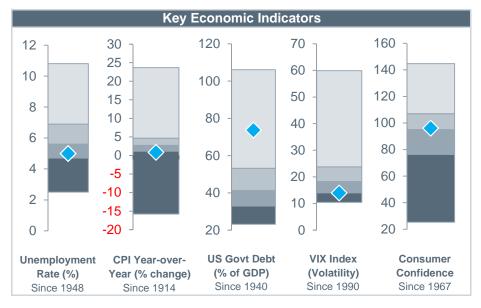


Capital Markets Review As of March 31, 2016

#### **First Quarter Economic Environment**

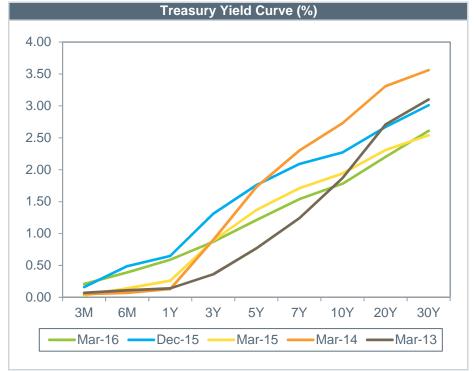
#### **Key Economic Indicators**

Negative investor sentiment and heightened volatility drove sharp declines in equity and commodity markets during the first two months of 2016. However, this trend reversed dramatically in March due to renewed optimism. By the quarter's end, global equities had sufficiently rallied to produce marginal overall gains for investors. Global fixed income appreciated as concern over disinflationary pressure and weak global growth led several developed market central banks to intensify accommodative monetary policies. In some cases, this included further experimentation with negative interest rates. In the US, investors reacted positively toward a perceived shift by the Federal Reserve toward a less aggressive monetary policy forecast. The US dollar reacted accordingly, reversing a prolonged strengthening trend over the past several years. The weakening dollar provided price support to dollar-based commodities, and also served as a tailwind for emerging market equity and debt assets.



Economic Indicators	Mar-16		Dec-15	Mar-15	Mar-13	20 Yr
Federal Funds Rate (%)	0.25		0.20	0.06	0.13	2.54
Breakeven Infl 1 Yr (%)	2.10		0.85	1.46	2.32	N/A
Breakeven Infl 10 Yr (%)	1.63		1.58	1.78	2.52	N/A
CPI YoY (Headline) (%)	0.9		0.7	-0.1	1.5	2.2
Unemployment Rate (%)	5.0	_	5.0	5.5	7.5	6.0
Real GDP YoY (%)	1.9	$\blacksquare$	2.0	2.9	1.1	2.4
PMI - Manufacturing	51.80		48.00	52.30	52.50	52.10
USD Total Wtd ldx	89.84	$\blacksquare$	94.46	92.14	76.20	86.73
WTI Crude Oil per Barrel (\$)	38		37	48	97	55
Gold Spot per Oz (\$)	1,233	$\blacktriangle$	1,061	1,184	1,597	751

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	1.35	1.35	1.78	11.58	7.01
Russell 2000	-1.52	-1.52	-9.76	7.20	5.26
MSCI EAFE (Net)	-3.01	-3.01	-8.27	2.29	1.80
MSCI EAFE SC (Net)	-0.60	-0.60	3.20	5.58	3.44
MSCI Emg Mkts (Net)	5.71	5.71	-12.03	-4.13	3.02
Barclays US Agg Bond	3.03	3.03	1.96	3.78	4.90
BofA ML 3 Mo US T-Bill	0.07	0.07	0.12	0.08	1.15
NCREIF ODCE (Gross)	2.21	2.21	13.70	13.26	6.36
Wilshire US REIT	5.20	5.20	4.76	12.11	6.29
HFN FOF Multi-Strat	-3.18	-3.18	-6.75	1.10	1.12
Bloomberg Cmdty (TR)	0.42	0.42	-19.56	-14.15	-6.16





# **Kentucky Retirement Systems**Table of Contents

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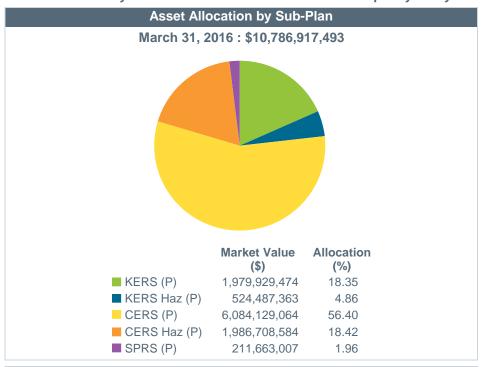
## **Kentucky Retirement Systems - Pension Plan Asset Allocation & Performance**

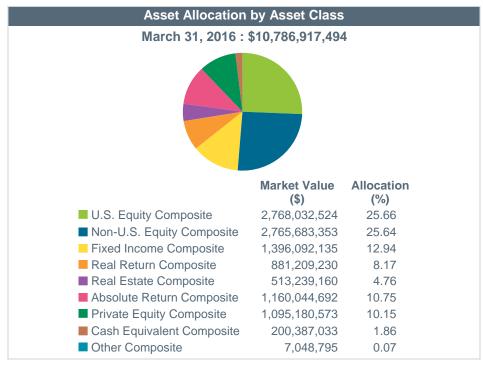
Asset Alloca	ition & Performa	nce	
	Allocation	1	Performance (%)
	Market Value (\$)	%	FYTD
Total Fund	10,786,917,494	100.00	-1.80
U.S. Equity Composite	2,768,032,524	25.66	-0.93
River Road Asset Management (SA)	30,876,969	0.29	5.78
Westwood Management (SA)	93,105,480	0.86	-5.35
Westfield Capital (SA)	108,638,621	1.01	-6.83
Internal S&P 500 Index (SA)	1,656,087,895	15.35	1.42
INVESCO Struct'd Core Equity (SA)	190,428,715	1.77	-4.37
Internal US Mid Cap (SA)	267,306,184	2.48	-2.74
Sasco Capital Inc. (SA)	41,363,498	0.38	-6.57
Systematic Financial Management (SA)	184,178,876	1.71	-5.54
NT Structured Small Cap (SA)	196,031,299	1.82	-7.83
Pension Transition	14,987	0.00	N/A
Non-U.S. Equity Composite	2,765,683,353	25.64	-7.22
Lazard Int'l Strategic Equity (SA)	477,920,414	4.43	-7.03
LSV Int'l Concentrated Value Equity (SA)	401,004,516	3.72	-10.79
BTC ACWI Ex US Fund (CF)	1,145,957,977	10.62	-9.49
American Century Non-US Growth Equity (SA)	340,915,752	3.16	-6.81
Franklin Templeton Non-US Equity (SA)	232,848,384	2.16	-4.13
NT Int'l Sm Cap Eq Index (SA)	160,794,871	1.49	-4.59
Non-US Transition Account	1,853,922	0.02	N/A
Fixed Income Composite	1,396,092,135	12.94	2.21
NISA Core Agg Fixed Income (SA)	258,970,808	2.40	4.25
Cerberus KRS Levered Loan Opps, L.P.	85,611,454	0.79	6.42
Columbia HY Fixed Income (SA)	243,143,420	2.25	-0.35
Marathon Bluegrass Credit Fund	115,000,000	1.07	N/A
Shenkman Capital (SA)	103,025,577	0.96	-2.84
Waterfall (SA)	125,680,139	1.17	-1.12
Manulife Asset Mgmt (SA)	464,143,613	4.30	2.83
Real Return Composite	881,209,230	8.17	-4.35
Internal TIPS (SA)	170,840,411	1.58	2.45
Nuveen Real Asset Income (SA)	207,309,304	1.92	1.96
PIMCO:All Asset;Inst (PAAIX)	306,940,895	2.85	-3.80
Tenaska Power Fund II (CF)	2,055,371	0.02	7.12
Tortoise Capital (CF)	63,477,686	0.59	-27.36
Amerra Ag Fund II (CF)	33,836,955	0.31	8.00
Amerra-AGRI Holding (CF)	15,805,286	0.15	N/A
BTG Pactual Brazil Timberland Fund I, L.P.	4,847,211	0.04	-29.41
Magnetar MTP Energy Fund, L.P.	60,779,850	0.56	-26.18
Magnetar MTP EOF II, L.P.	6,174,637	0.06	N/A
Oberland Capital Healthcare, L.P.	2,488,554	0.02	1.62
Taurus Mining Finance Fund	6,653,071	0.06	3.76
	-,,-		

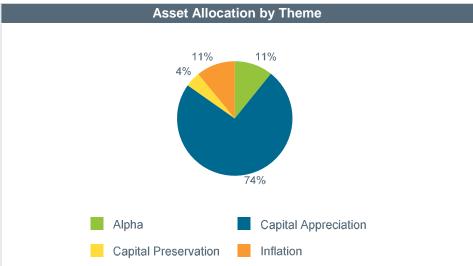
	Allocation		Performance (
	Market Value (\$)	%	FYTD
Real Estate Composite	513,239,160	4.76	7.11
FHA Mortgages (SA)	1,189,781	0.01	6.57
H/2 Credit Partners (CF)	72,000,000	0.67	-1.92
H/2 Core Real Estate Debt Fund, L.P.	19,343,053	0.18	3.95
Harrison Street Core (CF)	72,000,000	0.67	8.78
Mesa West Core Lending, L.P.	57,797,409	0.54	6.15
Prologis Targeted U.S. Logistics Fund (CF)	56,606,796	0.52	11.38
Stockbridge SmtMkts, L.P.	77,067,101	0.71	9.51
DivcoWest Fund IV, L.P.	20,742,206	0.19	28.74
Greenfield Acquisition Partners VI, L.P.	28,329,749	0.26	14.42
Greenfield Acquisition Partners VII, L.P.	18,761,444	0.17	17.64
Lubert Adler Real Estate Fund VII, L.P.	16,560,420	0.15	-0.83
Rubenstein Properties Fund II, L.P.	17,138,544	0.16	1.21
Valton Street Real Estate Fund VI, L.P.	21,975,680	0.20	10.68
Walton Street Real Estate Fund VII, L.P.	33,485,941	0.31	14.32
Absolute Return Composite	1,160,044,692	10.75	-6.68
AAM (SA)	315,847,518	2.93	-1.68
PAAMCO (SA)	282,308,080	2.62	-9.09
Prisma Capital Partners (SA)	322,980,223	2.99	-8.13
ourbillon Global Master Fund, Ltd	26,909,170	0.25	N/A
Pavidson-Kemper, L.P.	29,932,776	0.28	N/A
DSAM Fund, L.P.	15,000,000	0.14	N/A
Glenview Capital (CF)	12,185,433	0.11	N/A
IBK II (CF)	15,141,830	0.14	-5.78
ana Partners (CF)	13,127,646	0.12	-14.57
(nighthead Capital (CF)	13,719,557	0.13	-10.72
ibreMax Capital (CF)	14,972,697	0.14	-5.13
uxor Capital (CF)	10,456,298	0.10	-24.96
Myriad Opportunities	26,250,000	0.24	N/A
Pine River (CF)	14,199,672	0.13	-12.22
MS Diversified Global Macro (CF)	15,926,123	0.15	N/A
Scopia PX, LLC	15,203,285	0.14	-4.76
Coatue Qualified Partners, L.P.	15,884,384	0.15	5.90
Private Equity Composite	1,095,180,573	10.15	4.52
ash Equivalent Composite	200,387,033	1.86	0.19
Cash Equivalents (SA)	200,387,033	1.86	0.19
Other Composite	7,048,795	0.07	N/A
Perimeter Park (SA)	7,300,000	0.07	N/A
Custody Fee Accrual (SA)	-251,205	0.00	N/A

