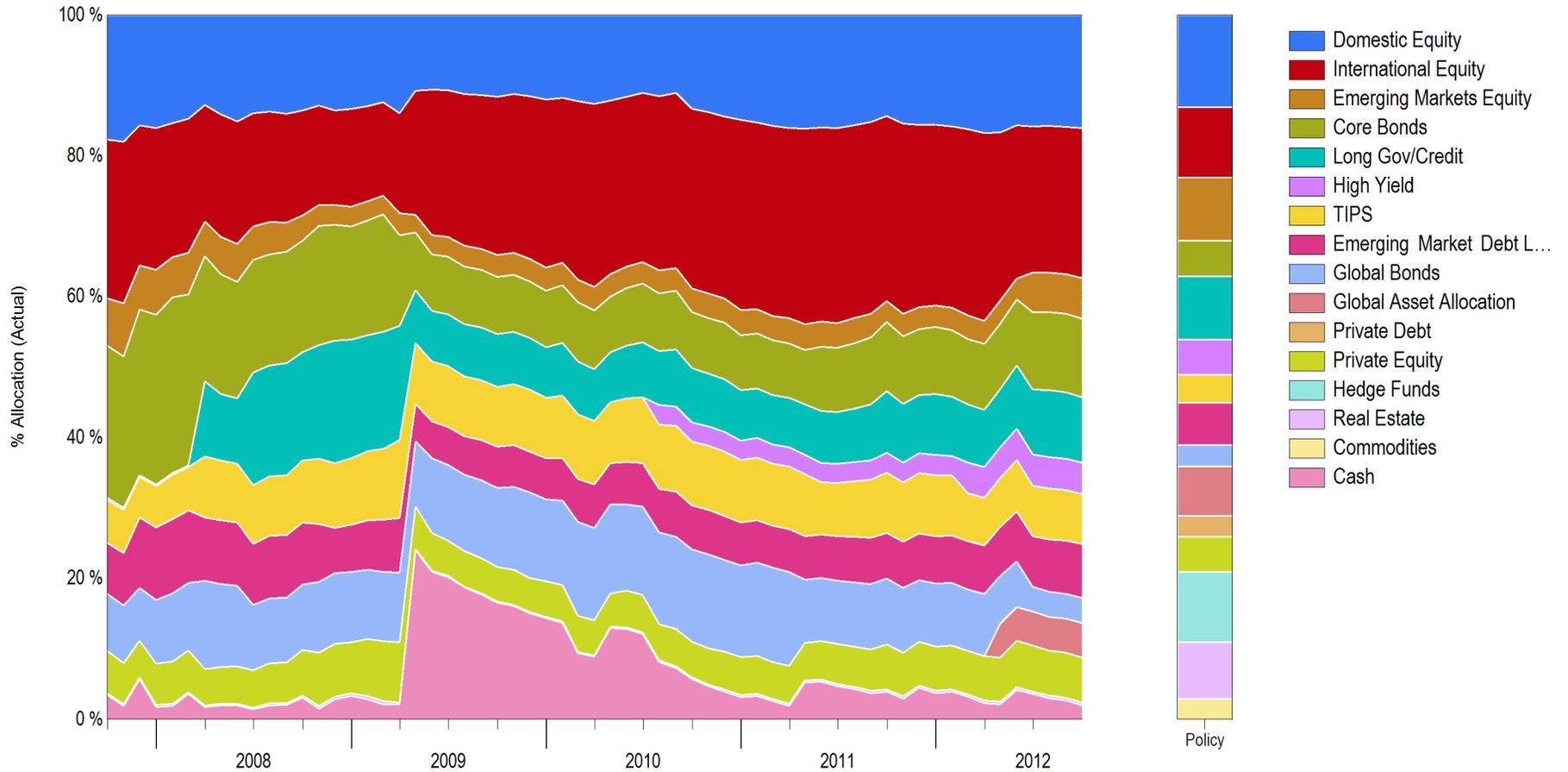
### Asset Allocation vs. Target

	Current	Policy	Current	Difference *	Policy Range	Within Range
Domestic Equity	\$153,642,697	13.0%	16.1%	3.1%	10.0% - 16.0%	No
International Equity	\$202,599,907	10.0%	21.2%	11.2%	8.0% - 12.0%	No
Emerging Markets Equity	\$55,701,220	9.0%	5.8%	-3.2%	7.0% - 11.0%	No
Core Bonds	\$106,423,980	5.0%	11.1%	6.1%	3.5% - 6.5%	No
Long Gov/Credit	\$88,422,370	9.0%	9.3%	0.3%	7.0% - 11.0%	Yes
High Yield	\$42,154,591	5.0%	4.4%	-0.6%	3.5% - 6.5%	Yes
TIPS	\$68,329,535	4.0%	7.2%	3.2%	2.5% - 5.5%	No
Emerging Market Debt Local	\$72,628,731	6.0%	7.6%	1.6%	4.0% - 8.0%	Yes
Global Bonds	\$34,001,719	3.0%	3.6%	0.6%	2.0% - 4.0%	Yes
Global Asset Allocation	\$46,787,594	7.0%	4.9%	-2.1%	5.0% - 9.0%	No
Private Debt	--	3.0%	--	-3.0%	1.0% - 5.0%	No
Private Equity	\$61,705,940	5.0%	6.5%	1.5%	3.0% - 8.0%	Yes
Hedge Funds	--	10.0%	--	-10.0%	8.0% - 12.0%	No
Real Estate	\$3,677,382	8.0%	0.4%	-7.6%	5.0% - 11.0%	No
Commodities	--	3.0%	--	-3.0%	2.0% - 4.0%	No
Cash	\$18,724,888	--	2.0%	2.0%	--	No
<b>Total</b>	<b>\$954,800,553</b>	<b>100.0%</b>	<b>100.0%</b>			

\*Difference between Policy and Current Allocation

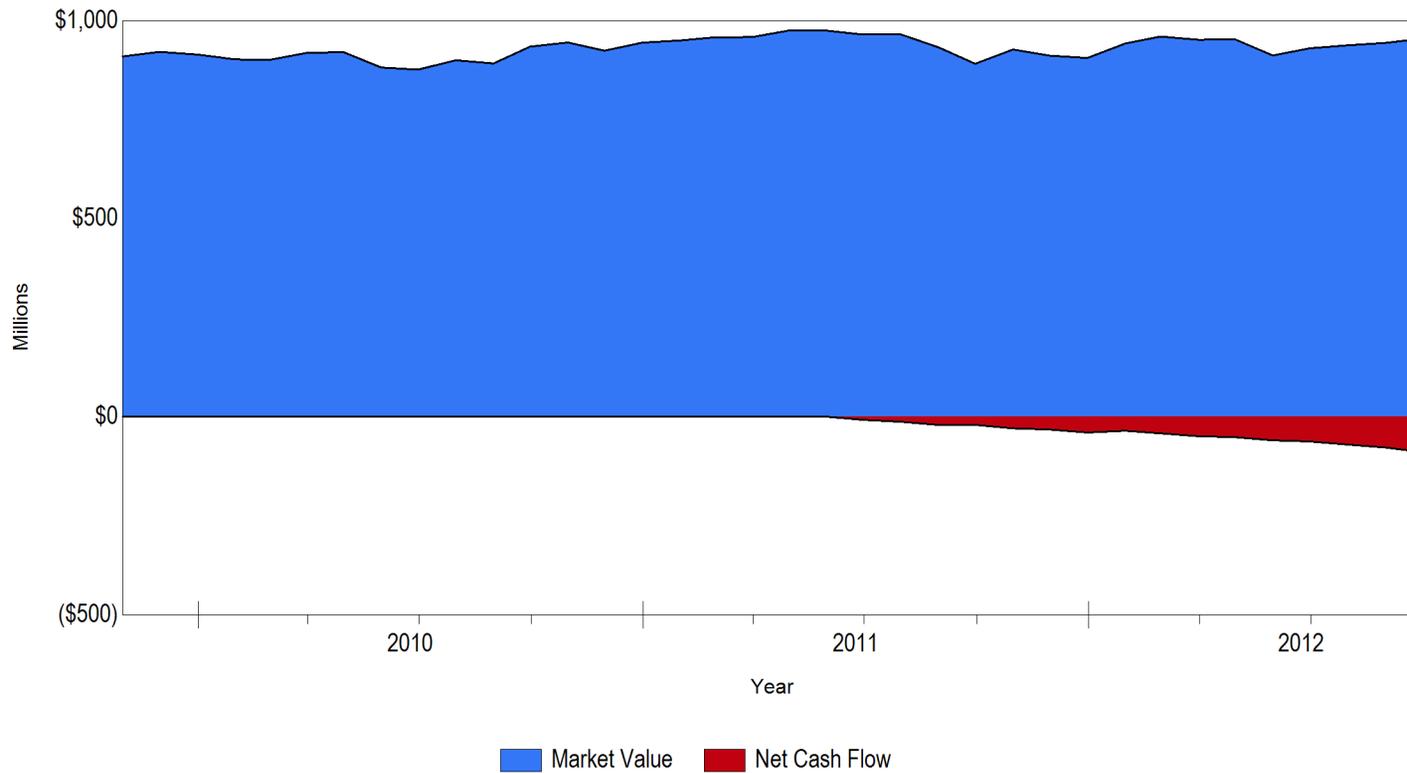
Total Fund Asset Allocation History

Asset Allocation History



**Total Fund Asset Growth Summary**

3 Years Ending September 30, 2012

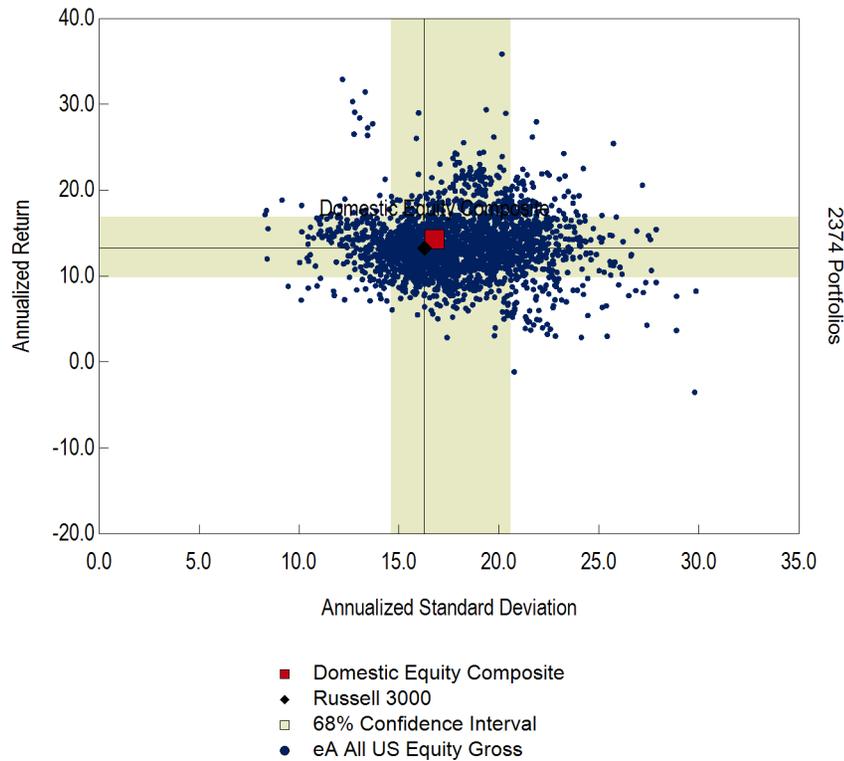


Sources of Portfolio Growth	Last Three Months	Year-To-Date	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$930,463,764	\$906,157,168	\$930,463,764	\$891,459,641	\$916,195,054
Net Additions/Withdrawals	-\$21,798,127	-\$42,237,685	-\$21,798,127	-\$60,533,267	-\$79,870,531
Investment Earnings	\$46,134,916	\$90,881,070	\$46,134,916	\$123,874,179	\$118,476,030
<b>Ending Market Value</b>	<b>\$954,800,553</b>	<b>\$954,800,553</b>	<b>\$954,800,553</b>	<b>\$954,800,553</b>	<b>\$954,800,553</b>

