

# **Kentucky Retirement Systems**

Investment Performance Analysis

Quarter Ended September 30, 2012

# RVKuhns & ASSOCIATES, INC.

111 SW Naito Parkway Portland, OR 97204 503.221.4200 www.rvkuhns.com

#### **Capital Markets Review** As of September 30, 2012

#### **Third Quarter Economic Environment**

Although uncertainty and weakness remained in domestic and European economies, equities made broad gains on the quarter. Domestically, the BEA revised estimate of GDP growth for the second quarter was 1.3% annualized, down from previous estimates and below the first quarter rate of 2.0%. The unemployment rate dipped to 7.8%, despite weak full-time job growth. The Federal Reserve, concerned about continued weakness in the labor market, announced a new round of bond purchases, dubbed "QE3". The open-ended program will purchase \$40 billion per month of agency MBS. The Fed's accommodative policy will continue with no fixed end date announced. Markets surged ahead in response to the news, but failed to hold most of their gains. Inflation expectations, as represented by Treasury breakeven rates, increased modestly in response to the action. September saw improvement in the manufacturing sector as the ISM index was reported at 51.5%, reversing a trend of three consecutive months of contraction.

Internationally, news from Europe continued to dominate headlines. Concerned about the continued widening of debt spreads, European Central Bank (ECB) President Mario Draghi announced that the bank will begin purchasing sovereign bonds from Eurozone nations. The ECB announcement stated that there would be no limits on the size or duration of the program, and that they intend to pursue all options within their mandate to preserve the Euro. Spanish and Italian debt spreads declined significantly in response, while equity markets rallied on the news. General Eurozone economic conditions remain poor however, with unemployment in the Euro area reaching a record high of 11.4% in August. Elsewhere, the Bank of Japan followed the ECB and Federal Reserve by announcing a further expansion of their bond buying program, driven by fears that a strong Yen and weakness in the global economy could push the country into recession.

#### **Domestic Equities**

• After a mixed performance in July, equities posted solid returns in August and September, regaining the ground lost in the second quarter.

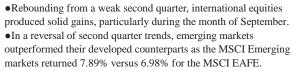
•Continuing the second quarter trend, value held a slight edge over growth as the Russell 1000 Value returned 6.51% versus 6.11% for the Russell 1000 Growth.

•Large cap stocks outperformed small cap, as the Russell 1000 returned 6.31% while the Russell 2000 returned 5.25%.

•All sectors, with the exception of the defensive utilities sector, posted positive returns on the quarter.

• Telecommunications, the highest performing sector in the previous • Appetite for risk was higher this quarter as high yield indices quarter, continued to perform strongly and was only outperformed by outperformed investment grade, and corporate indices outperformed the energy sector.

#### **International Equities**



#### **Fixed Income**

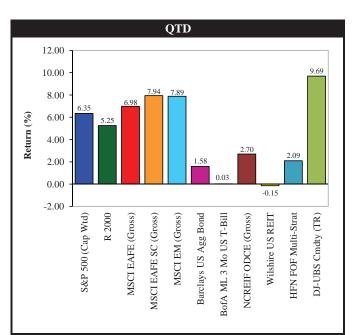
•Global bonds outperformed their U.S. counterparts as the Barclays Global Aggregate Bond Index returned 3.27% versus 1.59% for the Barclays US Aggregate Bond Index.

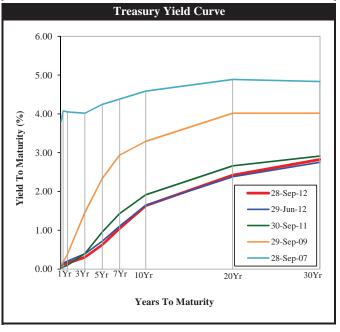
government indices.

a-	Trailing-Period Performance									
	Mth End July-2012	Mth End Aug-2012	MTD	QTD	CYTD	1 Year	2 Years	3 Years	5 Years	10 Years
S&P 500 (Cap Wtd)	1.39	2.25	2.58	6.35	16.44	30.20	14.76	13.20	1.05	8.01
R 2000	-1.38	3.33	3.28	5.25	14.23	31.90	12.80	12.98	2.21	10.17
MSCI EAFE (Gross)	1.15	2.70	2.99	6.98	10.59	14.33	2.04	2.59	-4.77	8.69
MSCI EAFE SC (Gross)	0.39	2.68	4.72	7.94	13.55	12.97	3.49	5.09	-2.64	11.65
MSCI EM (Gross)	2.02	-0.29	6.05	7.89	12.34	17.34	-0.66	5.96	-0.98	17.37
Barclays US Agg Bond	1.38	0.07	0.14	1.58	3.99	5.16	5.21	6.19	6.53	5.32
BofA ML 3 Mo US T-Bill	0.01	0.01	0.01	0.03	0.07	0.07	0.11	0.11	0.72	1.82
NCREIF ODCE (Gross)	N/A	N/A	N/A	2.70	8.32	11.53	14.85	12.16	-1.15	6.66
Wilshire US REIT	1.90	-0.18	-1.83	-0.15	14.74	32.43	16.28	20.72	1.73	11.35
HFN FOF Multi-Strat	0.78	0.65	0.65	2.09	3.28	2.85	0.45	1.09	-1.84	3.39
DJ-UBS Cmdty (TR)	6.47	1.30	1.71	9.69	5.63	5.99	2.97	5.26	-3.03	5.20

Performance is annualized for periods greater than one year.

Treasury data courtesy of the U.S. Department of the Treasury.





RVKuhns & ASSOCIATES, INC.

# Kentucky Retirement Systems

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September 30, 2012

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Asset Allocation & Performance

As of September 30, 2012

	Allocatio	n	Performance (%
	Market Value (\$)	%	FYTD
Total Fund	10,936,792,024	100.00	4.27
Global Equity Composite	4,635,316,989	42.38	6.96
U.S. Equity Composite	2,094,208,235	19.15	6.21
River Road Asset Management (SA)	28,340,604	0.26	4.34
Westwood Management (SA)	85,886,786	0.79	6.77
Westfield Capital (SA)	97,343,585	0.89	10.18
Internal S&P 500 Index (SA)	1,122,207,511	10.26	6.18
Equitization Assets Program	2,491,263	0.02	6.62
INVESCO Struct'd Core Equity (SA)	189,699,591	1.73	6.87
Sasco Capital Inc. (SA)	39,304,833	0.36	3.68
Systematic Financial Management (SA)	161,708,843	1.48	6.28
Geneva Capital Management (SA)	193,735,695	1.77	3.72
NT Structured Small Cap (SA)	173,335,598	1.58	5.43
Internal Mid Cap (SA)	56,823	0.00	N/A
Pension Liquidation	89,305	0.00	N/A
Kentucky Liquidation Account	7,800	0.00	N/A
Non-U.S. Equity Composite	2,106,532,935	19.26	7.43
The Boston Co. Non-US Value (SA)	659,632,035	6.03	7.36
BTC ACWI Ex US Fund (CF)	603,778,553	5.52	7.41
Pyramis Int'l Growth Fund (SA)	674,423,274	6.17	7.27
NT Int'l Sm Cap Eq Index (SA)	167,288,647	1.53	8.45
Artio Int'l Equity II (SA)	36,521	0.00	N/A
International Account (SA)	114	0.00	N/A
KRS Transition Account	1,512,991	0.01	N/A
Currency Overlay	-139,200	0.00	N/A
Emerging Mkts Equity Composite	434,575,820	3.97	8.39
Aberdeen Emg Mkts Equity (CF)	284,006,370	2.60	7.93
Wellington Emg Mkts Equity (CF)	150,569,450	1.38	9.27
Fixed Income Composite	2,276,077,188	20.81	3.02
NISA Core Agg Fixed Income (SA)	579,441,807	5.30	1.69
PIMCO Core Fixed Income (SA)	830,045,888	7.59	2.93
Columbia HY Fixed Income (SA)	177,271,401	1.62	4.61

	Allocation	n	Performance (%
	Market Value (\$)	%	FYTD
Fixed Income Composite (Cont.)			
Loomis Sayles HY Fixed Income (SA)	182,681,973	1.67	6.88
Manulife Asset Mgmt (SA)	114,313,509	1.05	3.50
Commerce Street Income Partners L.P.	38,239,911	0.35	-13.69
Waterfall (SA)	113,898,757	1.04	4.25
Shenkman Capital (SA)	117,124,521	1.07	3.31
Stone Harbor (SA)	123,059,422	1.13	6.58
Real Return Composite	1,143,726,167	10.46	3.45
Internal TIPS (SA)	434,842,967	3.98	2.26
Weaver Barksdale TIPS (SA)	400,934,840	3.67	2.18
PIMCO:All Asset;Inst (PAAIX)	234,834,903	2.15	6.43
Tenaska Power Fund II (CF)	15,139,720	0.14	0.73
Tortoise Capital (CF)	57,973,736	0.53	10.95
Real Estate Composite	257,921,710	2.36	2.82
Internal Real Estate (SA)	9,880,526	0.09	0.00
Walton Street Real Estate Fund VI, L.P.	28,644,364	0.26	1.18
Prima Mortgage Invest Trust, LLC	44,380,759	0.41	2.38
Mesa West Real Estate Income Fund II L.P.	31,781,259	0.29	4.63
H/2 Credit Partners (CF)	91,139,703	0.83	4.32
Harrison Street Core (CF)	52,095,098	0.48	-0.09
Absolute Return Composite	1,117,648,849	10.22	2.54
BAAM (SA)	373,552,698	3.42	2.62
PAAMCO (SA)	372,654,751	3.41	2.84
Prisma Capital Partners (SA)	371,125,649	3.39	2.18
Arrowhawk Durable Alpha Fund L.P.	315,751	0.00	N/A
Private Equity Composite	1,292,810,648	11.82	0.43
Cash Equivalent Composite	213,290,473	1.95	0.08
Cash Equivalents (SA)	213,290,473	1.95	0.08

Performance shown is gross of fees, except where noted. Fiscal year ends June 30th. Allocations shown may not sum up to 100% exactly due to rounding. Real Estate and Private Equity valuations shown are as of the most recent date available. Internal Mid Cap (SA), Artio Int'l Equity II (SA), and Arrowhawk Durable Alpha Fund L.P. are currently in the process of liquidation.



# Kentucky Retirement Systems - Pension Plan Total Fund Asset Allocation Charts As of September 30, 2012

Asset Allocation by	v Asset Class	AS OF SE	eptember 50, 201
Asset Allocation by September 30, 2012 :			
U.S. Equity Composite	Market Value (\$) 2,094,208,235	<b>Allocation</b> (%) 19.15	
Non-U.S. Equity Ex C.O. Composite	2,106,672,135	19.26	
Currency Overlay	-139,200	0.00	
Emerging Mkts Equity Composite	434,575,820	3.97	
Fixed Income Composite	2,276,077,188	20.81	
Real Return Composite	1,143,726,167	10.46	
Real Estate Composite	257,921,710	2.36	
Absolute Return Composite	1,117,648,849	10.22 11.82	
<ul><li>Private Equity Composite</li><li>Cash Equivalent Composite</li></ul>	1,292,810,648 213,290,473	11.82	
	213,290,475	1.93	

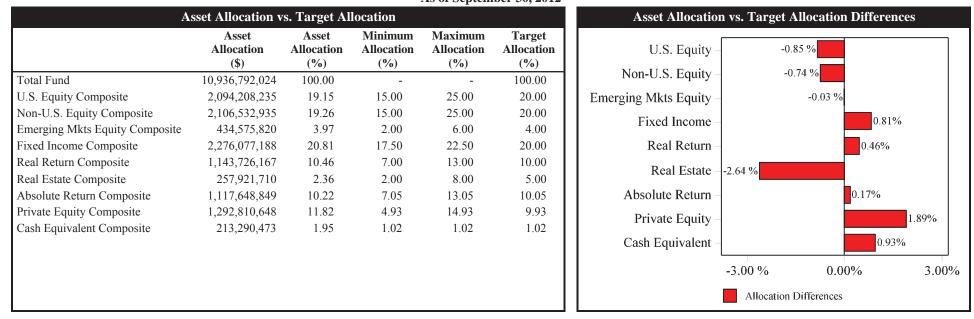
Allocations shown may not sum up to 100% exactly due to rounding.

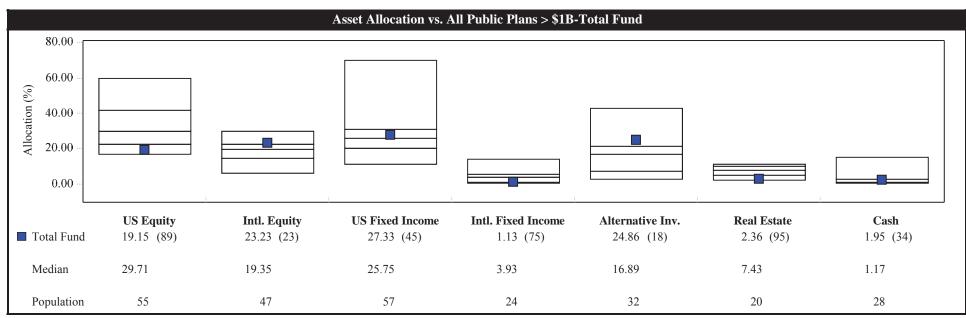
, 2012			
	Allocation by Sub-		
September	: 30, 2012 : \$10,936	5,792,024	
	Market Value	Allocation	
KEPS	(\$)	(%)	
KERS KERS Haz	( <b>\$</b> ) 2,933,828,084	(%) 26.83	
KERS Haz	( <b>\$</b> ) 2,933,828,084 493,920,249	(%) 26.83 4.52	
	( <b>\$</b> ) 2,933,828,084	(%) 26.83	

**RVKuhns** 

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### Kentucky Retirement Systems - Pension Plan Total Fund vs. All Public Plans > \$1B-Total Fund Asset Allocation vs. Target and Plan Sponsor Peer Group As of September 30, 2012

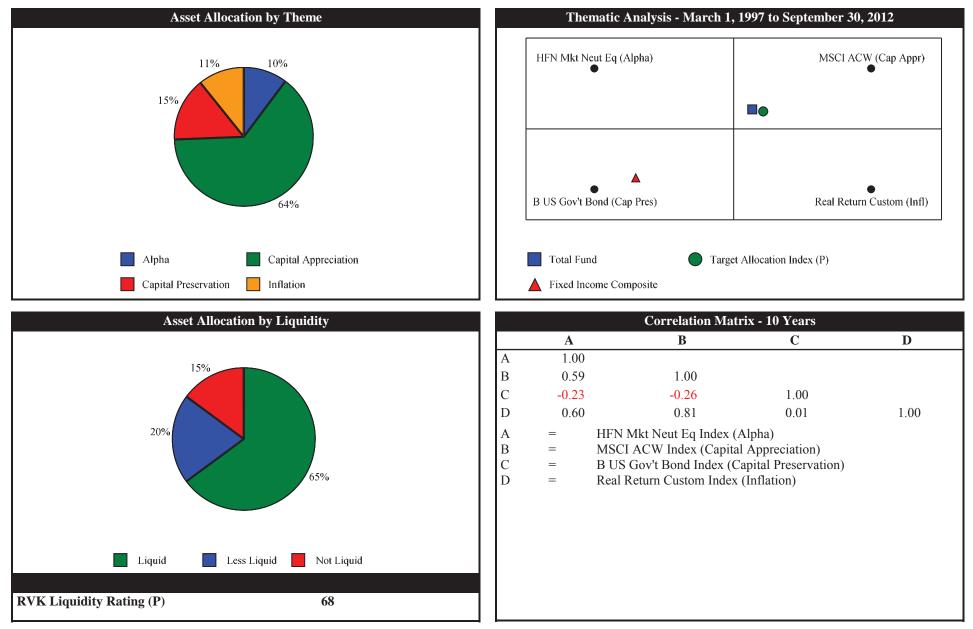




Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Currency Overlay is included in Non-U.S. Equity and dedicated TIPS are included in U.S. Fixed Income when compared to other public plans. Intl. Fixed Income does not reflect the underlying holdings within non-dedicated Intl. Fixed Income funds.



Kentucky Retirement Systems - Pension Plan Total Fund Thematic and Liquidity Analysis As of September 30, 2012



Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions.



**Comparative Performance** 

As	of	Sep	tember	30,	2012	1
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				1	$\frac{1}{3}$	5	10				Since	Inception
	QTD	FYTD	CYTD	Year	Years	Years	Years	2011	2010	2009	Incep.	Date
Total Fund	4.27	4.27	9.89	13.29	8.84	2.22	7.22	-0.44	12.90	19.66	9.44	04/01/1984
Target Allocation Index (P)	3.65	3.65	10.79	13.14	8.36	2.67	7.56	-1.19	12.41	23.06	9.53	
Difference	0.62	0.62	-0.90	0.15	0.48	-0.45	-0.34	0.75	0.49	-3.40	-0.09	
All Public Plans > \$1B-Total Fund Median	4.75	4.75	10.63	16.32	9.58	2.29	7.88	0.75	13.23	19.07	9.79	
Total Fund Rank	76	76	77	85	79	52	76	79	59	45	67	
Global Equity Composite	6.96	6.96	13.03	20.87	7.76	-0.74	8.09	-7.97	14.99	31.41	10.69	04/01/1984
Global Equity Blended Index (P)	6.96	6.96	13.47	22.09	8.54	-1.16	8.27	-6.97	15.56	31.40	10.54	
Difference	0.00	0.00	-0.44	-1.22	-0.78	0.42	-0.18	-1.00	-0.57	0.01	0.15	
Fixed Income Composite	3.02	3.02	8.11	9.37	8.12	6.58	5.58	7.04	7.61	10.01	8.30	04/01/1984
Barclays US Unv Bond Index (P)*	2.00	2.00	4.93	6.45	6.74	6.76	5.64	8.12	6.49	7.51	8.11	
Difference	1.02	1.02	3.18	2.92	1.38	-0.18	-0.06	-1.08	1.12	2.50	0.19	
Real Return Composite	3.45	3.45	8.55	11.03	N/A	N/A	N/A	N/A	N/A	N/A	12.52	07/01/2011
Consumer Price Index + 3%	1.59	1.59	4.84	5.05	5.40	5.17	5.56	6.05	4.54	5.80	5.07	
Difference	1.86	1.86	3.71	5.98	N/A	N/A	N/A	N/A	N/A	N/A	7.45	
Real Estate Composite	2.82	2.82	7.84	8.54	13.20	5.68	5.95	13.33	14.80	-6.37	8.30	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	7.94	15.26	5.83	-22.11	3.45	
Difference	0.05	0.05	-0.55	-3.07	4.67	3.34	-1.99	-1.93	8.97	15.74	4.85	
Absolute Return Composite	2.54	2.54	5.12	3.86	N/A	N/A	N/A	3.82	N/A	N/A	2.77	04/01/2010
HFRI FOF Diversified Index (Lagged)	1.16	1.16	2.22	-0.20	2.06	-1.18	3.58	-2.46	4.07	8.67	1.16	
Difference	1.38	1.38	2.90	4.06	N/A	N/A	N/A	6.28	N/A	N/A	1.61	
Private Equity Composite	0.43	0.43	9.63	8.77	15.43	1.99	11.45	11.03	16.76	-6.57	10.90	10/01/1990
R 3000 Index + 4% (Qtr Lag) (P)*	-2.19	-2.19	26.23	7.99	12.44	4.17	9.29	-8.63	16.16	39.44	N/A	
Difference	2.62	2.62	-16.60	0.78	2.99	-2.18	2.16	19.66	0.60	-46.01	N/A	
Cash Equivalent Composite	0.08	0.08	0.19	0.24	0.56	1.35	2.61	0.31	0.89	1.19	4.61	01/01/1988
Citi 3 Mo T-Bill Index	0.03	0.03	0.06	0.06	0.08	0.63	1.73	0.06	0.10	0.16	3.80	
Difference	0.05	0.05	0.13	0.18	0.48	0.72	0.88	0.25	0.79	1.03	0.81	

Performance shown is gross of fees, except where noted. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by Nothern Trust. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of the custom index. Non-U.S. Equity Ex C.O. Composite excludes Currency Overlay.



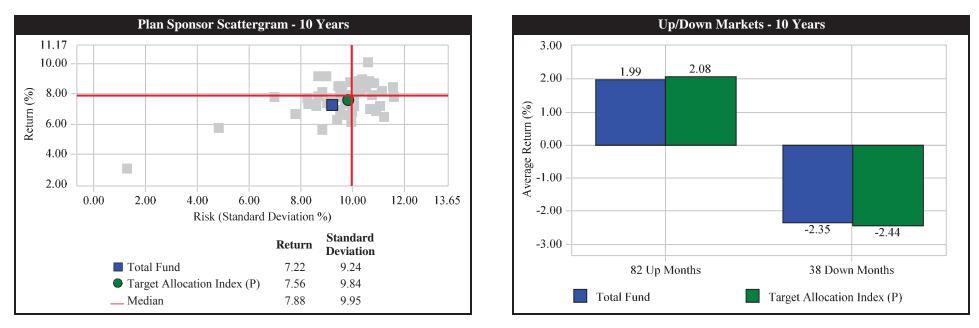
**Comparative Performance** 

				comparat								
				As of Sep	tember 30,	2012						
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2011	2010	2009	Since Incep.	Inception Date
U.S. Equity Composite	6.21	6.21	15.35	29.39	12.79	1.48	8.47	1.04	16.77	25.56	10.93	04/01/1984
R 3000 Index (P)*	6.23	6.23	16.13	30.20	13.34	1.46	8.69	0.92	17.50	27.16	10.85	
Difference	-0.02	-0.02	-0.78	-0.81	-0.55	0.02	-0.22	0.12	-0.73	-1.60	0.08	
U.S. All Cap Equity Composite	7.97	7.97	15.30	28.64	N/A	N/A	N/A	N/A	N/A	N/A	4.68	07/01/2011
R 3000 Index	6.23	6.23	16.13	30.20	13.26	1.30	8.49	1.03	16.93	28.34	8.16	
Difference	1.74	1.74	-0.83	-1.56	N/A	N/A	N/A	N/A	N/A	N/A	-3.48	
Cap Weighted U.S. Equity Composite	5.93	5.93	15.29	29.37	13.21	1.70	8.52	1.41	17.71	25.56	5.29	10/01/1999
R 3000 Index	6.23	6.23	16.13	30.20	13.26	1.30	8.49	1.03	16.93	28.34	3.49	
Difference	-0.30	-0.30	-0.84	-0.83	-0.05	0.40	0.03	0.38	0.78	-2.78	1.80	
Non-U.S. Equity Composite	7.43	7.43	9.71	11.73	2.10	-3.48	8.51	-17.01	12.88	39.79	1.24	07/01/2000
MSCI ACW Ex US Index (Gross) (P)*	7.49	7.49	10.86	15.04	3.77	-3.62	9.42	-13.26	12.37	40.20	2.07	
Difference	-0.06	-0.06	-1.15	-3.31	-1.67	0.14	-0.91	-3.75	0.51	-0.41	-0.83	
Non-U.S. Equity Ex C.O. Composite	7.42	7.42	9.62	12.95	2.75	-3.10	8.75	-15.33	12.68	40.12	1.45	07/01/2000
MSCI ACW Ex US Index (Gross) (P)*	7.49	7.49	10.86	15.04	3.77	-3.62	9.42	-13.26	12.37	40.20	2.07	
Difference	-0.07	-0.07	-1.24	-2.09	-1.02	0.52	-0.67	-2.07	0.31	-0.08	-0.62	
Emerging Mkts Equity Composite	8.39	8.39	16.59	22.04	N/A	N/A	N/A	N/A	N/A	N/A	-0.28	07/01/2011
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	17.37	-18.17	19.20	79.02	-7.28	
Difference	0.50	0.50	4.25	4.70	N/A	N/A	N/A	N/A	N/A	N/A	7.00	

Performance shown is gross of fees, except where noted. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by Nothern Trust. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of the custom index. Non-U.S. Equity Ex C.O. Composite excludes Currency Overlay.



# Kentucky Retirement Systems - Pension Plan Total Fund vs. All Public Plans > \$1B-Total Fund As of September 30, 2012

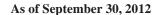


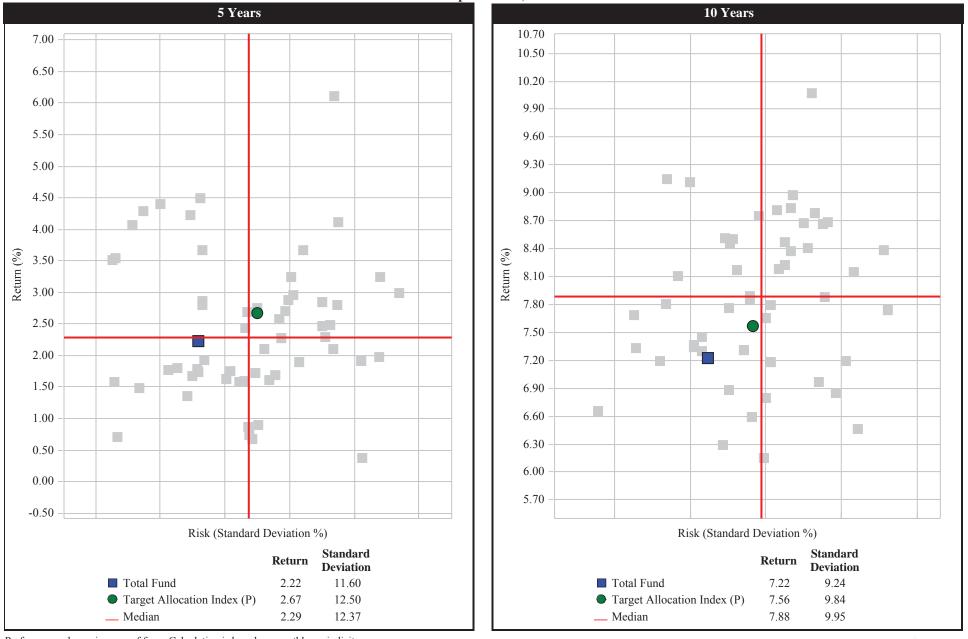
	Plan Sp	onsor Peer Group Analysis -	Multi Statistics (Beta vs.	S&P 500)	
	Standard Deviation	Sharpe Ratio	Excess Return	Downside Risk	Beta
12.00 ··· 10.00 ···	0.93 0.80 0.60	6.40		3.00 ···	
8.00	0.40	10 Years		5.00	0.40
Total Fund	9.24 (71)	0.60 (70)	5.62 (79)	6.47 (68)	0.58 (70)
• Target Allocation Index (P)	9.84 (53)	0.61 (70)	5.99 (63)	6.71 (57)	0.62 (50)
Median	9.95	0.64	6.37	6.88	0.62
Population	60	60	60	60	60

Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Total Fund vs. All Public Plans > \$1B-Total Fund

Plan Sponsor Peer Group Scattergram



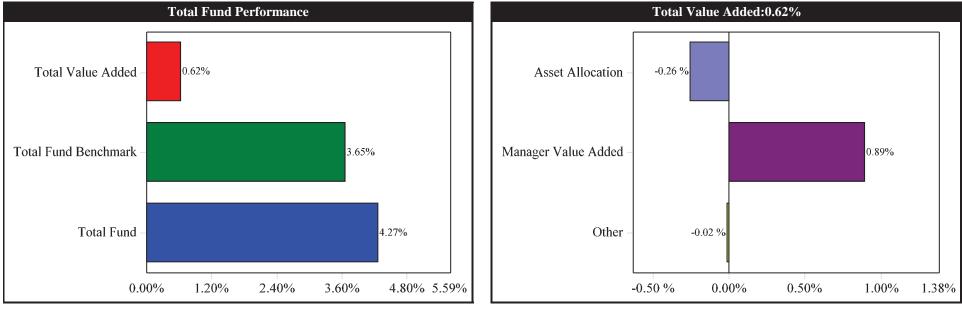


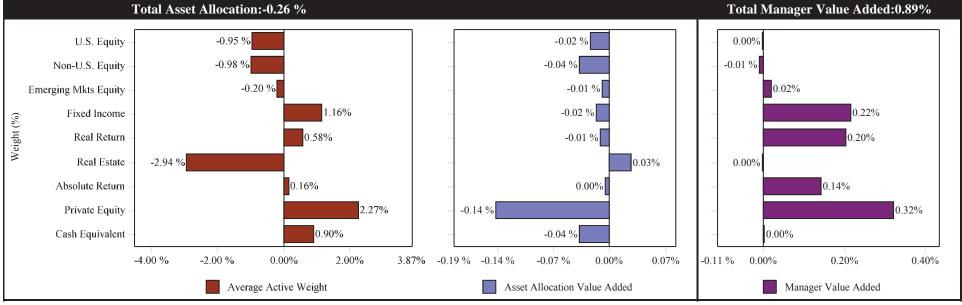
Performance shown is gross of fees. Calculation is based on monthly periodicity.