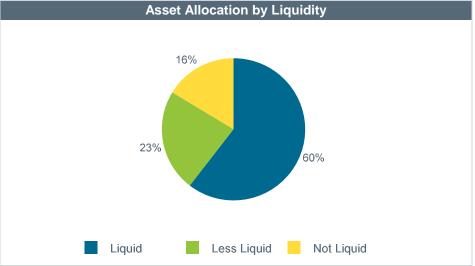
Performance shown is net of fees. Fiscal year ends June 30th. Allocations shown may not sum up to 100% exactly due to rounding. Other Composite consists of Perimeter Park (SA) and BNY fee accruals. Real Estate and Private Equity valuations shown are as of the most recent date available.







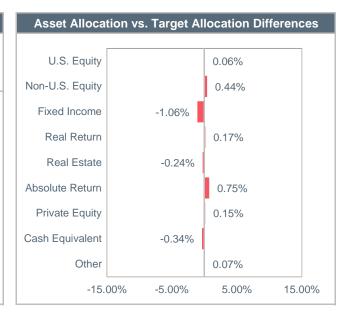




Allocations shown may not sum up to 100% exactly due to rounding. Totals shown may not match due to differences between BNY Mellon's performance and accounting departments. Other Composite consists of Perimeter Park (SA) and BNY fee accruals.



	Asset Allocation v	s. Target Allo	ocation		
	Asset Allocation (\$)	Asset Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)
Total Fund	10,786,917,493	100.00	-	100.00	-
U.S. Equity Composite	2,768,032,524	25.66	20.60	25.60	30.60
Non-U.S. Equity Composite	2,765,683,353	25.64	20.20	25.20	30.20
Fixed Income Composite	1,396,092,135	12.94	10.00	14.00	18.00
Real Return Composite	881,209,230	8.17	6.00	8.00	10.00
Real Estate Composite	513,239,160	4.76	3.00	5.00	7.00
Absolute Return Composite	1,160,044,692	10.75	8.00	10.00	12.00
Private Equity Composite	1,095,180,573	10.15	7.00	10.00	13.00
Cash Equivalent Composite	200,387,033	1.86	0.20	2.20	4.20
Other Composite	7,048,795	0.07	-	-	-



	Individual Plan Asset Allocation Monitor												
	KERS	KERS Haz	CERS	CERS Haz	SPRS								
U.S. Equity Composite	In Range	In Range	In Range	In Range	In Range								
Non-U.S. Equity Composite	In Range	In Range	In Range	In Range	In Range								
Fixed Income Composite	In Range	In Range	In Range	In Range	In Range								
Real Return Composite	In Range	In Range	In Range	In Range	In Range								
Real Estate Composite	In Range	In Range	In Range	In Range	In Range								
Absolute Return Composite	In Range	In Range	In Range	In Range	In Range								
Private Equity Composite	Over Max	In Range	In Range	In Range	In Range								
Cash Equivalent Composite	In Range	In Range	In Range	In Range	In Range								
Other Composite	In Range	In Range	In Range	In Range	In Range								

Allocations shown may not sum to 100% exactly due to rounding. Other Composite consists of Perimeter Park (SA) and BNY fee accruals.

KERS Private Equity Composite is over the maximum allocation by 1.57%. This is an illiquid asset class and may take additional time to bring back into target range.



# Kentucky Retirement Systems - Pension Plan Plan Comparative Performance

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
Total Fund	1.19	1.19	-1.80	-1.00	4.86	5.38	4.82	-0.02	5.14	12.70	9.06	04/01/1984
Target Allocation Index (P)	0.76	0.76	-1.66	-0.97	5.51	5.70	5.20	0.75	5.84	13.34	9.20	
Difference	0.43	0.43	-0.14	-0.03	-0.65	-0.32	-0.38	-0.77	-0.70	-0.64	-0.14	
KERS (P)	0.39	0.39	-1.95	-0.93	4.92	5.41	4.84	0.61	5.98	12.16	9.06	04/01/1984
Target Allocation Index (KERS P)	0.98	0.98	-1.35	-0.69	5.50	5.69	5.19	0.58	5.57	13.53	9.20	
Difference	-0.59	-0.59	-0.60	-0.24	-0.58	-0.28	-0.35	0.03	0.41	-1.37	-0.14	
KERS Haz (P)	1.53	1.53	-1.48	-0.66	4.96	5.43	4.85	0.03	4.90	12.84	9.07	04/01/1984
Target Allocation Index (KERS Haz P)	0.70	0.70	-2.19	-1.42	5.27	5.55	5.12	0.22	5.43	13.67	9.17	
Difference	0.83	0.83	0.71	0.76	-0.31	-0.12	-0.27	-0.19	-0.53	-0.83	-0.10	
CERS (P)	1.35	1.35	-1.82	-1.08	4.83	5.35	4.81	-0.20	4.91	12.85	9.05	04/01/1984
Target Allocation Index (CERS P)	0.70	0.70	-2.19	-1.42	5.27	5.55	5.12	0.22	5.43	13.67	9.17	
Difference	0.65	0.65	0.37	0.34	-0.44	-0.20	-0.31	-0.42	-0.52	-0.82	-0.12	
CERS Haz (P)	1.44	1.44	-1.66	-0.90	4.88	5.39	4.83	-0.10	4.92	12.80	9.06	04/01/1984
Target Allocation Index (CERS Haz P)	0.70	0.70	-2.19	-1.42	5.27	5.55	5.12	0.22	5.43	13.67	9.17	
Difference	0.74	0.74	0.53	0.52	-0.39	-0.16	-0.29	-0.32	-0.51	-0.87	-0.11	
SPRS (P)	0.50	0.50	-2.81	-2.01	4.48	5.14	4.71	-0.41	4.96	12.86	9.02	04/01/1984
Target Allocation Index (SPRS P)	0.86	0.86	-2.04	-1.25	5.30	5.57	5.13	0.21	5.37	13.67	9.18	
Difference	-0.36	-0.36	-0.77	-0.76	-0.82	-0.43	-0.42	-0.62	-0.41	-0.81	-0.16	



#### Kentucky Retirement Systems - Pension Plan Composite Comparative Performance

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
U.S. Equity Composite	1.77	1.77	-0.93	-1.25	10.33	10.33	-0.95	10.78	33.73	11.08	04/01/1984
R 3000 Index (P)*	0.97	0.97	-0.48	-0.34	11.14	10.98	0.48	12.55	33.55	11.07	
Difference	0.80	0.80	-0.45	-0.91	-0.81	-0.65	-1.43	-1.77	0.18	0.01	
Non-U.S. Equity Composite	0.54	0.54	-7.22	-6.09	2.09	0.72	-3.34	-4.12	18.34	1.95	07/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (P)*	-0.12	-0.12	-9.31	-8.66	0.81	0.80	-5.25	-3.44	15.78	2.34	
Difference	0.66	0.66	2.09	2.57	1.28	-0.08	1.91	-0.68	2.56	-0.39	
Fixed Income Composite	2.57	2.57	2.21	1.43	2.63	4.80	0.50	5.42	-0.03	7.70	04/01/1984
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (P)*	3.23	3.23	3.37	1.92	2.56	4.08	0.43	5.56	-1.35	7.47	
Difference	-0.66	-0.66	-1.16	-0.49	0.07	0.72	0.07	-0.14	1.32	0.23	
Real Return Composite	2.59	2.59	-4.35	-4.76	-1.86	N/A	-5.96	3.20	-4.37	2.28	07/01/2011
Real Return Actual Allocation Index (P)*	1.60	1.60	-2.42	-3.16	0.36	N/A	-4.07	2.95	2.33	1.89	
Difference	0.99	0.99	-1.93	-1.60	-2.22	N/A	-1.89	0.25	-6.70	0.39	
Real Estate Composite	2.87	2.87	7.11	9.31	8.51	9.22	8.89	8.85	9.17	5.82	07/01/1984
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	3.11	3.11	10.48	13.96	12.77	12.60	13.87	11.36	11.97	6.39	
Difference	-0.24	-0.24	-3.37	-4.65	-4.26	-3.38	-4.98	-2.51	-2.80	-0.57	
Absolute Return Composite	-3.92	-3.92	-6.68	-4.16	3.30	4.12	1.70	4.84	12.08	3.81	04/01/2010
HFRI FOF Diversified Index (Mth Lag)	-3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference	-0.37	-0.37	-0.29	0.80	1.07	2.64	0.92	0.12	3.47	1.48	
Private Equity Composite	0.80	0.80	4.52	9.35	13.16	13.11	11.15	16.20	15.11	10.96	07/01/2002
Private Equity Benchmark (P) [Short Term]	0.80	0.80	4.52	9.35	13.16	13.11	11.15	16.20	15.11	10.96	
Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
R 3000 Index + 3% (Qtr Lag) (P)* [Long Term]	6.28	6.28	0.76	3.49	18.38	14.47	3.51	21.76	25.61	10.31	
Difference	-5.48	-5.48	3.76	5.86	-5.22	-1.36	7.64	-5.56	-10.50	0.65	
Cash Equivalent Composite	0.09	0.09	0.19	0.24	0.34	0.33	0.20	0.17	0.64	3.77	01/01/1988
Citi 3 Mo T-Bill Index	0.05	0.05	0.07	0.08	0.04	0.05	0.03	0.02	0.05	3.33	
Difference	0.04	0.04	0.12	0.16	0.30	0.28	0.17	0.15	0.59	0.44	