# Manager Pages

**Domestic Equity Composite**

3 Year Risk Return



3 Year Style Analysis



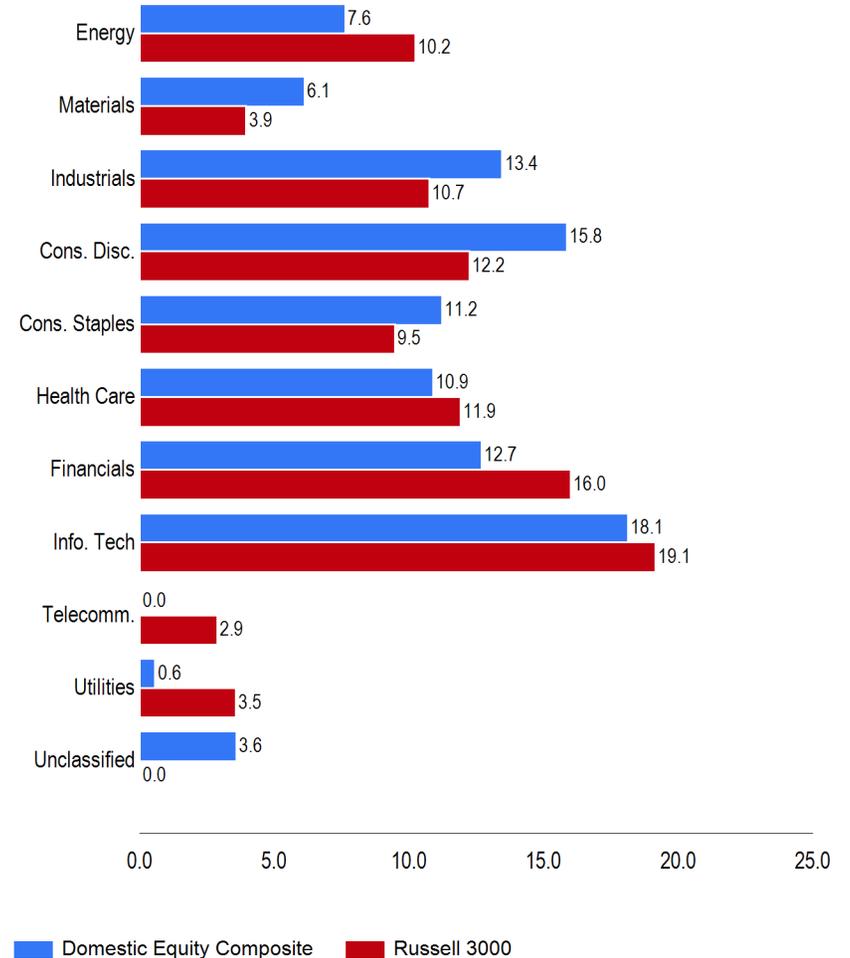
Style Analysis: Analytic is based on historical returns

**Domestic Equity Composite**

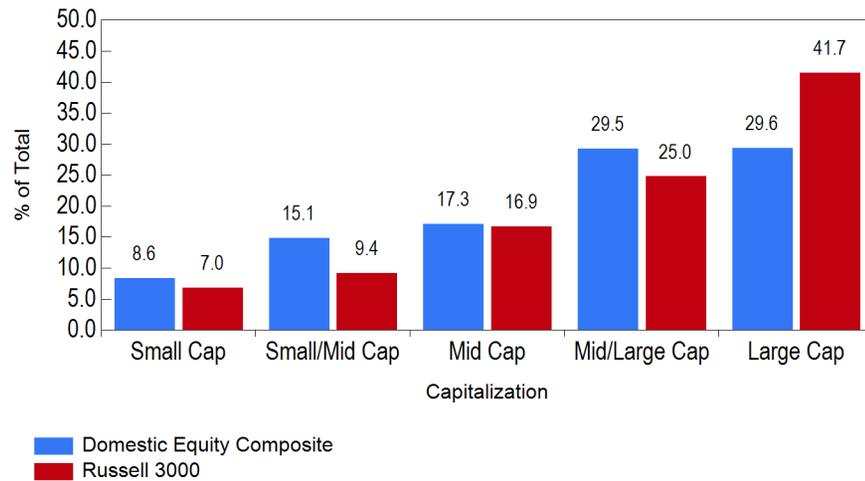
**Equity Characteristics**

	Portfolio	Russell 3000
Number of Holdings	242	2,961
Weighted Avg. Market Cap. (\$B)	65.4	97.5
Median Market Cap. (\$B)	2.6	1.0
Price To Earnings	19.9	18.2
Price To Book	3.7	3.7
Price To Sales	2.4	2.3
Return on Equity (%)	17.9	18.9
Yield (%)	1.3	2.0
Beta	1.0	1.0
R-Squared	1.0	1.0

**Equity Sector Allocation**



**Market Capitalization As Of September 30, 2012**



# City of Hartford Municipal Employees Retirement Fund

## Domestic Equity Composite

### Top Ten Holdings

CASH - USD	3.5%
COCA COLA	3.0%
GOOGLE 'A'	2.4%
MICROSOFT	2.2%
ECOLAB	2.0%
LIBERTY GLOBAL SR.C	1.9%
APPLE	1.9%
AON CLASS A	1.8%
BERKSHIRE HATHAWAY 'B'	1.8%
WAL MART STORES	1.8%

### Top Positive Contributors

	Relative Contribution %	Return %
CAMERON INTERNATIONAL	0.3%	31.3%
LIBERTY GLOBAL SR.C	0.3%	18.4%
GOOGLE 'A'	0.2%	30.1%
GILEAD SCIENCES	0.2%	29.3%
AON CLASS A	0.2%	12.1%
COMCAST SPECIAL 'A'	0.2%	10.9%
COGNIZANT TECH.SLTN.'A'	0.2%	16.5%
THOR INDUSTRIES	0.2%	33.2%
NATIONAL OILWELL VARCO	0.2%	24.5%
MONSANTO	0.1%	10.3%

### Top Negative Contributors

	Relative Contribution %	Return %
APPLE	-0.3%	14.7%
EXXON MOBIL	-0.1%	7.6%
TIMKEN	-0.1%	-18.4%
ECOLAB	-0.1%	-5.1%
PRICELINE.COM	-0.1%	-6.8%
PRAXAIR	-0.1%	-4.0%
INFORMATICA	-0.1%	-17.7%
UNITEDHEALTH GP.	-0.1%	-4.9%
SMITHFIELD FOODS	0.0%	-9.2%
HUNT JB TRANSPORT SVS.	0.0%	-12.5%

### Equity Sector Attribution

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	0.3%	-0.1%	-0.1%	12.9%	10.0%	8.0%	9.9%			
Materials	-0.3%	-0.2%	0.0%	-0.1%	1.6%	6.7%	6.2%	3.9%			
Industrials	-0.1%	0.0%	-0.1%	0.0%	3.6%	3.6%	14.7%	11.0%			
Cons. Disc.	0.2%	0.2%	0.0%	0.0%	9.3%	7.9%	14.6%	12.0%			
Cons. Staples	-0.2%	-0.2%	0.0%	0.0%	2.0%	3.9%	10.9%	9.7%			
Health Care	0.0%	0.0%	0.0%	0.0%	6.3%	6.3%	11.3%	11.9%			
Financials	-0.1%	-0.2%	0.0%	0.0%	4.9%	6.2%	11.9%	16.0%			
Info. Tech	0.1%	0.1%	0.0%	0.0%	7.2%	6.6%	17.9%	19.1%			
Telecomm.	0.0%	0.0%	0.0%	0.0%	8.9%	8.0%	0.2%	2.8%			
Utilities	0.2%	0.3%	0.2%	-0.2%	7.9%	0.6%	0.6%	3.7%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.0%	--	3.7%	0.0%			
<b>Portfolio</b>	<b>-0.3%</b>	<b>=</b>	<b>0.3%</b>	<b>+</b>	<b>-0.3%</b>	<b>+</b>	<b>-0.4%</b>	<b>5.9%</b>	<b>6.2%</b>	<b>100.0%</b>	<b>100.0%</b>

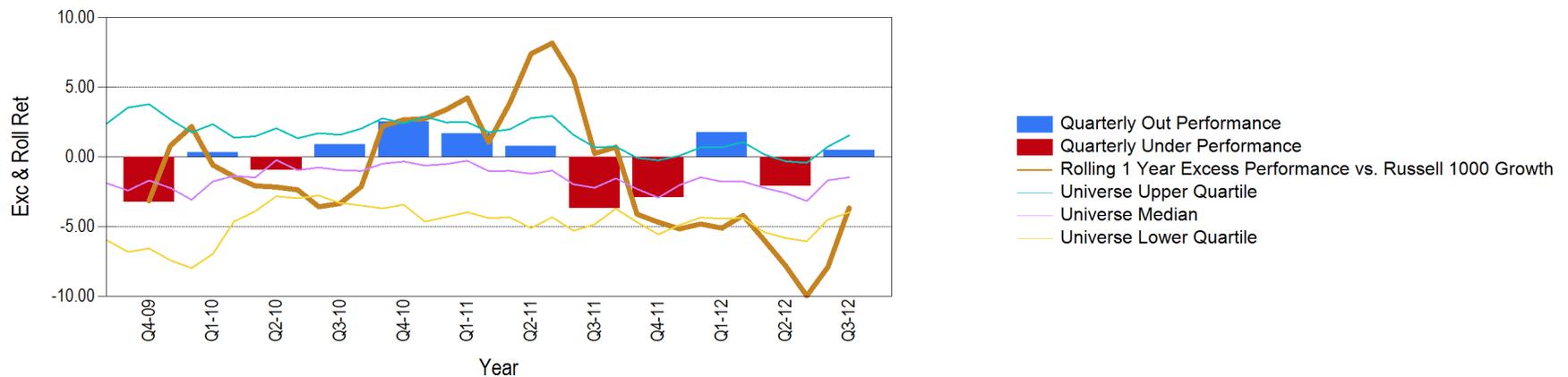
## Atlanta Capital Large Growth

Atlanta Capital Large Growth portfolio outperformed the Russell 1000 Growth Index returning 6.6% versus the benchmark return of 6.1%. Outperformance for the quarter was due to both stock selection and sector weighting. Selection was best within Information Technology and Energy Sectors. Relative to the Russell 1000 Growth Index, the underweight in the Information Technology sector was the largest detractor and the overweight in Energy was the largest contributor. Four stocks were added to the portfolio over the quarter - Comcast, Ecolab, IBM and Microsoft. Six were eliminated Acme Packet, Borg-Warner, J.B. Hunt, Mercadolibre, salesforec.com and VMWare.