Total Fund vs. Target Allocation Index (P)

**Total Fund Attribution** 

Quarter To Date Ending September 30, 2012



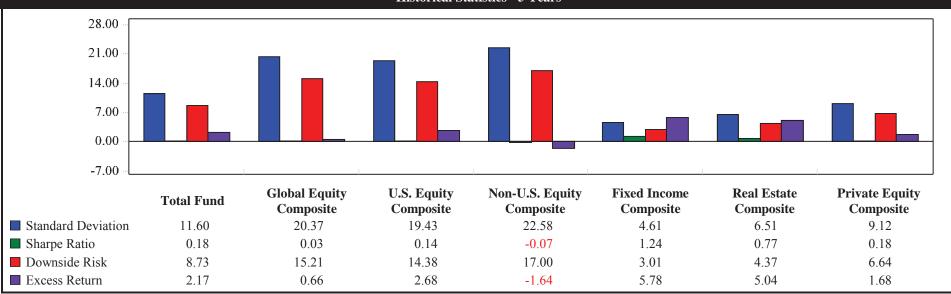


Performance shown is gross of fees, except where noted. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows. Please see the Glossary for additional information regarding the Total Fund Attribution calculation.

**Historical Stats & Correlation Analysis** 

#### As of September 30, 2012

Historical Statistics - 5 Years

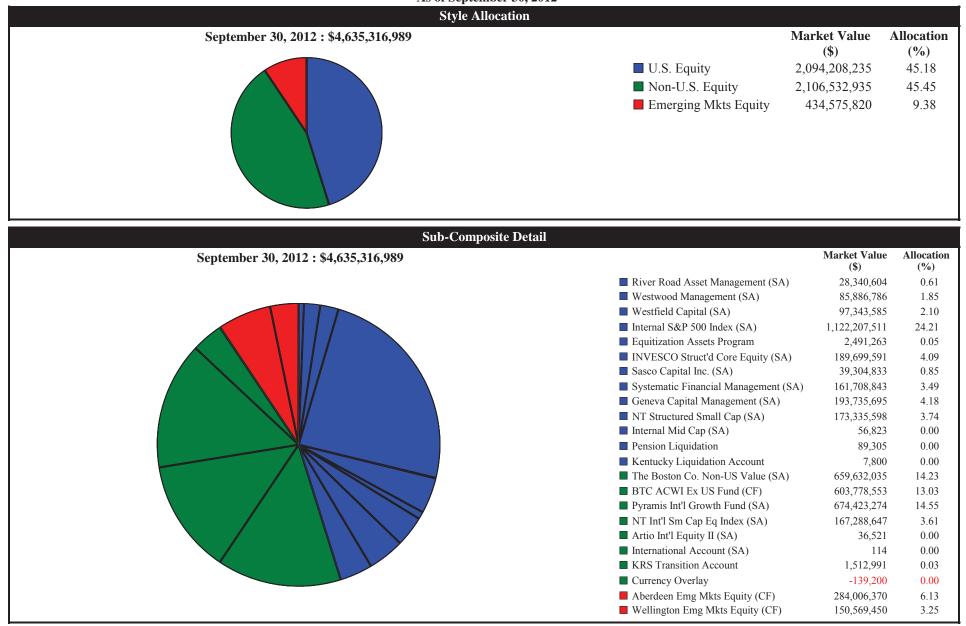


	Correlation Matrix - 5 Years								
	Total Fund	Global Equity Composite	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Real Estate Composite	Private Equity Composite		
Total Fund	1.00								
Global Equity Composite	0.98	1.00							
U.S. Equity Composite	0.97	0.98	1.00						
Non-U.S. Equity Composite	0.96	0.97	0.91	1.00					
Fixed Income Composite	0.53	0.42	0.37	0.46	1.00				
Real Estate Composite	-0.10	-0.12	-0.09	-0.15	-0.06	1.00			
Private Equity Composite	0.39	0.27	0.33	0.19	0.28	0.19	1.00		
	0.07	0/	0.00	0.17	0.20	0.17	1.00		

Performance shown is gross of fees, except where noted. Calculation is based on quarterly periodicity. Excluded composites do not have five years of performance history.



# Kentucky Retirement Systems - Pension Plan Global Equity Composite Asset Allocation Charts As of September 30, 2012



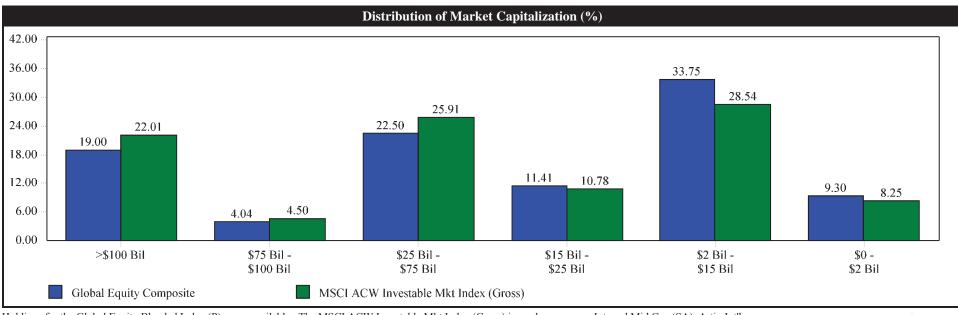
Allocations shown may not sum up to 100% exactly due to rounding.

# Kentucky Retirement Systems - Pension Plan Global Equity Composite vs. MSCI ACW Investable Mkt Index (Gross) Portfolio Characteristics

#### As of September 30, 2012

Top Ten Equity Holdings								
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)				
Exxon Mobil Corp	1.07	1.30	-0.23	7.56				
General Electric Co	0.67	0.73	-0.06	9.80				
Microsoft Corp	0.65	0.69	-0.04	-2.07				
Chevron Corp	0.63	0.70	-0.07	11.37				
China Mobile Ltd	0.61	0.20	0.41	3.51				
HSBC Holdings PLC	0.59	0.51	0.08	6.26				
International Business Machines Corp	0.57	0.69	-0.12	6.52				
Roche Holding AG	0.56	0.40	0.16	8.15				
JPMorgan Chase & Co	0.54	0.47	0.07	14.24				
AT&T Inc	0.54	0.67	-0.13	7.03				
% of Portfolio	6.43	6.36						

Foluo	olio Characteristics	
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	54,126	69,800
Median Mkt. Cap (\$M)	790	1,017
Price/Earnings Ratio	13.75	13.85
Price/Book Ratio	2.24	2.28
5 Yr. EPS Growth Rate (%)	4.76	5.73
Current Yield (%)	2.61	2.72
Beta (5 Years, Monthly)	0.93	1.00
Number of Securities	10,005	8,611



Holdings for the Global Equity Blended Index (P) are unavailable. The MSCI ACW Investable Mkt Index (Gross) is used as a proxy. Internal Mid Cap (SA), Artio Int'l Equity II (SA), and International Account (SA) currently have a 100% allocation to cash and are excluded from the holdings shown.

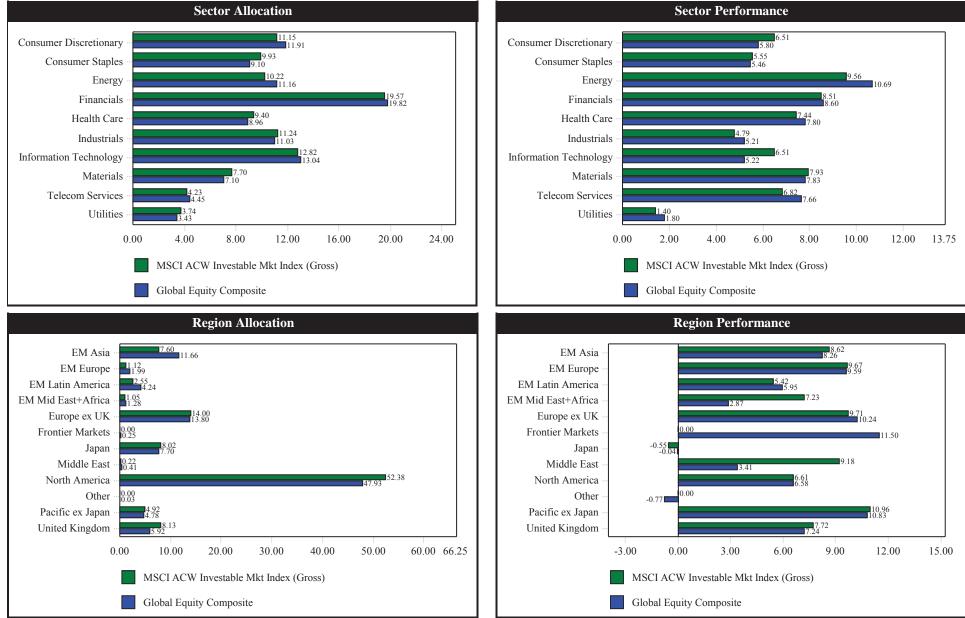


#### Kentucky Retirement Systems - Pension Plan Global Equity Composite vs. MSCI ACW Investable Mkt Index (Gross)

al Equity Composite vs. MISCI AC w Investable Wikt Index (G

# Buy and Hold Sector/Region Attribution Graphs

# As of September 30,2012

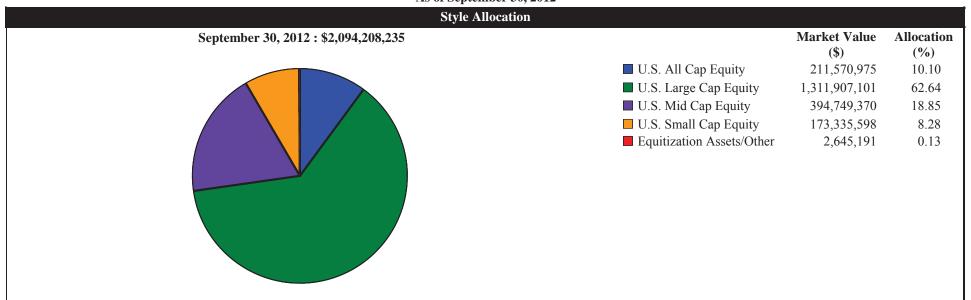


Holdings for the Global Equity Blended Index (P) are unavailable. The MSCI ACW Investable Mkt Index (Gross) is used as a proxy. Internal Mid Cap (SA), Artio Int'l Equity II (SA), and International Account (SA) currently have a 100% allocation to cash and are excluded from the holdings shown. Allocation to "Other" consists of holdings domiciled in countries/regions that do not meet economic development, size, liquidity, or market accessibility criteria as defined by the MSCI region standards.



# Kentucky Retirement Systems - Pension Plan U.S. Equity Composite Asset Allocation Charts

As of September 30, 2012



Sub-Com	posite Detail		
September 30, 2012 : \$2,094,208,235		Market Value (\$)	Allocation (%)
	River Road Asset Management (SA)	28,340,604	1.35
	Westwood Management (SA)	85,886,786	4.10
	Westfield Capital (SA)	97,343,585	4.65
	■ Internal S&P 500 Index (SA)	1,122,207,511	53.59
	■ INVESCO Struct'd Core Equity (SA)	189,699,591	9.06
	Sasco Capital Inc. (SA)	39,304,833	1.88
	Systematic Financial Management (SA)	161,708,843	7.72
	Geneva Capital Management (SA)	193,735,695	9.25
	NT Structured Small Cap (SA)	173,335,598	8.28
	Equitization Assets Program	2,491,263	0.12
	Internal Mid Cap (SA)	56,823	0.00
	Pension Liquidation	89,305	0.00
	Kentucky Liquidation Account	7,800	0.00

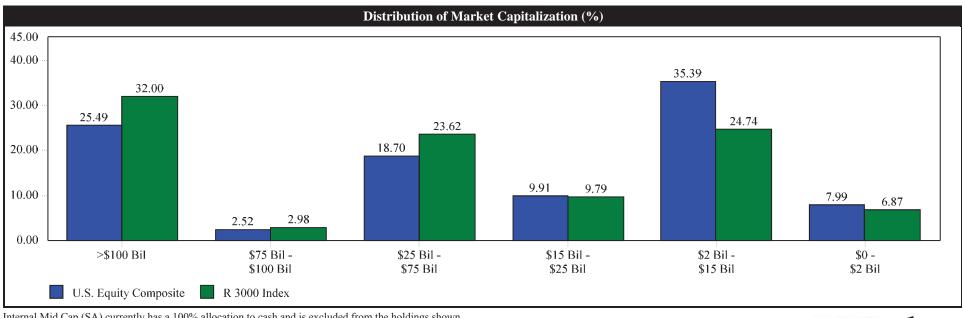
Allocations shown may not sum up to 100% exactly due to rounding.



# Kentucky Retirement Systems - Pension Plan U.S. Equity Composite vs. R 3000 Index **Portfolio Characteristics** As of September 30, 2012

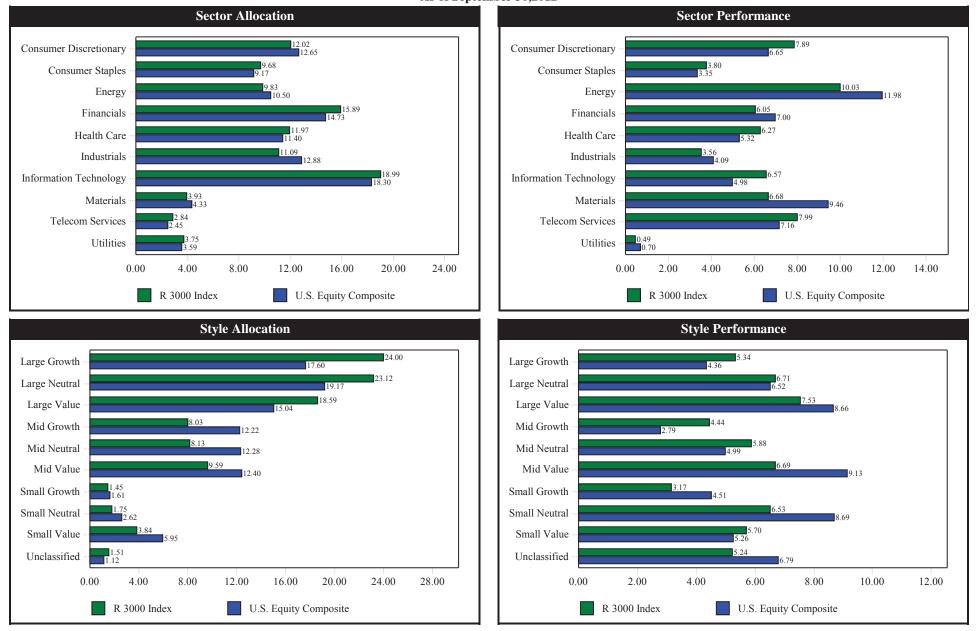
Top Ten Equity Holdings							
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)			
Exxon Mobil Corp	2.46	2.70	-0.24	7.56			
General Electric Co	1.55	1.52	0.03	9.80			
Microsoft Corp	1.49	1.41	0.08	-2.07			
Chevron Corp	1.46	1.45	0.01	11.37			
International Business Machines Corp	1.32	1.43	-0.11	6.52			
JPMorgan Chase & Co	1.25	0.97	0.28	14.24			
AT&T Inc	1.25	1.39	-0.14	7.03			
Pfizer Inc	1.21	1.17	0.04	9.04			
Johnson & Johnson	1.19	1.19	0.00	2.92			
Google Inc	1.10	1.23	-0.13	30.07			
% of Portfolio	14.28	14.46					

Porti	folio Characteristics	
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	71,221	99,279
Median Mkt. Cap (\$M)	505	1,026
Price/Earnings Ratio	15.63	15.49
Price/Book Ratio	2.55	2.58
5 Yr. EPS Growth Rate (%)	7.21	7.95
Current Yield (%)	1.95	2.02
Beta (5 Years, Monthly)	0.98	1.00
Number of Securities	3,444	2,961



Internal Mid Cap (SA) currently has a 100% allocation to cash and is excluded from the holdings shown.

# Kentucky Retirement Systems - Pension Plan U.S. Equity Composite vs. R 3000 Index Buy and Hold Sector/Style Attribution Graphs As of September 30,2012

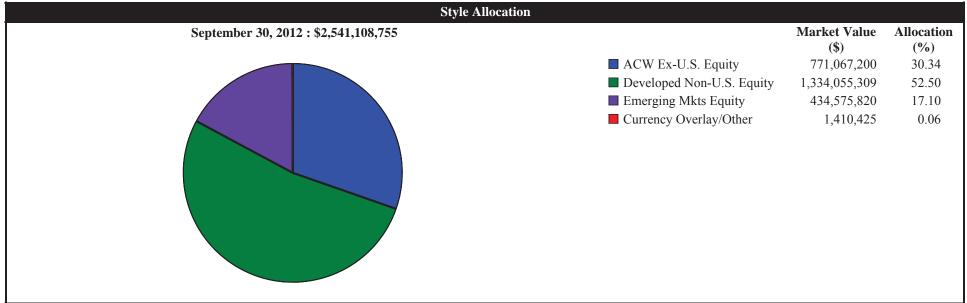


Internal Mid Cap (SA) currently has a 100% allocation to cash and is excluded from the holdings shown.

# Kentucky Retirement Systems - Pension Plan Non-U.S. and Emerging Markets Equity Composite

Asset Allocation Charts

As of September 30, 2012



Sub-Composite	Detail		
September 30, 2012 : \$2,541,108,755		Market Value	Allocation
		(\$)	(%)
	BTC ACWI Ex US Fund (CF)	603,778,553	23.76
	NT Int'l Sm Cap Eq Index (SA)	167,288,647	6.58
	The Boston Co. Non-US Value (SA)	659,632,035	25.96
	Pyramis Int'l Growth Fund (SA)	674,423,274	26.54
	Aberdeen Emg Mkts Equity (CF)	284,006,370	11.18
	Wellington Emg Mkts Equity (CF)	150,569,450	5.93
	Artio Int'l Equity II (SA)	36,521	0.00
	International Account (SA)	114	0.00
	KRS Transition Account	1,512,991	0.06
	Currency Overlay	-139,200	-0.01

Allocations shown may not sum up to 100% exactly due to rounding. Allocations shown are not representative of the actual allocations due to the negative Currency Overlay program balance.



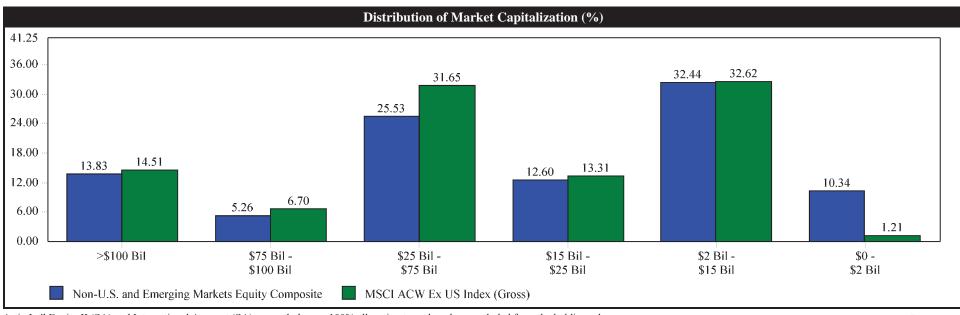
# Kentucky Retirement Systems - Pension Plan Non-U.S. and Emerging Markets Equity Composite vs. MSCI ACW Ex US Index (Gross)

# **Portfolio Characteristics**

#### As of September 30, 2012

Top Ten Equity Holdings							
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)			
China Mobile Ltd	1.08	0.44	0.64	3.51			
HSBC Holdings PLC	1.05	1.11	-0.06	6.26			
Roche Holding AG	0.99	0.87	0.12	8.15			
Novartis AG	0.94	0.93	0.01	9.56			
Toyota Motor Corp	0.93	0.71	0.22	-1.63			
Samsung Electronics Co Ltd	0.92	0.88	0.04	15.02			
Sanofi	0.83	0.67	0.16	12.58			
Vodafone Group PLC	0.83	0.93	-0.10	0.94			
Total	0.80	0.70	0.10	11.77			
Nestle SA, Cham Und Vevey	0.76	1.38	-0.62	5.60			
% of Portfolio	9.13	8.62					

PortfolioWtd. Avg. Mkt. Cap (\$M)41,056Median Mkt. Cap (\$M)915Price/Earnings Ratio12.32Price/Book Ratio1.98	Benchmark 48,101 6,056 12,58
Median Mkt. Cap (\$M)915Price/Earnings Ratio12.32	6,056
Price/Earnings Ratio 12.32	
	12 50
Price/Book Ratio 1.98	12.38
	2.01
5 Yr. EPS Growth Rate (%) 2.03	2.72
Current Yield (%) 3.12	3.41
Beta (5 Years, Monthly) 0.93	1.00
Number of Securities 6,563	1,837

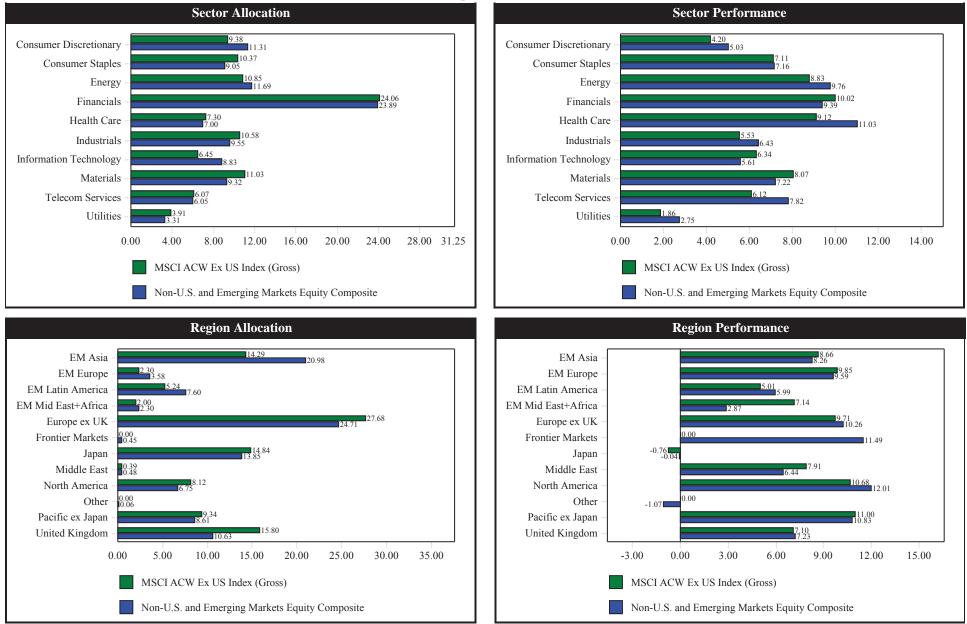


Artio Int'l Equity II (SA) and International Account (SA) currently have a 100% allocation to cash and are excluded from the holdings shown.

#### Non-U.S. and Emerging Markets Equity Composite vs. MSCI ACW Ex US Index (Gross)

Buy and Hold Sector/Region Attribution Graphs

As of September 30,2012



Artio Int'l Equity II (SA) and International Account (SA) currently have a 100% allocation to cash and are excluded from the holdings shown. Allocation to "Other" consists of holdings domiciled in countries/regions that do not meet economic development, size, liquidity, or market accessibility criteria as defined by the MSCI region standards.

# Kentucky Retirement Systems - Pension Plan Fixed Income Composite Asset Allocation by Manager As of September 30, 2012

As of September 30,	2012		
September 30, 2012 : \$2,2	76,077,188	Allocation	
	(\$)	(%)	
PIMCO Core Fixed Income (SA)	830,045,888	36.47	
■ NISA Core Agg Fixed Income (SA)	579,441,807	25.46	
Loomis Sayles HY Fixed Income (SA)	182,681,973	8.03	
Columbia HY Fixed Income (SA)	177,271,401	7.79	
Stone Harbor (SA)	123,059,422	5.41	
Shenkman Capital (SA)	117,124,521	5.15	
Manulife Asset Mgmt (SA)	114,313,509	5.02	
Waterfall (SA)	113,898,757	5.00	

Allocations shown may not sum up to 100% exactly due to rounding.



38,239,911

1.68

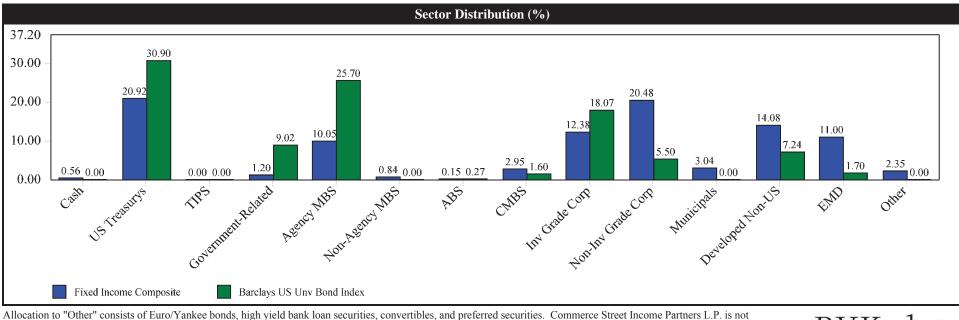
Commerce Street Income Partners L.P.

#### Fixed Income Composite vs. Barclays US Unv Bond Index

**Portfolio Characteristics** 

#### As of September 30, 2012

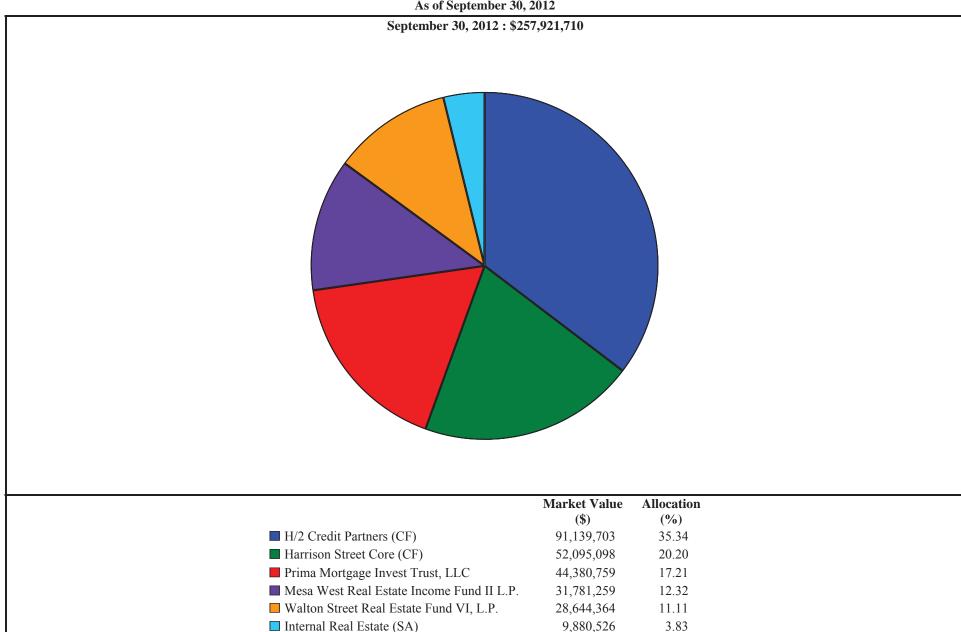
Portfolio Characteristics					
	Portfolio	Benchmark			
Effective Duration	5.06	4.83			
Avg. Maturity	7.30	6.79			
Avg. Quality	A3	-			
Yield To Maturity (%)	3.21	2.08			
Coupon Rate (%)	4.40	4.05			
Current Yield (%)	4.11	-			



Allocation to "Other" consists of Euro/Yankee bonds, high yield bank loan securities, convertibles, and preferred securities. Commerce Street Income Partners L.P. is not included in the Fixed Income Composite statistics due to its private equity style. Statistics for Waterfall (SA) are excluded from the Portfolio Characteristics shown.