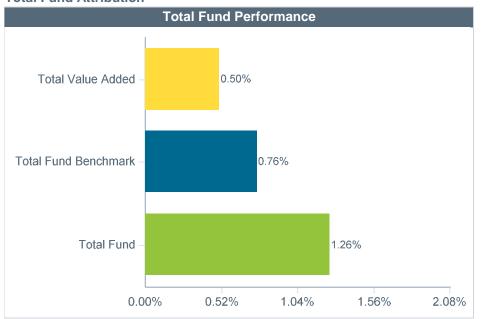


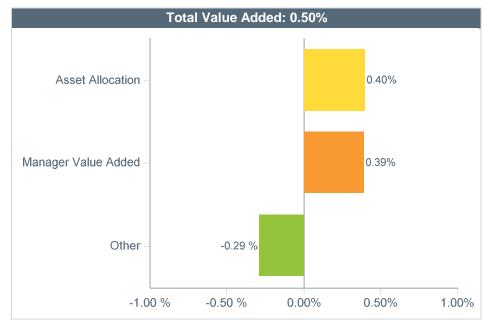
#### Kentucky Retirement Systems - Pension Plan Composite Comparative Performance

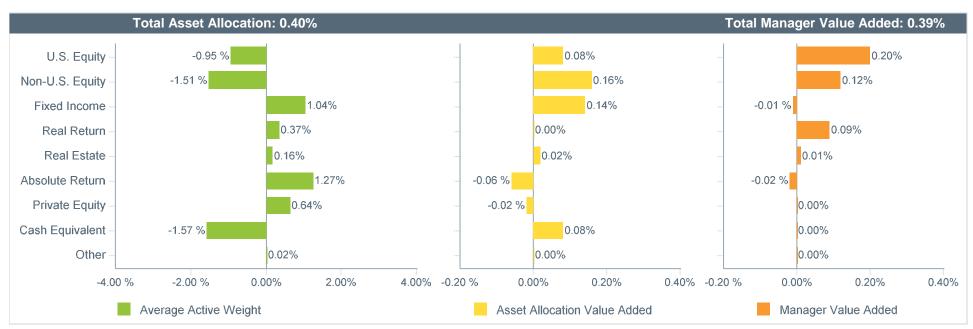
	7 Years	10 Years	12 Years	15 Years	20 Years	25 Years
U.S. Equity Composite	16.28	6.69	7.32	6.32	8.32	9.64
R 3000 Index (P)*	17.14	6.90	7.55	6.62	8.30	9.58
Difference	-0.86	-0.21	-0.23	-0.30	0.02	0.06
Dillelelice	-0.00	-0.21	-0.23	-0.50	0.02	0.00
Non-U.S. Equity Composite	9.55	2.20	4.84	4.39	N/A	N/A
MSCI ACW Ex US Investable Mkt Index (Gross) (P)*	9.78	2.06	4.87	4.85	N/A	N/A
Difference	-0.23	0.14	-0.03	-0.46	N/A	N/A
Fixed Income Composite	5.97	5.23	4.64	5.41	5.84	6.36
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (P)*	4.79	5.09	4.49	5.31	5.79	6.28
Difference	1.18	0.14	0.15	0.10	0.05	0.08
Real Return Composite	N/A	N/A	N/A	N/A	N/A	N/A
Real Return Actual Allocation Index (P)*	N/A	N/A	N/A	N/A	N/A	N/A
Difference	N/A	N/A	N/A	N/A	N/A	N/A
Real Estate Composite	8.64	6.15	6.98	6.57	5.61	4.80
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	5.47	5.55	7.23	6.94	8.42	6.52
Difference	3.17	0.60	-0.25	-0.37	-2.81	-1.72
Absolute Return Composite	N/A	N/A	N/A	N/A	N/A	N/A
HFRI FOF Diversified Index (Mth Lag)	3.45	1.73	2.68	3.24	4.81	5.99
Difference	N/A	N/A	N/A	N/A	N/A	N/A
Private Equity Composite	12.90	7.50	9.75	N/A	N/A	N/A
Private Equity Benchmark (P) [Short Term]	12.90	7.50	9.75	N/A	N/A	N/A
Difference	0.00	0.00	0.00	N/A	N/A	N/A
R 3000 Index + 3% (Qtr Lag) (P)* [Long Term]	19.60	9.92	9.76	8.74	9.23	N/A
Difference	-6.70	-2.42	-0.01	N/A	N/A	N/A
Cash Equivalent Composite	0.48	1.64	1.80	1.87	2.81	3.21
Citi 3 Mo T-Bill Index	0.08	1.07	1.31	1.42	2.37	2.78
Difference	0.40	0.57	0.49	0.45	0.44	0.43



Kentucky Retirement Systems - Pension Plan Total Fund vs. Target Allocation Index (P) Total Fund Attribution



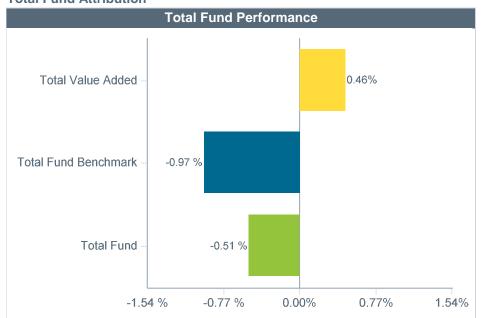




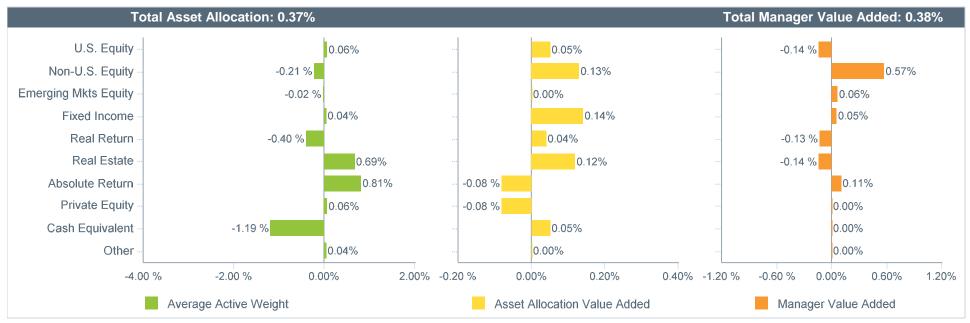
Performance shown is gross of fees. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows.



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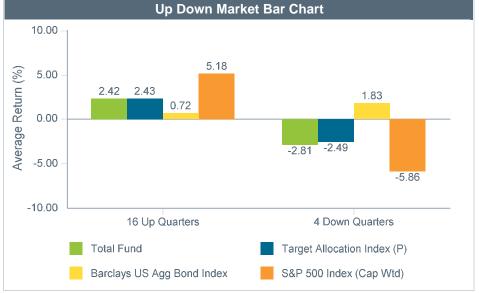
Performance shown is gross of fees. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows.



	Historical Statistics - 5 Years												
	Total Fund	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Real Estate Composite	Absolute Return Composite	Private Equity Composite	Cash Equivalent Composite					
Standard Deviation	6.53	12.85	15.12	3.15	3.19	3.43	6.23	0.16					
Sharpe Ratio	0.82	0.83	0.12	1.48	2.77	1.17	2.00	1.58					
Downside Risk	3.99	7.56	10.79	1.76	0.30	1.98	0.65	0.00					
Excess Return	5.38	10.61	1.80	4.67	8.82	4.02	12.49	0.25					
Excess Return	5.38	10.61	1.80	4.67	8.82	4.02	12.49						

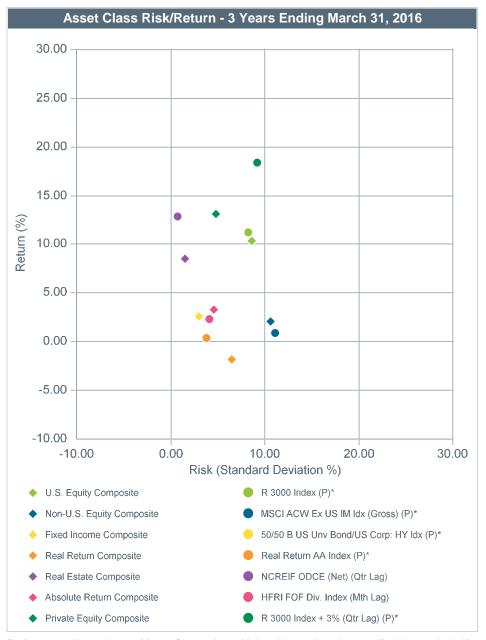
Correlation Matrix - 5 Years											
	Total Fund	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Real Estate Composite	Absolute Return Composite	Private Equity Composite	Cash Equivalent Composite			
Total Fund	1.00										
U.S. Equity Composite	0.93	1.00									
Non-U.S. Equity Composite	0.97	0.88	1.00								
Fixed Income Composite	0.52	0.33	0.47	1.00							
Real Estate Composite	-0.09	-0.15	-0.18	-0.21	1.00						
Absolute Return Composite	-0.11	-0.17	-0.16	-0.24	0.24	1.00					
Private Equity Composite	-0.07	-0.15	-0.19	-0.18	0.66	0.31	1.00				
Cash Equivalent Composite	0.12	0.15	0.14	0.06	-0.11	-0.14	-0.10	1.00			