eA US Large Cap Growth Equity Gross Accounts



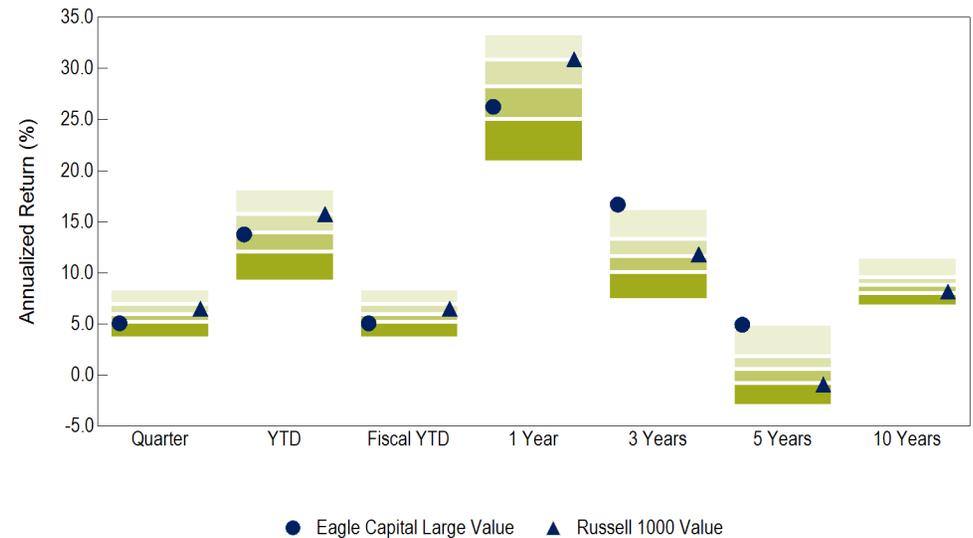
Annualized Excess Performance



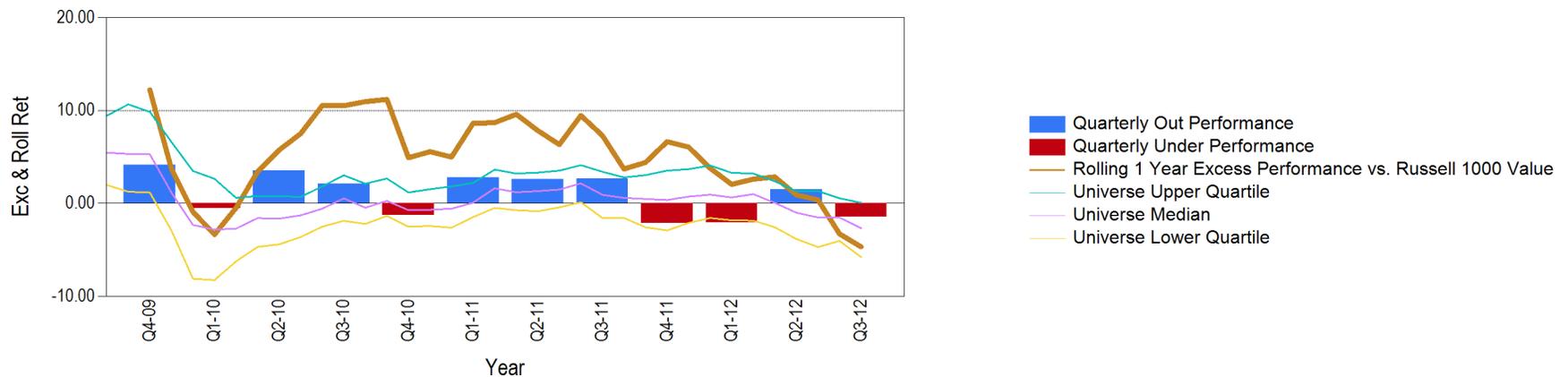
Eagle Capital Large Value

Eagle Capital Large Value underperformed in the third quarter returning 5.1%, while the Russell 1000 Value returned 6.5%. Historically, Eagle has underperformed during periods when a rising market is disconnected from fundamentals. It is Eagle's belief that short-term increases in overall market are the result of liquidity expansion rather than improving growth prospects, and hence Eagle's portfolio ought not fully participate as the portfolio is structured to avoid secular business risk and capture likely long-term growth. Top contributors for the quarter include Liberty Global (+.88%), Google (+.85%), Goldman Sachs Group (+.58%). Detractors include W R Berkely (-0.13%), Fidelity National Information (-0.14%) and Praxair (-0.20%). A position in Morgan Stanley was initiated, while Progressive was exited, there were no other purchases or sales over the quarter.

eA US Large Cap Value Equity Gross Accounts



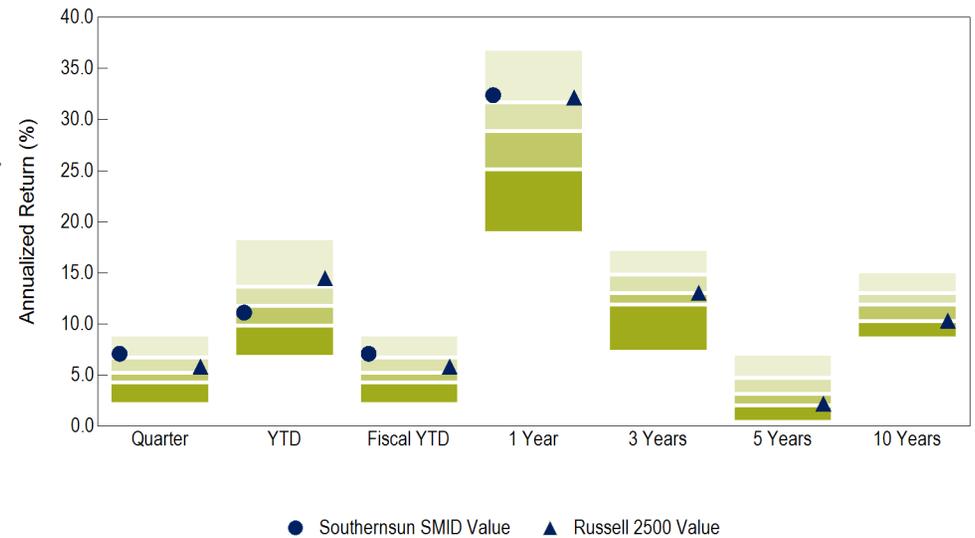
Annualized Excess Performance



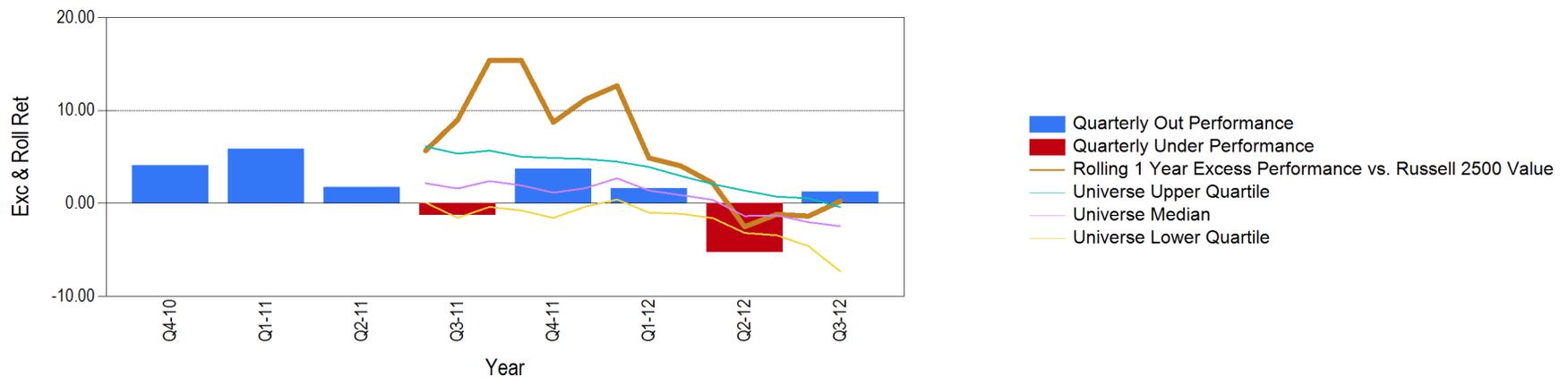
Southernsun SMID Value

SouthernSun Smid Value returned 7.1% in the quarter outperforming the Russell 2500 value which returned 5.8%. Stock selection drove majority of outperformance. Stock selection in the Producer Durables were strong as Trinity (TRN), Pentair (PNR) and Flowserve (FLS) outperformed. The Consumer Discretionary sector was also a positive contributor to performance. No new positions were added over the quarter. Tractor Supply Company (TSCO) reached SoutherSun's price target and the position was exited during the quarter.