# Kentucky Retirement Systems - Pension Plan Real Estate Composite Asset Allocation by Manager As of September 30, 2012

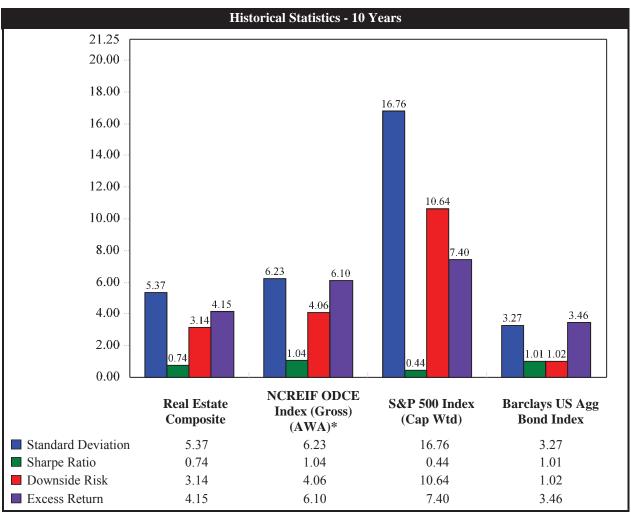


Allocations shown may not sum up to 100% exactly due to rounding.



## Kentucky Retirement Systems - Pension Plan Real Estate Composite As of September 30, 2012

Comparative Performance												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2011	2010	2009	Since Incep.	Inception Date
Real Estate Composite	2.82	2.82	7.84	8.54	13.20	5.68	5.95	13.33	14.80	-6.37	8.30	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	7.94	15.26	5.83	-22.11	3.45	
Difference	0.05	0.05	-0.55	-3.07	4.67	3.34	-1.99	-1.93	8.97	15.74	4.85	

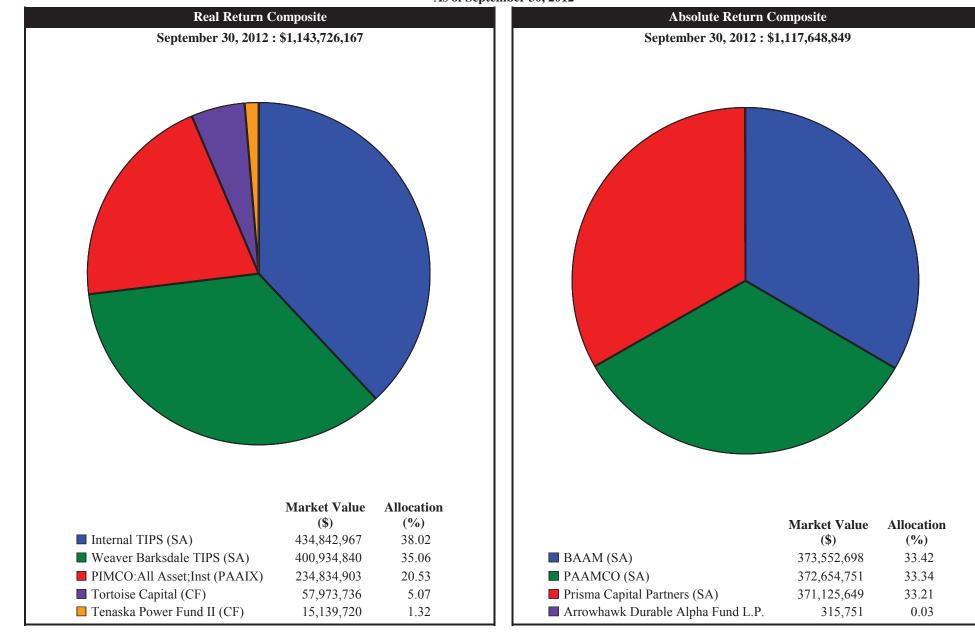


Historical Statistics - 10 Years				
	Actual Correlation			
NCREIF ODCE Index (Gross) (AWA)*	0.31			
S&P 500 Index (Cap Wtd)	-0.11			
R 2000 Index	-0.09			
MSCI EAFE Index (Gross)	-0.12			
MSCI Emg Mkts Index (Gross)	-0.10			
Barclays US Agg Bond Index	-0.03			
Barclays US Trsy: US TIPS Index	-0.04			
Wilshire US REIT Index	-0.05			
HFN FOF Multi-Strat Index (Net)	-0.06			
DJ-UBS Cmdty Index (TR)	-0.01			
BofA ML 3 Mo US T-Bill Index	-0.10			
Consumer Price Index	0.03			

Performance shown is gross of fees. Calculation is based on quarterly periodicity.



# Kentucky Retirement Systems - Pension Plan Real Return Composite and Absolute Return Composite Asset Allocation by Manager As of September 30, 2012



Allocations shown may not sum up to 100% exactly due to rounding.

#### Kentucky Retirement Systems - Insurance Plan

Asset Allocation & Performance

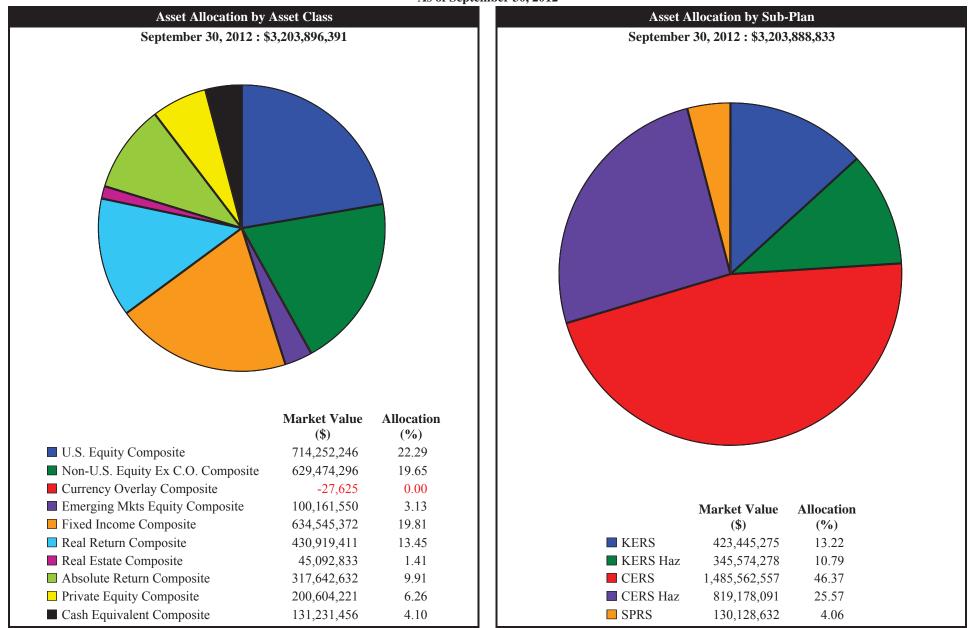
As of September 30, 2012

	Allocati	on	Performance (%)		Allocation		Performance (%)
	Market Value (\$)				Market Value (\$)		FYTD
Total Fund	3,203,896,391	100.00	4.35	Fixed Income Composite (Cont.)			
				Manulife Asset Mgmt (SA)	26,908,787	0.84	3.41
Global Equity Composite	1,443,860,466	45.07	6.79	Commerce Street Income Partners L.P.	7,283,791	0.23	-13.69
				Waterfall (SA)	36,660,490	1.14	5.74
U.S. Equity Composite	714,252,246	22.29	6.17	Shenkman Capital (SA)	28,583,437	0.89	2.73
River Road Asset Management (SA)	10,980,136	0.34	4.35	Stone Harbor (SA)	28,384,698	0.89	6.67
Westwood Management (SA)	33,073,783	1.03	6.75				
Westfield Capital (SA)	37,795,459	1.18	10.17	Real Return Composite	430,919,411	13.45	3.17
Internal S&P 500 Index (SA)	422,623,152	13.19	6.35	Internal TIPS (SA)	347,442,108	10.84	2.16
Equitization Assets Program	589,006	0.02	6.63	PIMCO:All Asset;Inst (PAAIX)	58,469,004	1.82	6.43
Sasco Capital Inc. (SA)	13,246,620	0.41	3.68	Tenaska Power Fund II (CF)	1,682,191	0.05	0.73
Systematic Financial Management (SA)	54,498,960	1.70	6.27	Tortoise Capital (CF)	23,326,108	0.73	11.00
Geneva Capital Management (SA)	65,291,782	2.04	3.71				
NT Structured Small Cap (SA)	76,134,069	2.38	5.63	Real Estate Composite	45,092,833	1.41	2.84
Internal Mid Cap (SA)	18,833	0.00	N/A	Walton Street Real Estate Fund VI, L.P.	3,182,704	0.10	1.18
KRS Insurance Liquidation	446	0.00	N/A	Prima Mortgage Invest Trust, LLC	4,931,192	0.15	1.78
•				Mesa West Real Estate Income Fund II L.P.	3,531,256	0.11	4.63
Non-U.S. Equity Composite	629,446,671	19.65	7.26	H/2 Credit Partners (CF)	19,335,075	0.60	4.32
The Boston Co. Non-US Value (SA)	232,984,949	7.27	7.35	Harrison Street Core (CF)	14,112,605	0.44	-0.09
BTC ACWI Ex US Fund (CF)	121,940,147	3.81	7.40				
Pyramis Int'l Growth Fund (SA)	260,495,233	8.13	7.18	Absolute Return Composite	317,642,632	9.91	2.49
International Account (SA)	13,626,438	0.43	5.56	BAAM (SA)	106,155,052	3.31	2.62
Artio Int'l Equity II (SA)	9,993	0.00	N/A	PAAMCO (SA)	105,753,107	3.30	2.83
KRS Insurance Transition	417,535	0.01	N/A	Prisma Capital Partners (SA)	105,734,473	3.30	2.18
Currency Overlay	-27,625	0.00	N/A				
5				Private Equity Composite	200,604,221	6.26	0.32
Emerging Mkts Equity Composite	100,161,550	3.13	8.38	<b>T T T</b>			
Aberdeen Emg Mkts Equity (CF)	66,209,225	2.07	7.93	Cash Equivalent Composite	131,231,456	4.10	0.08
Wellington Emg Mkts Equity (CF)	33,952,325	1.06	9.27	Cash Equivalents (SA)	131,223,899	4.10	0.08
	, ,			KRS Clearing Account	7,558	0.00	0.04
Fixed Income Composite	634,545,372	19.81	3.10				
NISA Core Agg Fixed Income (SA)	202,422,072	6.32	1.68				
PIMCO Core Fixed Income (SA)	219,331,273	6.85	3.25				
Columbia HY Fixed Income (SA)	41,951,416	1.31	4.62				
Loomis Sayles HY Fixed Income (SA)	43,019,408	1.34	6.62				

Performance shown is gross of fees, except where noted. Fiscal year ends June 30th. Allocations shown may not sum up to 100% exactly due to rounding. Real Estate and Private Equity valuations shown are as of the most recent date available. KRS Clearing Account is excluded from the Cash Equivalent Composite performance calculation. Internal Mid Cap (SA) and Artio Int'l Equity II (SA) are currently in the process of liquidation.



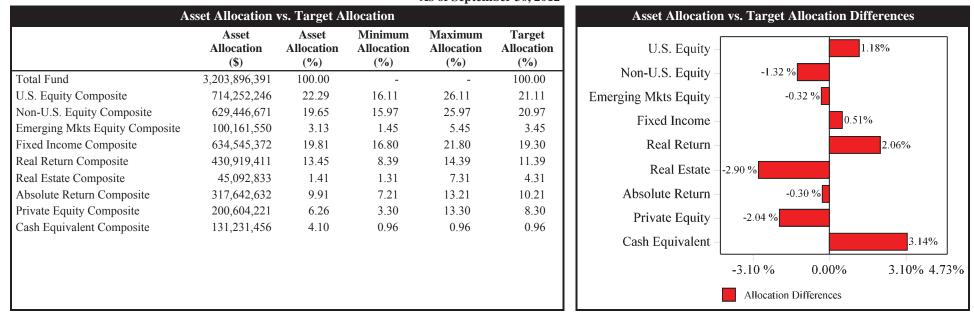
# Kentucky Retirement Systems - Insurance Plan Total Fund Asset Allocation Charts As of September 30, 2012

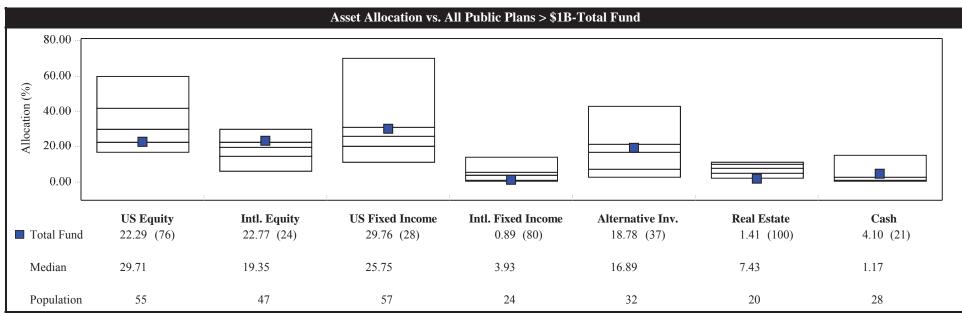


Allocations shown may not sum up to 100% exactly due to rounding. Sub-Plan allocations shown may not sum up to the Total Fund due to accounting differences between the performance and accounting departments of Northern Trust.



### Kentucky Retirement Systems - Insurance Plan Total Fund vs. All Public Plans > \$1B-Total Fund Asset Allocation vs. Target and Plan Sponsor Peer Group As of September 30, 2012

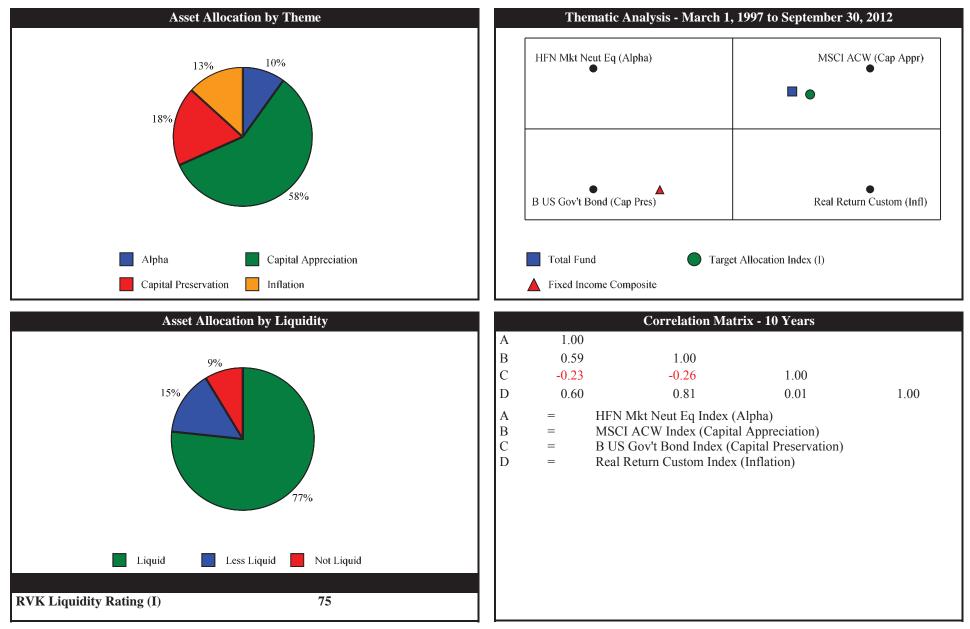




Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Currency Overlay is included in Non-U.S. Equity and dedicated TIPS are included in U.S. Fixed Income when compared to other public plans. Intl. Fixed Income does not reflect the underlying holdings within non-dedicated Intl. Fixed Income funds.



Kentucky Retirement Systems - Insurance Plan Total Fund Thematic and Liquidity Analysis As of September 30, 2012



Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions.



#### Kentucky Retirement Systems - Insurance Plan

**Comparative Performance** 

As	of	Sep	tember	30,	2012
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<b>F</b>	$\begin{array}{c} \text{As of September 50, 2012} \\ \hline \\ \text{OTD} \\ \text{DUTD} \\ \end{array} \begin{array}{c} 1 \\ 3 \\ 5 \\ 10 \\ \end{array}$								Since	una Turantian		
	QTD	FYTD	CYTD	I Year	3 Years	5 Years	10 Years	2011	2010	2009	Since Incep.	Inception Date
Total Fund	4.35	4.35	9.54	12.65	8.58	0.19	7.71	-1.94	13.26	25.68	7.63	04/01/1987
Target Allocation Index (I)	3.78	3.78	10.56	13.30	9.18	0.71	7.98	-0.45	13.24	28.49	7.77	
Difference	0.57	0.57	-1.02	-0.65	-0.60	-0.52	-0.27	-1.49	0.02	-2.81	-0.14	
All Public Plans > \$1B-Total Fund Median	4.75	4.75	10.63	16.32	9.58	2.29	7.88	0.75	13.23	19.07	8.43	
Total Fund Rank	74	74	84	86	81	98	62	98	50	7	100	
Global Equity Composite	6.79	6.79	12.93	20.36	7.32	-1.25	7.91	-8.56	14.09	31.30	8.37	07/01/1992
Global Equity Blended Index (I)	6.94	6.94	13.49	22.19	8.17	-1.46	7.60	-6.67	14.01	31.47	8.19	
Difference	-0.15	-0.15	-0.56	-1.83	-0.85	0.21	0.31	-1.89	0.08	-0.17	0.18	
Fixed Income Composite	3.10	3.10	8.04	9.63	8.38	7.39	6.39	7.99	6.40	10.21	7.26	07/01/1992
Barclays US Unv Bond Index (I)*	2.00	2.00	4.93	6.45	7.68	6.98	6.16	10.00	6.31	11.41	7.10	
Difference	1.10	1.10	3.11	3.18	0.70	0.41	0.23	-2.01	0.09	-1.20	0.16	
Real Return Composite	3.17	3.17	8.18	10.70	N/A	N/A	N/A	N/A	N/A	N/A	12.18	07/01/2011
Consumer Price Index + 3%	1.59	1.59	4.84	5.05	5.40	5.17	5.56	6.05	4.54	5.80	5.07	
Difference	1.58	1.58	3.34	5.65	N/A	N/A	N/A	N/A	N/A	N/A	7.11	
Real Estate Composite	2.84	2.84	8.23	8.87	15.34	N/A	N/A	14.85	18.36	N/A	9.06	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	7.94	15.26	5.83	-22.11	3.45	
Difference	0.07	0.07	-0.16	-2.74	6.81	N/A	N/A	-0.41	12.53	N/A	5.61	
Absolute Return Composite	2.49	2.49	5.20	3.85	N/A	N/A	N/A	3.81	N/A	N/A	2.57	04/01/2010
HFRI FOF Diversified Index (Lagged)	1.16	1.16	2.22	-0.20	2.06	-1.18	3.58	-2.46	4.07	8.67	1.16	
Difference	1.33	1.33	2.98	4.05	N/A	N/A	N/A	6.27	N/A	N/A	1.41	
Private Equity Composite	0.32	0.32	9.08	7.28	15.65	3.66	9.72	11.64	17.83	3.24	6.86	06/01/2001
R 3000 Index + 4% (Qtr Lag) (I)*	-2.19	-2.19	26.23	7.99	12.56	2.59	8.73	-8.41	16.32	33.31	4.58	
Difference	2.51	2.51	-17.15	-0.71	3.09	1.07	0.99	20.05	1.51	-30.07	2.28	
Cash Equivalent Composite	0.08	0.08	0.18	0.22	0.24	0.88	2.24	0.26	0.25	0.22	3.40	07/01/1992
Citi 3 Mo T-Bill Index	0.03	0.03	0.06	0.06	0.08	0.63	1.73	0.06	0.10	0.16	3.13	
Difference	0.05	0.05	0.12	0.16	0.16	0.25	0.51	0.20	0.15	0.06	0.27	

Performance shown is gross of fees, except where noted. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by Nothern Trust. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of the custom index. Non-U.S. Equity Ex-C.O. Composite excludes Currency Overlay and Cash Equivalent Composite excludes KRS Clearing Account.



#### Kentucky Retirement Systems - Insurance Plan

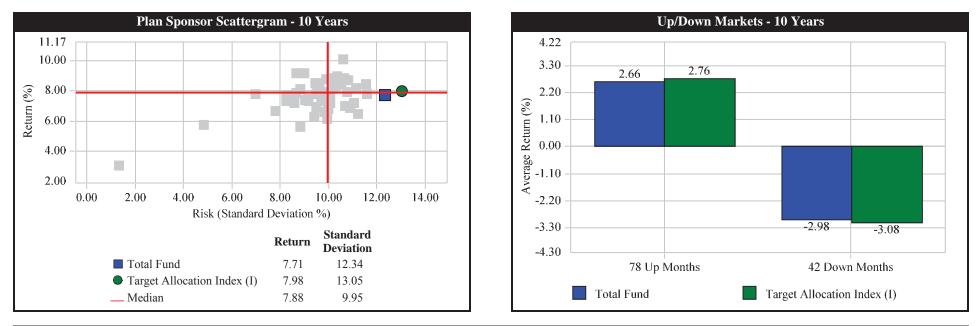
#### **Comparative Performance**

				As of Sep	tember 30,	2012						
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2011	2010	2009	Since Incep.	Inception Date
U.S. Equity Composite	6.17	6.17	15.27	29.47	12.64	1.12	8.20	0.43	16.32	26.14	8.66	07/01/1992
R 3000 Index (I)*	6.23	6.23	16.13	30.20	13.08	1.20	8.26	0.97	16.38	27.25	N/A	
Difference	-0.06	-0.06	-0.86	-0.73	-0.44	-0.08	-0.06	-0.54	-0.06	-1.11	N/A	
U.S. All Cap Equity Composite	7.97	7.97	15.30	28.64	N/A	N/A	N/A	N/A	N/A	N/A	4.69	07/01/2011
R 3000 Index	6.23	6.23	16.13	30.20	13.26	1.30	8.49	1.03	16.93	28.34	8.16	
Difference	1.74	1.74	-0.83	-1.56	N/A	N/A	N/A	N/A	N/A	N/A	-3.47	
Cap Weighted U.S. Equity Composite	5.92	5.92	15.21	29.47	12.91	1.27	8.27	1.21	16.32	26.14	2.98	07/01/2000
R 3000 Index	6.23	6.23	16.13	30.20	13.26	1.30	8.49	1.03	16.93	28.34	2.36	
Difference	-0.31	-0.31	-0.92	-0.73	-0.35	-0.03	-0.22	0.18	-0.61	-2.20	0.62	
Non-U.S. Equity Composite	7.26	7.26	9.22	10.14	1.33	-4.01	8.91	-17.36	11.39	39.31	1.29	04/01/2000
MSCI ACW Ex US Index (Gross) (I)*	7.49	7.49	10.86	15.04	3.30	-4.28	9.03	-12.90	10.60	37.06	0.88	
Difference	-0.23	-0.23	-1.64	-4.90	-1.97	0.27	-0.12	-4.46	0.79	2.25	0.41	
Non-U.S. Equity Ex C.O. Composite	7.25	7.25	9.10	11.84	2.18	-3.50	9.24	-15.05	11.02	39.74	1.65	04/01/2000
MSCI ACW Ex US Index (Gross) (I)*	7.49	7.49	10.86	15.04	3.30	-4.28	9.03	-12.90	10.60	37.06	0.88	
Difference	-0.24	-0.24	-1.76	-3.20	-1.12	0.78	0.21	-2.15	0.42	2.68	0.77	
Emerging Mkts Equity Composite	8.38	8.38	16.63	22.08	N/A	N/A	N/A	N/A	N/A	N/A	-0.24	07/01/2011
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	17.37	-18.17	19.20	79.02	-7.28	
Difference	0.49	0.49	4.29	4.74	N/A	N/A	N/A	N/A	N/A	N/A	7.04	

Performance shown is gross of fees, except where noted. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by Nothern Trust. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of the custom index. Non-U.S. Equity Ex-C.O. Composite excludes Currency Overlay and Cash Equivalent Composite excludes KRS Clearing Account.



# Kentucky Retirement Systems - Insurance Plan Total Fund vs. All Public Plans > \$1B-Total Fund As of September 30, 2012



	J	Plan Sponsor Peer Group Ana	lysis - Multi Statistics (Beta vs	s. S&P 500)	
	Standard Deviation	Sharpe Ratio	Excess Return	Downside Risk	Beta
14.00 12.00 10.00		0.93	9.20	9.20	
8.00		0.40	5.00 ···	5.00	0.40 ···
<ul> <li>Total Fund</li> <li>Target Allocation Index (I)</li> </ul>	Years 12.34 (2) 13.05 (2)	Years 0.52 (87) 0.52 (88)	Years 6.42 (48) 6.77 (40)	Years 8.64 (2) 9.05 (2)	Years 0.79 (2) 0.84 (2)
Median	9.95	0.64	6.37	6.88	0.62
Population	60	60	60	60	60

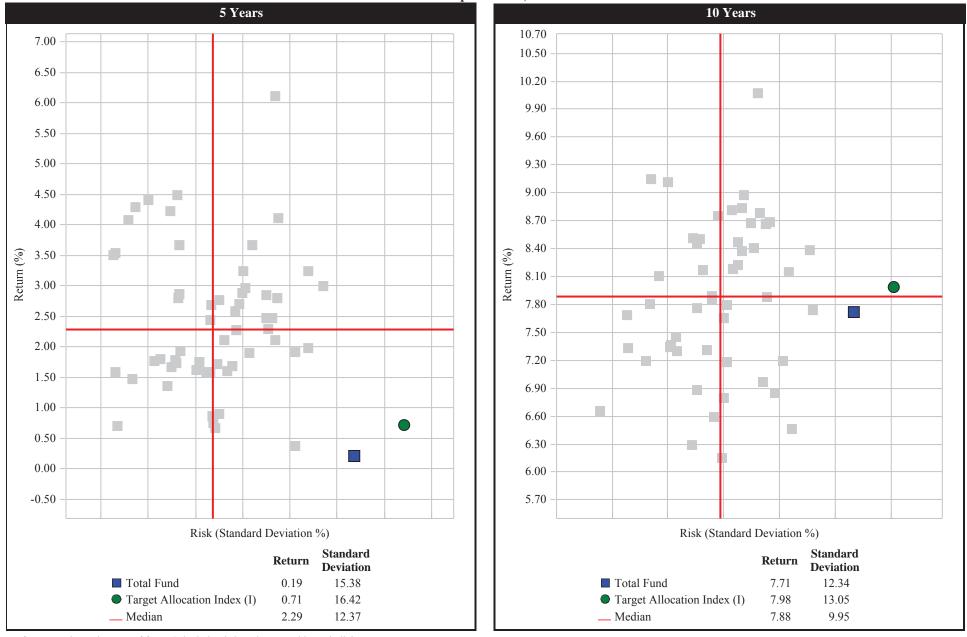
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



#### Kentucky Retirement Systems - Insurance Plan Total Fund vs. All Public Plans > \$1B-Total Fund

Plan Sponsor Peer Group Scattergram

As of September 30, 2012



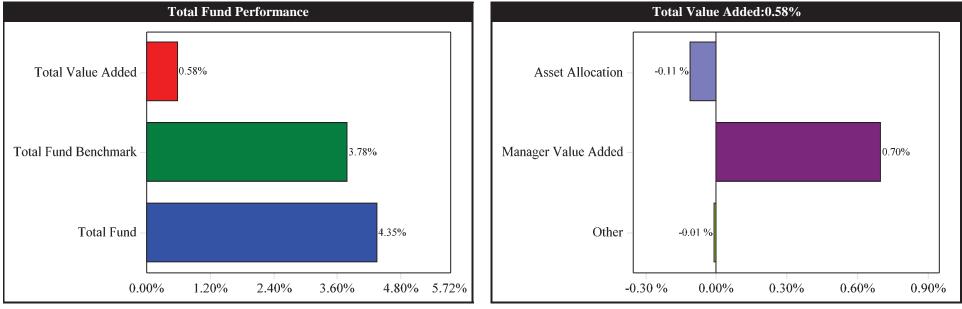
Performance shown is gross of fees. Calculation is based on monthly periodicity.