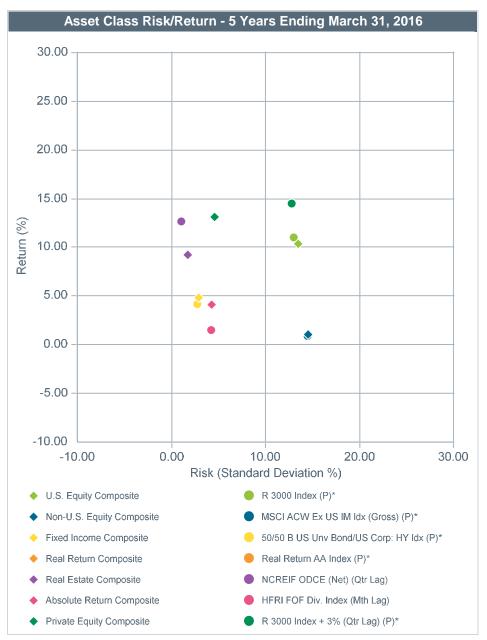






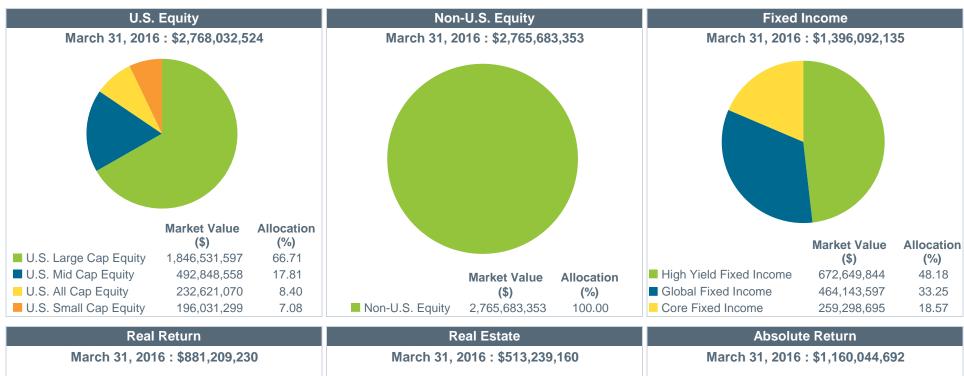


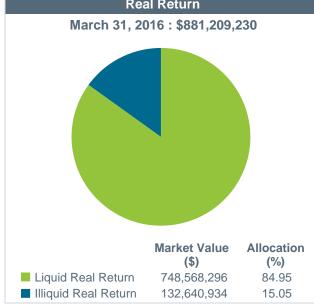


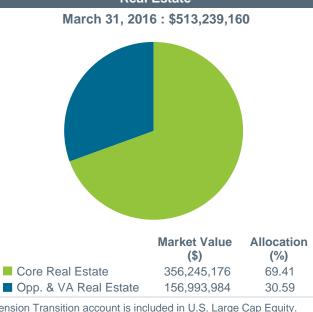


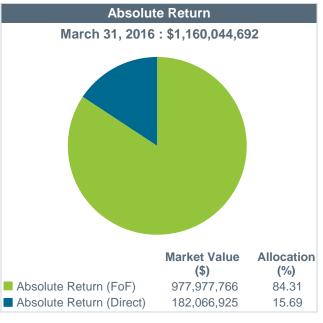
Performance shown is net of fees. Composites with less history than the specified time period will not appear in the chart.











Allocations shown may not sum to 100% exactly due to rounding. Pension Transition account is included in U.S. Large Cap Equity.