eA US Small-Mid Cap Value Equity Gross Accounts

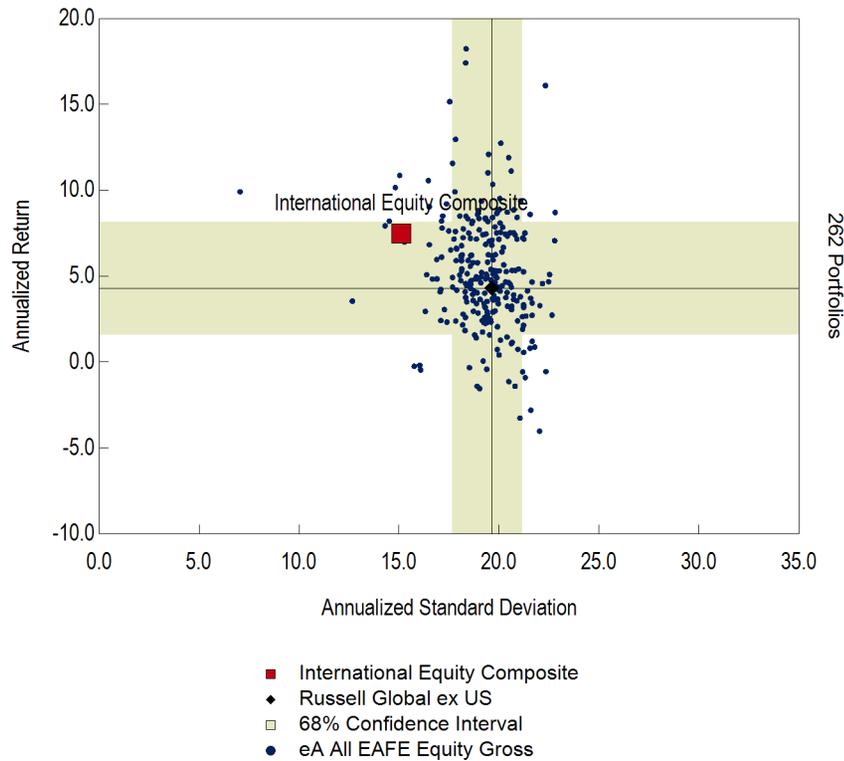


Annualized Excess Performance

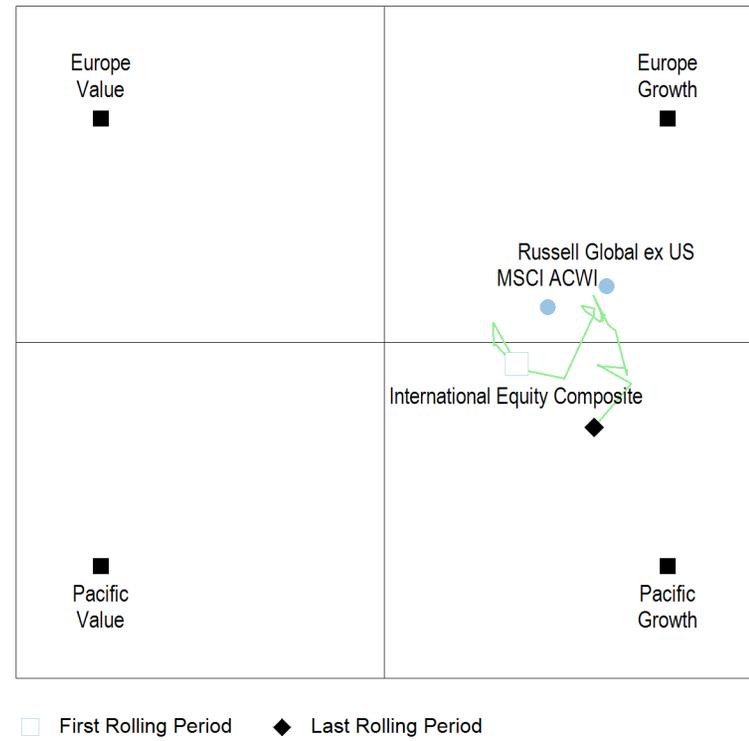


International Equity Composite

3 Year Risk Return



3 Year Style Analysis



Style Analysis: Analytic is based on historical returns

**International Equity Composite**

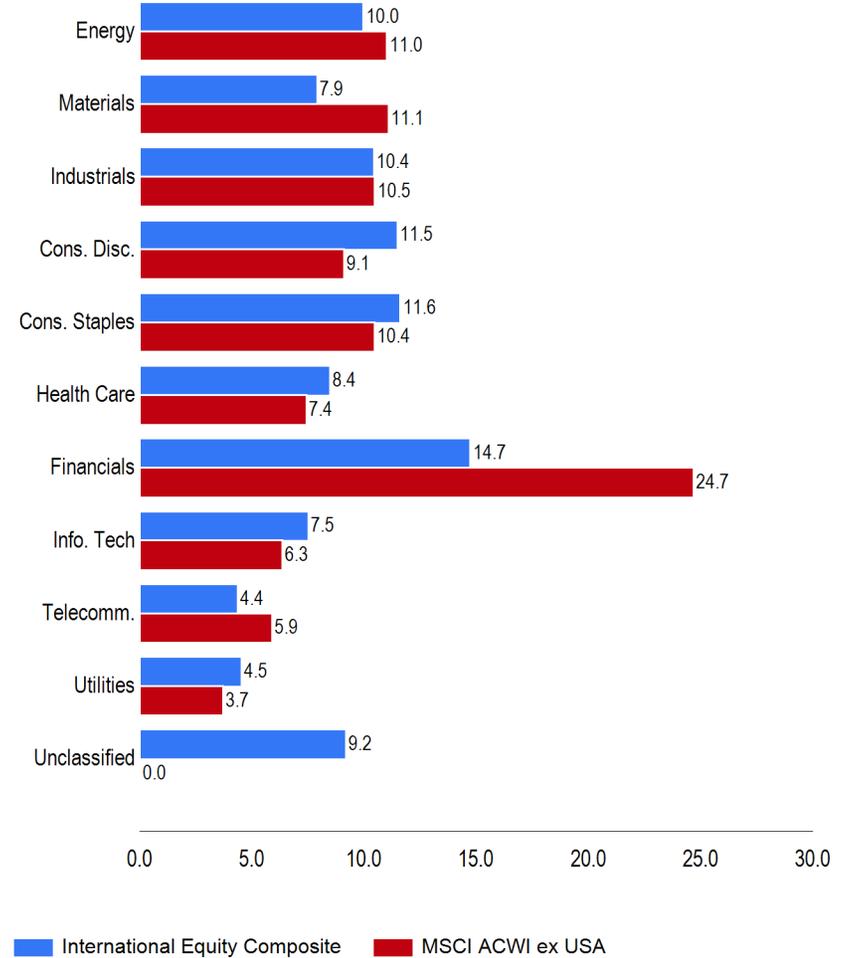
**Equity Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	1,489	1,837
Weighted Avg. Market Cap. (\$B)	34.1	45.1
Median Market Cap. (\$B)	3.2	5.9
Price To Earnings	15.9	14.7
Price To Book	3.2	2.5
Price To Sales	2.2	1.7
Return on Equity (%)	17.5	15.5
Yield (%)	2.8	3.3
Beta	0.8	1.0
R-Squared	1.0	1.0

**Regional Allocation**

	International Equity Composite	MSCI ACWI ex USA
Region Weighting		
North America ex U.S.	2.03	8.32
United States	9.03	0.00
Europe Ex U.K.	18.44	28.38
United Kingdom	6.85	15.87
Pacific Basin Ex Japan	9.51	9.60
Japan	18.85	13.60
Emerging Markets	32.74	23.82
Other	2.56	0.41

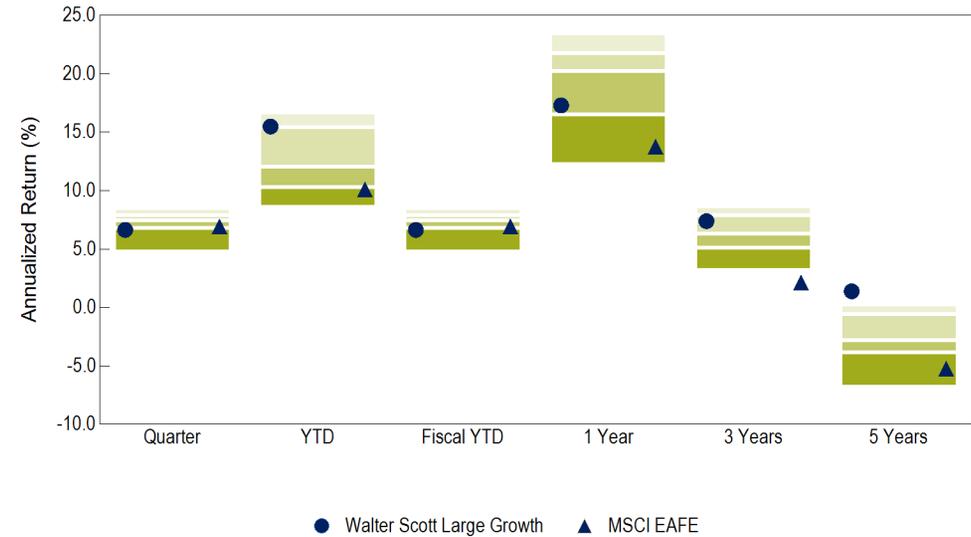
**Equity Sector Allocation**



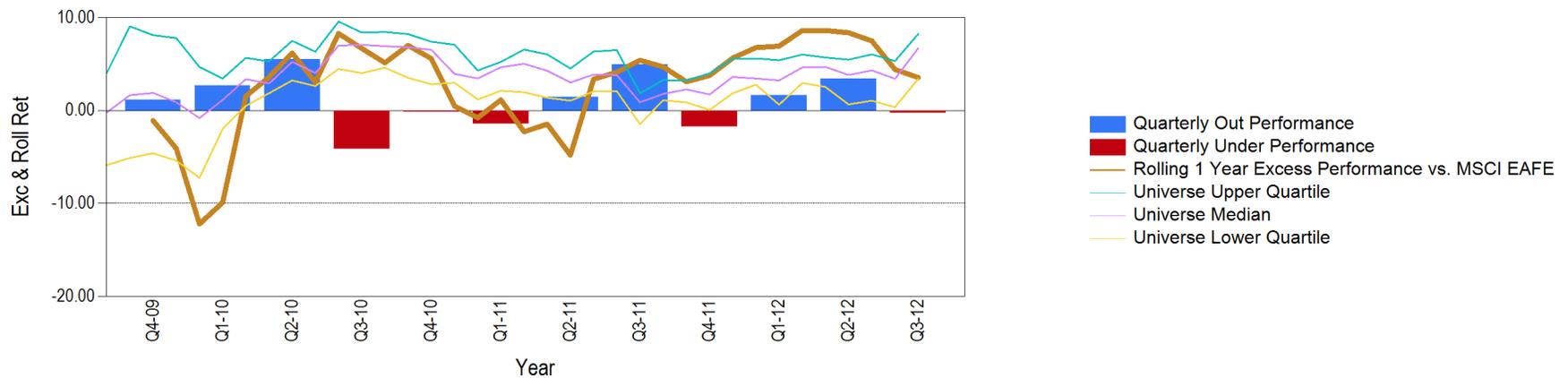
Walter Scott Large Growth

Walter Scott & Partners Int'l Large Growth underperformed during the quarter returning 6.6% while the MSCI EAFE returned 6.9%. Over longer time periods, the strategy has continued it's strong performance versus it's benchmark as all tailing periods great than three months remain ahead of the MSCI EAFE index.

eA EAFE Large Cap Growth Gross Accounts

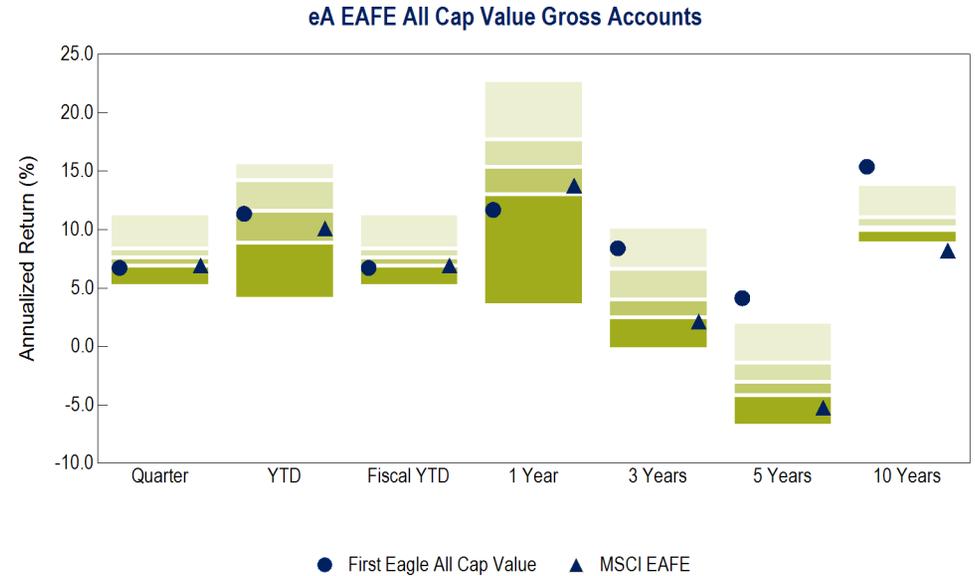


Annualized Excess Performance

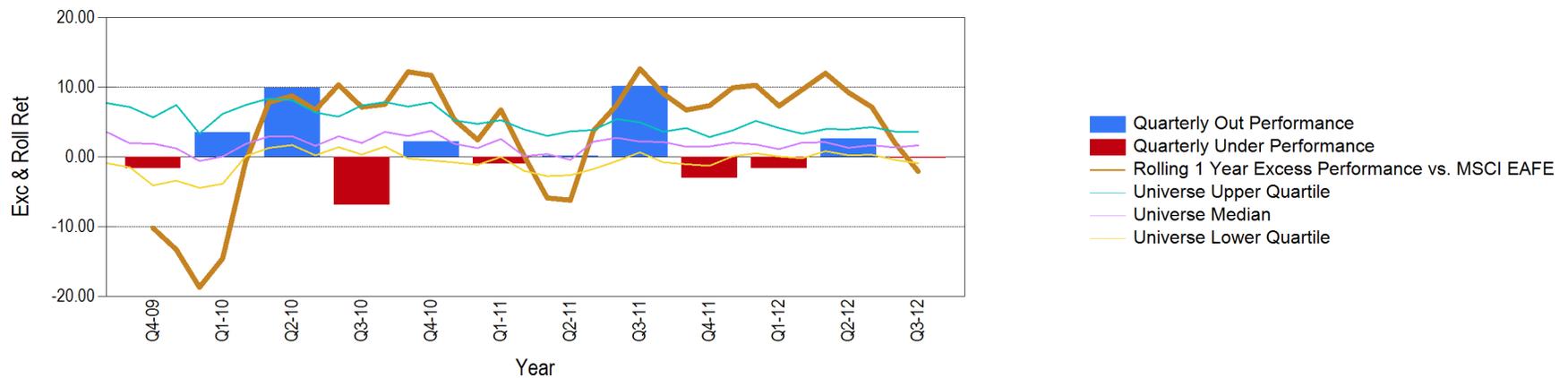


First Eagle All Cap Value

First Eagle Int'l All Cap Value slightly underperformed over the third quarter returning 6.7%, while the MSCI EAFE returned 6.9%. Top contributors to return for the third quarter include SPDR Gold Trust (largest holding as of September 30), Angico-Ealges Mines Ltd., KDDI Corp and Shimano Inc. Top detractors from performance were Canon Inc., NKSJ holdings Inc., Wienerberger AG, Bouygues S.A. and SMC Corp. The portfolio's weighting to cash and cash equivalents has increased to near 20%.