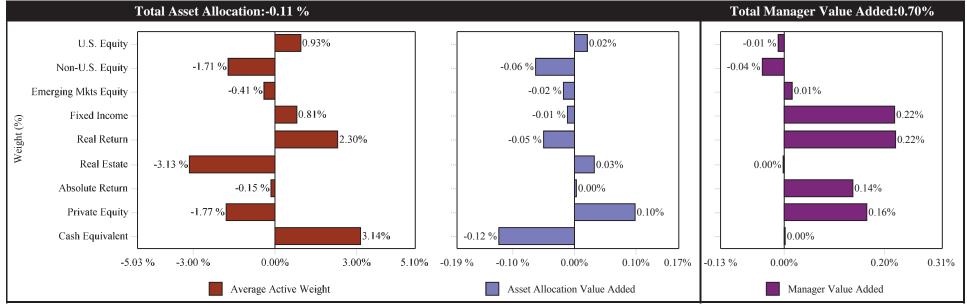
#### Kentucky Retirement Systems - Insurance Plan

Total Fund vs. Target Allocation Index (I)

**Total Fund Attribution** 

Quarter To Date Ending September 30, 2012

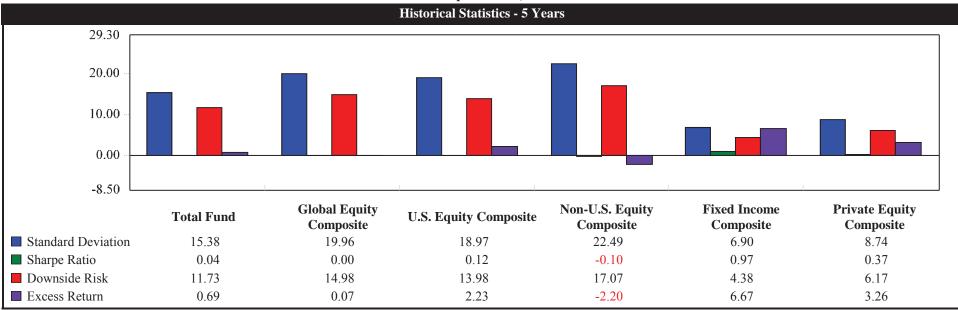




Performance shown is gross of fees, except where noted. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows. Please see the Glossary for additional information regarding the Total Fund Attribution calculation.

**Historical Stats & Correlation Analysis** 

As of September 30, 2012



	<b>Total Fund</b>	Global Equity Composite	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Private Equity Composite
Total Fund	1.00					
Global Equity Composite	0.98	1.00				
J.S. Equity Composite	0.96	0.98	1.00			
Non-U.S. Equity Composite	0.95	0.97	0.91	1.00		
Fixed Income Composite	0.36	0.32	0.28	0.35	1.00	
Private Equity Composite	0.65	0.55	0.59	0.49	0.19	1.00

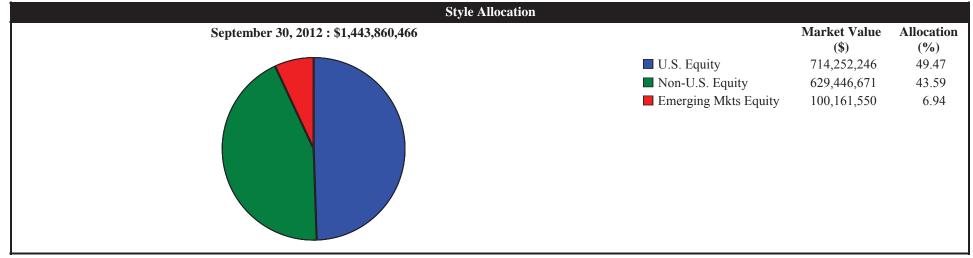
Performance shown is gross of fees, except where noted. Calculation is based on quarterly periodicity. Excluded composites do not have five years of performance history.



Global Equity Composite

Asset Allocation Charts

As of September 30, 2012



Sub-Composite Detail						
September 30, 2012 : \$1,443,860,466		Market Value (\$)	Allocation (%)			
	River Road Asset Management (SA)	10,980,136	0.76			
	Westwood Management (SA)	33,073,783	2.29			
	Westfield Capital (SA)	37,795,459	2.62			
	Internal S&P 500 Index (SA)	422,623,152	29.27			
	Equitization Assets Program	589,006	0.04			
	Sasco Capital Inc. (SA)	13,246,620	0.92			
	Systematic Financial Management (SA)	54,498,960	3.77			
	Geneva Capital Management (SA)	65,291,782	4.52			
	■ NT Structured Small Cap (SA)	76,134,069	5.27			
	Internal Mid Cap (SA)	18,833	0.00			
	KRS Insurance Liquidation	446	0.00			
	The Boston Co. Non-US Value (SA)	232,984,949	16.14			
	BTC ACWI Ex US Fund (CF)	121,940,147	8.45			
	Pyramis Int'l Growth Fund (SA)	260,495,233	18.04			
	International Account (SA)	13,626,438	0.94			
	Artio Int'l Equity II (SA)	9,993	0.00			
	KRS Insurance Transition	417,535	0.03			
	Currency Overlay	-27,625	0.00			
	Aberdeen Emg Mkts Equity (CF)	66,209,225	4.59			
	Wellington Emg Mkts Equity (CF)	33,952,325	2.35			

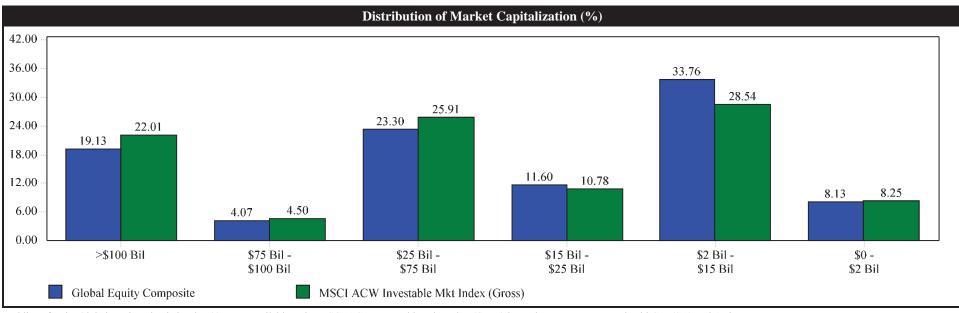
Allocations shown may not sum up to 100% exactly due to rounding.

# Kentucky Retirement Systems - Insurance Plan Global Equity Composite vs. MSCI ACW Investable Mkt Index (Gross) Portfolio Characteristics

# As of September 30, 2012

Top Ten Equity Holdings									
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)					
Exxon Mobil Corp	1.06	1.30	-0.24	7.56					
General Electric Co	0.64	0.73	-0.09	9.80					
Microsoft Corp	0.62	0.69	-0.07	-2.07					
Roche Holding AG	0.62	0.40	0.22	8.15					
HSBC Holdings PLC	0.61	0.51	0.10	6.26					
Google Inc	0.60	0.60	0.00	30.07					
Chevron Corp	0.59	0.70	-0.11	11.37					
Novartis AG	0.58	0.43	0.15	9.56					
Toyota Motor Corp	0.57	0.33	0.24	-1.63					
International Business Machines Corp	0.56	0.69	-0.13	6.52					
% of Portfolio	6.45	6.38							

PortfolioWtd. Avg. Mkt. Cap (\$M)54,374Median Mkt. Cap (\$M)1,968Price/Earnings Ratio14.03Price/Book Ratio2.255 Yr. EPS Growth Rate (%)4.71Current Yield (%)2.56Beta (5 Years, Monthly)0.91	Benchmar 69,800 1,017 13.85 2.28 5.73 2.72
Median Mkt. Cap (\$M)       1,968         Price/Earnings Ratio       14.03         Price/Book Ratio       2.25         5 Yr. EPS Growth Rate (%)       4.71         Current Yield (%)       2.56         Beta (5 Years, Monthly)       0.91	1,017 13.85 2.28 5.73
Price/Earnings Ratio14.03Price/Book Ratio2.255 Yr. EPS Growth Rate (%)4.71Current Yield (%)2.56Beta (5 Years, Monthly)0.91	13.85 2.28 5.73
Price/Book Ratio2.255 Yr. EPS Growth Rate (%)4.71Current Yield (%)2.56Beta (5 Years, Monthly)0.91	2.28 5.73
5 Yr. EPS Growth Rate (%)       4.71         Current Yield (%)       2.56         Beta (5 Years, Monthly)       0.91	5.73
Current Yield (%)2.56Beta (5 Years, Monthly)0.91	
Beta (5 Years, Monthly) 0.91	2.72
	1.00
Number of Securities 5,307	8,611
	- ) -

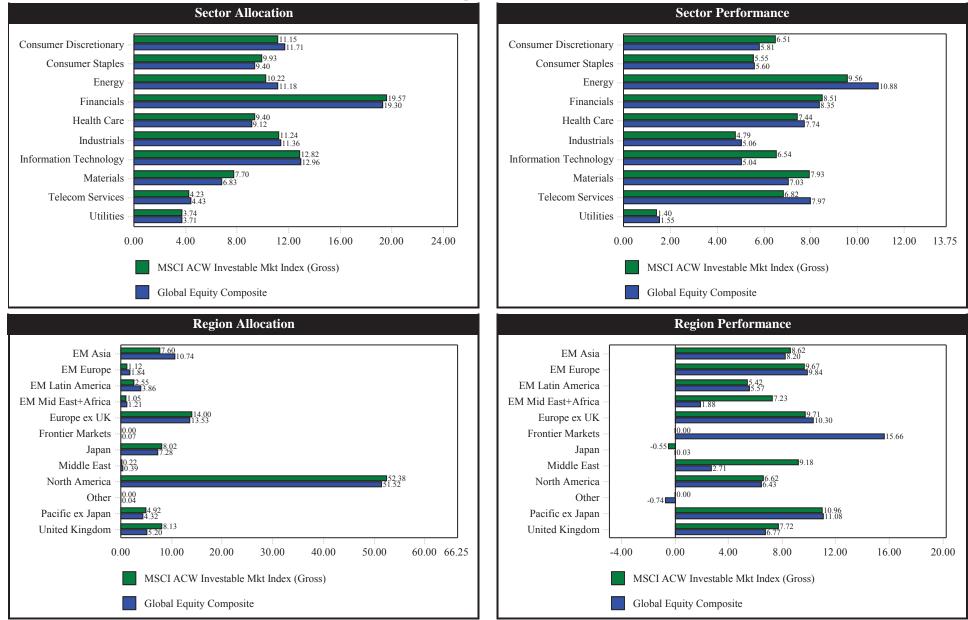


Holdings for the Global Equity Blended Index (I) are unavailable. The MSCI ACW Investable Mkt Index (Gross) is used as a proxy. Internal Mid Cap (SA) and Artio Int'l Equity II (SA) currently have a 100% allocation to cash and are excluded from the holdings shown.

Global Equity Composite vs. MSCI ACW Investable Mkt Index (Gross)

Buy and Hold Sector/Region Attribution Graphs

# As of September 30,2012



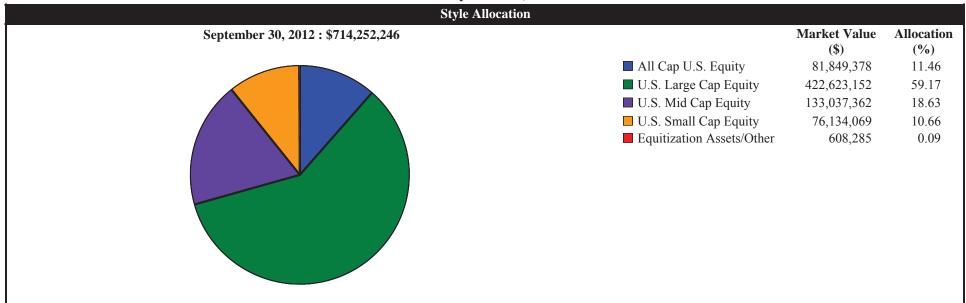
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# Kentucky Retirement Systems - Insurance Plan U.S. Equity Composite

Asset Allocation Charts

As of September 30, 2012



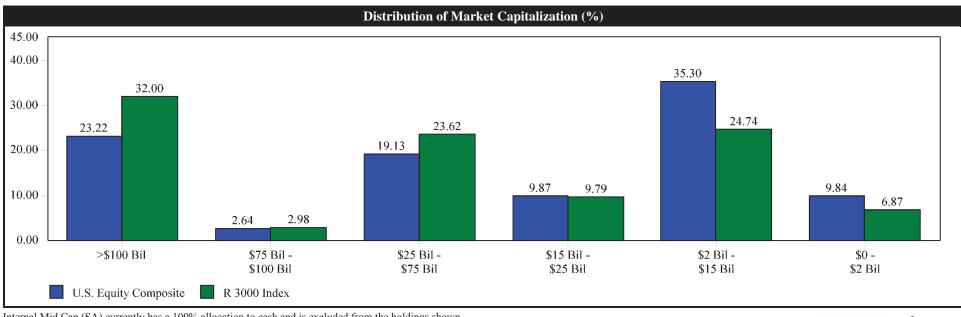
Sub-Co	mposite Detail		
September 30, 2012 : \$714,252,246		Market Value (\$)	Allocation (%)
	River Road Asset Management (SA)	10,980,136	1.54
	Westwood Management (SA)	33,073,783	4.63
	Westfield Capital (SA)	37,795,459	5.29
	■ Internal S&P 500 Index (SA)	422,623,152	59.17
	Sasco Capital Inc. (SA)	13,246,620	1.85
	Systematic Financial Management (SA)	54,498,960	7.63
	Geneva Capital Management (SA)	65,291,782	9.14
	NT Structured Small Cap (SA)	76,134,069	10.66
	Equitization Assets Program	589,006	0.08
	Internal Mid Cap (SA)	18,833	0.00
	KRS Insurance Liquidation	446	0.00

Allocations shown may not sum up to 100% exactly due to rounding.

# Kentucky Retirement Systems - Insurance Plan U.S. Equity Composite vs. R 3000 Index **Portfolio Characteristics** As of September 30, 2012

Top Ten Equity Holdings										
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)						
Exxon Mobil Corp	2.19	2.70	-0.51	7.56						
General Electric Co	1.33	1.52	-0.19	9.80						
Microsoft Corp	1.28	1.41	-0.13	-2.07						
Google Inc	1.24	1.23	0.01	30.07						
Chevron Corp	1.22	1.45	-0.23	11.37						
International Business Machines Corp	1.16	1.43	-0.27	6.52						
AT&T Inc	1.13	1.39	-0.26	7.03						
Johnson & Johnson	1.11	1.19	-0.08	2.92						
JPMorgan Chase & Co	1.08	0.97	0.11	14.24						
Procter & Gamble Co (The)	1.01	1.20	-0.19	14.22						
% of Portfolio	12.75	14.49								

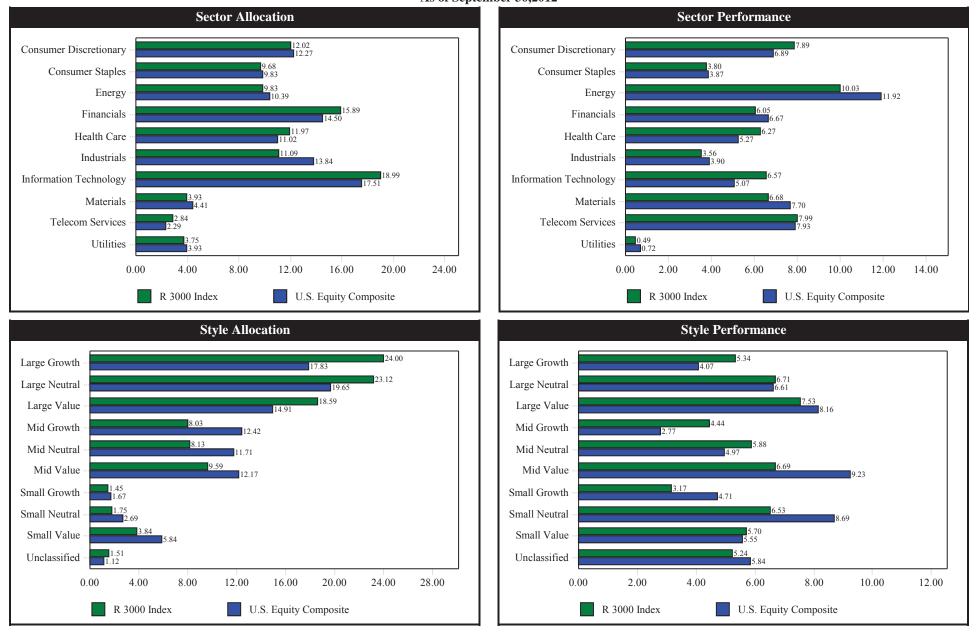
PortfolioWtd. Avg. Mkt. Cap (\$M)65,390Median Mkt. Cap (\$M)559Price/Earnings Ratio15.97Price/Book Ratio2.555 Yr. EPS Growth Rate (%)7.17Current Yield (%)1.93Beta (5 Years, Monthly)0.96Number of Securities3,103	Port	olio Characteristics	
Median Mkt. Cap (\$M)559Price/Earnings Ratio15.97Price/Book Ratio2.555 Yr. EPS Growth Rate (%)7.17Current Yield (%)1.93Beta (5 Years, Monthly)0.96		Portfolio	Benchmark
Price/Earnings Ratio15.97Price/Book Ratio2.555 Yr. EPS Growth Rate (%)7.17Current Yield (%)1.93Beta (5 Years, Monthly)0.96	Wtd. Avg. Mkt. Cap (\$M)	65,390	99,279
Price/Book Ratio2.555 Yr. EPS Growth Rate (%)7.17Current Yield (%)1.93Beta (5 Years, Monthly)0.96	Median Mkt. Cap (\$M)	559	1,026
5 Yr. EPS Growth Rate (%)       7.17         Current Yield (%)       1.93         Beta (5 Years, Monthly)       0.96	Price/Earnings Ratio	15.97	15.49
Current Yield (%)1.93Beta (5 Years, Monthly)0.96	Price/Book Ratio	2.55	2.58
Beta (5 Years, Monthly) 0.96	5 Yr. EPS Growth Rate (%)	7.17	7.95
	Current Yield (%)	1.93	2.02
Number of Securities 3,103	Beta (5 Years, Monthly)	0.96	1.00
	Number of Securities	3,103	2,961



Internal Mid Cap (SA) currently has a 100% allocation to cash and is excluded from the holdings shown.

RVKuhns ▶ ▶ ▶ & ASSOCIATES, INC.

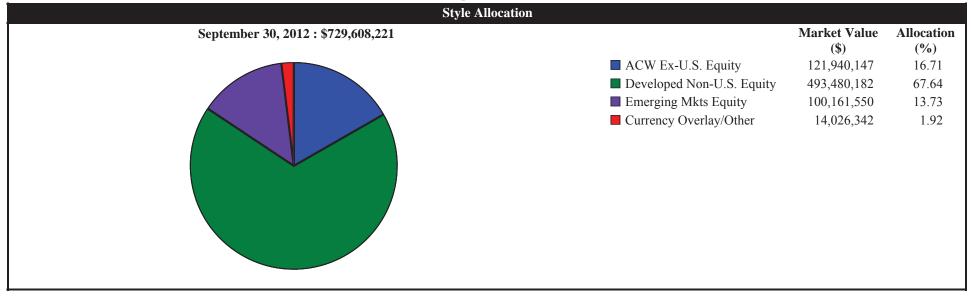
# Kentucky Retirement Systems - Insurance Plan U.S. Equity Composite vs. R 3000 Index Buy and Hold Sector/Style Attribution Graphs As of September 30,2012

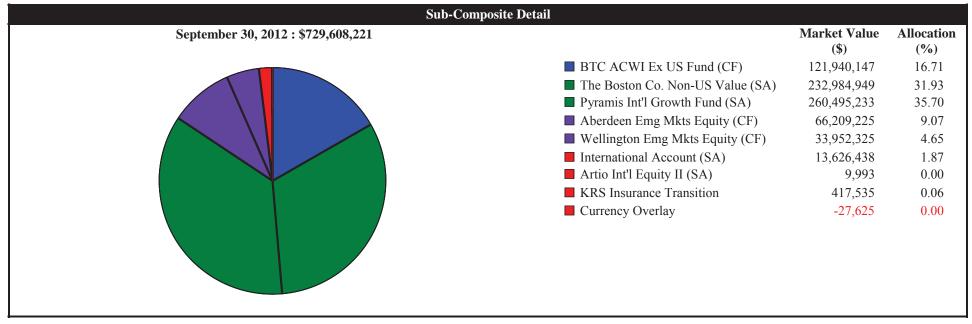


Internal Mid Cap (SA) currently has a 100% allocation to cash and is excluded from the holdings shown.

# Kentucky Retirement Systems - Insurance Plan Non-U.S. and Emerging Markets Equity Composite Asset Allocation Charts

As of September 30, 2012





Allocations shown may not sum up to 100% exactly due to rounding. Allocations shown are not representative of the actual allocations due to the negative Currency Overlay program balance.



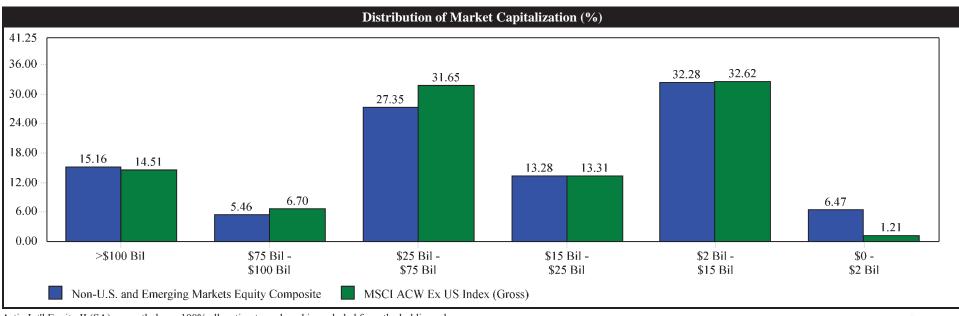
#### Non-U.S. and Emerging Markets Equity Composite vs. MSCI ACW Ex US Index (Gross)

#### **Portfolio Characteristics**

#### As of September 30, 2012

Top Ten Equity Holdings										
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)						
Roche Holding AG	1.19	0.87	0.32	8.15						
HSBC Holdings PLC	1.18	1.11	0.07	6.26						
Novartis AG	1.11	0.93	0.18	9.56						
Toyota Motor Corp	1.10	0.71	0.39	-1.63						
China Mobile Ltd	1.03	0.44	0.59	3.51						
Sanofi	1.00	0.67	0.33	12.58						
Samsung Electronics Co Ltd	0.97	0.88	0.09	15.02						
Vodafone Group PLC	0.97	0.93	0.04	0.94						
Total	0.93	0.70	0.23	11.77						
Nestle SA, Cham Und Vevey	0.84	1.38	-0.54	5.60						
% of Portfolio	10.32	8.62								

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	44,103	48,101
Median Mkt. Cap (\$M)	5,193	6,056
Price/Earnings Ratio	12.30	12.58
Price/Book Ratio	1.95	2.01
5 Yr. EPS Growth Rate (%)	1.40	2.72
Current Yield (%)	3.15	3.41
Beta (5 Years, Monthly)	0.92	1.00
Number of Securities	2,209	1,837

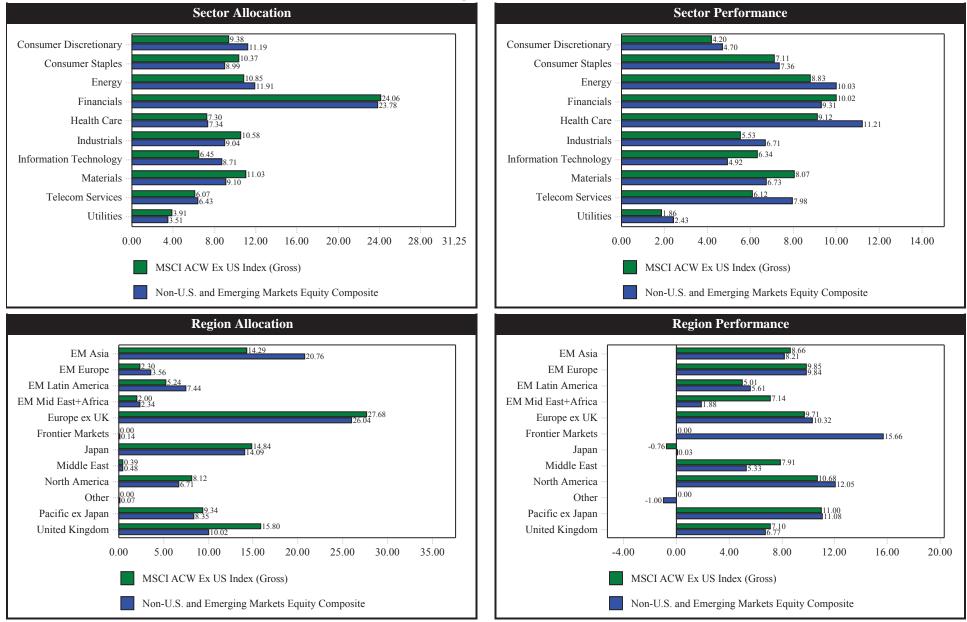


Artio Int'l Equity II (SA) currently has a 100% allocation to cash and is excluded from the holdings shown.

#### Non-U.S. and Emerging Markets Equity Composite vs. MSCI ACW Ex US Index (Gross)

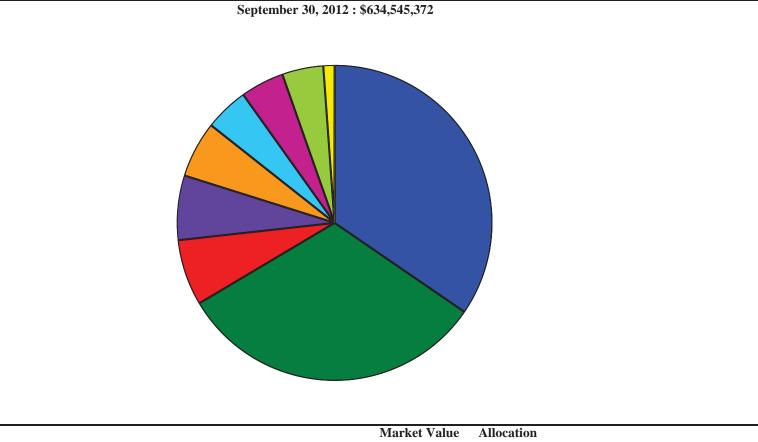
Buy and Hold Sector/Region Attribution Graphs

As of September 30,2012



Artio Int'l Equity II (SA) currently has a 100% allocation to cash and is excluded from the holdings shown. Allocation to "Other" consists of holdings domiciled in countries/regions that do not meet economic development, size, liquidity, or market accessibility criteria as defined by the MSCI region standards.