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
River Road Asset Management (SA)	7.79	7.79	5.78	2.84	9.85	N/A	-3.83	9.82	32.55	11.24	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	6.15	6.15	7.84	4.89	0.77	N/A	0.30	-2.88	-0.14	0.58	
Westwood Management (SA)	0.38	0.38	-5.35	-5.57	8.82	N/A	-2.63	10.37	34.02	9.11	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	-1.26	-1.26	-3.29	-3.52	-0.26	N/A	1.50	-2.33	1.33	-1.55	
Westfield Capital (SA)	-3.19	-3.19	-6.83	-8.60	10.23	N/A	-1.37	12.34	38.88	10.76	07/01/2011
Russell 3000 Grth Index	0.34	0.34	1.07	1.34	13.16	12.00	5.09	12.44	34.23	12.52	
Difference	-3.53	-3.53	-7.90	-9.94	-2.93	N/A	-6.46	-0.10	4.65	-1.76	
U.S. All Cap Equity Composite	-0.42	-0.42	-4.86	-6.13	9.58	N/A	-2.31	11.30	36.05	10.12	07/01/2011
Russell 3000 Index	0.97	0.97	-0.48	-0.34	11.14	11.01	0.48	12.55	33.55	11.63	
Difference	-1.39	-1.39	-4.38	-5.79	-1.56	N/A	-2.79	-1.25	2.50	-1.51	
Internal S&P 500 Index (SA)	1.25	1.25	1.42	1.70	11.75	11.57	1.37	13.61	32.34	6.14	07/01/2001
S&P 500 Index (Cap Wtd)*	1.35	1.35	1.50	1.78	11.82	11.56	1.38	13.69	32.39	6.09	
Difference	-0.10	-0.10	-0.08	-0.08	-0.07	0.01	-0.01	-0.08	-0.05	0.05	
INVESCO Struct'd Core Equity (SA)	-0.91	-0.91	-4.37	-4.89	9.59	10.73	-3.41	13.02	35.28	7.54	08/01/2005
S&P 500 Index (Cap Wtd)	1.35	1.35	1.50	1.78	11.82	11.58	1.38	13.69	32.39	7.17	
Difference	-2.26	-2.26	-5.87	-6.67	-2.23	-0.85	-4.79	-0.67	2.89	0.37	
U.S. Large Cap Equity Composite	1.90	1.90	1.56	1.73	N/A	N/A	0.77	13.20	N/A	11.64	07/01/2013
Russell 1000 Index	1.17	1.17	0.39	0.50	11.52	11.35	0.92	13.24	33.11	11.56	
Difference	0.73	0.73	1.17	1.23	N/A	N/A	-0.15	-0.04	N/A	0.08	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal US Mid Cap (SA)	3.74	3.74	-2.74	-3.79	N/A	N/A	-2.37	N/A	N/A	4.72	08/01/2014
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	4.90	
Difference	-0.04	-0.04	-0.18	-0.19	N/A	N/A	-0.19	N/A	N/A	-0.18	
Sasco Capital Inc. (SA)	5.15	5.15	-6.57	-8.95	4.48	N/A	-14.14	7.24	32.41	8.74	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	1.23	1.23	-5.12	-5.56	-5.40	N/A	-9.36	-7.51	-1.05	-5.84	
Systematic Financial Management (SA)	0.78	0.78	-5.54	-7.47	6.08	N/A	-5.24	5.34	34.69	10.94	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	-3.14	-3.14	-4.09	-4.08	-3.80	N/A	-0.46	-9.41	1.23	-3.64	
U.S. Mid Cap Equity Composite	3.31	3.31	-3.64	-5.20	N/A	N/A	-4.79	3.72	N/A	7.27	07/01/2013
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	9.96	
Difference	-0.47	-0.47	-1.08	-1.60	N/A	N/A	-2.61	-6.05	N/A	-2.69	
NT Structured Small Cap (SA)	-0.03	-0.03	-7.83	-7.41	8.53	9.05	-3.18	6.55	39.27	9.36	10/01/1999
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	7.39	
Difference	1.49	1.49	2.31	2.35	1.69	1.85	1.23	1.66	0.45	1.97	
U.S. Small Cap Equity Composite	-0.04	-0.04	-7.83	-7.41	N/A	N/A	-3.26	6.55	N/A	8.17	07/01/2013
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	6.31	
Difference	1.48	1.48	2.31	2.35	N/A	N/A	1.15	1.66	N/A	1.86	
U.S. Equity Composite	1.77	1.77	-0.93	-1.25	10.33	10.33	-0.95	10.78	33.73	11.08	04/01/1984
R 3000 Index (P)*	0.97	0.97	-0.48	-0.34	11.14	10.98	0.48	12.55	33.55	11.07	
Difference	0.80	0.80	-0.45	-0.91	-0.81	-0.65	-1.43	-1.77	0.18	0.01	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Lazard Int'l Strategic Equity (SA)	0.02	0.02	-7.03	-4.57	N/A	N/A	-0.62	N/A	N/A	-4.15	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.28	0.28	2.41	4.21	N/A	N/A	4.63	N/A	N/A	4.00	
LSV Int'l Concentrated Value Equity (SA)	-0.56	-0.56	-10.79	-9.66	N/A	N/A	-5.96	N/A	N/A	-8.17	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-0.30	-0.30	-1.35	-0.88	N/A	N/A	-0.71	N/A	N/A	-0.02	
BTC ACWI Ex US Fund (CF)	-0.28	-0.28	-9.49	-8.92	0.51	0.53	-5.42	-3.85	15.55	5.84	07/01/2009
MSCI ACW Ex US Index (Net)	-0.38	-0.38	-9.66	-9.19	0.32	0.31	-5.66	-3.87	15.29	5.65	
Difference	0.10	0.10	0.17	0.27	0.19	0.22	0.24	0.02	0.26	0.19	
American Century Non-US Growth Equity (SA)	-2.94	-2.94	-6.81	-7.53	N/A	N/A	-0.88	N/A	N/A	-5.62	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-2.68	-2.68	2.63	1.25	N/A	N/A	4.37	N/A	N/A	2.53	
Franklin Templeton Non-US Equity (SA)	0.51	0.51	-4.13	-2.48	N/A	N/A	1.00	N/A	N/A	-3.45	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.77	0.77	5.31	6.30	N/A	N/A	6.25	N/A	N/A	4.70	
NT Int'l Sm Cap Eq Index (SA)	0.63	0.63	-4.59	-0.48	4.13	2.50	2.87	-3.76	20.73	12.94	12/01/2008
MSCI ACW Ex US Sm Cap Index (Net)	0.68	0.68	-4.63	-0.60	3.67	2.39	2.60	-4.03	19.73	13.44	
Difference	-0.05	-0.05	0.04	0.12	0.46	0.11	0.27	0.27	1.00	-0.50	
Non-U.S. Equity Composite	0.54	0.54	-7.22	-6.09	2.09	0.72	-3.34	-4.12	18.34	1.95	07/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (P)*	-0.12	-0.12	-9.31	-8.66	0.81	0.80	-5.25	-3.44	15.78	2.34	
Difference	0.66	0.66	2.09	2.57	1.28	-0.08	1.91	-0.68	2.56	-0.39	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
NISA Core Agg Fixed Income (SA)	3.29	3.29	4.25	2.52	2.73	3.94	0.87	6.27	-2.19	4.78	02/01/2009
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	4.56	
Difference	0.26	0.26	0.54	0.56	0.23	0.16	0.32	0.30	-0.17	0.22	
Core Fixed Income Composite	3.37	3.37	4.34	2.64	N/A	N/A	0.61	5.67	N/A	3.82	07/01/2013
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.61	
Difference	0.34	0.34	0.63	0.68	N/A	N/A	0.06	-0.30	N/A	0.21	
Cerberus KRS Levered Loan Opps, L.P.	2.39	2.39	6.42	9.52	N/A	N/A	9.29	N/A	N/A	8.15	09/01/2014
S&P-LSTA Lvg'd Loan Index	1.55	1.55	-1.92	-1.25	1.85	3.23	-0.69	1.60	5.29	-0.17	
Difference	0.84	0.84	8.34	10.77	N/A	N/A	9.98	N/A	N/A	8.32	
Columbia HY Fixed Income (SA)	2.83	2.83	-0.35	-0.48	3.56	N/A	-0.25	4.38	6.45	6.74	11/01/2011
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	5.45	
Difference	-0.52	-0.52	3.35	3.21	1.72	N/A	4.22	1.93	-0.99	1.29	
Marathon Bluegrass Credit Fund	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	01/01/2016
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	3.35	
Difference	-3.35	-3.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3.35	
Shenkman Capital (SA)	1.28	1.28	-2.84	-1.97	2.02	3.74	-0.61	1.64	5.67	4.30	10/01/2010
Shenkman Blended Index	1.55	1.55	-1.92	-1.25	2.53	4.52	-0.69	2.98	6.42	5.31	
Difference	-0.27	-0.27	-0.92	-0.72	-0.51	-0.78	0.08	-1.34	-0.75	-1.01	
Waterfall (SA)	-1.43	-1.43	-1.12	0.19	7.73	9.13	3.17	10.71	12.84	11.47	02/01/2010
Opportunistic FI Blended Index	1.72	1.72	-2.76	-2.64	1.32	3.26	-2.73	2.16	5.06	4.52	
Difference	-3.15	-3.15	1.64	2.83	6.41	5.87	5.90	8.55	7.78	6.95	
High Yield Fixed Income Composite	1.07	1.07	-1.91	-0.99	N/A	N/A	0.20	5.61	N/A	4.53	07/01/2013
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	2.55	
Difference	-2.28	-2.28	1.79	2.70	N/A	N/A	4.67	3.16	N/A	1.98	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Manulife Asset Mgmt (SA)	2.67	2.67	2.83	1.50	2.30	N/A	0.59	3.95	1.57	4.74	12/01/2011
Barclays US Unv Bond Index*	3.07	3.07	2.66	1.60	-0.03	1.35	-3.29	0.48	-2.19	0.78	
Difference	-0.40	-0.40	0.17	-0.10	2.33	N/A	3.88	3.47	3.76	3.96	
Global Fixed Income Composite	2.67	2.67	2.68	1.80	N/A	N/A	0.98	3.63	N/A	2.96	07/01/2013
Barclays Gbl Agg Bond Index	5.90	5.90	5.81	4.57	0.87	1.81	-3.15	0.59	-2.60	1.99	
Difference	-3.23	-3.23	-3.13	-2.77	N/A	N/A	4.13	3.04	N/A	0.97	
Fixed Income Composite	2.57	2.57	2.21	1.43	2.63	4.80	0.50	5.42	-0.03	7.70	04/01/1984
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (P)*	3.23	3.23	3.37	1.92	2.56	4.08	0.43	5.56	-1.35	7.47	
Difference	-0.66	-0.66	-1.16	-0.49	0.07	0.72	0.07	-0.14	1.32	0.23	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal TIPS (SA)	3.70	3.70	2.45	2.48	-0.51	3.08	0.22	3.03	-8.45	5.45	05/01/2002
Internal US TIPS Blend	3.60	3.60	1.99	1.84	-1.00	2.84	-0.52	2.63	-8.61	5.32	
Difference	0.10	0.10	0.46	0.64	0.49	0.24	0.74	0.40	0.16	0.13	
Nuveen Real Asset Income (SA)	4.75	4.75	1.96	-0.28	N/A	N/A	N/A	N/A	N/A	-0.13	02/01/2015
Nuveen Real Asset Custom Index	5.17	5.17	4.07	1.30	N/A	N/A	N/A	N/A	N/A	1.16	
Difference	-0.42	-0.42	-2.11	-1.58	N/A	N/A	N/A	N/A	N/A	-1.29	
PIMCO:All Asset;Inst (PAAIX)	7.26	7.26	-3.80	-4.03	-1.06	N/A	-7.87	0.52	-1.66	2.93	12/01/2011
Barclays US Trsy Infl Notes: 1-10 Yr Index	3.60	3.60	1.99	1.84	-0.72	1.88	-0.52	0.91	-5.58	0.67	
Difference	3.66	3.66	-5.79	-5.87	-0.34	N/A	-7.35	-0.39	3.92	2.26	
Tenaska Power Fund II (CF)	0.00	0.00	7.12	10.54	-1.00	1.23	16.85	-0.88	-16.55	-1.59	10/01/2008
Tortoise Capital (CF)	-5.82	-5.82	-27.36	-29.74	-3.44	5.51	-27.04	15.54	36.72	12.56	08/01/2009
Alerian MLP Index	-4.17	-4.17	-27.41	-31.83	-10.31	-0.55	-32.59	4.80	27.58	7.86	
Difference	-1.65	-1.65	0.05	2.09	6.87	6.06	5.55	10.74	9.14	4.70	
Amerra Ag Fund II (CF)	-1.75	-1.75	8.00	9.91	8.42	N/A	14.34	8.63	0.06	6.18	12/01/2012
Amerra-AGRI Holding (CF)	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.34	08/01/2015
BTG Pactual Brazil Timberland Fund I, L.P.	-23.70	-23.70	-29.41	-29.41	N/A	N/A	-17.41	N/A	N/A	-29.27	12/01/2014
Magnetar MTP Energy Fund, L.P.	-10.65	-10.65	-26.18	-24.20	N/A	N/A	-15.63	2.98	N/A	-7.79	07/01/2013
Magnetar MTP EOF II, L.P.	-15.97	-15.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.97	08/01/2015
Oberland Capital Healthcare, L.P.	0.00	0.00	1.62	36.50	N/A	N/A	-27.53	N/A	N/A	-21.04	10/01/2014
Taurus Mining Finance Fund	2.02	2.02	3.76	2.53	N/A	N/A	N/A	N/A	N/A	2.53	04/01/2015
Real Return Composite	2.59	2.59	-4.35	-4.76	-1.86	N/A	-5.96	3.20	-4.37	2.28	07/01/2011
Real Return Actual Allocation Index (P)*	1.60	1.60	-2.42	-3.16	0.36	N/A	-4.07	2.95	2.33	1.89	
Difference	0.99	0.99	-1.93	-1.60	-2.22	N/A	-1.89	0.25	-6.70	0.39	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
FHA Mortgages (SA)	3.12	3.12	6.57	8.72	6.60	6.78	6.95	6.53	2.73	8.02	10/01/1990
H/2 Credit Partners (CF)	0.45	0.45	-1.92	1.72	3.47	N/A	2.11	6.57	4.52	5.35	07/01/2011
H/2 Core Real Estate Debt Fund, L.P.	2.47	2.47	3.95	5.75	N/A	N/A	4.06	2.80	N/A	3.74	10/01/2013
Harrison Street Core (CF)	2.81	2.81	8.78	10.53	10.07	N/A	9.53	10.12	9.69	8.30	05/01/2012
Mesa West Core Lending, L.P.	2.15	2.15	6.15	7.83	N/A	N/A	7.56	4.84	N/A	5.96	05/01/2013
Prologis Targeted U.S. Logistics Fund (CF)	4.66	4.66	11.38	12.77	N/A	N/A	14.74	N/A	N/A	12.98	10/01/2014
Stockbridge SmtMkts, L.P.	2.88	2.88	9.51	12.71	N/A	N/A	12.00	N/A	N/A	10.26	05/01/2014
DivcoWest Fund IV, L.P.	7.95	7.95	28.74	34.41	N/A	N/A	28.79	N/A	N/A	19.01	03/01/2014
Greenfield Acquisition Partners VI, L.P.	3.30	3.30	14.42	14.19	18.00	N/A	18.77	16.59	11.34	14.98	12/01/2012
Greenfield Acquisition Partners VII, L.P.	6.99	6.99	17.64	18.68	N/A	N/A	15.29	N/A	N/A	11.32	07/01/2014
Lubert Adler Real Estate Fund VII, L.P.	0.00	0.00	-0.83	-1.56	N/A	N/A	-0.33	N/A	N/A	-14.29	07/01/2014
Rubenstein Properties Fund II, L.P.	-1.93	-1.93	1.21	0.36	N/A	N/A	11.17	44.51	N/A	16.46	07/01/2013
Walton Street Real Estate Fund VI, L.P.	4.21	4.21	10.68	14.26	14.41	12.79	12.99	16.41	15.24	-23.75	05/01/2009
Walton Street Real Estate Fund VII, L.P.	3.92	3.92	14.32	15.16	N/A	N/A	16.78	15.13	N/A	15.23	07/01/2013
Real Estate Composite  NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	<b>2.87</b> 3.11	<b>2.87</b> 3.11	<b>7.11</b> 10.48	<b>9.31</b> 13.96	<b>8.51</b> 12.77	<b>9.22</b> 12.60	<b>8.89</b> 13.87	<b>8.85</b> 11.36	<b>9.17</b> 11.97	<b>5.82</b> 6.39	07/01/1984
Difference	-0.24	-0.24	-3.37	-4.65	-4.26	-3.38	-4.98	-2.51	-2.80	-0.57	