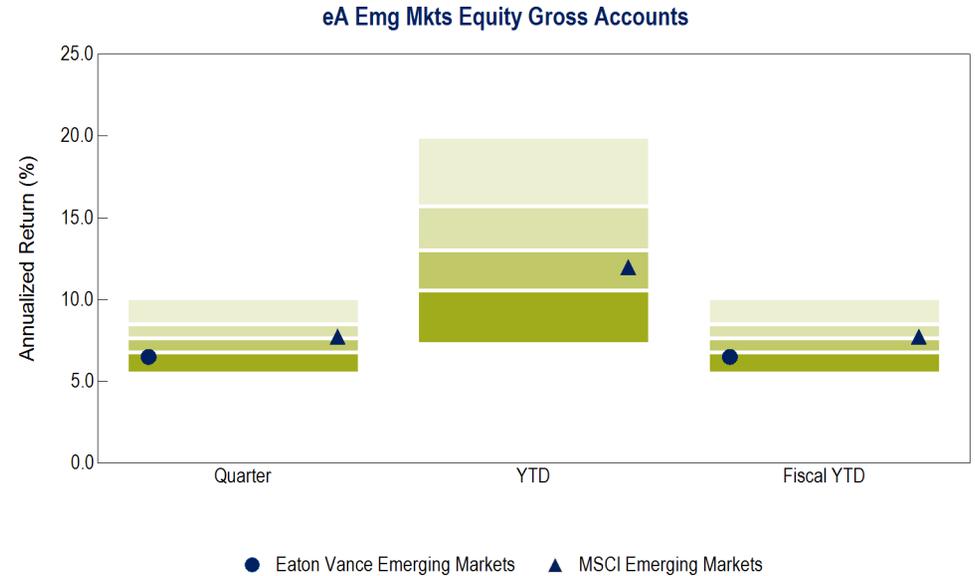


Annualized Excess Performance

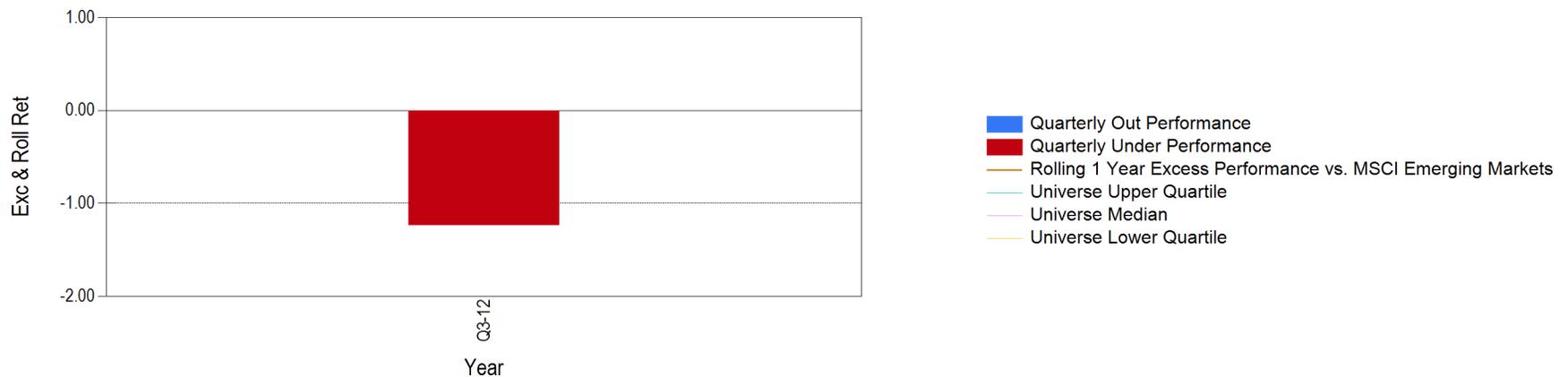


Eaton Vance Emerging Markets

Eaton Vance Emerging Markets under performed in the third quarter returning 6.5% versus the MSCI Emerging Markets Index return of 7.7%. Positive contributors to relative performance included an underweight to China which underperformed the index (4.7%), and overweight to Egypt which outperformed the index (22.6%) and exposure to Nigeria which outperformed the index (32.0%). The main detractors from the quarterly performance were an overweight position to Morocco which underperformed the index (-3.4%), an underweight to Korea which outperformed the index (9.9%) and exposure to Vietnam which underperformed the index (-8.2%).

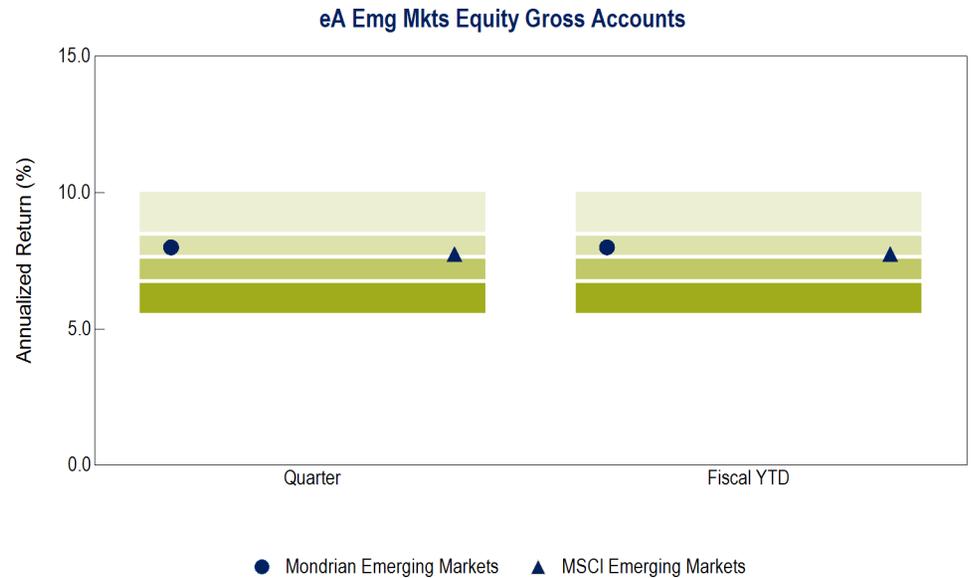


Annualized Excess Performance



**Mondrian Emerging Markets**

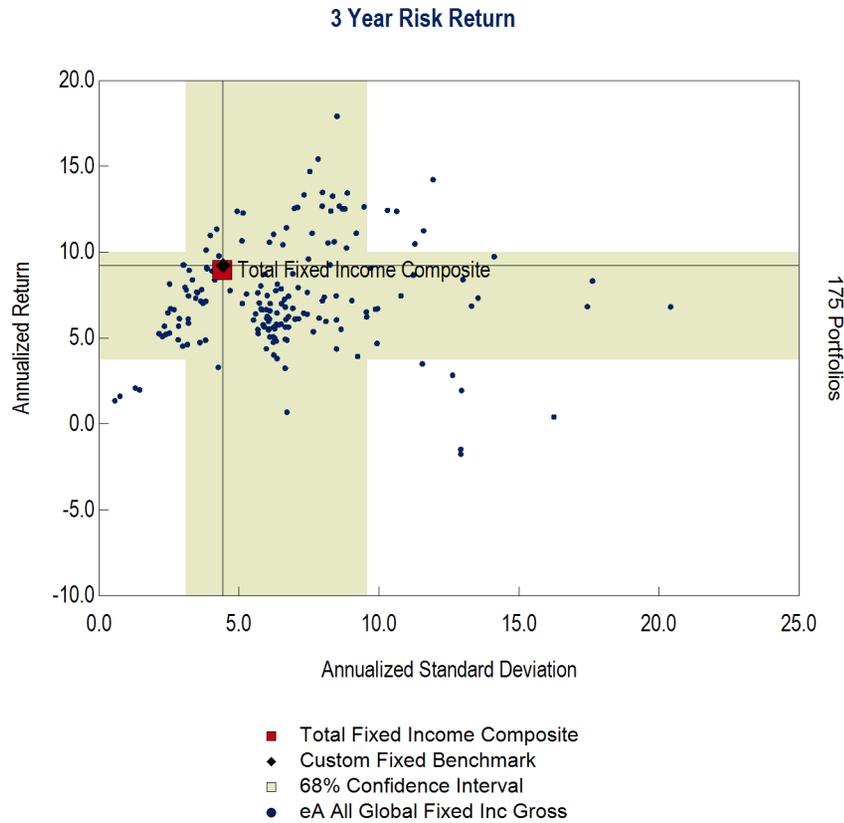
Mondrian Focused Emerging Markets Equity returned 8.0% outperforming the MSCI Emerging Market Index return of 7.7%. Stock selection was the primary driver of outperformance. Holdings in Indian financials in particular benefitted the fund, as positive policy developments drove prices higher. Santander Mexico, a new holding for the fund, was spun off from its Spanish parent and rose substantially add to performance. Country and currency allocations slightly detracted from performance. The fund's underweight position in Taiwan was the biggest detractor, as this market outperformed strongly.