# Kentucky Retirement Systems - Insurance Plan Fixed Income Composite Asset Allocation by Manager As of September 30, 2012



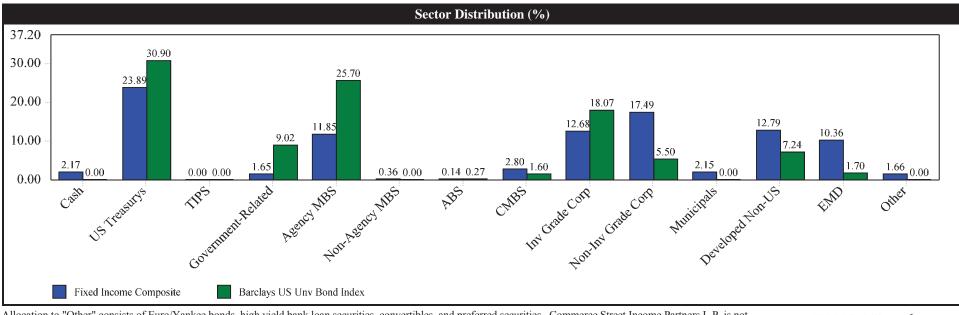
	Market Value	Allocation
	(\$)	(%)
PIMCO Core Fixed Income (SA)	219,331,273	34.57
■ NISA Core Agg Fixed Income (SA)	202,422,072	31.90
Loomis Sayles HY Fixed Income (SA)	43,019,408	6.78
Columbia HY Fixed Income (SA)	41,951,416	6.61
Waterfall (SA)	36,660,490	5.78
Shenkman Capital (SA)	28,583,437	4.50
Stone Harbor (SA)	28,384,698	4.47
Manulife Asset Mgmt (SA)	26,908,787	4.24
Commerce Street Income Partners L.P.	7,283,791	1.15

#### Fixed Income Composite vs. Barclays US Unv Bond Index

**Portfolio Characteristics** 

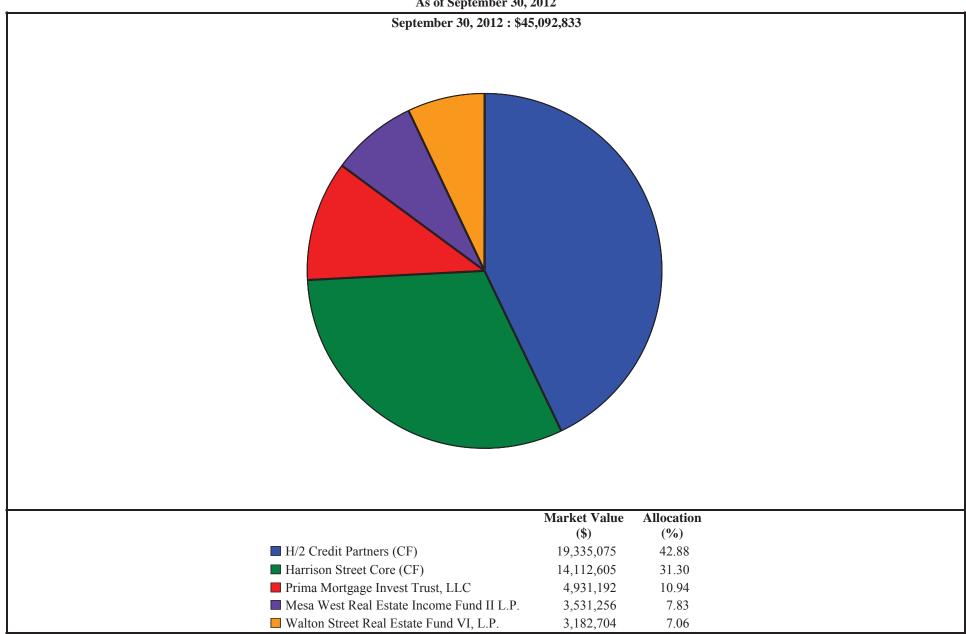
As of September 30, 2012

	Portfolio Characteristics	
	Portfolio	Benchmark
Effective Duration	4.99	4.83
Avg. Maturity	7.06	6.79
Avg. Quality	A3	-
Yield To Maturity (%)	2.90	2.08
Coupon Rate (%)	4.23	4.05
Current Yield (%)	3.91	-



Allocation to "Other" consists of Euro/Yankee bonds, high yield bank loan securities, convertibles, and preferred securities. Commerce Street Income Partners L.P. is not included in the Fixed Income Composite statistics due to its private equity style. Statistics for Waterfall (SA) are excluded from the Portfolio Characteristics shown.

# Kentucky Retirement Systems - Insurance Plan Real Estate Composite Asset Allocation by Manager As of September 30, 2012

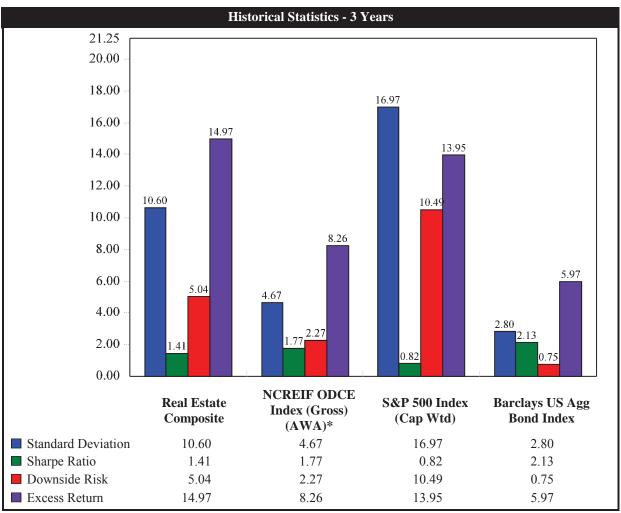


Allocations shown may not sum up to 100% exactly due to rounding.



# Kentucky Retirement Systems - Insurance Plan Real Estate Composite As of September 30, 2012

Comparative Performance												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2011	2010	2009	Since Incep.	Inception Date
Real Estate Composite	2.84	2.84	8.23	8.87	15.34	N/A	N/A	14.85	18.36	N/A	9.06	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	7.94	15.26	5.83	-22.11	3.45	
Difference	0.07	0.07	-0.16	-2.74	6.81	N/A	N/A	-0.41	12.53	N/A	5.61	

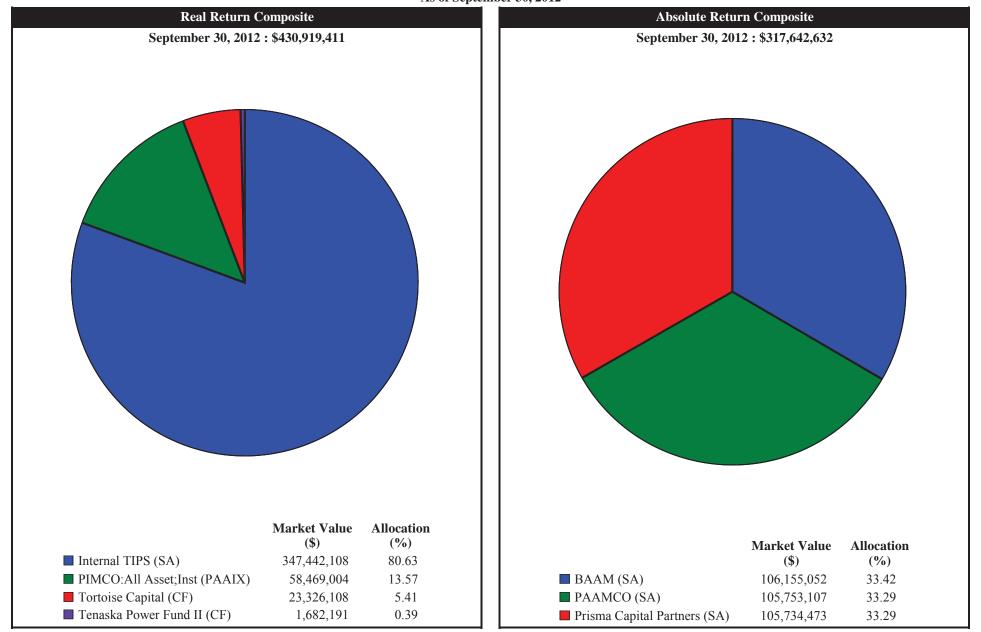


Historical Statistics - 3 Yea	rs
	Actual Correlation
NCREIF ODCE Index (Gross) (AWA)*	0.15
S&P 500 Index (Cap Wtd)	-0.36
R 2000 Index	-0.27
MSCI EAFE Index (Gross)	-0.38
MSCI Emg Mkts Index (Gross)	-0.21
Barclays US Agg Bond Index	0.08
Barclays US Trsy: US TIPS Index	0.03
Wilshire US REIT Index	-0.34
HFN FOF Multi-Strat Index (Net)	-0.34
DJ-UBS Cmdty Index (TR)	-0.22
BofA ML 3 Mo US T-Bill Index	0.29
Consumer Price Index	0.12
Real Estate Composite	1.00

Performance shown is gross of fees. Calculation is based on quarterly periodicity.



# Kentucky Retirement Systems - Insurance Plan Real Return Composite and Absolute Return Composite Asset Allocation by Manager As of September 30, 2012



Allocations shown may not sum up to 100% exactly due to rounding.

Manager Comparative Performance

As of September 30, 2012

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
River Road Asset Management (SA)	4.34	4.34	10.93	23.94	N/A	N/A	N/A	N/A	N/A	9.05	07/01/2011
R 3000 Value Index	6.44	6.44	15.64	31.05	11.83	-0.72	-0.10	16.23	19.76	7.34	
Difference	-2.10	-2.10	-4.71	-7.11	N/A	N/A	N/A	N/A	N/A	1.71	
IM U.S. All Cap Value Equity (SA+CF) Median	5.70	5.70	12.78	27.73	11.31	1.28	-0.40	17.63	30.19	4.80	
River Road Asset Management (SA) Rank	80	80	74	77	N/A	N/A	N/A	N/A	N/A	9	
Westwood Management (SA)	6.77	6.77	11.13	26.01	N/A	N/A	N/A	N/A	N/A	1.58	07/01/2011
R 3000 Value Index	6.44	6.44	15.64	31.05	11.83	-0.72	-0.10	16.23	19.76	7.34	
Difference	0.33	0.33	-4.51	-5.04	N/A	N/A	N/A	N/A	N/A	-5.76	
IM U.S. All Cap Value Equity (SA+CF) Median	5.70	5.70	12.78	27.73	11.31	1.28	-0.40	17.63	30.19	4.80	
Westwood Management (SA) Rank	29	29	69	61	N/A	N/A	N/A	N/A	N/A	81	
Westfield Capital (SA)	10.18	10.18	20.67	32.55	N/A	N/A	N/A	N/A	N/A	6.33	07/01/2011
R 3000 Growth Index	6.01	6.01	16.59	29.35	14.69	3.22	2.18	17.64	37.01	8.99	
Difference	4.17	4.17	4.08	3.20	N/A	N/A	N/A	N/A	N/A	-2.66	
IM U.S. All Cap Growth Equity (SA+CF) Median	5.59	5.59	15.41	25.67	13.15	3.20	-1.34	21.01	34.62	5.37	
Westfield Capital (SA) Rank	6	6	3	4	N/A	N/A	N/A	N/A	N/A	36	
Internal S&P 500 Index (SA)	6.18	6.18	16.26	29.91	13.69	1.72	3.20	15.97	25.44	4.07	07/01/2001
S&P 500 Index (Cap Wtd)*	6.35	6.35	16.44	30.20	13.71	1.53	2.37	16.38	27.25	3.99	
Difference	-0.17	-0.17	-0.18	-0.29	-0.02	0.19	0.83	-0.41	-1.81	0.08	
IM U.S. Large Cap Index Equity (SA+CF) Median	6.34	6.34	16.37	30.18	13.24	1.16	1.89	15.56	26.70	3.71	
Internal S&P 500 Index (SA) Rank	80	80	64	80	21	21	9	42	74	24	
Equitization Assets Program	6.62	6.62	17.81	31.80	15.80	N/A	8.20	15.02	24.30	17.36	01/01/2009
S&P 500 Index (Cap Wtd)	6.35	6.35	16.44	30.20	13.20	1.05	2.11	15.06	26.46	15.74	
Difference	0.27	0.27	1.37	1.60	2.60	N/A	6.09	-0.04	-2.16	1.62	
INVESCO Struct'd Core Equity (SA)	6.87	6.87	16.77	31.15	12.37	1.27	2.85	11.17	21.40	5.66	08/01/2005
S&P 500 Index (Cap Wtd)	6.35	6.35	16.44	30.20	13.20	1.05	2.11	15.06	26.46	4.36	
Difference	0.52	0.52	0.33	0.95	-0.83	0.22	0.74	-3.89	-5.06	1.30	
IM U.S. Large Cap Core Equity (SA+CF) Median	6.43	6.43	15.88	29.84	12.78	1.61	1.86	14.85	26.50	4.93	
INVESCO Struct'd Core Equity (SA) Rank	33	33	36	29	57	59	38	87	81	26	



Manager Comparative Performance

As of September 30, 2012	As	of	Se	ptem	ber	30,	2012	
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As of September 50, 2012												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date	
Sasco Capital Inc. (SA)	3.68	3.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.68	07/01/2012	
R Mid Cap Value Index	5.80	5.80	14.03	29.28	13.86	1.74	-1.38	24.75	34.21	5.80		
Difference	-2.12	-2.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2.12		
IM U.S. Mid Cap Value Equity (SA+CF) Median	5.67	5.67	13.58	28.21	13.27	2.20	-1.08	22.22	34.94	5.67		
Sasco Capital Inc. (SA) Rank	91	91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91		
Systematic Financial Management (SA)	6.28	6.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.28	07/01/2012	
R Mid Cap Value Index	5.80	5.80	14.03	29.28	13.86	1.74	-1.38	24.75	34.21	5.80		
Difference	0.48	0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.48		
IM U.S. Mid Cap Value Equity (SA+CF) Median	5.67	5.67	13.58	28.21	13.27	2.20	-1.08	22.22	34.94	5.67		
Systematic Financial Management (SA) Rank	28	28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28		
Geneva Capital Management (SA)	3.72	3.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.72	07/01/2012	
R Mid Cap Growth Index	5.35	5.35	13.88	26.69	14.73	2.54	-1.65	26.38	46.29	5.35		
Difference	-1.63	-1.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.63		
IM U.S. Mid Cap Growth Equity (SA+CF) Median	4.74	4.74	14.04	26.10	14.94	3.23	-1.78	26.53	41.35	4.74		
Geneva Capital Management (SA) Rank	76	76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	76		
NT Structured Small Cap (SA)	5.43	5.43	15.46	32.80	15.30	3.60	-1.25	29.64	30.39	8.74	10/01/1999	
R 2000 Index	5.25	5.25	14.23	31.90	12.98	2.21	-4.18	26.86	27.18	6.70		
Difference	0.18	0.18	1.23	0.90	2.32	1.39	2.93	2.78	3.21	2.04		
IM U.S. Small Cap Core Equity (SA+CF) Median	5.37	5.37	13.87	32.36	14.76	2.98	-1.50	28.25	29.98	10.17		
NT Structured Small Cap (SA) Rank	50	50	36	45	36	35	48	37	47	76		
U.S. Equity Composite	6.21	6.21	15.35	29.39	12.79	1.48	1.04	16.77	25.56	10.93	04/01/1984	
R 3000 Index (P)*	6.23	6.23	16.13	30.20	13.34	1.46	0.92	17.50	27.16	10.85		
Difference	-0.02	-0.02	-0.78	-0.81	-0.55	0.02	0.12	-0.73	-1.60	0.08		



Manager Comparative Performance

Asc	of Se	ptembe	r 30.	2012	
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As of September 30, 2012												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date	
The Boston Co. Non-US Value (SA)	7.36	7.36	7.70	8.75	-0.54	-4.37	-16.01	5.88	33.01	2.77	05/01/2005	
MSCI ACW Ex US Index (Gross)*	7.49	7.49	10.86	14.82	3.13	-4.49	-11.78	9.43	32.71	3.99		
Difference	-0.13	-0.13	-3.16	-6.07	-3.67	0.12	-4.23	-3.55	0.30	-1.22		
IM International Value Equity (SA+CF) Median	7.35	7.35	10.97	15.17	4.03	-2.82	-11.02	11.09	35.42	5.27		
The Boston Co. Non-US Value (SA) Rank	50	50	81	91	92	72	83	81	59	90		
BTC ACWI Ex US Fund (CF)	7.41	7.41	10.64	14.78	3.40	N/A	-13.43	11.23	N/A	8.99	07/01/2009	
MSCI ACW Ex US Index (Net)	7.40	7.40	10.38	14.49	3.17	-4.12	-13.71	11.15	41.46	8.78		
Difference	0.01	0.01	0.26	0.29	0.23	N/A	0.28	0.08	N/A	0.21		
IM International Core Equity (SA+CF) Median	7.54	7.54	11.98	17.27	4.55	-3.81	-12.11	11.64	33.57	10.09		
BTC ACWI Ex US Fund (CF) Rank	54	54	76	80	70	N/A	67	54	N/A	69		
Pyramis Int'l Growth Fund (SA)	7.27	7.27	10.73	14.53	4.11	-3.72	-11.52	11.85	32.15	5.90	08/01/2001	
MSCI ACW Ex US Index (Gross)*	7.49	7.49	10.86	14.82	3.13	-4.49	-11.78	9.43	32.71	5.05		
Difference	-0.22	-0.22	-0.13	-0.29	0.98	0.77	0.26	2.42	-0.56	0.85		
IM International Growth Equity (SA+CF) Median	7.20	7.20	13.09	18.56	6.21	-2.53	-12.33	14.67	37.60	7.11		
Pyramis Int'l Growth Fund (SA) Rank	49	49	77	78	79	65	46	67	69	69		
NT Int'l Sm Cap Eq Index (SA)	8.45	8.45	12.55	13.09	5.16	N/A	-18.79	22.69	61.43	18.82	12/01/2008	
MSCI ACW Ex US Sm Cap Index (Gross)	8.64	8.64	13.35	13.86	6.28	-1.83	-18.21	25.58	63.50	20.64		
Difference	-0.19	-0.19	-0.80	-0.77	-1.12	N/A	-0.58	-2.89	-2.07	-1.82		
IM International Small Cap Equity (SA+CF) Median	8.67	8.67	16.05	17.65	8.37	-2.23	-13.62	23.37	44.93	19.04		
NT Int'l Sm Cap Eq Index (SA) Rank	57	57	79	86	85	N/A	93	58	12	55		
Non-U.S. Equity Composite	7.43	7.43	9.71	11.73	2.10	-3.48	-17.01	12.88	39.79	1.24	07/01/2000	
MSCI ACW Ex US Index (Gross) (P)*	7.49	7.49	10.86	15.04	3.77	-3.62	-13.26	12.37	40.20	2.07		
Difference	-0.06	-0.06	-1.15	-3.31	-1.67	0.14	-3.75	0.51	-0.41	-0.83		



Manager Comparative Performance

As of September 30, 2012												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date	
Aberdeen Emg Mkts Equity (CF)	7.93	7.93	18.58	24.69	13.94	N/A	-10.46	29.06	81.47	10.14	04/01/2008	
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	0.68		
Difference	0.04	0.04	6.24	7.35	7.98	N/A	7.71	9.86	2.45	9.46		
IM Emerging Markets Equity (SA+CF) Median	7.70	7.70	12.65	17.66	6.35	-0.95	-18.60	21.27	79.73	0.55		
Aberdeen Emg Mkts Equity (CF) Rank	44	44	11	7	7	N/A	7	11	44	4		
Wellington Emg Mkts Equity (CF)	9.27	9.27	13.06	17.37	3.47	N/A	-21.63	16.39	73.90	0.28	04/01/2008	
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	0.68		
Difference	1.38	1.38	0.72	0.03	-2.49	N/A	-3.46	-2.81	-5.12	-0.40		
IM Emerging Markets Equity (SA+CF) Median	7.70	7.70	12.65	17.66	6.35	-0.95	-18.60	21.27	79.73	0.55		
Wellington Emg Mkts Equity (CF) Rank	19	19	47	53	82	N/A	72	85	72	56		
Emerging Mkts Equity Composite	8.39	8.39	16.59	22.04	N/A	N/A	N/A	N/A	N/A	-0.28	07/01/2011	
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	-7.28		
Difference	0.50	0.50	4.25	4.70	N/A	N/A	N/A	N/A	N/A	7.00		



Manager Comparative Performance

As of September	30,	2012
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	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
NISA Core Agg Fixed Income (SA)	1.69	1.69	4.23	5.38	6.45	N/A	8.00	6.96	N/A	7.18	02/01/2009
Barclays US Agg Bond Index	1.58	1.58	3.99	5.16	6.19	6.53	7.84	6.54	5.93	6.90	
Difference	0.11	0.11	0.24	0.22	0.26	N/A	0.16	0.42	N/A	0.28	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.15	2.15	5.36	6.62	7.15	7.15	7.85	7.22	9.79	8.51	
NISA Core Agg Fixed Income (SA) Rank	84	84	86	87	79	N/A	37	62	N/A	84	
PIMCO Core Fixed Income (SA)	2.93	2.93	8.12	9.01	N/A	N/A	4.90	7.06	N/A	6.53	11/01/2009
PIMCO Blended Index	2.60	2.60	5.33	6.18	6.53	6.74	7.51	6.54	5.93	6.54	
Difference	0.33	0.33	2.79	2.83	N/A	N/A	-2.61	0.52	N/A	-0.01	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.15	2.15	5.36	6.62	7.15	7.15	7.85	7.22	9.79	7.09	
PIMCO Core Fixed Income (SA) Rank	7	7	5	5	N/A	N/A	99	59	N/A	74	
Columbia HY Fixed Income (SA)	4.61	4.61	12.41	N/A	N/A	N/A	N/A	N/A	N/A	13.45	11/01/2011
Barclays US Corp: Hi Yld Index	4.53	4.53	12.13	19.37	12.90	9.34	4.98	15.12	58.21	12.62	
Difference	0.08	0.08	0.28	N/A	N/A	N/A	N/A	N/A	N/A	0.83	
Loomis Sayles HY Fixed Income (SA)	6.88	6.88	18.22	N/A	N/A	N/A	N/A	N/A	N/A	17.05	11/01/2011
Barclays US Corp: Hi Yld Index	4.53	4.53	12.13	19.37	12.90	9.34	4.98	15.12	58.21	12.62	
Difference	2.35	2.35	6.09	N/A	N/A	N/A	N/A	N/A	N/A	4.43	
Manulife Asset Mgmt (SA)	3.50	3.50	9.15	N/A	N/A	N/A	N/A	N/A	N/A	9.43	12/01/2011
Barclays Multiverse Index	3.38	3.38	5.14	5.57	5.27	6.31	5.55	5.84	8.04	5.90	
Difference	0.12	0.12	4.01	N/A	N/A	N/A	N/A	N/A	N/A	3.53	
Commerce Street Income Partners L.P.	-13.69	-13.69	-16.03	-19.36	3.65	N/A	6.66	2.67	N/A	3.24	05/01/2009
Opportunistic FI Blended Index	2.86	2.86	7.58	11.88	8.51	5.96	3.24	10.12	44.58	13.35	
Difference	-16.55	-16.55	-23.61	-31.24	-4.86	N/A	3.42	-7.45	N/A	-10.11	
Waterfall (SA)	4.25	4.25	10.55	10.92	N/A	N/A	10.55	N/A	N/A	16.41	02/01/2010
Opportunistic FI Blended Index	2.86	2.86	7.58	11.88	8.51	5.96	3.24	10.12	44.58	7.42	
Difference	1.39	1.39	2.97	-0.96	N/A	N/A	7.31	N/A	N/A	8.99	
Shenkman Capital (SA)	3.31	3.31	8.04	13.42	N/A	N/A	3.46	N/A	N/A	7.06	10/01/2010
Shenkman Blended Index	4.05	4.05	10.40	15.67	10.29	7.44	3.04	12.41	56.08	8.40	
Difference	-0.74	-0.74	-2.36	-2.25	N/A	N/A	0.42	N/A	N/A	-1.34	



Manager Comparative Performance

		As of Se	eptember 3	80, 2012							
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Stone Harbor (SA)	6.58	6.58	14.32	20.64	N/A	N/A	7.12	N/A	N/A	11.93	12/01/2010
JPMorgan EMBI Global Dvfd TR Index	6.64	6.64	14.24	19.55	11.83	10.07	7.35	12.24	29.82	11.49	
Difference	-0.06	-0.06	0.08	1.09	N/A	N/A	-0.23	N/A	N/A	0.44	
IM Emerging Markets Debt (SA+CF) Median	6.45	6.45	14.64	19.51	12.64	10.47	2.58	14.90	32.27	10.43	
Stone Harbor (SA) Rank	48	48	56	45	N/A	N/A	22	N/A	N/A	39	
Fixed Income Composite	3.02	3.02	8.11	9.37	8.12	6.58	7.04	7.61	10.01	8.30	04/01/1984
Fixed Income Custom Index (P)	2.00	2.00	4.93	6.45	6.74	6.76	8.12	6.49	7.51	8.11	
Difference	1.02	1.02	3.18	2.92	1.38	-0.18	-1.08	1.12	2.50	0.19	



Manager Comparative Performance

As of September 30, 2012

As of September 50, 2012												
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date	
Internal TIPS (SA)	2.26	2.26	6.39	8.95	9.52	7.95	13.09	6.46	10.08	7.48	05/01/2002	
Barclays US Trsy: US TIPS Index	2.12	2.12	6.25	9.10	9.29	7.93	13.56	6.31	11.41	7.45		
Difference	0.14	0.14	0.14	-0.15	0.23	0.02	-0.47	0.15	-1.33	0.03		
IM U.S. TIPS (SA+CF) Median	2.17	2.17	6.26	9.10	9.39	8.06	13.52	6.43	11.31	7.54		
Internal TIPS (SA) Rank	33	33	41	62	38	62	58	45	95	74		
Weaver Barksdale TIPS (SA)	2.18	2.18	6.21	9.00	9.62	8.09	13.67	6.51	9.60	7.46	07/01/2001	
Barclays US Trsy: US TIPS Index	2.12	2.12	6.25	9.10	9.29	7.93	13.56	6.31	11.41	7.40		
Difference	0.06	0.06	-0.04	-0.10	0.33	0.16	0.11	0.20	-1.81	0.06		
IM U.S. TIPS (SA+CF) Median	2.17	2.17	6.26	9.10	9.39	8.06	13.52	6.43	11.31	N/A		
Weaver Barksdale TIPS (SA) Rank	49	49	62	59	31	48	42	44	97	N/A		
PIMCO:All Asset;Inst (PAAIX)	6.43	6.43	16.62	N/A	N/A	N/A	N/A	N/A	N/A	12.81	12/01/2011	
Barclays US Trsy Infl Notes: 1-10 Yr Index	1.71	1.71	4.56	6.32	6.97	6.56	8.93	5.22	12.02	4.37		
Difference	4.72	4.72	12.06	N/A	N/A	N/A	N/A	N/A	N/A	8.44		
Tenaska Power Fund II (CF)	0.73	0.73	7.04	9.57	4.54	N/A	5.94	-0.92	-2.79	0.86	10/01/2008	
Tortoise Capital (CF)	10.95	10.95	10.65	30.07	27.47	N/A	18.68	34.95	N/A	26.28	08/01/2009	
Alerian MLP Index	8.89	8.89	8.50	26.22	25.10	14.04	13.88	35.85	76.41	24.17		
Difference	2.06	2.06	2.15	3.85	2.37	N/A	4.80	-0.90	N/A	2.11		
Real Return Composite	3.45	3.45	8.55	11.03	N/A	N/A	N/A	N/A	N/A	12.52	07/01/2011	
Consumer Price Index + 3%	1.59	1.59	4.84	5.05	5.40	5.17	6.05	4.54	5.80	5.07		
Difference	1.86	1.86	3.71	5.98	N/A	N/A	N/A	N/A	N/A	7.45		



Manager Comparative Performance

			-								
		As of S	eptember 3	30, 2012							
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Internal Real Estate (SA)	0.00	0.00	0.00	0.00	0.02	0.09	0.02	0.02	0.07	4.41	04/01/1999
Walton Street Real Estate Fund VI, L.P.	1.18	1.18	6.46	7.25	10.47	N/A	54.15	-11.15	N/A	-49.68	05/01/2009
Prima Mortgage Invest Trust, LLC	2.38	2.38	5.73	5.54	13.96	N/A	7.93	22.63	N/A	12.78	05/01/2009
Mesa West Real Estate Income Fund II L.P.	4.63	4.63	12.72	16.57	N/A	N/A	11.12	-15.50	N/A	2.09	01/01/2010
H/2 Credit Partners (CF)	4.32	4.32	10.26	10.57	N/A	N/A	N/A	N/A	N/A	7.78	07/01/2011
Harrison Street Core (CF)	-0.09	-0.09	-0.09	N/A	N/A	N/A	N/A	N/A	N/A	-0.09	12/01/2011
Real Estate Composite	2.82	2.82	7.84	8.54	13.20	5.68	13.33	14.80	-6.37	8.30	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	15.26	5.83	-22.11	3.45	
Difference	0.05	0.05	-0.55	-3.07	4.67	3.34	-1.93	8.97	15.74	4.85	



Manager Comparative Performance

		As of S	eptember 3	30, 2012							
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
BAAM (SA)	2.62	2.62	5.09	5.33	N/A	N/A	N/A	N/A	N/A	4.91	09/01/2011
PAAMCO (SA)	2.84	2.84	4.86	4.13	N/A	N/A	N/A	N/A	N/A	3.81	09/01/2011
Prisma Capital Partners (SA)	2.18	2.18	5.79	2.81	N/A	N/A	N/A	N/A	N/A	2.59	09/01/2011
Absolute Return Composite	2.54	2.54	5.12	3.86	N/A	N/A	3.82	N/A	N/A	2.77	04/01/2010
HFRI FOF Diversified Index (Lagged)	1.16	1.16	2.22	-0.20	2.06	-1.18	-2.46	4.07	8.67	1.16	
Difference	1.38	1.38	2.90	4.06	N/A	N/A	6.28	N/A	N/A	1.61	
Cash Equivalents (SA)	0.08	0.08	0.19	0.24	0.56	1.35	0.31	0.89	1.19	4.27	01/01/1988
Citi 3 Mo T-Bill Index	0.03	0.03	0.06	0.06	0.08	0.63	0.06	0.10	0.16	3.80	
Difference	0.05	0.05	0.13	0.18	0.48	0.72	0.25	0.79	1.03	0.47	

Performance for absolute return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Gross) (AWA) is available quarterly; interim month returns assume a 0.00% return.