BAAM (SA)  PAAMCO (SA)  Prisma Capital Partners (SA)  Tourbillon Global Master Fund, Ltd  -3.42  -3.38  -4.38	-3.38 -4.38	-1.68 -9.09 -8.13	Year 0.38 -6.60 -4.86	Years 5.89 2.61	Years N/A N/A	6.10	7.97	11.54	6.50	Date 09/01/2011
Prisma Capital Partners (SA) -4.38	-4.38	-8.13			N/A	-2.01	2.02			
			-4.86				3.83	15.09	3.88	09/01/2011
Tourbillon Global Master Fund, Ltd -10.93	-10.93	21/2		2.30	N/A	2.52	3.30	9.78	3.37	09/01/2011
		N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.31	11/01/2015
Davidson-Kemper, L.P. N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.22	02/01/2016
DSAM Fund, L.P. N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Glenview Capital (CF) -15.93	-15.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-18.76	11/01/2015
HBK II (CF) -2.37	-2.37	-5.78	-4.01	N/A	N/A	-1.46	3.93	N/A	0.40	12/01/2013
Jana Partners (CF) -6.29	-6.29	-14.57	-13.80	N/A	N/A	-5.99	N/A	N/A	-8.08	09/01/2014
Knighthead Capital (CF) -3.52	-3.52	-10.72	-12.21	N/A	N/A	-10.22	5.59	N/A	-3.89	01/01/2014
LibreMax Capital (CF) -3.02	-3.02	-5.13	-4.23	N/A	N/A	-0.16	N/A	N/A	-0.11	08/01/2014
Luxor Capital (CF) -11.17	-11.17	-24.96	-21.34	N/A	N/A	-16.70	N/A	N/A	-16.51	04/01/2014
Myriad Opportunities N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Pine River (CF) -5.90	-5.90	-12.22	-8.48	N/A	N/A	0.09	N/A	N/A	-2.82	05/01/2014
QMS Diversified Global Macro (CF) 5.36	5.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	07/01/2014
Scopia PX, LLC -3.75	-3.75	-4.76	-3.13	N/A	N/A	0.92	N/A	N/A	0.49	11/01/2015
Coatue Qualified Partners, L.P. 0.04	0.04	5.90	N/A	N/A	N/A	N/A	N/A	N/A	5.90	07/01/2015
Absolute Return Composite -3.92	-3.92	-6.68	-4.16	3.30	4.12	1.70	4.84	12.08	3.81	04/01/2010
HFRI FOF Diversified Index (Mth Lag) -3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference -0.37	-0.37	-0.29	0.80	1.07	2.64	0.92	0.12	3.47	1.48	
Cash Equivalents (SA) 0.09	0.09	0.19	0.24	0.34	0.33	0.20	0.17	0.64	3.77	01/01/1988
Citi 3 Mo T-Bill Index 0.05		0.19	0.24	0.04	0.05	0.20	0.17	0.05	3.33	01/01/1300
Difference 0.04		0.07	0.08	0.04	0.03	0.03	0.02	0.03	0.44	

Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Net) (AWA) is lagged by one quarter and available quarterly; interim month returns assume a 0.00% return.

Performance shown is net of fees. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by BNY Mellon. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of custom indices. Manager inception dates shown represent the first full month following initial funding.

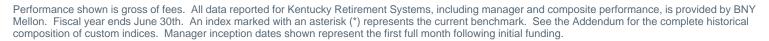


	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
River Road Asset Management (SA)	7.95	7.95	6.22	3.39	10.50	N/A	-3.27	10.50	33.33	11.88	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	6.31	6.31	8.28	5.44	1.42	N/A	0.86	-2.20	0.64	1.22	
IM U.S. All Cap Value Equity (SA+CF) Median	1.87	1.87	-4.18	-3.44	9.61	9.89	-3.25	10.22	34.74	10.40	
Rank	2	2	4	7	32	N/A	51	49	63	22	
Westwood Management (SA)	0.52	0.52	-4.97	-5.13	9.39	N/A	-2.16	10.99	34.70	9.65	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	-1.12	-1.12	-2.91	-3.08	0.31	N/A	1.97	-1.71	2.01	-1.01	
IM U.S. All Cap Value Equity (SA+CF) Median	1.87	1.87	-4.18	-3.44	9.61	9.89	-3.25	10.22	34.74	10.40	
Rank	66	66	65	60	53	N/A	40	42	51	62	
Westfield Capital (SA)	-3.04	-3.04	-6.41	-8.09	10.89	N/A	-0.81	13.03	39.68	11.39	07/01/2011
Russell 3000 Grth Index	0.34	0.34	1.07	1.34	13.16	12.00	5.09	12.44	34.23	12.52	
Difference	-3.38	-3.38	-7.48	-9.43	-2.27	N/A	-5.90	0.59	5.45	-1.13	
IM U.S. All Cap Growth Equity (SA+CF) Median	-2.49	-2.49	-4.58	-3.27	10.52	9.75	3.52	8.79	35.96	10.21	
Rank	58	58	69	93	47	N/A	87	20	21	25	
U.S. All Cap Equity Composite	-0.28	-0.28	-4.45	-5.64	10.17	N/A	-1.81	11.93	36.78	10.70	07/01/2011
Russell 3000 Index	0.97	0.97	-0.48	-0.34	11.14	11.01	0.48	12.55	33.55	11.63	
Difference	-1.25	-1.25	-3.97	-5.30	-0.97	N/A	-2.29	-0.62	3.23	-0.93	
Internal S&P 500 Index (SA)	1.25	1.25	1.42	1.70	11.75	11.57	1.37	13.61	32.34	6.14	07/01/2001
S&P 500 Index (Cap Wtd)*	1.35	1.35	1.50	1.78	11.82	11.56	1.38	13.69	32.39	6.09	
Difference	-0.10	-0.10	-0.08	-0.08	-0.07	0.01	-0.01	-0.08	-0.05	0.05	
IM U.S. Large Cap Index Equity (SA+CF) Median	1.29	1.29	0.92	0.84	11.59	11.42	0.95	13.28	32.56	5.79	
Rank	53	53	42	39	48	34	40	37	74	17	
INVESCO Struct'd Core Equity (SA)	-0.88	-0.88	-4.28	-4.78	9.73	10.86	-3.29	13.16	35.44	7.59	08/01/2005
S&P 500 Index (Cap Wtd)	1.35	1.35	1.50	1.78	11.82	11.58	1.38	13.69	32.39	7.17	
Difference	-2.23	-2.23	-5.78	-6.56	-2.09	-0.72	-4.67	-0.53	3.05	0.42	
IM U.S. Large Cap Core Equity (SA+CF) Median	0.61	0.61	-0.52	-0.20	11.67	11.35	1.26	13.41	33.02	7.58	
Rank	79	79	84	90	80	63	88	53	28	50	
U.S. Large Cap Equity Composite	1.90	1.90	1.57	1.75	N/A	N/A	0.79	13.22	N/A	11.66	07/01/2013
Russell 1000 Index	1.17	1.17	0.39	0.50	11.52	11.35	0.92	13.24	33.11	11.56	
Difference	0.73	0.73	1.18	1.25	N/A	N/A	-0.13	-0.02	N/A	0.10	

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	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal US Mid Cap (SA)	3.83	3.83	-2.66	-3.70	N/A	N/A	-2.37	N/A	N/A	4.77	08/01/2014
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	4.90	
Difference	0.05	0.05	-0.10	-0.10	N/A	N/A	-0.19	N/A	N/A	-0.13	
IM U.S. Mid Cap Equity (SA+CF) Median	0.65	0.65	-4.39	-4.76	10.27	9.75	-1.19	9.76	36.37	4.05	
Rank	15	15	35	40	N/A	N/A	65	N/A	N/A	40	
Sasco Capital Inc. (SA)	5.29	5.29	-6.19	-8.51	5.04	N/A	-13.72	7.84	33.12	9.29	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	1.37	1.37	-4.74	-5.12	-4.84	N/A	-8.94	-6.91	-0.34	-5.29	
IM U.S. Mid Cap Value Equity (SA+CF) Median	3.00	3.00	-3.15	-3.94	10.22	10.23	-3.88	11.73	36.06	14.50	
Rank	16	16	77	85	100	N/A	99	72	79	99	
Systematic Financial Management (SA)	0.89	0.89	-5.24	-7.09	6.51	N/A	-4.86	5.73	35.26	11.36	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	-3.03	-3.03	-3.79	-3.70	-3.37	N/A	-0.08	-9.02	1.80	-3.22	
IM U.S. Mid Cap Value Equity (SA+CF) Median	3.00	3.00	-3.15	-3.94	10.22	10.23	-3.88	11.73	36.06	14.50	
Rank	81	81	69	77	95	N/A	61	87	57	93	
U.S. Mid Cap Equity Composite	3.36	3.36	-3.48	-5.00	N/A	N/A	-4.58	4.08	N/A	7.60	07/01/2013
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	9.96	
Difference	-0.42	-0.42	-0.92	-1.40	N/A	N/A	-2.40	-5.69	N/A	-2.36	
NT Structured Small Cap (SA)	0.01	0.01	-7.73	-7.29	8.64	9.17	-3.05	6.65	39.39	9.40	10/01/1999
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	7.39	
Difference	1.53	1.53	2.41	2.47	1.80	1.97	1.36	1.76	0.57	2.01	
IM U.S. Small Cap Core Equity (SA+CF) Median	0.02	0.02	-6.78	-6.41	9.62	9.72	-1.39	6.57	41.01	10.37	
Rank	51	51	63	60	62	58	72	49	66	71	
U.S. Small Cap Equity Composite	0.00	0.00	-7.73	-7.29	N/A	N/A	-3.14	6.65	N/A	8.28	07/01/2013
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	6.31	
Difference	1.52	1.52	2.41	2.47	N/A	N/A	1.27	1.76	N/A	1.97	
U.S. Equity Composite	1.80	1.80	-0.85	-1.14	10.48	10.46	-0.84	10.93	33.95	11.10	04/01/1984
R 3000 Index (P)*	0.97	0.97	-0.48	-0.34	11.14	10.98	0.48	12.55	33.55	11.07	
Difference	0.83	0.83	-0.37	-0.80	-0.66	-0.52	-1.32	-1.62	0.40	0.03	