**Annualized Excess Performance**



**Total Fixed Income Composite**



Style Analysis: Analytic is based on historical returns

# City of Hartford Municipal Employees Retirement Fund

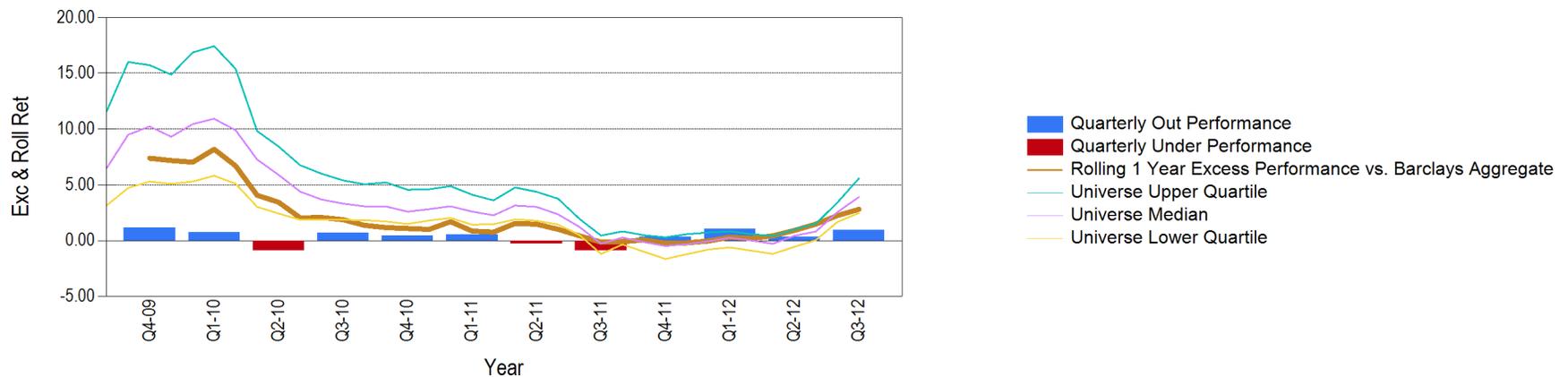
## Hartford Investment Core Plus Fixed

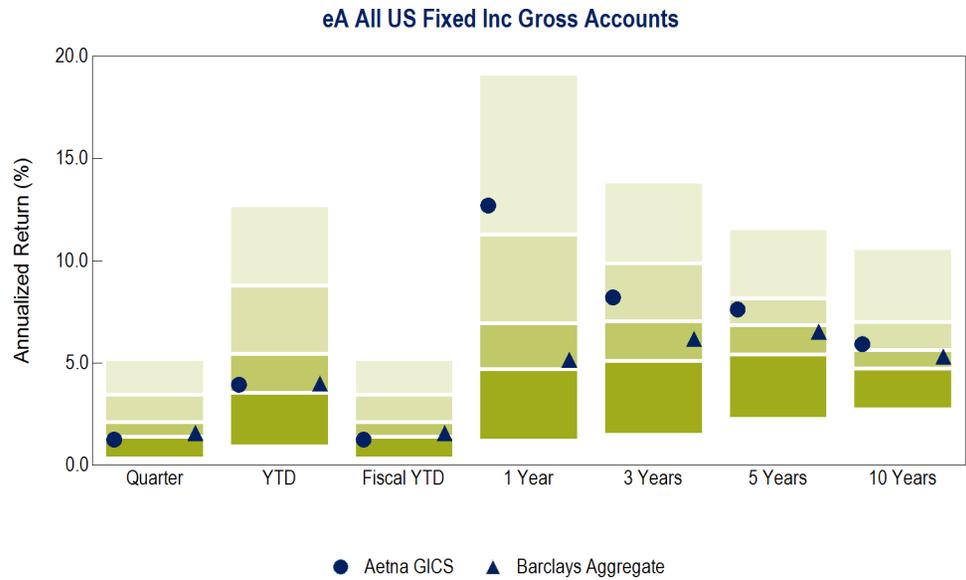
The **Hartford Core Plus Fixed Income** portfolio earned 2.5%, outperforming the Barclays Aggregate benchmark return of 1.6% by 90bps. Over the past 3 year period the portfolio has significantly outperformed the index by 150 bps, returning 7.7% versus the index return of 6.2%. Portfolio yield was 1.8% versus the benchmark yield of 1.25%, and its duration was 4.36 slightly higher than the 4.34 benchmark duration. As volatility in the fixed income markets decreased, spread sectors rallied. Security selection results were strong across multiple asset classes. Within Investment Grade Credit, an overweight to Banking and underweights to Foreign Agencies and Supranationals contributed to outperformance. With the Fed's QE3 open ended commitment to buy mortgages, the portfolio's Mortgage-Backed securities rallied significantly.

eA US Core Plus Fixed Inc Gross Accounts



Annualized Excess Performance

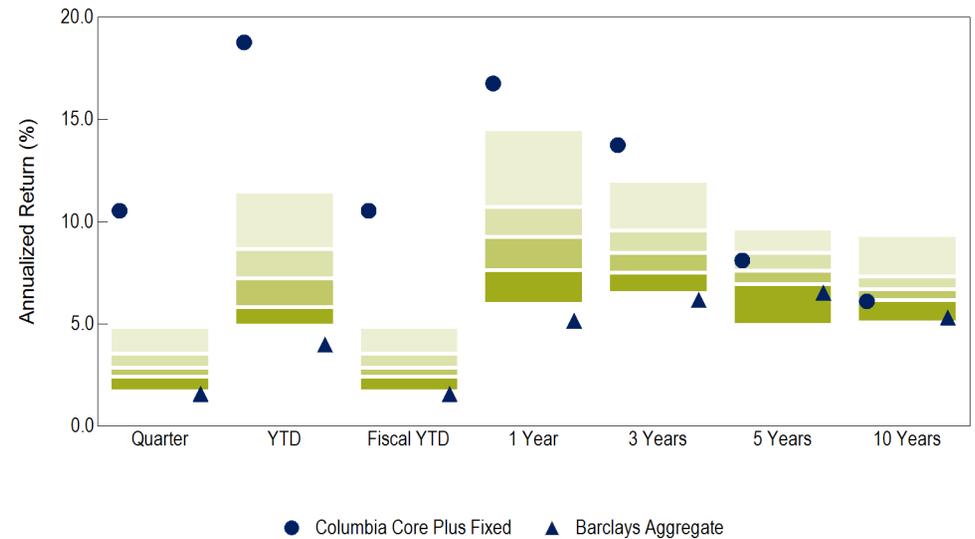




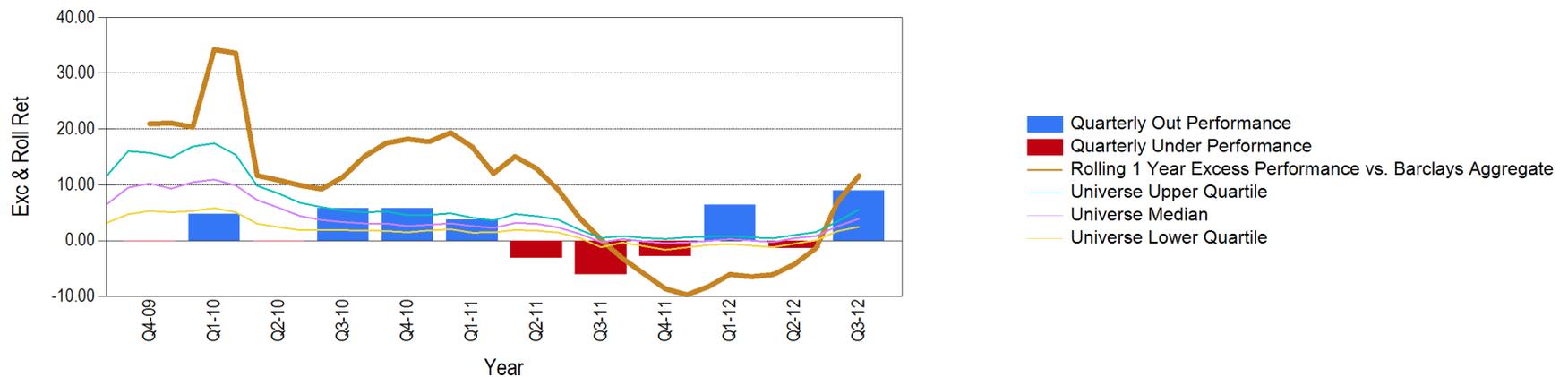
Columbia Core Plus Fixed

Columbia Core Plus Fixed Income portfolio was mostly liquidated and is now managed by Hartford Investment Management Company (HIMCO) as the remaining securities are paid down. There are a handful of securities left at this point and their value is less than \$1 million.

eA US Core Plus Fixed Inc Gross Accounts



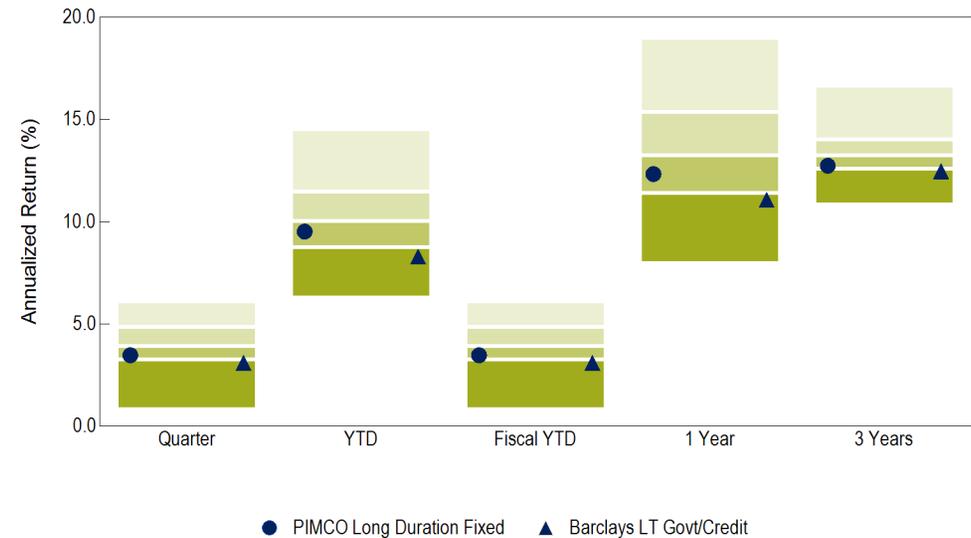
Annualized Excess Performance



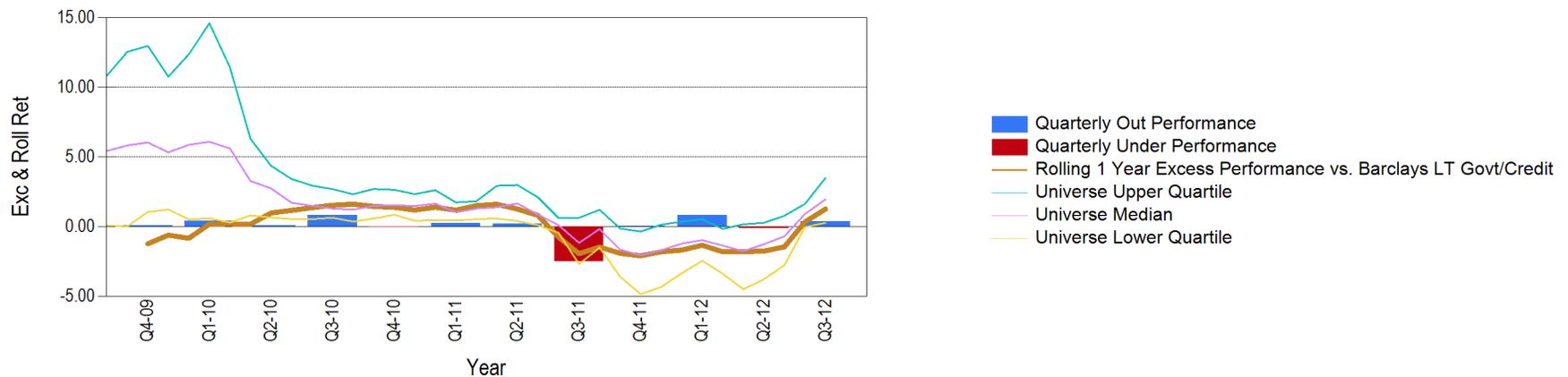
**PIMCO Long Duration Fixed**

**PIMCO Long Duration** outperformed over the quarter returning 3.5% versus the Barclays Long Term Gov't/Credit Index return of 3.1%. The trailing one year return is now above the benchmark by 120 bps returning 12.3% versus the index return of 11.1%, and is also ahead on the three year period by 20 bps. Most spread sectors outperformed amid global central bank monetary easing. Financials, non-Agency mortgages, Build America Bonds, a modest tactical allocation to high yield corporates, exposure to emerging market local rates and holdings of U.S. dollar-denominated emerging market debt all were positive contributors to performance. The overall underweight position to corporate bonds detracted from performance over the quarter.