Manager Comparative Performance

As of September 30, 2012

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
River Road Asset Management (SA)	4.35	4.35	10.98	23.99	N/A	N/A	N/A	N/A	N/A	9.08	07/01/2011
R 3000 Value Index	6.44	6.44	15.64	31.05	11.83	-0.72	-0.10	16.23	19.76	7.34	
Difference	-2.09	-2.09	-4.66	-7.06	N/A	N/A	N/A	N/A	N/A	1.74	
IM U.S. All Cap Value Equity (SA+CF) Median	5.70	5.70	12.78	27.73	11.31	1.28	-0.40	17.63	30.19	4.80	
River Road Asset Management (SA) Rank	80	80	71	77	N/A	N/A	N/A	N/A	N/A	9	
Westwood Management (SA)	6.75	6.75	11.07	25.94	N/A	N/A	N/A	N/A	N/A	1.54	07/01/2011
R 3000 Value Index	6.44	6.44	15.64	31.05	11.83	-0.72	-0.10	16.23	19.76	7.34	
Difference	0.31	0.31	-4.57	-5.11	N/A	N/A	N/A	N/A	N/A	-5.80	
IM U.S. All Cap Value Equity (SA+CF) Median	5.70	5.70	12.78	27.73	11.31	1.28	-0.40	17.63	30.19	4.80	
Westwood Management (SA) Rank	29	29	70	62	N/A	N/A	N/A	N/A	N/A	81	
Westfield Capital (SA)	10.17	10.17	20.69	32.57	N/A	N/A	N/A	N/A	N/A	6.35	07/01/2011
R 3000 Growth Index	6.01	6.01	16.59	29.35	14.69	3.22	2.18	17.64	37.01	8.99	
Difference	4.16	4.16	4.10	3.22	N/A	N/A	N/A	N/A	N/A	-2.64	
IM U.S. All Cap Growth Equity (SA+CF) Median	5.59	5.59	15.41	25.67	13.15	3.20	-1.34	21.01	34.62	5.37	
Westfield Capital (SA) Rank	6	6	3	4	N/A	N/A	N/A	N/A	N/A	36	
Internal S&P 500 Index (SA)	6.35	6.35	16.39	30.10	13.85	1.77	2.71	16.32	26.14	4.14	07/01/2001
S&P 500 Index (Cap Wtd)*	6.35	6.35	16.44	30.20	13.71	1.53	2.37	16.38	27.25	3.99	
Difference	0.00	0.00	-0.05	-0.10	0.14	0.24	0.34	-0.06	-1.11	0.15	
IM U.S. Large Cap Index Equity (SA+CF) Median	6.34	6.34	16.37	30.18	13.24	1.16	1.89	15.56	26.70	3.71	
Internal S&P 500 Index (SA) Rank	42	42	50	66	20	21	13	31	72	23	
Equitization Assets Program	6.63	6.63	17.68	30.66	25.45	N/A	37.64	14.98	25.04	25.29	01/01/2009
S&P 500 Index (Cap Wtd)	6.35	6.35	16.44	30.20	13.20	1.05	2.11	15.06	26.46	15.74	
Difference	0.28	0.28	1.24	0.46	12.25	N/A	35.53	-0.08	-1.42	9.55	
Sasco Capital Inc. (SA)	3.68	3.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.68	07/01/2012
R Mid Cap Value Index	5.80	5.80	14.03	29.28	13.86	1.74	-1.38	24.75	34.21	5.80	
Difference	-2.12	-2.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2.12	
IM U.S. Mid Cap Value Equity (SA+CF) Median	5.67	5.67	13.58	28.21	13.27	2.20	-1.08	22.22	34.94	5.67	
Sasco Capital Inc. (SA) Rank	91	91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91	



Manager Comparative Performance

As of September	30,	2012
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		AS ULD	eptember.	50, 2012							
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Systematic Financial Management (SA)	6.28	6.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.28	07/01/2012
R Mid Cap Value Index	5.80	5.80	14.03	29.28	13.86	1.74	-1.38	24.75	34.21	5.80	
Difference	0.48	0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.48	
IM U.S. Mid Cap Value Equity (SA+CF) Median	5.67	5.67	13.58	28.21	13.27	2.20	-1.08	22.22	34.94	5.67	
Systematic Financial Management (SA) Rank	28	28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28	
Geneva Capital Management (SA)	3.72	3.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.72	07/01/2012
R Mid Cap Growth Index	5.35	5.35	13.88	26.69	14.73	2.54	-1.65	26.38	46.29	5.35	
Difference	-1.63	-1.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.63	
IM U.S. Mid Cap Growth Equity (SA+CF) Median	4.74	4.74	14.04	26.10	14.94	3.23	-1.78	26.53	41.35	4.74	
Geneva Capital Management (SA) Rank	76	76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	76	
NT Structured Small Cap (SA)	5.63	5.63	15.33	32.13	N/A	N/A	N/A	N/A	N/A	4.36	07/01/2011
R 2000 Index	5.25	5.25	14.23	31.90	12.98	2.21	-4.18	26.86	27.18	2.44	
Difference	0.38	0.38	1.10	0.23	N/A	N/A	N/A	N/A	N/A	1.92	
IM U.S. Small Cap Core Equity (SA+CF) Median	5.37	5.37	13.87	32.36	14.76	2.98	-1.50	28.25	29.98	3.41	
NT Structured Small Cap (SA) Rank	45	45	37	53	N/A	N/A	N/A	N/A	N/A	35	
U.S. Equity Composite	6.17	6.17	15.27	29.47	12.64	1.12	0.43	16.32	26.14	8.66	07/01/1992
R 3000 Index (I)*	6.23	6.23	16.13	30.20	13.08	1.20	0.97	16.38	27.25	N/A	
Difference	-0.06	-0.06	-0.86	-0.73	-0.44	-0.08	-0.54	-0.06	-1.11	N/A	



Manager Comparative Performance

		113 01 0	eptember.	50, 2012							
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
The Boston Co. Non-US Value (SA)	7.35	7.35	7.75	8.77	-0.53	N/A	-16.00	5.79	33.67	-3.66	06/01/2008
MSCI ACW Ex US Index (Gross)*	7.49	7.49	10.86	14.82	3.13	-4.49	-11.78	9.43	32.71	-4.19	
Difference	-0.14	-0.14	-3.11	-6.05	-3.66	N/A	-4.22	-3.64	0.96	0.53	
IM International Value Equity (SA+CF) Median	7.35	7.35	10.97	15.17	4.03	-2.82	-11.02	11.09	35.42	-2.48	
The Boston Co. Non-US Value (SA) Rank	51	51	81	90	92	N/A	83	82	57	68	
BTC ACWI Ex US Fund (CF)	7.40	7.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.74	06/01/2012
MSCI ACW Ex US Index (Net)	7.40	7.40	10.38	14.49	3.17	-4.12	-13.71	11.15	41.46	13.74	
Difference	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	
IM International Core Equity (SA+CF) Median	7.54	7.54	11.98	17.27	4.55	-3.81	-12.11	11.64	33.57	13.71	
BTC ACWI Ex US Fund (CF) Rank	54	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49	
Pyramis Int'l Growth Fund (SA)	7.18	7.18	10.36	14.19	3.98	-3.76	-11.48	11.75	32.37	5.87	08/01/2001
MSCI ACW Ex US Index (Gross)*	7.49	7.49	10.86	14.82	3.13	-4.49	-11.78	9.43	32.71	5.05	
Difference	-0.31	-0.31	-0.50	-0.63	0.85	0.73	0.30	2.32	-0.34	0.82	
IM International Growth Equity (SA+CF) Median	7.20	7.20	13.09	18.56	6.21	-2.53	-12.33	14.67	37.60	7.11	
Pyramis Int'l Growth Fund (SA) Rank	51	51	80	79	79	66	46	67	68	69	
International Account (SA)	5.56	5.56	10.24	20.14	N/A	N/A	N/A	N/A	N/A	-9.11	07/01/2011
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	-7.28	
Difference	-2.33	-2.33	-2.10	2.80	N/A	N/A	N/A	N/A	N/A	-1.83	
IM Emerging Markets Equity (SA+CF) Median	7.70	7.70	12.65	17.66	6.35	-0.95	-18.60	21.27	79.73	-7.71	
International Account (SA) Rank	93	93	76	29	N/A	N/A	N/A	N/A	N/A	68	
Non-U.S. Equity Composite	7.26	7.26	9.22	10.14	1.33	-4.01	-17.36	11.39	39.31	1.29	04/01/2000
MSCI ACW Ex US Index (Gross) (I)*	7.49	7.49	10.86	15.04	3.30	-4.28	-12.90	10.60	37.06	0.88	
Difference	-0.23	-0.23	-1.64	-4.90	-1.97	0.27	-4.46	0.79	2.25	0.41	



Manager Comparative Performance

As	of S	Sept	ember	30.	2012
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	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Aberdeen Emg Mkts Equity (CF)	7.93	7.93	18.57	24.68	13.94	N/A	-10.46	29.06	81.47	10.14	04/01/2008
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	0.68	
Difference	0.04	0.04	6.23	7.34	7.98	N/A	7.71	9.86	2.45	9.46	
IM Emerging Markets Equity (SA+CF) Median	7.70	7.70	12.65	17.66	6.35	-0.95	-18.60	21.27	79.73	0.55	
Aberdeen Emg Mkts Equity (CF) Rank	44	44	11	7	7	N/A	7	11	44	4	
Wellington Emg Mkts Equity (CF)	9.27	9.27	13.06	17.37	3.48	N/A	-21.61	16.39	73.90	0.29	04/01/2008
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	0.68	
Difference	1.38	1.38	0.72	0.03	-2.48	N/A	-3.44	-2.81	-5.12	-0.39	
IM Emerging Markets Equity (SA+CF) Median	7.70	7.70	12.65	17.66	6.35	-0.95	-18.60	21.27	79.73	0.55	
Wellington Emg Mkts Equity (CF) Rank	19	19	47	53	82	N/A	72	85	72	56	
Emerging Mkts Equity Composite	8.38	8.38	16.63	22.08	N/A	N/A	N/A	N/A	N/A	-0.24	07/01/2011
MSCI Emg Mkts Index (Gross)	7.89	7.89	12.34	17.34	5.96	-0.98	-18.17	19.20	79.02	-7.28	
Difference	0.49	0.49	4.29	4.74	N/A	N/A	N/A	N/A	N/A	7.04	



Manager Comparative Performance

As of September 30, 2012

		AS UI D	eptember .	1	3	5				Since	Inception
	QTD	FYTD	CYTD	Year	Years	Years	2011	2010	2009	Incep.	Date
NISA Core Agg Fixed Income (SA)	1.68	1.68	4.16	5.39	N/A	N/A	N/A	N/A	N/A	7.67	07/01/2011
Barclays US Agg Bond Index	1.58	1.58	3.99	5.16	6.19	6.53	7.84	6.54	5.93	7.28	
Difference	0.10	0.10	0.17	0.23	N/A	N/A	N/A	N/A	N/A	0.39	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.15	2.15	5.36	6.62	7.15	7.15	7.85	7.22	9.79	8.11	
NISA Core Agg Fixed Income (SA) Rank	85	85	87	87	N/A	N/A	N/A	N/A	N/A	69	
PIMCO Core Fixed Income (SA)	3.25	3.25	8.61	9.59	N/A	N/A	N/A	N/A	N/A	8.42	04/01/2011
PIMCO Blended Index	2.60	2.60	5.33	6.18	6.53	6.74	7.51	6.54	5.93	8.34	
Difference	0.65	0.65	3.28	3.41	N/A	N/A	N/A	N/A	N/A	0.08	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.15	2.15	5.36	6.62	7.15	7.15	7.85	7.22	9.79	8.32	
PIMCO Core Fixed Income (SA) Rank	5	5	3	4	N/A	N/A	N/A	N/A	N/A	45	
Columbia HY Fixed Income (SA)	4.62	4.62	12.40	N/A	N/A	N/A	N/A	N/A	N/A	13.44	11/01/2011
Barclays US Corp: Hi Yld Index	4.53	4.53	12.13	19.37	12.90	9.34	4.98	15.12	58.21	12.62	
Difference	0.09	0.09	0.27	N/A	N/A	N/A	N/A	N/A	N/A	0.82	
Loomis Sayles HY Fixed Income (SA)	6.62	6.62	17.75	N/A	N/A	N/A	N/A	N/A	N/A	16.53	11/01/2011
Barclays US Corp: Hi Yld Index	4.53	4.53	12.13	19.37	12.90	9.34	4.98	15.12	58.21	12.62	
Difference	2.09	2.09	5.62	N/A	N/A	N/A	N/A	N/A	N/A	3.91	
Manulife Asset Mgmt (SA)	3.41	3.41	9.00	N/A	N/A	N/A	N/A	N/A	N/A	9.24	12/01/2011
Barclays Multiverse Index	3.38	3.38	5.14	5.57	5.27	6.31	5.55	5.84	8.04	5.90	
Difference	0.03	0.03	3.86	N/A	N/A	N/A	N/A	N/A	N/A	3.34	
Commerce Street Income Partners L.P.	-13.69	-13.69	-16.03	-19.36	3.65	N/A	6.66	2.67	N/A	3.24	05/01/2009
Opportunistic FI Blended Index	2.86	2.86	7.58	11.88	8.51	5.96	3.24	10.12	44.58	13.35	
Difference	-16.55	-16.55	-23.61	-31.24	-4.86	N/A	3.42	-7.45	N/A	-10.11	
Waterfall (SA)	5.74	5.74	12.84	17.20	N/A	N/A	N/A	N/A	N/A	15.25	07/01/2011
Opportunistic FI Blended Index	2.86	2.86	7.58	11.88	8.51	5.96	3.24	10.12	44.58	5.94	
Difference	2.88	2.88	5.26	5.32	N/A	N/A	N/A	N/A	N/A	9.31	
Shenkman Capital (SA)	2.73	2.73	7.92	13.87	N/A	N/A	N/A	N/A	N/A	6.79	07/01/2011
US High Yield/Bank Loan Blended Index	4.05	4.05	10.40	15.67	10.29	7.44	3.04	12.41	56.08	7.64	
Difference	-1.32	-1.32	-2.48	-1.80	N/A	N/A	N/A	N/A	N/A	-0.85	



Manager Comparative Performance

As	of	Sen	tem	her	30	2012	

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since	Inception
										Incep.	Date
Stone Harbor (SA)	6.67	6.67	13.89	19.64	N/A	N/A	N/A	N/A	N/A	11.47	07/01/2011
JPMorgan EMBI Global Dvf'd TR Index	6.64	6.64	14.24	19.55	11.83	10.07	7.35	12.24	29.82	13.43	
Difference	0.03	0.03	-0.35	0.09	N/A	N/A	N/A	N/A	N/A	-1.96	
IM Emerging Markets Debt (SA+CF) Median	6.45	6.45	14.64	19.51	12.64	10.47	2.58	14.90	32.27	9.05	
Stone Harbor (SA) Rank	47	47	66	50	N/A	N/A	N/A	N/A	N/A	41	
Fixed Income Composite	3.10	3.10	8.04	9.63	8.38	7.39	7.99	6.40	10.21	7.26	07/01/1992
Barclays US Unv Bond Index (I)*	2.00	2.00	4.93	6.45	7.68	6.98	10.00	6.31	11.41	7.10	
Difference	1.10	1.10	3.11	3.18	0.70	0.41	-2.01	0.09	-1.20	0.16	



Manager Comparative Performance

As of September	30, 2012	
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	As of September 50, 2012										
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Internal TIPS (SA)	2.16	2.16	6.32	9.21	9.50	7.98	13.30	6.40	10.25	6.82	10/01/2003
Barclays US Trsy: US TIPS Index	2.12	2.12	6.25	9.10	9.29	7.93	13.56	6.31	11.41	6.57	
Difference	0.04	0.04	0.07	0.11	0.21	0.05	-0.26	0.09	-1.16	0.25	
IM U.S. TIPS (SA+CF) Median	2.17	2.17	6.26	9.10	9.39	8.06	13.52	6.43	11.31	6.68	
Internal TIPS (SA) Rank	51	51	46	42	38	60	55	53	95	25	
PIMCO:All Asset;Inst (PAAIX)	6.43	6.43	16.62	N/A	N/A	N/A	N/A	N/A	N/A	12.81	12/01/2011
Barclays US Trsy Infl Notes: 1-10 Yr Index	1.71	1.71	4.56	6.32	6.97	6.56	8.93	5.22	12.02	4.37	
Difference	4.72	4.72	12.06	N/A	N/A	N/A	N/A	N/A	N/A	8.44	
Tenaska Power Fund II (CF)	0.73	0.73	7.03	9.57	4.54	N/A	5.94	-0.92	-2.79	0.86	10/01/2008
Tortoise Capital (CF)	11.00	11.00	12.77	32.63	28.30	N/A	18.73	34.93	N/A	27.05	08/01/2009
Alerian MLP Index	8.89	8.89	8.50	26.22	25.10	14.04	13.88	35.85	76.41	24.17	
Difference	2.11	2.11	4.27	6.41	3.20	N/A	4.85	-0.92	N/A	2.88	
Real Return Composite	3.17	3.17	8.18	10.70	N/A	N/A	N/A	N/A	N/A	12.18	07/01/2011
Consumer Price Index + 3%	1.59	1.59	4.84	5.05	5.40	5.17	6.05	4.54	5.80	5.07	
Difference	1.58	1.58	3.34	5.65	N/A	N/A	N/A	N/A	N/A	7.11	



Manager Comparative Performance

As of September 30, 2012											
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
Walton Street Real Estate Fund VI, L.P.	1.18	1.18	6.46	7.24	10.47	N/A	54.14	-11.15	N/A	-49.68	05/01/2009
Prima Mortgage Invest Trust, LLC	1.78	1.78	5.11	4.92	13.81	N/A	7.92	22.87	N/A	12.65	05/01/2009
Mesa West Real Estate Income Fund II L.P.	4.63	4.63	12.72	16.57	N/A	N/A	11.12	-15.50	N/A	2.09	01/01/2010
H/2 Credit Partners (CF)	4.32	4.32	10.25	10.57	N/A	N/A	N/A	N/A	N/A	7.78	07/01/2011
Harrison Street Core (CF)	-0.09	-0.09	-0.09	N/A	N/A	N/A	N/A	N/A	N/A	-0.09	12/01/2011
Real Estate Composite	2.84	2.84	8.23	8.87	15.34	N/A	14.85	18.36	N/A	9.06	05/01/2009
NCREIF ODCE Index (Gross) (AWA)*	2.77	2.77	8.39	11.61	8.53	2.34	15.26	5.83	-22.11	3.45	
Difference	0.07	0.07	-0.16	-2.74	6.81	N/A	-0.41	12.53	N/A	5.61	



Manager Comparative Performance

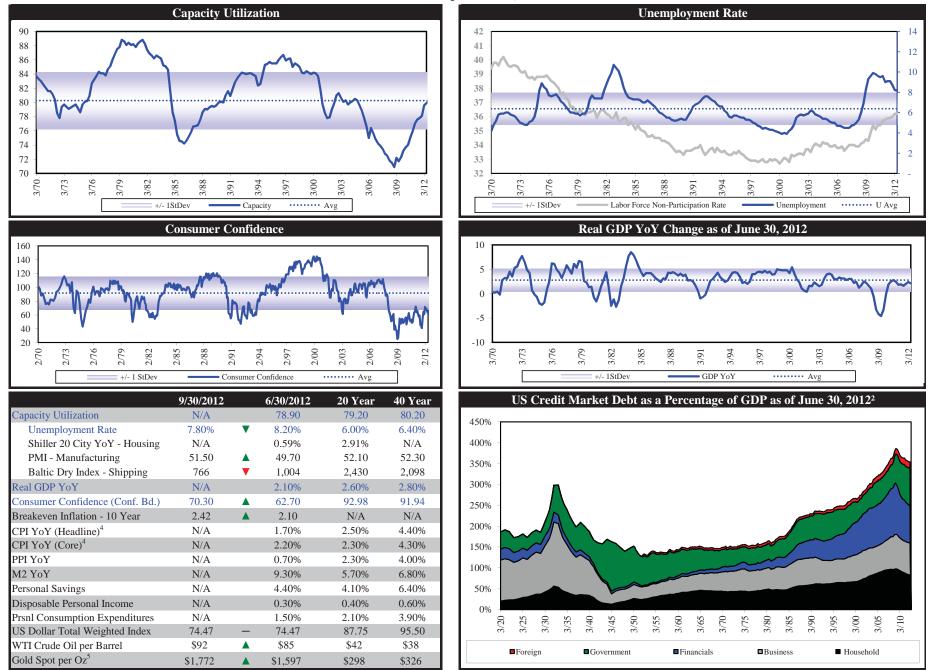
		0	eptember 3								
	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	2011	2010	2009	Since Incep.	Inception Date
BAAM (SA)	2.62	2.62	5.26	5.50	N/A	N/A	N/A	N/A	N/A	5.07	09/01/2011
PAAMCO (SA)	2.83	2.83	5.08	4.35	N/A	N/A	N/A	N/A	N/A	4.01	09/01/2011
Prisma Capital Partners (SA)	2.18	2.18	5.99	3.00	N/A	N/A	N/A	N/A	N/A	2.77	09/01/2011
Absolute Return Composite	2.49	2.49	5.20	3.85	N/A	N/A	3.81	N/A	N/A	2.57	04/01/2010
HFRI FOF Diversified Index (Lagged)	1.16	1.16	2.22	-0.20	2.06	-1.18	-2.46	4.07	8.67	1.16	
Difference	1.33	1.33	2.98	4.05	N/A	N/A	6.27	N/A	N/A	1.41	
Cash Equivalents (SA)	0.08	0.08	0.18	0.22	0.24	0.88	0.26	0.25	0.22	3.23	07/01/1992
Citi 3 Mo T-Bill Index	0.03	0.03	0.06	0.06	0.08	0.63	0.06	0.10	0.16	3.13	
Difference	0.05	0.05	0.12	0.16	0.16	0.25	0.20	0.15	0.06	0.10	
KRS Clearing Account	0.04	0.04	0.09	-0.25	0.03	3.18	-0.02	0.02	0.15	2.77	03/01/2002
Citi 3 Mo T-Bill Index	0.03	0.03	0.06	0.06	0.08	0.63	0.06	0.10	0.16	1.73	
Difference	0.01	0.01	0.03	-0.31	-0.05	2.55	-0.08	-0.08	-0.01	1.04	

Performance for absolute return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Gross) (AWA) is available quarterly; interim month returns assume a 0.00% return.



# Economic Measures<sup>1</sup> As of September 30, 2012

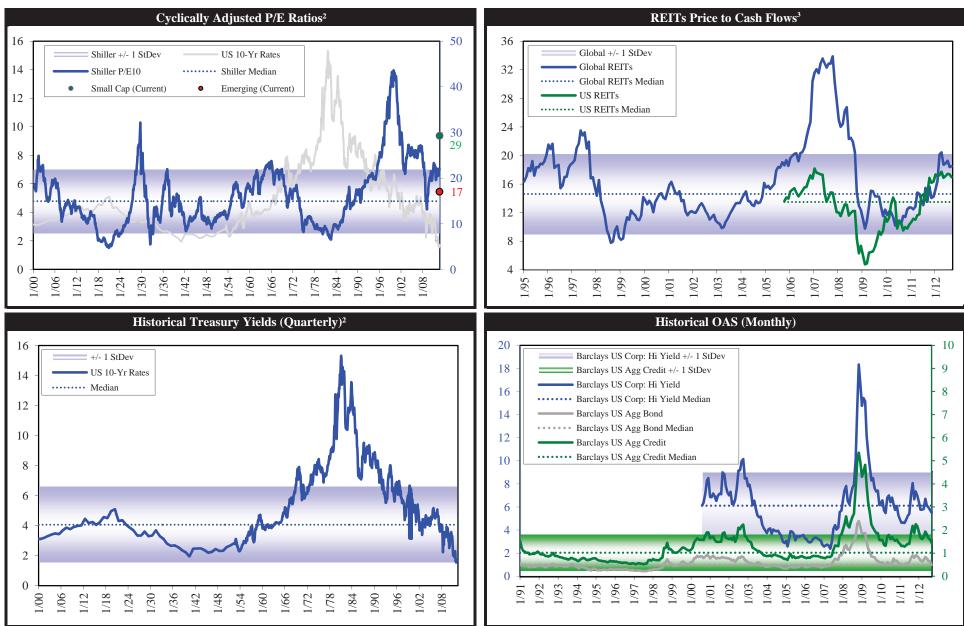


<sup>1</sup> All data courtesy of Bloomberg Professional Service, except as noted below.

<sup>2</sup> Data prior to 1952 is from "The Statistical History of the United States, From Colonial Times to the Present", by Ben Wattenberg, Morgan Stanley Research.

<sup>3</sup> "N/A" is shown for data that is not yet available. <sup>4</sup> CPI figures are cyclically adjusted. <sup>5</sup> 20- and 40-year average Gold spot prices are adjusted for inflation.

# Valuation Metrics <sup>1</sup> As of September 30, 2012



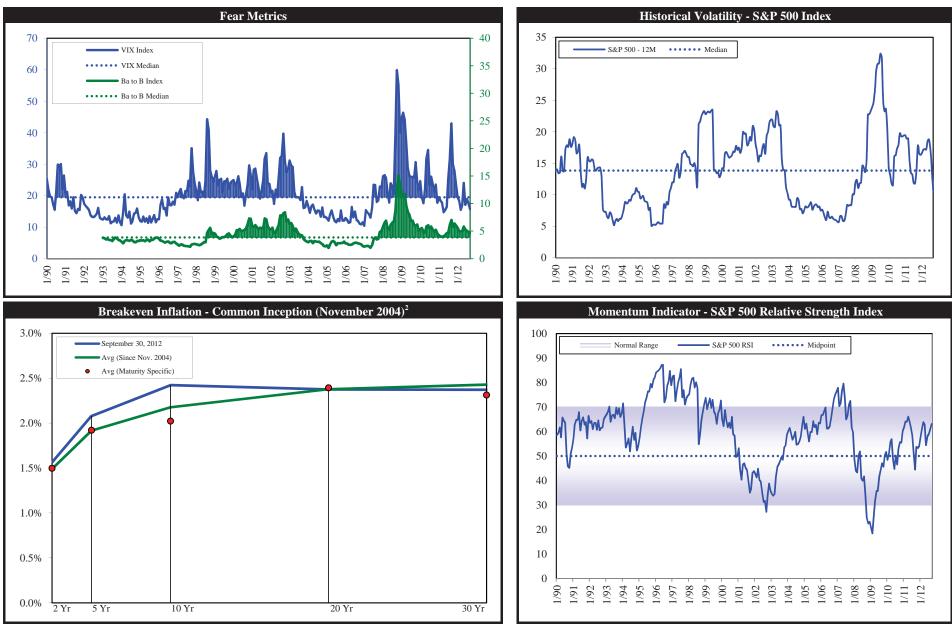
<sup>1</sup> All data courtesy of Bloomberg Professional Service.

<sup>2</sup> Source: Bloomberg and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E for the S&P 500 Index is based on 10-year trailing real earnings. Small Cap is represented by the S&P 600 Small Cap Index, and Emerging is represented by the MSCI Emerging Markets Index. Due to limited history, only the current 10-year P/E is shown for Small Cap and Emerging.

<sup>3</sup> US REITs is represented by the MSCI US REITs Index and Global REITs is represented by the MSCI World Real Estate Index.