	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Lazard Int'l Strategic Equity (SA)	0.06	0.06	-6.82	-4.43	N/A	N/A	-0.39	N/A	N/A	-3.84	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.32	0.32	2.62	4.35	N/A	N/A	4.86	N/A	N/A	4.31	
IM International Value Equity (SA+CF) Median	-1.32	-1.32	-7.47	-6.06	3.61	3.37	-0.87	-4.04	23.80	-6.37	
Rank	31	31	40	34	N/A	N/A	44	N/A	N/A	27	
LSV Int'l Concentrated Value Equity (SA)	-0.46	-0.46	-10.49	-9.22	N/A	N/A	-5.43	N/A	N/A	-7.62	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-0.20	-0.20	-1.05	-0.44	N/A	N/A	-0.18	N/A	N/A	0.53	
IM International Value Equity (SA+CF) Median	-1.32	-1.32	-7.47	-6.06	3.61	3.37	-0.87	-4.04	23.80	-6.37	
Rank	37	37	76	75	N/A	N/A	88	N/A	N/A	68	
BTC ACWI Ex US Fund (CF)	-0.27	-0.27	-9.51	-8.93	0.55	0.55	-5.43	-3.80	15.61	5.86	07/01/2009
MSCI ACW Ex US Index (Net)	-0.38	-0.38	-9.66	-9.19	0.32	0.31	-5.66	-3.87	15.29	5.65	
Difference	0.11	0.11	0.15	0.26	0.23	0.24	0.23	0.07	0.32	0.21	
IM International Core Equity (SA+CF) Median	-1.75	-1.75	-7.00	-5.45	4.00	3.94	1.12	-3.49	23.97	8.38	
Rank	26	26	74	85	95	96	94	54	95	98	
American Century Non-US Growth Equity (SA)	-2.83	-2.83	-6.48	-7.15	N/A	N/A	-0.53	N/A	N/A	-5.25	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-2.57	-2.57	2.96	1.63	N/A	N/A	4.72	N/A	N/A	2.90	
IM International Growth Equity (SA+CF) Median	-1.98	-1.98	-5.86	-3.48	3.96	4.23	2.95	-3.37	22.89	-3.37	
Rank	65	65	58	82	N/A	N/A	81	N/A	N/A	76	
Franklin Templeton Non-US Equity (SA)	0.62	0.62	-3.79	-2.08	N/A	N/A	1.39	N/A	N/A	-3.03	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.88	0.88	5.65	6.70	N/A	N/A	6.64	N/A	N/A	5.12	
IM International Growth Equity (SA+CF) Median	-1.98	-1.98	-5.86	-3.48	3.96	4.23	2.95	-3.37	22.89	-3.37	
Rank	15	15	37	37	N/A	N/A	66	N/A	N/A	44	
NT Int'l Sm Cap Eq Index (SA)	0.66	0.66	-4.51	-0.39	4.25	2.61	2.95	-3.62	20.87	13.03	12/01/2008
MSCI ACW Ex US Sm Cap Index (Gross)	0.76	0.76	-4.43	-0.26	4.03	2.76	2.95	-3.69	20.13	13.83	
Difference	-0.10	-0.10	-0.08	-0.13	0.22	-0.15	0.00	0.07	0.74	-0.80	
IM International Small Cap Equity (SA+CF) Median	-0.73	-0.73	-1.78	2.57	8.37	7.20	10.46	-3.14	31.05	15.90	
Rank	23	23	73	78	92	97	89	57	96	86	
Non-U.S. Equity Composite	0.61	0.61	-7.02	-5.87	2.32	0.94	-3.12	-3.90	18.58	2.03	07/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (P)*	-0.12	-0.12	-9.31	-8.66	0.81	0.80	-5.25	-3.44	15.78	2.34	
Difference	0.73	0.73	2.29	2.79	1.51	0.14	2.13	-0.46	2.80	-0.31	

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	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
NISA Core Agg Fixed Income (SA)	3.41	3.41	4.44	2.73	2.90	4.10	0.97	6.44	-2.03	4.89	02/01/2009
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	4.56	
Difference	0.38	0.38	0.73	0.77	0.40	0.32	0.42	0.47	-0.01	0.33	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.04	3.04	3.70	2.06	2.71	4.14	0.81	6.14	-1.56	5.45	
Rank	5	5	6	7	27	55	31	35	74	79	
Core Fixed Income Composite	3.38	3.38	4.42	2.66	N/A	N/A	0.73	5.92	N/A	4.01	07/01/2013
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.61	
Difference	0.35	0.35	0.71	0.70	N/A	N/A	0.18	-0.05	N/A	0.40	
Cerberus KRS Levered Loan Opps, L.P.	3.00	3.00	8.67	12.82	N/A	N/A	13.09	N/A	N/A	10.93	09/01/2014
S&P-LSTA Lvg'd Loan Index	1.55	1.55	-1.92	-1.25	1.85	3.23	-0.69	1.60	5.29	-0.17	
Difference	1.45	1.45	10.59	14.07	N/A	N/A	13.78	N/A	N/A	11.10	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	-1.75	
Rank	29	29	1	1	N/A	N/A	1	N/A	N/A	1	
Columbia HY Fixed Income (SA)	2.88	2.88	-0.10	-0.15	3.96	N/A	0.14	4.82	6.87	7.14	11/01/2011
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	5.45	
Difference	-0.47	-0.47	3.60	3.54	2.12	N/A	4.61	2.37	-0.57	1.69	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	5.82	
Rank	34	34	14	21	8	N/A	15	10	66	8	
Marathon Bluegrass Credit Fund	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	01/01/2016
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	3.35	
Difference	-3.35	-3.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3.35	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	2.50	
Rank	96	96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96	
Shenkman Capital (SA)	1.40	1.40	-2.47	-1.46	2.54	4.22	-0.10	2.16	6.20	4.74	10/01/2010
Shenkman Blended Index	1.55	1.55	-1.92	-1.25	2.53	4.52	-0.69	2.98	6.42	5.31	
Difference	-0.15	-0.15	-0.55	-0.21	0.01	-0.30	0.59	-0.82	-0.22	-0.57	
Waterfall (SA)	-1.30	-1.30	-0.71	0.76	9.02	10.40	4.57	12.58	15.13	12.52	02/01/2010
Opportunistic FI Blended Index	1.72	1.72	-2.76	-2.64	1.32	3.26	-2.73	2.16	5.06	4.52	
Difference	-3.02	-3.02	2.05	3.40	7.70	7.14	7.30	10.42	10.07	8.00	
High Yield Fixed Income Composite	1.24	1.24	-1.35	-0.22	N/A	N/A	1.21	6.36	N/A	5.34	07/01/2013
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	2.55	
Difference	-2.11	-2.11	2.35	3.47	N/A	N/A	5.68	3.91	N/A	2.79	

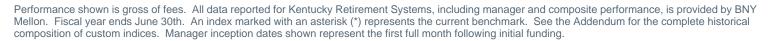
Performance shown is gross of fees. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by BNY Mellon. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of custom indices. Manager inception dates shown represent the first full month following initial funding.



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Manulife Asset Mgmt (SA)	2.73	2.73	3.01	1.72	2.60	N/A	0.85	4.30	1.90	5.05	12/01/2011
Barclays US Unv Bond Index*	3.07	3.07	2.66	1.60	-0.03	1.35	-3.29	0.48	-2.19	0.78	
Difference	-0.34	-0.34	0.35	0.12	2.63	N/A	4.14	3.82	4.09	4.27	
Global Fixed Income Composite	2.72	2.72	2.87	2.04	N/A	N/A	1.28	4.09	N/A	3.34	07/01/2013
Barclays Gbl Agg Bond Index	5.90	5.90	5.81	4.57	0.87	1.81	-3.15	0.59	-2.60	1.99	
Difference	-3.18	-3.18	-2.94	-2.53	N/A	N/A	4.43	3.50	N/A	1.35	
Fixed Income Composite	2.66	2.66	2.47	1.74	3.02	5.14	0.90	5.83	0.38	7.75	04/01/1984
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (P)*	3.23	3.23	3.37	1.92	2.56	4.08	0.43	5.56	-1.35	7.47	
Difference	-0.57	-0.57	-0.90	-0.18	0.46	1.06	0.47	0.27	1.73	0.28	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal TIPS (SA)	3.70	3.70	2.45	2.48	-0.47	3.10	0.22	3.09	-8.40	5.46	05/01/2002
Internal US TIPS Blend	3.60	3.60	1.99	1.84	-1.00	2.84	-0.52	2.63	-8.61	5.32	
Difference	0.10	0.10	0.46	0.64	0.53	0.26	0.74	0.46	0.21	0.14	
IM U.S. TIPS (SA+CF) Median	4.24	4.24	2.39	1.56	-0.69	2.97	-1.40	3.52	-8.24	5.49	
Rank	64	64	46	1	20	34	1	66	53	72	
Nuveen Real Asset Income (SA)	4.92	4.92	2.46	0.40	N/A	N/A	N/A	N/A	N/A	0.55	02/01/2015
Nuveen Real Asset Custom Index	5.17	5.17	4.07	1.30	N/A	N/A	N/A	N/A	N/A	1.16	
Difference	-0.25	-0.25	-1.61	-0.90	N/A	N/A	N/A	N/A	N/A	-0.61	
PIMCO:All Asset;Inst (PAAIX)	7.26	7.26	-3.80	-4.03	-1.06	N/A	-7.87	0.52	-1.66	2.93	12/01/2011
Barclays US Trsy Infl Notes: 1-10 Yr Index	3.60	3.60	1.99	1.84	-0.72	1.88	-0.52	0.91	-5.58	0.67	
Difference	3.66	3.66	-5.79	-5.87	-0.34	N/A	-7.35	-0.39	3.92	2.26	
Tenaska Power Fund II (CF)	0.00	0.00	7.83	11.67	-0.26	1.68	18.41	-0.69	-15.95	-0.30	10/01/2008
Tortoise Capital (CF)	-5.67	-5.67	-26.99	-29.38	-2.74	6.22	-26.63	16.37	37.97	13.13	08/01/2009
Alerian MLP Index	-4.17	-4.17	-27.41	-31.83	-10.31	-0.55	-32.59	4.80	27.58	7.86	
Difference	-1.50	-1.50	0.42	2.45	7.57	6.77	5.96	11.57	10.39	5.27	
Amerra Ag Fund II (CF)	-1.75	-1.75	11.27	14.16	11.57	N/A	21.02	10.65	1.14	8.95	12/01/2012
Amerra-AGRI Holding (CF)	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.43	08/01/2015
BTG Pactual Brazil Timberland Fund I, L.P.	-22.78	-22.78	-26.75	-26.75	N/A	N/A	-11.97	N/A	N/A	-25.14	12/01/2014
Magnetar MTP Energy Fund, L.P.	-10.33	-10.33	-25.91	-23.92	N/A	N/A	-15.63	2.98	N/A	-7.67	07/01/2013
Magnetar MTP EOF II, L.P.	-15.31	-15.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.31	08/01/2015
Oberland Capital Healthcare, L.P.	0.00	0.00	14.74	55.61	N/A	N/A	-15.28	N/A	N/A	-12.38	10/01/2014
Taurus Mining Finance Fund	4.27	4.27	9.71	8.41	N/A	N/A	N/A	N/A	N/A	8.41	04/01/2015
Real Return Composite	2.70	2.70	-3.98	-4.24	-1.55	N/A	-5.42	3.36	-4.23	2.51	07/01/2011
Real Return Actual Allocation Index (P)*	1.60	1.60	-2.42	-3.16	0.36	N/A	-4.07	2.95	2.33	1.89	
Difference	1.10	1.10	-1.56	-1.08	-1.91	N/A	-1.35	0.41	-6.56	0.62	