eA US Long Duration Fixed Inc Gross Accounts



Annualized Excess Performance



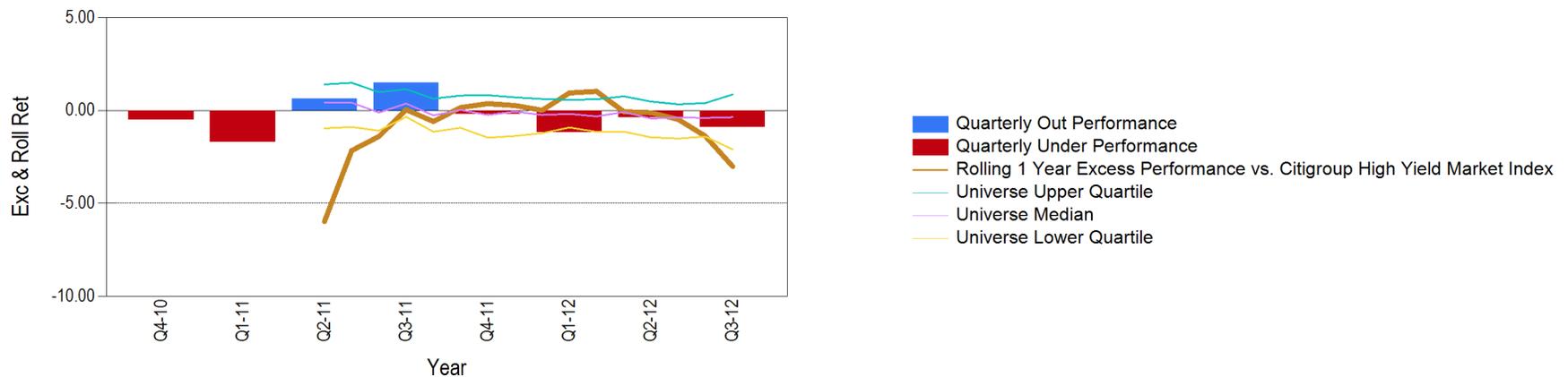
# City of Hartford Municipal Employees Retirement Fund

## Shenkman Capital High Yield Fixed

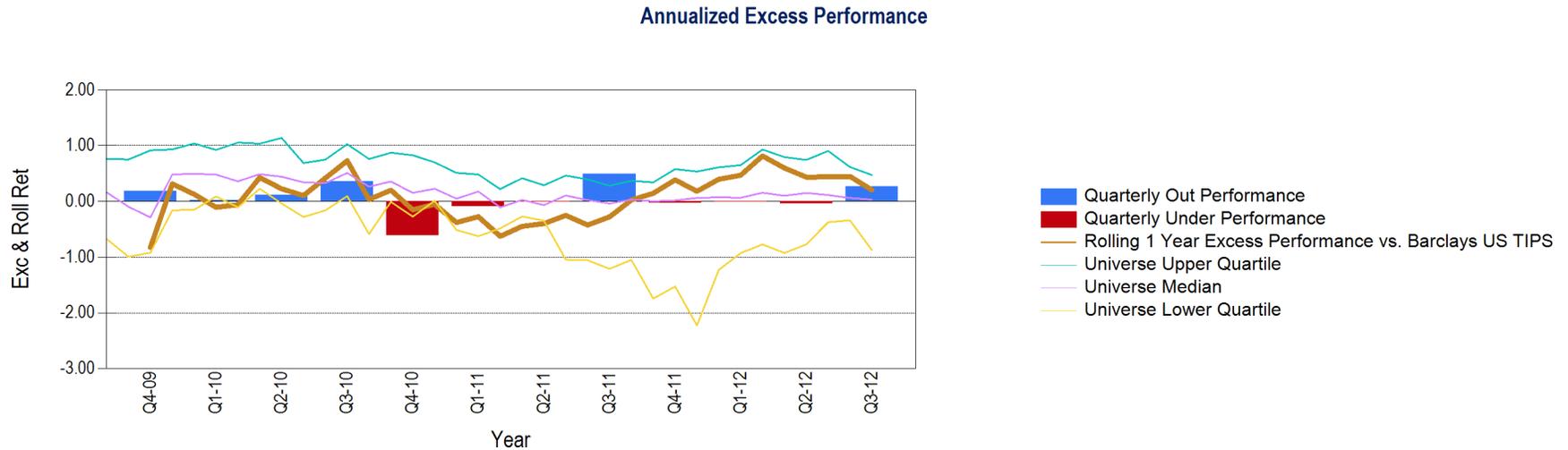
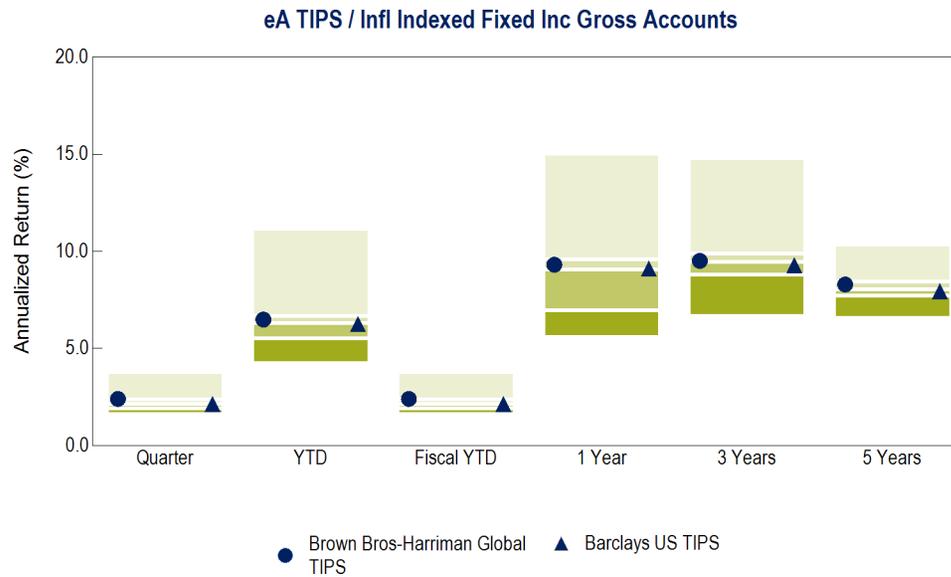
Shenkman Capital High Yield Fixed underperformed for the quarter returning approximately 3.4% versus the Citigroup High Yield Market index which returned 4.3%. As the risk-on trade was fueled by money from the FED, the riskier segments of the high yield market rallied. Poor stock selection in the Telecom industry detracted from performance, along with an underweight to financials. An underweight to Metals/Mining (excluding steel) sector was a positive contributor to performance, along with positive selection in the Packaging industry. The strategy participated in 12 new issues which also added to performance. As of September 30, the portfolio was well diversified consisting of 125 issuers across 27 industries. High yield bonds accounted for 88% of the allocation, while leveraged loans accounted for 8%.



### Annualized Excess Performance



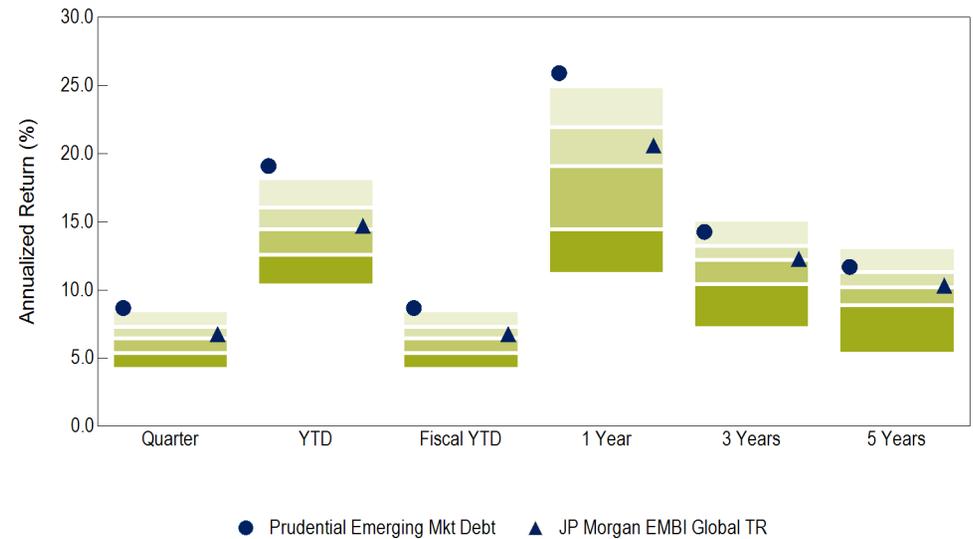
**Brown Bros-Harriman Global TIPS**



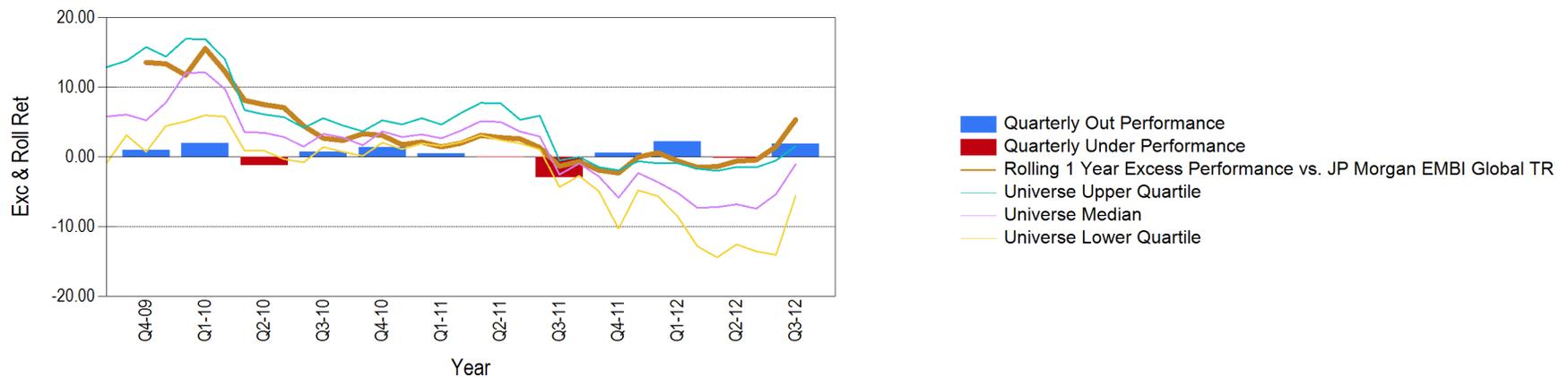
Prudential Emerging Mkt Debt

Prudential Emerging Markets Debt Fund strongly outperformed for the quarter returning 8.7% versus the JP Morgan EMBI Global TR index return of 6.8%. Year to date the strategy remains well ahead of the benchmark returning 19.1% versus the benchmark of 14.7%. Overweights to Latin American countries Venezuela (+33bps), Argentina (+16bps) and Chile (+11bps) were primary contributors to country selection. Underweights in Lebanon (+12bps), Malaysia (+8bsp) and South Africa (+5bps) also added to performance, while an overweight in Ivory Coast (+16bps) also contributed to performance. All emerging currencies appreciated versus the dollar in the third quarter.