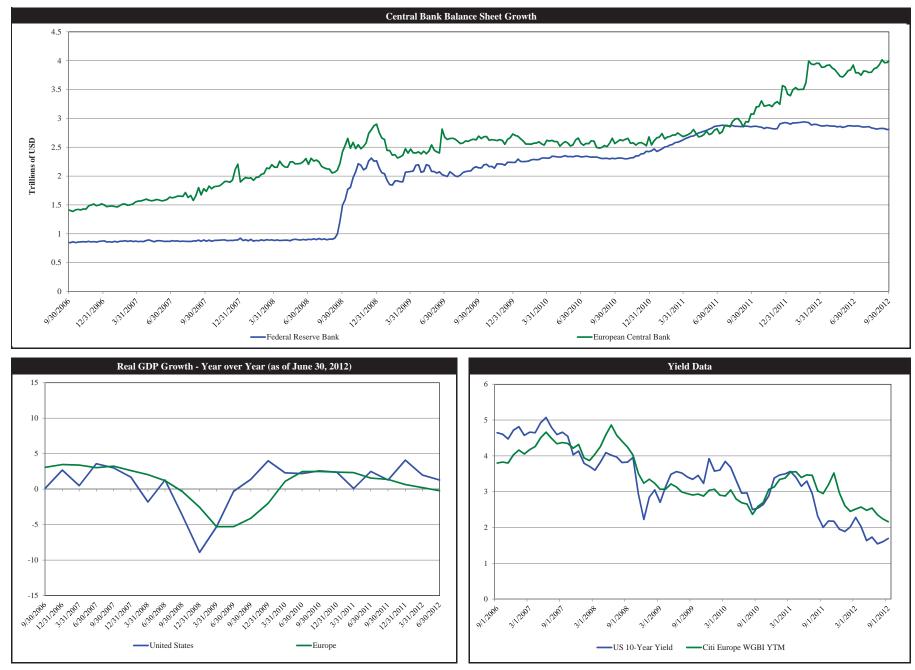
# Risk Metrics <sup>1</sup> As of September 30, 2012



<sup>1</sup> All data courtesy of Bloomberg Professional Service.

<sup>2</sup> Common inception of November 2004 is based on historical data availability. Specific inception dates are as follows: 2- and 20-year (2004), 5-year (2002), 10- and 30-year (1998).

#### Global Monetary Expansion As of September 30, 2012



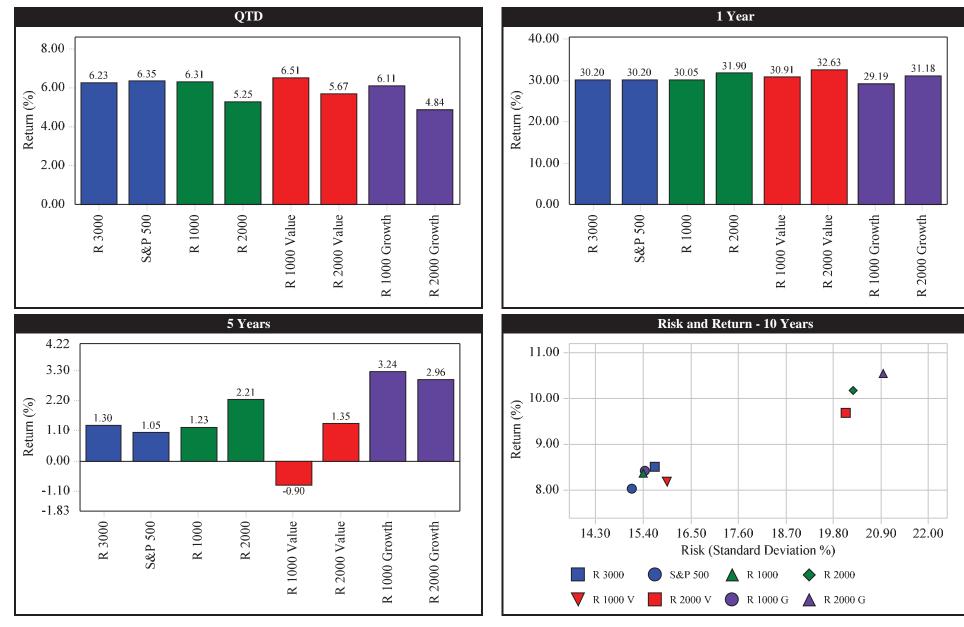
All data courtesy of Bloomberg Professional Service.

							As of Septe	ember 30, 2	012						
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	YTD
Best	28.58	66.42	31.84	12.35	25.91	62.14	33.16	34.54	35.97	39.78	8.44	79.02	28.60	22.49	16.44
Î	20.34	27.31	31.04	8.44	16.56	56.28	31.27	26.65	32.59	16.23	5.24	58.21	26.86	15.99	14.74
	16.42	24.69	16.16	7.89	14.81	47.25	25.95	21.39	26.86	15.97	2.06	47.32	22.40	13.56	14.23
	11.77	24.34	14.28	7.28	10.25	39.17	20.70	21.36	19.67	11.63	-2.35	32.46	19.20	9.24	13.55
	8.69	21.26	13.15	6.61	5.54	36.18	18.33	14.02	18.37	11.63	-10.01	28.60	16.83	7.84	12.34
	5.23	21.04	12.40	5.64	3.58	28.97	13.06	13.82	16.32	9.91	-20.47	27.18	16.36	4.98	12.13
	3.94	20.19	11.63	5.28	3.12	28.68	11.13	6.75	15.79	6.97	-26.16	26.46	15.12	2.11	10.59
	3.75	13.17	6.18	4.42	1.78	23.93	10.88	5.33	11.85	6.60	-33.79	18.91	15.06	0.10	8.39
	1.87	4.85	-3.02	2.49	-1.41	11.93	9.15	4.91	9.85	5.49	-35.65	11.41	10.16	-4.18	8.30
	-2.55	2.40	-5.86	-2.37	-6.00	9.28	8.56	4.55	4.85	5.00	-37.00	9.72	8.21	-5.55	6.25
	-17.01	2.39	-7.22	-11.89	-7.44	8.39	8.46	3.07	4.33	1.87	-39.20	5.93	6.54	-11.73	5.63
	-25.33	-0.82	-9.10	-12.11	-15.66	5.87	6.79	2.84	2.71	1.79	-43.06	1.92	6.31	-13.32	3.99
+	-27.03	-2.58	-13.96	-19.51	-20.48	4.10	4.34	2.74	2.07	-1.57	-46.78	0.21	4.77	-15.66	3.28
Worst	N/A	-7.65	-30.61	-21.21	-22.10	1.15	1.33	2.43	0.41	-17.55	-53.18	-29.76	0.13	-18.17	0.07

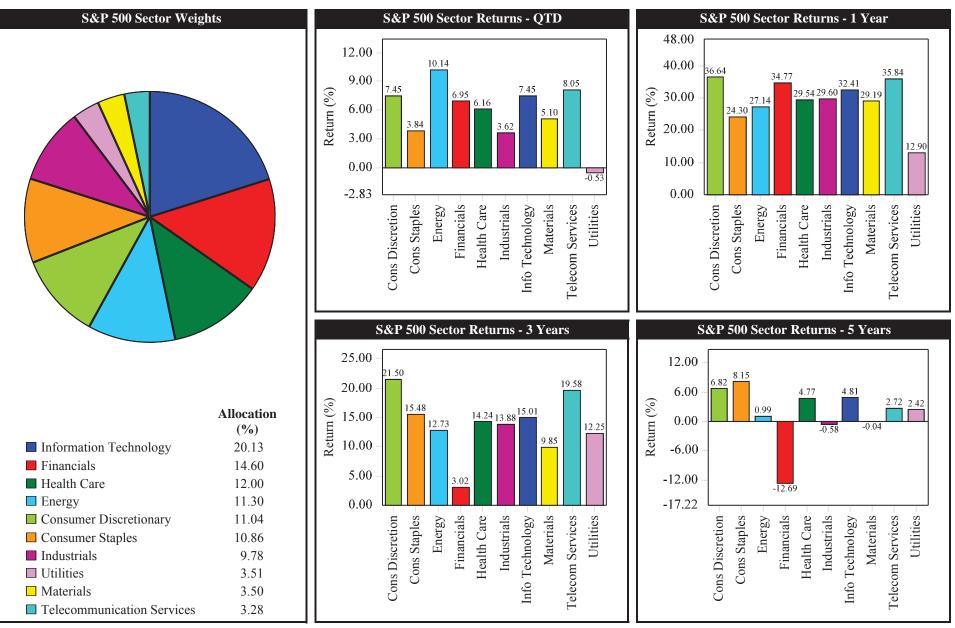
Annual Asset Class Performance
As of September 30, 2012

S&P 500 - US Large Cap	MSCI EAFE (Gross) - Int'l Dev.	EAFE SC (Gross) -	MSCI EM (Gross) - Int'l Emg Mkts	Barclays			Gov/Credit:		REIT - REITs	Multi-Strat	Cmdty (TR)	BofA ML 3 Mo T-Bill - Cash Equiv
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# Domestic Equity Market Performance and Risk As of September 30, 2012

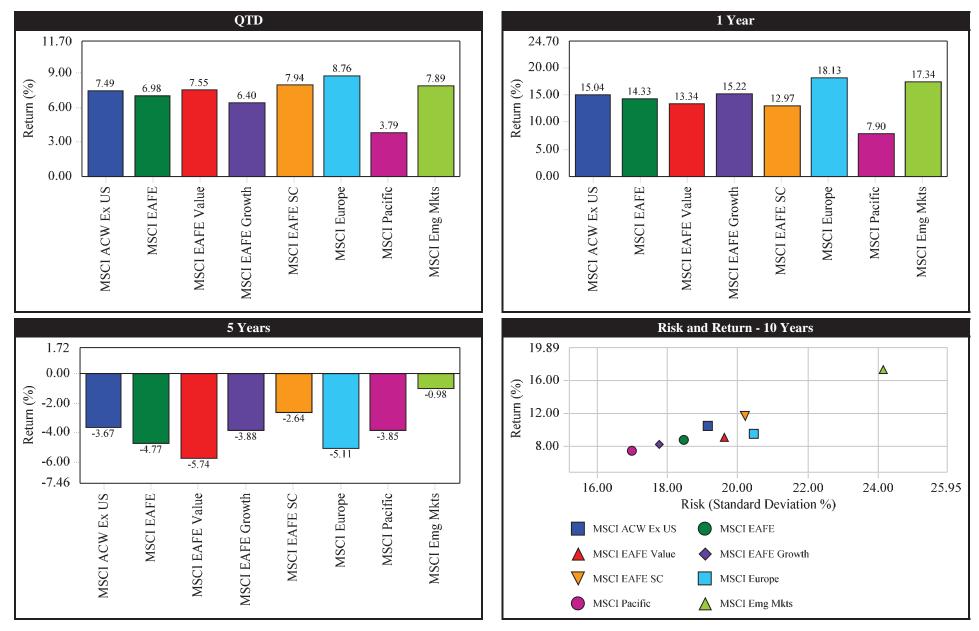


Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity.

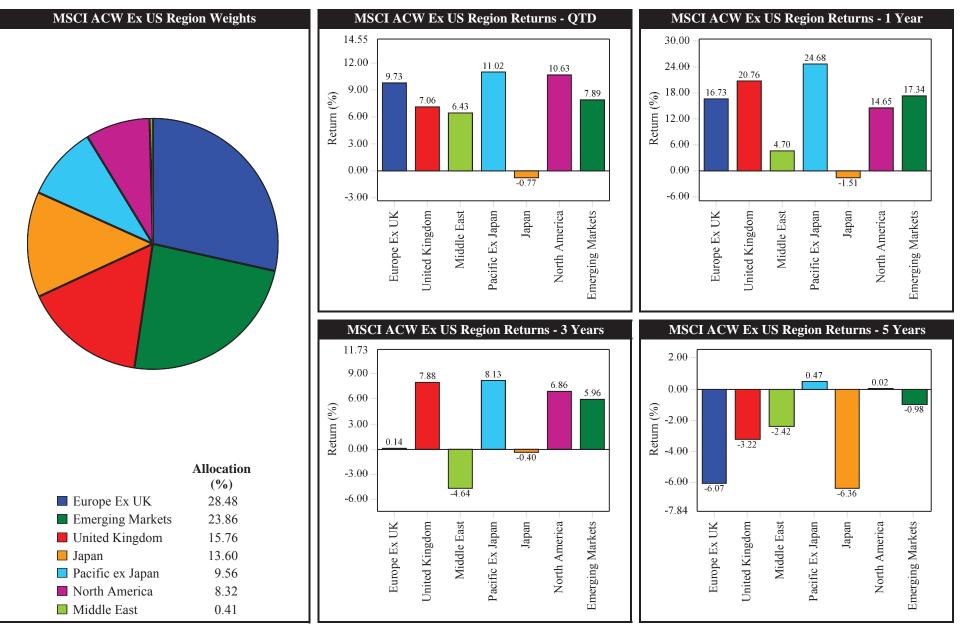


Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns provided by MPI Stylus, allocations provided by Standard & Poor's.

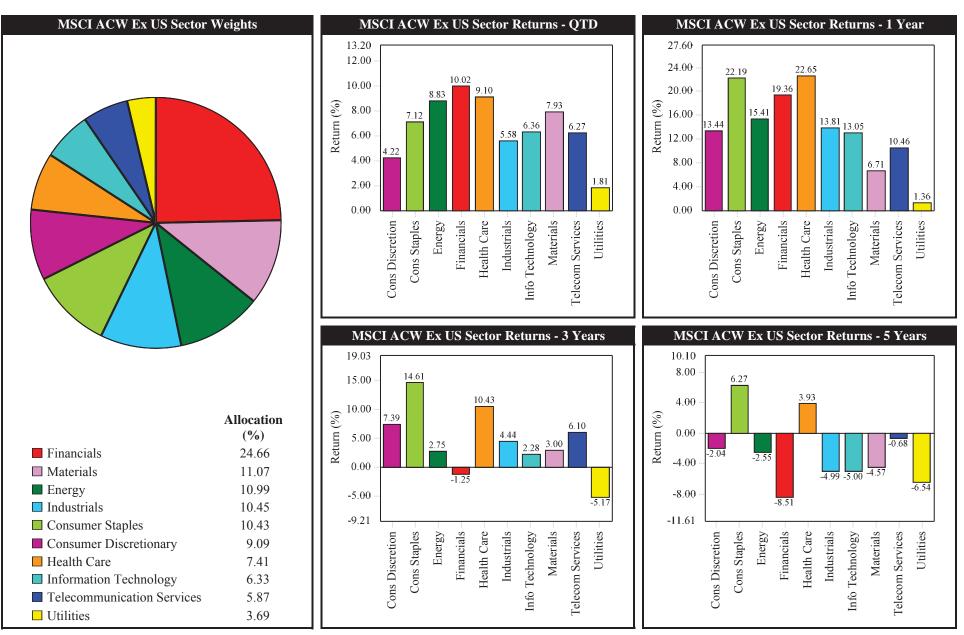
# International Equity Market Performance and Risk As of September 30, 2012



Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity. All returns are shown gross of foreign taxes on dividends.

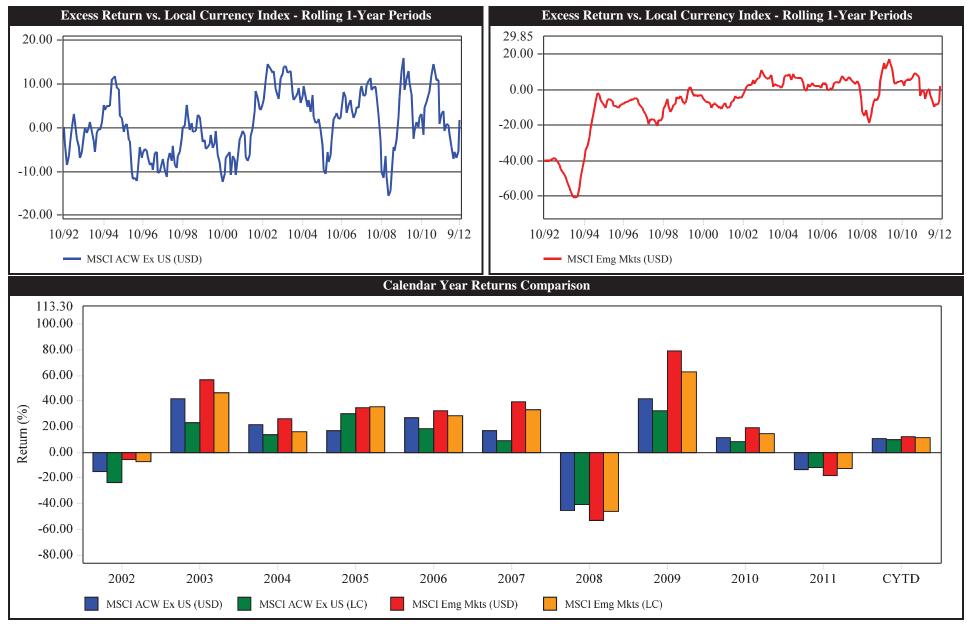


Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns and allocations provided by MSCI Barra. All returns are shown gross of foreign taxes on dividends.



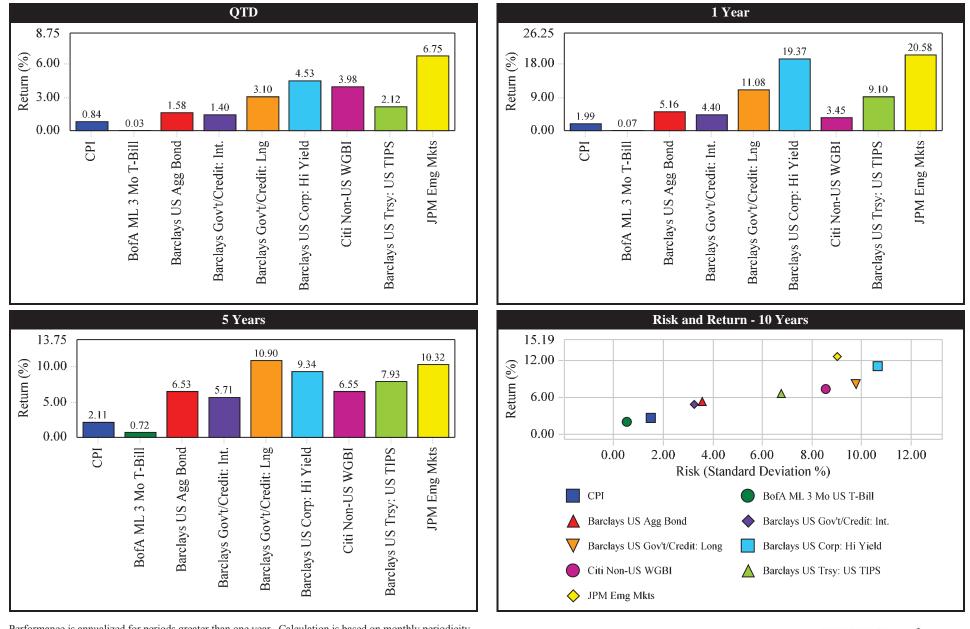
Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns and allocations provided by MSCI Barra. All returns are shown gross of foreign taxes on dividends.

# Effect of Currency on International Equity Performance As of September 30, 2012



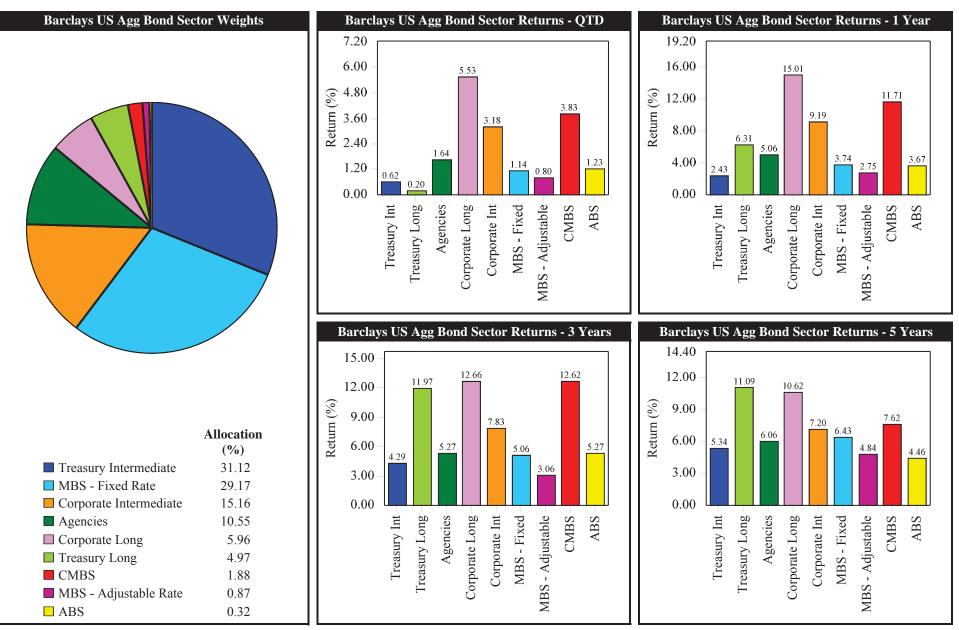
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity. All returns are shown gross of foreign taxes on dividends.

# Fixed Income Market Performance and Risk As of September 30, 2012



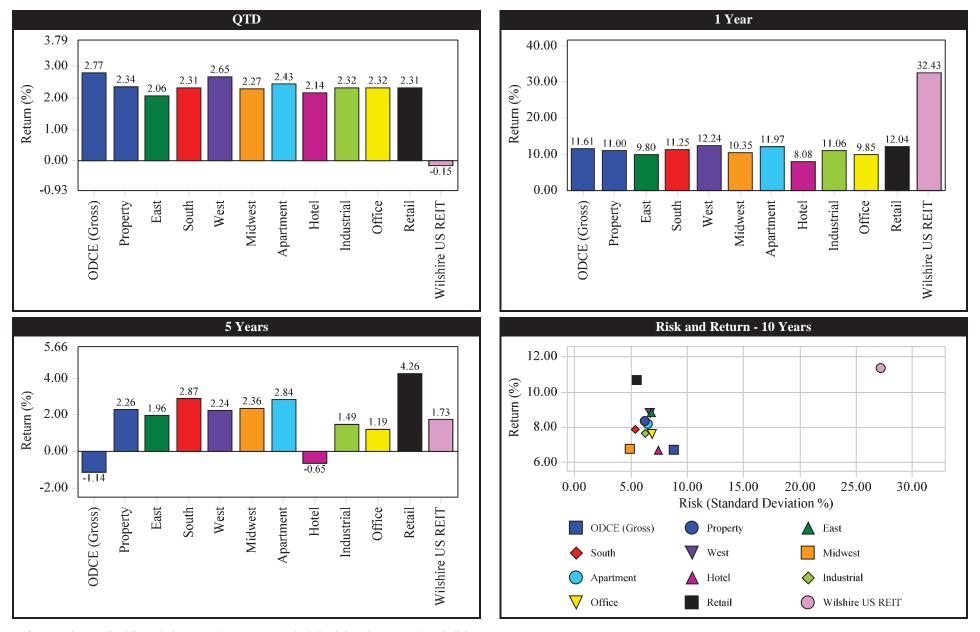
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity.

RVKuhns ▶ ▶ ▶ & ASSOCIATES, INC.



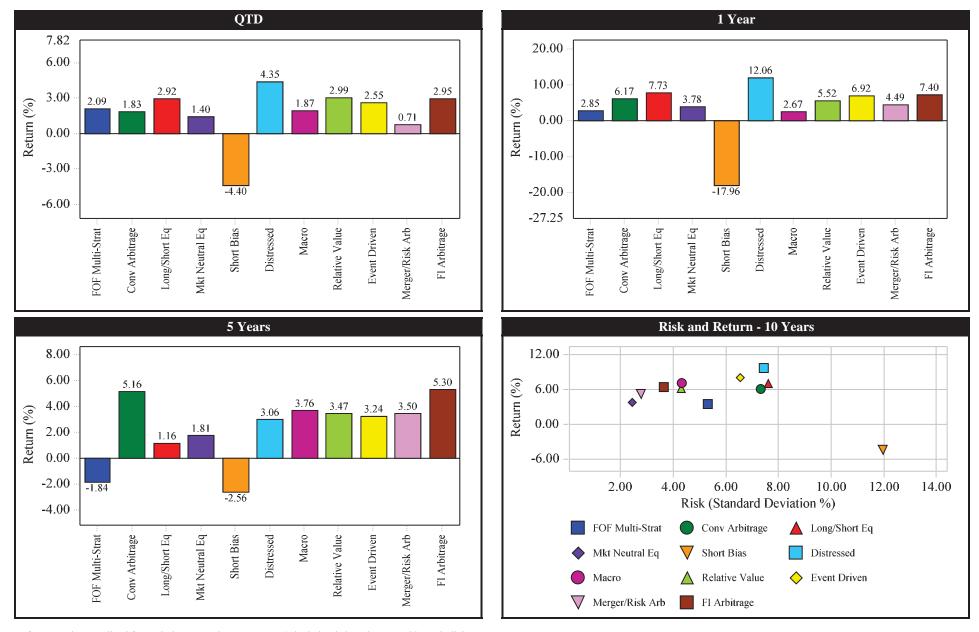
Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns and allocations provided by Barclays Indices.

# Real Estate Market Performance and Risk As of September 30, 2012



Performance is annualized for periods greater than one year. Calculation is based on quarterly periodicity. All data shown represent NCREIF indices unless otherwise noted. Region and sector data represent the Property Index.

# Hedge Fund Market Performance and Risk As of September 30, 2012



Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity. All data shown represent HFN indices, net of fees. Values are preliminary and subject to change.

RVKuhns

▶ ▶ ▶ & ASSOCIATES, INC.

## Kentucky Retirement Systems Addendum As of September 30, 2012

#### Performance Related Comments

- Performance shown is gross of fees, except mutual funds, absolute return, and private equity, which are shown net of fees.
- RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Glossary.
- Indices show N/A for Since Inception returns when the fund contains more history than the corresponding benchmark.
- All data reported for Kentucky Retirement Systems including manager performance and composite performance is provided by Northern Trust. Real Estate and Private Equity valuations are as of the most recent date available.
- Manager inception dates shown represent the first full month following initial funding. Since Inception performance and inception dates may differ from Northern Trust.
- Effective September 1, 2011, Equitization Assets are included in the Total Fund and U.S. Equity Composites.

### Asset Allocation Comments

- The U.S. Equity and Non-U.S. Equity Composites include Liquidation Accounts.
- The Private Equity Composite includes Internal Alternative Assets.
- The KERS, KERS Haz, CERS, CERS Haz and SPRS asset allocations are provided by Northern Trust.

### **Manager Transition Comments**

- BAAM (SA), PAAMCO (SA), and Prisma Capital Partners were funded in Q3 2011.
- Columbia HY Fixed Income (SA), Loomis Sayles HY Fixed Income (SA), Manulife Asset Mgmt (SA), and PIMCO: All Asset; Inst (PAAIX) were funded in Q4 2011.
- Harrison Street Core (CF), Sasco Capital Inc. (SA), Systematic Financial Management (SA), and Geneva Capital Management (SA) were funded in Q2 2012. Artio Int'l Equity II (SA) and Internal Mid Cap (SA) were liquidated in Q2 2012.
- Arrowhawk Durable Alpha Fund L.P. was liquidated in Q3 2012.