eA All Emg Mkts Fixed Inc Gross Accounts



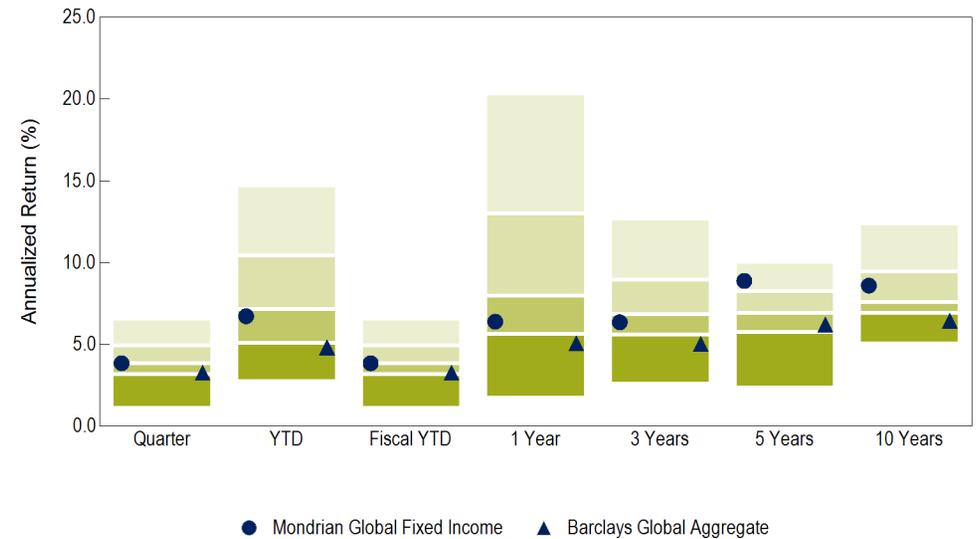
Annualized Excess Performance



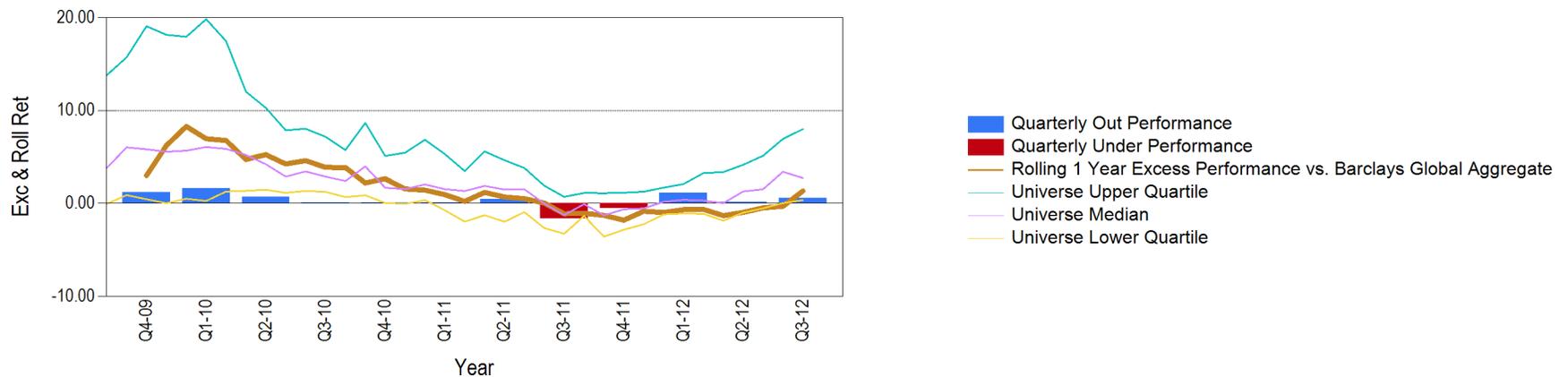
**Mondrian Global Fixed Income**

Mondrian Global Fixed Income returned 3.9% for the quarter, outperforming the Barclay's Global Aggregate of 3.3%. Overweights to Mexico and Poland, and an underweight to the relatively weak US market added to performance, while an underweight to peripheral Europe detracted from performance. An overweight to Financial corporate bonds also contributed to performance.

eA All Global Fixed Inc Gross Accounts



Annualized Excess Performance

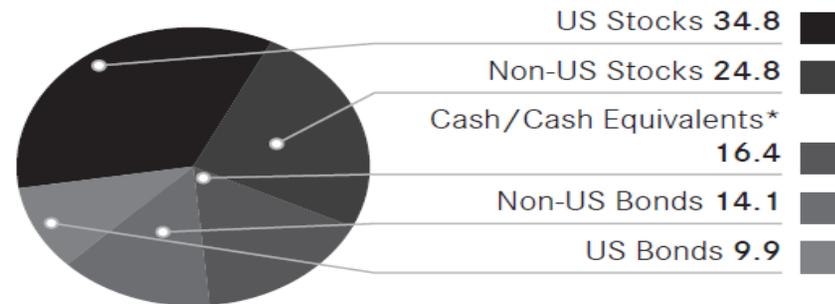


# City of Hartford Municipal Employees Retirement Fund

## Blackrock Global Allocation

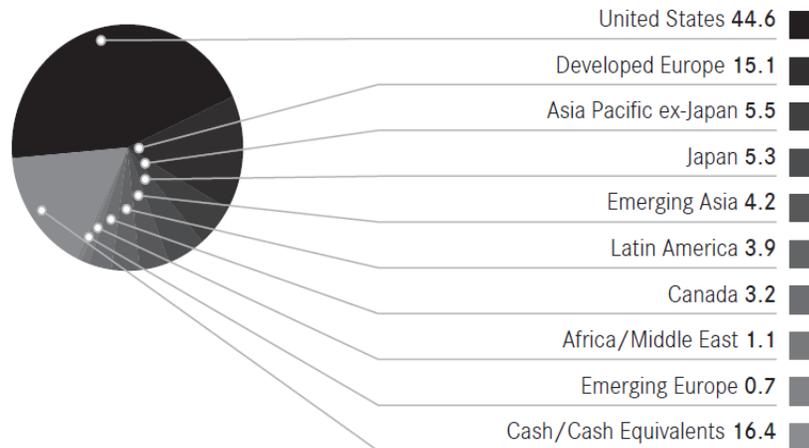
**Blackrock Global Allocation** slightly underperformed its blended benchmark for the quarter returning 4.9% versus the index return of 5.0%. Within equities, an overweight allocation to Japan detracted from performance, although this was partially offset by stock selection. From a sector perspective, stock selection in information technology (IT) weighed on returns. An overweight allocation to cash also negatively impacted performance. In contrast, stock selection in Canada and the United Kingdom contributed to performance within equities. From a sector perspective, stock selection in materials, consumer staples and financials aided returns, as did stock selection and an overweight in energy. The fund's underweight allocation to fixed income, notably an overweight to convertible and corporate bonds, also positively impacted performance.

### Asset Allocation (% of Net Assets)



\*Actively managed as part of the fund's investment strategy. Can be considered "Zero Duration Fixed Income;" includes US dollar and non-US dollar short-term securities and other money-market type instruments.

### Geographic Allocation (% of Net Assets)



### Top 10 Equity Holdings (% of Net Assets)

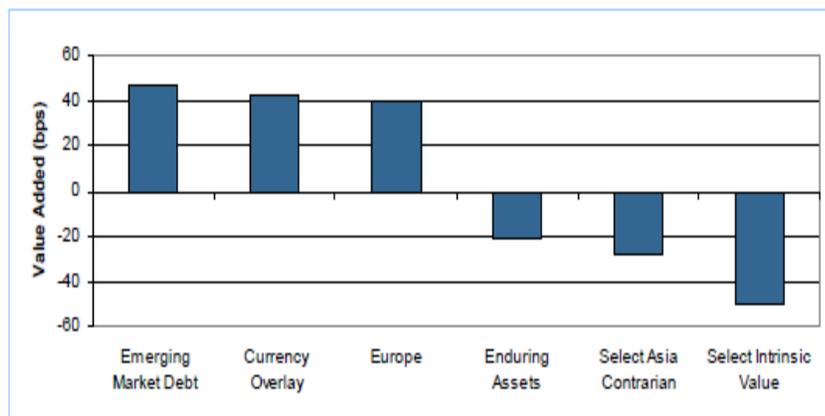
1.	SPDR Gold Shares	1.8
2.	Apple	1.7
3.	Oracle	0.9
4.	General Electric	0.7
5.	AT&T	0.6
6.	Occidental Petroleum	0.6
7.	Johnson & Johnson	0.6
8.	Pfizer	0.6
9.	Samsung	0.6
10.	Qualcomm	0.6

Source: Blackrock

# City of Hartford Municipal Employees Retirement Fund

## Wellington Opportunistic

**Wellington Opportunistic** outperformed its 65% MSCI ACWI/35% BC Aggregate benchmark returning 5.6% in the third quarter versus the index return of only 5.0%. Emerging market debt exposure outperformed and added to results, along with emerging sovereigns, corporates and currencies. A long euro position and an underweighting to the yen were additive to returns. Supportive ECB actions helped European equities outperform in the portfolio, particularly German equities. Select Intrinsic Value detracted most from relative performance as security selection within industrials, and commercial services companies were weak.



### Portfolio Positioning

	09/30/2012	06/30/2012
<b>Themes</b>		
Europe	13	12
Emerging Markets Debt	9	10
Enduring Assets	6	6
Natural Resources	6	7
Agriculture	3	4
Energy	3	3
Mortgage-Backed Securities	3	3
Precious Metals	2	0
Global Industrials	2	2
Bank Loans	2	2
High Yield	1	1
Developed Market Infl-Linked Bonds	1	1
Convertibles	0	0
<b>Tactical Positions</b>		
Equities	9	12
Fixed Income	8	4
Currencies	*	*
<b>Alpha Opportunities Managers</b>		
Select Intrinsic Value	12	13
Select Asia Contrarian	11	11
Global Financial Assets	2	2
Long/Short Country Alpha	*	*
Structured Absolute Return	3	3
Government Relative Value	3	3
Managed Futures	*	*
Rates and Currencies Relative Value	*	*
Cash	6	7
<b>TOTAL</b>	<b>100</b>	<b>100</b>

\*Overlay strategy implemented via long and short derivatives positions, which do not require cash. Cash excludes cash that may be held in underlying strategies. The Portfolio is opportunistic in nature, meaning that the portfolio managers may rotate completely into and out of investment ideas; there are no static 'normal' allocations, and no limit on the size of allocations to any investment idea. Totals may not add due to rounding.

Source: Wellington

## Glossary of Investment Terminology—Risk Statistics

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

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

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

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

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

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

*Formula:*

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

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

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

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

*Formula:*

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

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

*Formula:*

*(Annualized Return of Portfolio - Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)*

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

*Formula:*

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

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

*Formula:*

*(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta*

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

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

*DownsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Benchmark < 0*

Data Source: InvestorForce

## Glossary of Investment Terminology

**# Of Portfolios/Observations<sup>1</sup>** – The total number of data points that make up a specified universe

**Allocation Index<sup>3</sup>** - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

**Asset Allocation Effect<sup>2</sup>** - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

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

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

**Attribution<sup>3</sup>** - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

**Average Effective Maturity<sup>4</sup>** - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

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

**Batting Average<sup>1</sup>** - A measurement representing an investment manager's ability to meet or beat an index.

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

**Brinson Fachler (BF) Attribution<sup>1</sup>** - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

**Brinson Hood Beebower (BHB) Attribution<sup>1</sup>** - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

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

**Correlation<sup>1</sup>** - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

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

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**Coupon<sup>4</sup>** – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

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

**Derivative Instrument<sup>3</sup>** - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

**Downside Deviation<sup>1</sup>** - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

*Formula:*

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

**Duration<sup>3</sup>** - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

**Equity/Debt/Cash Ratio<sup>1</sup>** – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

**Foreign Bond<sup>3</sup>** - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

**Hard Hurdle<sup>5</sup>** – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

**High-Water Mark<sup>4</sup>** - The highest peak in value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

**Hurdle Rate<sup>4</sup>** - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

**Interaction Effects<sup>2</sup>** - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

**Median<sup>3</sup>** - The value (rate of return, market sensitivity, etc.) that exceeds one-half of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

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

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

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

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

**Performance Fee<sup>4</sup>** - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

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

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**Policy Index**<sup>3</sup> - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

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

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

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

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

**Selection (or Manager) Effect**<sup>2</sup> - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

**Soft Hurdle rate**<sup>5</sup> – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

**Tiered Fee**<sup>1</sup> – A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

**Total Effects**<sup>2</sup> - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

**Total Return**<sup>1</sup> - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

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

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

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

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

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

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

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