### **Miscellaneous Comments**

• The PIMCO All Asset Fund currently consists of the following underlying strategies which have been classified by RVK into eight broad categories:

- Equity Nat. Resources: None
- Commodities: Commodity Real Return Strategy Fund, CommoditiesPLUS Strategy Fund
- Inflation Linked Bonds: Real Return Fund, Real Return Asset Fund
- Floating Rate Bonds: Floating Income Fund, Senior Floating Rate Fund
- *REITs*: Real Estate Real Return Strategy Fund
- Nominal Bonds: Low Duration Fund, Short Term Fund, Investment Grade Corporate Bond Fund, Long Duration Total Return Fund, Long Term Credit Fund, Long Term US Government Fund, Total Return Fund, Convertible Fund, Emerging Markets Currency, Diversified Income Fund, Emerging Local Bond Fund, Emerging Markets Bond Fund, Foreign Bond Fund (Unhedged), Fundamental Advantage Total Return Strategy Fund, Global Advantage Strategy Fund, High Yield Fund, High Yield Spectrum Fund, Income Fund, Unconstrained Bond Fund, Credit Absolute Return Fund
- Equity Non Real: EM Fundamental IndexPlus TR Fund, Fundamental IndexPlus TR, Int'l StocksPlus TR Fund (US Dollar Hedged), Int'l StocksPlus TR Fund (Unhedged), International Fundamental IndexPLUS TR Strategy Fund, Small Company Fundamental IndexPLUS TR Strategy Fund, Small Cap StocksPlus TR Fund, StocksPlus Fund, StocksPlus Total Return Fund, EqS Pathfinder Fund, EqS Emerging Markets Fund, EqS Dividend Fund, EqS Long/Short Fund
- Other (Includes Cash): None



# Kentucky Retirement Systems Addendum

#### As of September 30, 2012

**Investment Manager Fees** 

River Road Asset Management (SA) - 0.650% on the first \$25 million, 0.500% on the next \$50 million, and 0.450% thereafter. Westwood Management (SA) - 0.800% on the first \$10 million, 0.650% on the next \$25 million, 0.500% on the next \$50 million, and 0.400% thereafter. Westfield Capital (SA) - 0.750% on the first \$25 million, 0.650% on the next \$50 million, and 0.500% thereafter. INVESCO Struct'd Core Equity Fund (SA) - 0.120% on the first \$750 million, 0.060% over \$750 million. Sasco Capital Inc. (SA) - 0.800% on the first \$10 million, 0.500% on the next \$40 million, 0.400% on the next \$50 million, and 0.350% thereafter. Systematic Financial Management (SA) - 0.750% on the first \$25 million, 0.500% on the next \$50 million, and 0.400% thereafter. Geneva Capital Management (SA) - 0.500% on the first \$150 million, 0.450% on the next \$150 million, and 0.400% thereafter. NT Structured Small Cap (SA) - 0.150% first \$200 million, and 0.120% thereafter. The Boston Co. Non-US Value (SA) - 0.550% on the first \$100 million, 0.400% on next \$100 million, 0.300% on next \$250 million, 0.250% over \$450 million. BTC ACWI Ex US Fund (CF) - 0.055%. Pyramis Int'l Growth Fund (SA) - 0.280% on the first \$650 million, 0.225% on next \$350 million, 0.200% over \$1 billion. NT Int'l Sm Cap Eq Index (SA) - 0.100% on the first \$100 million, 0.050% over \$100 million. Aberdeen Emg Mkts Equity (CF) - 0.750% on the first \$100 million, 0.650% over \$100 million. Wellington Emg Mkts Equity (CF) - 0.800%. NISA Core Agg Fixed Income (SA) - If account value is greater than \$1 billion, 0.125% on the first \$1.5 billion, 0.105% on next \$1.0 billion, 0.085% on the balance. If account value is less than \$1 billion, 0.165% on the first \$500 million, 0.125% thereafter. PIMCO Core Fixed Income (SA) - If combined account values are greater than \$600 million, 0.310% on the first \$600 million, 0.260% on next \$700 million, and 0.210% thereafter. Columbia HY Fixed Income (SA) - 0.500% on the first \$50 million, 0.400% on the next \$50 million, and 0.350% on all assets over \$100 million. Loomis Sayles HY Fixed Income (SA) - 0.500% on all assets. Fee is waived if account value is in excess of \$100 million. Manulife Asset Mgmt (SA) - 0.350% on the first \$75 million, 0.300% on next \$75 million, and 0.250% thereafter. Commerce Street Income Partners L.P. - 2.000% per year on commitments; 2.000% per year on cost basis of portfolio after the commitment period; Preferred Return of 8.000% and Carried Interest of 20.000%. Waterfall (SA) - 0.550% of the fair market value of assets, billed quarterly in arrears, plus a 20% performance fee over an 8% hurdle rate. Shenkman Capital (SA) - 0.500%. Stone Harbor (SA) - 0.600% on first \$50 million, 0.550% thereafter. Weaver Barksdale TIPS (SA) - 0.075% on first \$100 million, 0.065% on next \$100 million, 0.055% on next \$200 million, 0.040% on next \$200 million, 0.030% on next \$400 million, 0.0225% over \$1 billion. PIMCO:All Asset:Inst (PAAIX) - 0.895%. Management fee of 0.225% per annum, total annual fee/fund expenses up to 0.905% per annum. Tenaska Power Fund II (CF) - 1.500% of committed capital during the commitment period and 1.500% of invested capital thereafter. **Tortoise Capital (CF)** - 1.000% management fee on capital balance annually; fees payable quarterly. Walton Street Real Estate Fund VI. L.P. - The General Partner will receive an Acquisition Fee of 1.000% of the gross asset cost of each Fund investment. Subject to certain exceptions, the General Partner will receive a Management Fee equal to, on a cumulative aggregate annual basis, 1.500% of the net invested capital for the investments held by the Fund. Prima Mortgage Invest Trust, LLC - 0.400% per annum of the value of Commercial Mortgage Investments, 0.100% per annum of the value of cash and cash equivalents, loan origination fee of up to 1.500% of loan amount to the extent the Company receives such fee from third party borrower, 1.500% origination fee for purchases of other commercial mortgage investments. Mesa West Real Estate Income Fund II L.P. - During the Commitment Period, the Fund will pay to the General Partner an annual asset management fee equal to 1.500% of committed capital, payable guarterly; and thereafter, the Fund will pay to the General Partner an annual asset management fee equal to 1.500% of invested equity, payable guarterly. Cash flow will be allocated among the partners are distributed to each partner quarterly as follows: (i) First, 100.000% to each partner until (1) such partner has received an 8.000% compounded preferred return on their capital, and (2) such partner's funded commitment to the Fund is zero; (ii) second, 80,000% to such partner and 20,000% to the General Partner until such partner has received a 12,000% annual compound return; and (iii) third, thereafter 50.000% to the limited partners and 50.000% to the general partner.

H/2 Credit Partners (CF) - 1.000% of NAV and a performance fee of 10.000%.

Harrison Street Core (CF) - 0.750% of NAV.

BAAM (SA) - 0.500% of NAV and a 10.00% incentive fee over a LIBOR hurdle. Standard high water mark applies; hurdle is non-cumulative since account inception.

PAAMCO (SA) - 0.750% of NAV and a 5.00% incentive fee over a LIBOR hurdle. Standard high water mark applies; hurdle is non-cumulative since account inception.

Prisma Capital Partners (SA) - 0.700% of NAV and a 5.00% incentive fee over a 13 week T-bill hurdle. Standard high water mark applies; hurdle is non-cumulative since account inception.



Composite/Manager	Benchma		Since		
Total Fund Target Allocation Index (P)R.V. Kuhns & Associates, Inc. began calculating the custom index as of September 1, 2008.					
	The custom index is calculated monthly and consists of:				
	6.00%	S&P 500 Index (Cap Wtd)			
	27.20%	S&P 1500 Composite Index			
	4.00%	R 2000 Index			
	18.00%	MSCI EAFE Index (Gross)			
	2.00%	MSCI Emerging Markets Index (Gross)			
	25.00%	Barclays US Aggregate Bond Index			
	10.00%	Barclays US Treasury: US TIPS Index			
	4.80%	Barclays US Corporate: High Yield Index			
	3.00%	Citigroup 3 Mo T-Bill Index	9/1/2008		
	6.00%	S&P 500 Index (Cap Wtd)			
	27.20%	S&P 1500 Composite Index			
	4.00%	R 2000 Index			
	12.00%	MSCI World Ex US Index (Gross)			
	4.00%	MSCI ACW Ex US Index (Gross)			
	2.00%	MSCI ACW Ex US Small Cap Index (Gross)			
	2.00%	MSCI Emerging Markets Index (Gross)			
	25.00%	Barclays US Aggregate Bond Index			
	10.00%	Barclays US Treasury: US TIPS Index			
	4.80%	Barclays US Corporate: High Yield Index			
	3.00%	Citigroup 3 Mo T-Bill Index	7/1/2009		
	20.00%	R 3000 Index			
	20.00%	MSCI ACW Ex US Index (Gross)			
	4.00%	MSCI Emerging Markets Index (Gross)			
	20.00%	Barclays US Unv Index			
	10.00%	Consumer Price Index + 3%			
	5.00%	NCREIF ODCE Index (Gross) (AWA)			
	10.05%	HFRI FOF Div Index (Lagged)			
	9.93%	R 3000 Index +4% (Qtr Lag)			
	1.02%	Citi 3 Mo T-Bill Index	7/1/2011		



	As of September 30, 2012			
<u>Composite/Manager</u> Total Fund Target Allocation Index (I)	Benchma The custo	ark m index is calculated monthly and consists of:	Since	
	27.50%	S&P 500 Index (Cap Wtd)		
	62.50%	Barclays US Gov't/Credit Bond index		
	10.00%	Citigroup 3 Mo T-Bill Index	Inception	
	50.00%	S&P 500 Index (Cap Wtd)		
	20.00%	S&P SmallCap 600 Index (Cap Wtd)		
	25.00%	Barclays US Gov't/Credit Bond index		
	5.00%	Citigroup 3 Mo T-Bill Index	8/1/1996	
	35.00%	S&P 500 Index (Cap Wtd)		
	20.00%	S&P SmallCap 600 Index (Cap Wtd)		
	25.00%	Barclays US Gov't/Credit Bond index		
	15.00%	BNY Mellon ADR Index		
	5.00%	Citigroup 3 Mo T-Bill Index	7/1/2000	
	60.00%	S&P 1500 Composite Index		
	15.00%	MSCI EAFE Index (Gross)		
	10.00%	Barclays US Treasury: US TIPS Index		
	5.00%	R 3000 Index + 4% (Qtr Lag) (I)*		
	5.00%	BNY Mellon ADR Index		
	5.00%	Citigroup 3 Mo T-Bill Index	7/1/2001	
	60.00%	S&P 1500 Composite Index		
	15.00%	MSCI EAFE Index (Gross)		
	10.00%	Barclays US Treasury: US TIPS Index		
	5.00%	R 3000 Index + 4% (Qtr Lag) (I)*		
	5.00%	S&P American Depositary Receipt Index		
	5.00%	Citigroup 3 Mo T-Bill Index	7/1/2002	
	60.00%	S&P 1500 Composite Index		
	16.00%	MSCI EAFE Index (Gross)		
	10.00%	Barclays US Treasury: US TIPS Index		
	5.00%	R 3000 Index + 4% (Qtr Lag) (I)*		
	4.00%	S&P American Depositary Receipt Index		
	5.00%	Citigroup 3 Mo T-Bill Index	7/1/2003	
	60.00%	S&P 1500 Composite Index		
	20.00%	MSCI EAFE Index (Gross)		
	10.00%	Barclays US Treasury: US TIPS Index		
	5.00%	R 3000 Index + 4% (Qtr Lag) (I)*		
	5.00%	Citigroup 3 Mo T-Bill Index	4/1/2004	
	40.00%	S&P 1500 Composite Index		
	30.00%	MSCI EAFE Index (Gross)		
	12.00%	Barclays US Treasury: US TIPS Index		
	15.00%	R 3000 Index + 4% (Qtr Lag) (I)*		
	3.00%	Citigroup 3 Mo T-Bill Index	7/1/2007	



		As of September 30, 2012	
Composite/Manager	Benchma	ark	Since
	40.00%	S&P 1500 Composite Index	
	27.00%	MSCI EAFE Index (Gross)	
	3.00%	MSCI Emerging Markets Index (Gross)	
	12.00%	Barclays US Treasury: US TIPS Index	
	15.00%	R 3000 Index + 4% (Qtr Lag) (I)*	
	3.00%	Citigroup 3 Mo T-Bill Index	5/1/2008
	40.00%	S&P 1500 Composite Index	
	24.00%	MSCI World Ex US Index (Gross)	
	3.00%	MSCI ACW Ex US Index (Gross)	
	3.00%	MSCI Emerging Markets Index (Gross)	
	12.00%	70% Barclays US Treasury: US TIPS Index/30% Barclays US Aggregate Bond Index	
	15.00%	R 3000 Index + 4% (Qtr Lag) (I)*	
	3.00%	Citigroup 3 Mo T-Bill Index	7/1/2009
	21.11%	R 3000 Index	
	20.97%	MSCI ACW Ex US Index (Gross)	
	3.45%	MSCI Emerging Markets Index (Gross)	
	19.30%	Barclays US Unv Index	
	11.39%	Consumer Price Index + 3%	
	4.31%	NCREIF ODCE Index (Gross) (AWA)	
	10.21%	HFRI FOF Div Index (Lagged)	
	8.30%	R 3000 Index +4% (Qtr Lag)	
	0.96%	Citi 3 Mo T-Bill Index	7/1/2011
Global Equity Composite (P)	R.V. Kuh	ans & Associates, Inc. began calculating the blended index as of July 1, 2011, and consists of:	
	45.45%	R 3000 Index	
	45.45%	MSCI ACW Ex US Index (Gross)	
	9.10%	MSCI Emerging Markets Index (Gross)	7/1/2011
Global Equity Composite (I)	R.V. Kuh	ans & Associates, Inc. began calculating the blended index as of July 1, 2011, and consists of:	
	46.40%	R 3000 Index	
	46.10%	MSCI ACW Ex US Index (Gross)	
	7.50%	MSCI Emerging Markets Index (Gross)	7/1/2011



	As of September 30, 2012			
<u>Composite/Manager</u> U.S. Equity Composite (P)	Benchmark The custom index is calculated monthly and consists of:	Since		
	90.00%         S&P 500 Index (Cap Wtd)           10.00%         R 2000 Index	Inception		
	85.00%         S&P 500 Index (Cap Wtd)           15.00%         R 2000 Index	8/1/1996		
	80.52%         S&P 500 Index (Cap Wtd)           19.48%         R 2000 Index	7/1/2000		
	41.10%       S&P 500 Index (Cap Wtd)         42.46%       S&P 1500 Composite Index         16.44%       R 2000 Index	7/1/2001		
	36.98%         S&P 500 Index (Cap Wtd)           42.47%         S&P 1500 Composite Index           12.33%         R 2000 Index           8.22%         R 2500 Growth Index	7/1/2003		
	27.50%         S&P 500 Index (Cap Wtd)           50.00%         S&P 1500 Composite Index           12.50%         R 2000 Index           10.00%         R 2500 Growth Index	11/1/2003		
	12.50%         S&P 500 Index (Cap Wtd)           65.00%         S&P 1500 Composite Index           12.50%         R 2000 Index           10.00%         R 2500 Growth Index	8/1/2005		
	16.50%         S&P 500 Index (Cap Wtd)           71.00%         S&P 1500 Composite Index           12.50%         R 2000 Index	3/1/2006		
	20.00%         S&P 500 Index (Cap Wtd)           66.67%         S&P 1500 Composite Index           13.33%         R 2000 Index	7/1/2007		
	100.00% R 3000 Index	7/1/2011		
U.S. Equity Composite (I)	The custom index is calculated monthly and consists of:			
	100.00%         S&P 1500 Composite Index           100.00%         R 3000 Index	Inception 7/1/2011		



	As of September 30, 2012	
<u>Composite/Manager</u> Non-U.S. Equity Composite (P) & Non-U.S. Equity Ex.C.O.Composite (P)	Benchmark The custom index is calculated monthly and consists of:	Since
& Non-U.S. Equity Ex C.O Composite (P)	100.00% BNY Mellon ADR Index	Inception
	33.00%BNY Mellon ADR Index67.00%MSCI EAFE Index (Gross)	8/1/2001
	<ul> <li>33.00% S&amp;P American Depositary Receipt Index</li> <li>67.00% MSCI EAFE Index (Gross)</li> </ul>	7/1/2002
	<ul><li>27.00% S&amp;P American Depositary Receipt Index</li><li>73.00% MSCI EAFE Index (Gross)</li></ul>	7/1/2003
	100.00% MSCI EAFE Index (Gross)	4/1/2004
	90.00%MSCI EAFE Index (Gross)10.00%MSCI Emerging Markets Index (Gross)	5/1/2008
	80.00%MSCI EAFE Index (Gross)10.00%MSCI Emerging Markets Index (Gross)10.00%MSCI ACW Ex US Small Cap Index (Gross)	1/1/2009
	<ul> <li>60.00% MSCI World Ex US Index (Gross)</li> <li>20.00% MSCI ACW Ex US Index (Gross)</li> <li>10.00% MSCI Emerging Markets Index (Gross)</li> <li>10.00% MSCI ACW Ex US Small Cap Index (Gross)</li> </ul>	7/1/2009
No. U.S. Facilità Composita (I)	100.00% MSCI ACW Ex US Index (Gross)	7/1/2011
Non-U.S. Equity Composite (I) & Non-U.S. Equity Ex C.O Composite (I)	The custom index is calculated monthly and consists of:	
	100.00% BNY Mellon ADR Index	Inception
	25.00%BNY Mellon ADR Index75.00%MSCI EAFE Index (Gross)	7/1/2001
	25.00%S&P American Depositary Receipt Index75.00%MSCI EAFE Index (Gross)	7/1/2002
	20.00%S&P American Depositary Receipt Index80.00%MSCI EAFE Index (Gross)	7/1/2003
	100.00% MSCI EAFE Index (Gross)	4/1/2004
	90.00%MSCI EAFE Index (Gross)10.00%MSCI Emerging Markets Index (Gross)	5/1/2008
	80.00%MSCI World Ex US Index (Gross)10.00%MSCI ACW Ex US Index (Gross)	
	10.00% MSCI Emerging Markets Index (Gross)	7/1/2009
	100.00% MSCI ACW Ex US Index (Gross)	7/1/2011
		RVKuhns

► ► & ASSOCIATES, INC.

	As of September 30, 2012	
Composite/Manager Fixed Income Composite (P)	Benchmark The custom index is calculated monthly and consists of:	Since
	<ul> <li>80.00% Barclays US Govt/Credit Bond Index</li> <li>20.00% BofA ML 1-3 Year US Treasury Index</li> </ul>	Inception
	<ul> <li>54.00% Barclays US Govt/Credit Bond Index</li> <li>27.00% Barclays US Tsry: US TIPS Index</li> <li>19.00% Barclays US Agg Bond Index</li> </ul>	7/1/2001
	<ul> <li>38.00% Barclays US Agg Bond Index</li> <li>35.00% Barclays US Govt/Credit Bond Index</li> <li>27.00% Barclays US Tsry: US TIPS Index</li> </ul>	7/1/2003
	<ul> <li>71.43% Barclays US Agg Bond Index</li> <li>28.57% Barclays US Tsry: US TIPS Index</li> </ul>	7/1/2007
	100.00% Barclays US Unv Bond Index	7/1/2011
Fixed Income Composite (I)	The custom index is calculated monthly and consists of:	
	100.00% Barclays US Govt/Credit Bond Index	Inception
	100.00% Barclays US Tsry: US TIPS Index	7/1/2001
	<ul> <li>70.00% Barclays US Tsry: US TIPS Index</li> <li>30.00% Barclays US Agg Bond Index</li> </ul>	4/1/2011
	100.00% Barclays US Unv Bond Index	7/1/2011
Real Estate Composite (P)	The custom index is calculated monthly and consists of:	
& Real Estate Composite (I)	100.00% NCREIF Property Index (Qtr Lag)	Inception
	100.00% NCREIF ODCE Index (Gross) (AWA)	7/1/2011
Private Equity Composite (P)	The custom index is calculated monthly and consists of:	
	60.00%S&P 1500 Composite Index40.00%Barclays US Corp: High Yield Index	Inception
	100.00% R 3000 Index + 4% (Qtr Lag)	7/1/2011
Private Equity Composite (I)	The custom index is calculated monthly and consists of:	
	<ul> <li>80.00% S&amp;P 1500 Composite Index</li> <li>20.00% Barclays US Corp: High Yield Index</li> </ul>	Inception
	100.00% R 3000 Index + 4% (Qtr Lag)	7/1/2011



	As of September 30, 2012	
Composite/Manager Internal S&P 500 Index (SA)	Benchmark The custom index is calculated monthly and consists of:	<u>Since</u>
	100.00%         S&P 1500 Composite Index           100.00%         S&P 500 Index (Cap Wtd)	Inception <b>7/1/2011</b>
The Boston Co. Non-U.S. Value (SA) & Pyramis Int'l Growth Fund (SA)	The custom index is calculated monthly and consists of:	
	100.00%         MSCI EAFE Index (Gross)           100.00%         MSCI World Ex US Index (Gross)           100.00%         MSCI ACW Ex US Index (Gross)	Inception 7/1/2009 <b>1/1/2012</b>
PIMCO Core Fixed Income (SA) PIMCO Blended Index	The blended index is calculated monthly and consists of:	
	100.00% Barclays US Agg Bond Index	Inception
	60.00%Barclays US Agg Bond Index40.00%PIMCO Global Advantage Index	10/1/2011
Commerce Street Income Partners L.P. & Waterfall (SA)	The blended index is calculated monthly and consists of:	
Opportunistic FI Blended Index	60.00%Barclays US Corp: High Yield Index40.00%Barclays US ABS Floating Rate Index	Inception
Shenkman Capital (SA) Shenkman Blended Index	The blended index is calculated monthly and consists of:	
	50.00%Barclays US Corp: High Yield Index50.00%Barclays US High Yield Loans Index	Inception



Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

Alpha Ratio - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

Average Quality - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	Moody's	<b>Explanation</b>	<u>S&amp;P</u>	Moody's	<b>Explanation</b>			
Higher Cred	lit Quality – Inve	stment Grade	Lower Cree	Lower Credit Quality – Below Investment Grade				
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality			
AA+	Aa1	High credit quality	BB	Ba2				
AA	Aa2		BB-	Ba3				
AA-	Aa3		B+	B1	Highly speculative			
A+	A1	Upper-medium credit quality	В	B2				
А	A2		B-	B3				
A-	A3		CCC+	Caa1	Substantial credit/default risk			
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative			
BBB	Baa2		CCC-	Caa3				
BBB-	Baa3		CC	Ca	Vulnerable to default			
			С	Ca				
			D	С	In default			

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Buy and Hold Attribution -** At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

Sector - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

Country/Region - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

**Style -** Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.



**Capital Markets Review -**

Baltic Dry Index - Measures the demand for shipping capacity versus the supply of dry bulk carriers. As the supply of cargo ships is inelastic, the Baltic Dry Index provides an assessment of the price of moving major raw materials by sea.

Breakeven Inflation - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Capacity Utilization** - Measures the extent to which a country efficiently utilizes installed productive capacity. It measures the difference between the output that is produced using the installed equipment versus the output that *could* be produced using the installed equipment.

Consumer Confidence - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

Consumer Price Index (CPI) - Measures the change in the price level of consumer goods and services.

Disposable Personal Income - The difference between total personal income and personal income tax payments.

Disposable Producer Price Index (PPI) - Measures the average change in selling prices received by US producers for their output.

M2 - Measures the amount of money in circulation and is often used as an indicator for forecasting inflation.

Option-Adjusted Spread - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

Personal Consumption Expenditures - Measures the average increase in prices for all domestic personal consumption.

Personal Savings - Percentage of personal saving within the US as a percentage of disposable personal income.

Purchasing Managers Index (PMI) - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.

**Relative Strength Index (RSI)** - Measures the current and historical strength or weakness of a stock market based on the closing prices of the most recent 14-day period. RSI is classified as a momentum oscillator and measures the velocity and magnitude of directional price movements. RSI levels at or above 70 may indicate that a market is "overbought" while RSI levels below 30 may indicate that a market is "oversold."

Shiller 20 City YoY - Measures the yearly change in housing prices for 20 major metropolitan areas within the US.

#### US Credit Market Debt as a Percentage of GDP -

Business - Non-financial corporate business and non-corporate business.

Financials - Commercial banks, savings institutions and credit unions, government-sponsored enterprises, agency- and GSE-backed mortgage pools, ABS issuers, life insurance companies, REITs, and financial companies.

Foreign - US credit market instruments owed by non-US entities and debt issued by foreign companies in the US.

Government - Savings bonds, Treasury securities, budget agency securities, insurance reserves, and non-marketable securities held by retirement plans.

Household - Home mortgages, consumer credit, municipal securities, bank loans, and commercial mortgages.

US Dollar Total Weighted Index - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

VIX - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Convexity - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation -** A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

Coupon Rate - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

Current Yield - The annual income of a security divided by the security's current price.

**Down Market Capture -** Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

**Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the factor, the riskier the product.

Earnings Per Share - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

Effective Duration - The weighted average duration of all the bonds in a given portfolio, weighted by their dollar values.

Excess Return vs. Market - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

Excess Return vs. Risk Free - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

Excess Risk - A measure of the standard deviation of a portfolio's performance relative to the risk free return.

Expense Ratios - Morningstar is the source for mutual fund expense ratios.

Gain/Loss - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.

Information Ratio - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

**Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

Estimated Funded Status - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded. Estimated PV of Liabilities - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

Duration of Liabilities - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

Duration of Assets - The dollar-weighted average duration of all the individual Plan assets.

Estimated Plan Hedge Ratio - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

Modified Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield.

Net Cash Flow - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.



#### Peer Groups -

**Plan Sponsor Peer Groups -** RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client returns compiled from consultant and custodial data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

**Institutional Peer Groups (Separate Account and Commingled Fund)** - RVK utilizes the Investment Metrics Separate Account and Commingled Fund Manager Peer Groups for peer comparison and rankings. The Separate Account and Commingled Fund Peer Group database includes performance and other quantitative data for over 1,000 investment management firms, 6,400 investment products, across more than 145 standard peer groups. Separate Account and Commingled Fund Peer Groups are gross of fees.

Mutual Fund (MF) Peer Groups - RVK utilizes the Lipper Mutual Fund Manager Peer Groups for peer comparison and rankings. The Lipper Manager Peer Group database includes performance and other quantitative data for over 700 investment management firms and 24,500 investment products, across 125 standard peer groups. Mutual Fund Peer Groups are net of fees.

**Percentile Rankings -** Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value 100 - Lowest Statistical Value

Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.

**Performance Methodology -** RVK endorses the Global Investment Performance Standards (GIPS) and calculates performance for investment managers and composites using different methodologies. Investment manager performance is calculated by revaluing the portfolio on the date of all large external cash flows while composite performance is calculated using the Modified Dietz calculation methodology. According to the CFA Institute, "Only investment management firms that actually manage assets can claim compliance with the Standards. Plan Sponsors and consultants cannot make a claim of compliance unless they actually manage assets for which they are making a claim of compliance. They can claim to endorse the Standards and/or require that their investment managers comply with the Standards."

Investment Managers - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month. Composites - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

Portfolio Characteristics - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

**Private Equity Quartile Ranks** – Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

Return - Compounded rate of return for the period.

%Return - The time-weighted rate of return of a portfolio for a given period.



**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

Risk Free Benchmark - BofA ML 3 Mo US T-Bill Index unless specified otherwise.

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

Asset Class	<b>RVK Liquidity Rating</b>	Asset Class	<b>RVK Liquidity Rating</b>
Liquid Investments		Less Liquid Investments	
T-Bills and Treasurys	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Diversified Real Return	50
TIPS	95	Global Tactical Asset Allocation	50
US Large Cap Equity	95	Stable Value (Plan Sponsor Directed)	50
Stable Value (Participant Directed)	91	Absolute Return Strategies	35
Non-US Large Cap Equity	90	Not Liquid Investments	
US Small Cap Equity	85	Core Real Estate	25
REITS	85	Core Plus Real Estate	15
Non-US Small Cap Equity	85	Plus Only Real Estate	5
Emerging Markets Equity	85	Private Equity Funds of Funds	5
Core Fixed Income	85		
Core Plus Fixed Income	80		

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Simple Alpha - The difference between the manager's return and the benchmark's return.

Spread Duration - A measure of the price sensitivity of a bond to a 100 basis-point movement of the bond's spread relative to Treasurys.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

Time Period Abbreviations - QTD - Quarter-to-Date. CYTD - Calendar Year-to-Date. FYTD - Fiscal Year-to-Date. YOY - Year Over Year.



**Thematic Classification -** Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	Capital Appreciation	Capital Preservation	<b>Inflation</b>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Core Real Estate
	Preferred Securities	Asset Backed Fixed Income	Real Return
	High Yield	Domestic Core Plus Fixed Income	Inflation Hedges
	Convertible Fixed Income	Mortgage Backed Fixed Income	REITS
	TALF Funds	International Developed Fixed Income	Commodities
	Distressed Debt	Cash Equivalents	
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	<b>Opportunistic Real Estate</b>		

**Total Fund Attribution -** A method for identifying the sources of a total fund's over- or underperformance relative to its benchmark. The calculation identifies the contributions of positive or negative total fund excess return caused by allocation differences relative to the total fund's custom benchmark, and performance differences of the investment managers relative to the benchmark components that represent them.

**Total Fund Performance -**

Total Fund - The percentage return of the total fund for the specified time period.

Total Fund Benchmark - The percentage return of the total fund benchmark for the specified time period; calculated using the target asset allocation and the corresponding benchmark returns. Total Value Added - The percentage of over- or underperformance of the total fund as compared to the total fund benchmark.

**Total Value Added -**

Asset Allocation - Shows how the variance of the total fund's actual allocation from its target allocation added to or subtracted from fund performance.

Manager Value Added - The portion of the total value added attributable to the outperformance or underperformance of the fund's investment managers, relative to the individual benchmarks that represent them in the total fund benchmark.

Market Timing/Other - The contribution of other residual factors, including estimation error and transaction timing.

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

Tracking Error - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture -** Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

Yield to Maturity - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return.

Yield to Worst - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.