	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
FHA Mortgages (SA)	3.12	3.12	6.57	8.72	6.60	6.78	6.95	6.53	2.73	8.02	10/01/1990
H/2 Credit Partners (CF)	0.45	0.45	-1.92	1.72	3.47	N/A	2.11	6.57	4.52	5.35	07/01/2011
H/2 Core Real Estate Debt Fund, L.P.	2.69	2.69	4.17	5.97	N/A	N/A	4.06	2.80	N/A	3.83	10/01/2013
Harrison Street Core (CF)	3.05	3.05	9.46	11.42	10.44	N/A	10.16	10.33	9.69	8.58	05/01/2012
Mesa West Core Lending, L.P.	2.37	2.37	6.81	8.72	N/A	N/A	8.40	5.63	N/A	6.66	05/01/2013
Prologis Targeted U.S. Logistics Fund (CF)	5.28	5.28	12.81	14.22	N/A	N/A	15.53	N/A	N/A	13.95	10/01/2014
Stockbridge SmtMkts, L.P.	3.11	3.11	10.23	13.46	N/A	N/A	12.50	N/A	N/A	10.64	05/01/2014
DivcoWest Fund IV, L.P.	9.81	9.81	38.28	46.60	N/A	N/A	38.42	N/A	N/A	25.37	03/01/2014
Greenfield Acquisition Partners VI, L.P.	4.23	4.23	18.68	18.43	21.10	N/A	24.47	18.30	12.16	17.70	12/01/2012
Greenfield Acquisition Partners VII, L.P.	6.98	6.98	15.94	17.64	N/A	N/A	13.86	N/A	N/A	11.73	07/01/2014
Lubert Adler Real Estate Fund VII, L.P.	0.00	0.00	1.35	1.86	N/A	N/A	4.60	N/A	N/A	-5.46	07/01/2014
Rubenstein Properties Fund II, L.P.	2.43	2.43	7.97	8.16	N/A	N/A	16.23	50.33	N/A	21.99	07/01/2013
Walton Street Real Estate Fund VI, L.P.	4.55	4.55	11.78	15.77	15.85	13.64	14.49	18.01	16.08	-23.33	05/01/2009
Walton Street Real Estate Fund VII, L.P.	4.33	4.33	15.60	16.78	N/A	N/A	18.34	16.89	N/A	16.98	07/01/2013
Real Estate Composite  NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	<b>3.33</b> 3.11	<b>3.33</b> 3.11	<b>8.72</b> 10.48	<b>11.14</b> 13.96	<b>9.49</b> 12.77	<b>9.81</b> 12.60	<b>10.45</b> 13.87	<b>9.53</b> 11.36	<b>9.38</b> 11.97	<b>5.91</b> 6.39	07/01/1984
Difference	0.22	0.22	-1.76	-2.82	-3.28	-2.79	-3.42	-1.83	-2.59	-0.48	



	*										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
BAAM (SA)	-3.29	-3.29	-1.36	0.70	6.00	N/A	6.30	7.97	11.54	6.57	09/01/2011
PAAMCO (SA)	-3.38	-3.38	-9.09	-6.60	2.61	N/A	-2.01	3.83	15.09	3.88	09/01/2011
Prisma Capital Partners (SA)	-4.27	-4.27	-8.22	-4.96	2.26	N/A	2.30	3.30	9.78	3.35	09/01/2011
Tourbillon Global Master Fund, Ltd	-10.68	-10.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-9.77	11/01/2015
Davidson-Kemper, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	02/01/2016
DSAM Fund, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Glenview Capital (CF)	-15.48	-15.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-18.06	11/01/2015
HBK II (CF)	-2.00	-2.00	-5.35	-3.57	N/A	N/A	-1.38	3.93	N/A	0.60	12/01/2013
Jana Partners (CF)	-5.82	-5.82	-14.68	-13.91	N/A	N/A	-6.58	N/A	N/A	-8.15	09/01/2014
Knighthead Capital (CF)	-3.03	-3.03	-10.27	-11.77	N/A	N/A	-10.22	5.59	N/A	-3.67	01/01/2014
LibreMax Capital (CF)	-1.94	-1.94	-4.07	-3.16	N/A	N/A	-0.16	N/A	N/A	0.56	08/01/2014
Luxor Capital (CF)	-10.82	-10.82	-24.02	-20.35	N/A	N/A	-15.99	N/A	N/A	-15.99	04/01/2014
Myriad Opportunities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Pine River (CF)	-5.54	-5.54	-11.20	-7.41	N/A	N/A	0.88	N/A	N/A	-2.23	05/01/2014
QMS Diversified Global Macro (CF)	7.05	7.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.27	11/01/2015
Scopia PX, LLC	N/A	N/A	N/A	N/A	N/A	N/A	1.74	N/A	N/A	N/A	11/01/2014
Coatue Qualified Partners, L.P.	1.61	1.61	8.86	N/A	N/A	N/A	N/A	N/A	N/A	8.86	07/01/2015
Absolute Return Composite	-3.75	-3.75	-6.47	-3.95	3.37	4.17	1.74	4.84	12.08	3.85	04/01/2010
HFRI FOF Diversified Index (Mth Lag)	-3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference	-0.20	-0.20	-0.08	1.01	1.14	2.69	0.96	0.12	3.47	1.52	
Cash Equivalents (SA)			0.40	0.04	0.04	0.33	0.20	0.47	0.64	0.77	04/04/4000
	0 00	0.09	0.19	() 74	() 34	11.5.5	11 /11	0.17	Und	3 / /	UT/UT/TYXX
Citi 3 Mo T-Bill Index	<b>0.09</b> 0.05	<b>0.09</b> 0.05	<b>0.19</b> 0.07	<b>0.24</b> 0.08	<b>0.34</b> 0.04	0.05	<b>0.20</b> 0.03	<b>0.17</b> 0.02	<b>0.64</b> 0.05	<b>3.77</b> 3.33	01/01/1988

Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Net) (AWA) is lagged by one quarter and available quarterly; interim month returns assume a 0.00% return.

Performance shown is gross of fees. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by BNY Mellon. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of custom indices. Manager inception dates shown represent the first full month following initial funding.



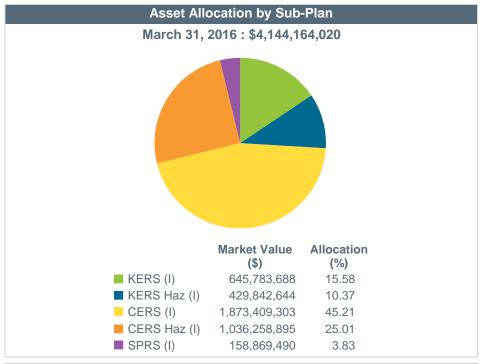
# **Kentucky Retirement Systems - Insurance Plan Asset Allocation & Performance**

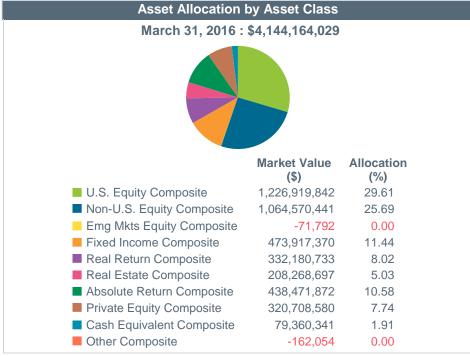
Asset Alloca	ntion & Performa	nce	
	Allocation	ı	Performance (%)
	Market Value (\$)	%	FYTD
Total Fund	4,144,164,029	100.00	-1.50
U.S. Equity Composite	1,226,919,842	29.61	-0.19
River Road Asset Management (SA)	11,798,369	0.28	5.63
Westwood Management (SA)	37,194,596	0.90	-5.19
Westfield Capital (SA)	43,463,649	1.05	-6.92
Internal S&P 500 Index (SA)	815,794,285	19.69	1.50
Internal US Mid Cap (SA)	141,763,683	3.42	-2.23
Sasco Capital Inc. (SA)	17,338,586	0.42	-6.95
Systematic Financial Management (SA)	77,236,946	1.86	-5.57
NT Structured Small Cap (SA)	82,323,995	1.99	-7.45
Insurance Transition	5,733	0.00	N/A
Non-U.S. Equity Composite	1,064,570,441	25.69	-7.17
Lazard Int'l Strategic Equity (SA)	171,024,093	4.13	-7.08
LSV Int'l Concentrated Value Equity (SA)	142,190,707	3.43	-10.81
BTC ACWI Ex US Fund (CF)	475,698,784	11.48	-8.80
American Century Non-US Growth Equity (SA)	129,503,450	3.12	-6.65
Franklin Templeton Non-US Equity (SA)	86,251,093	2.08	-4.43
BTC ACWI Ex US Small Cap Fund (CF)	58,206,982	1.40	-4.77
Non-US Transition Account	600,644	0.01	N/A
Emerging Mkts Equity Composite	-71,792	0.00	N/A
Fixed Income Composite	473,917,370	11.44	2.29
NISA Core Agg Fixed Income (SA)	78,447,335	1.89	4.18
Cerberus KRS Levered Loan Opps, L.P.	36,690,623	0.89	6.42
Columbia HY Fixed Income (SA)	44,390,883	1.07	0.16
Marathon Bluegrass Credit Fund	65,000,000	1.57	N/A
Shenkman Capital (SA)	39,015,033	0.94	-2.14
Waterfall (SA)	44,388,754	1.07	-1.25
Manulife Asset Mgmt (SA)	165,825,539	4.00	2.79
Real Return Composite	332,180,733	8.02	-3.62
Internal TIPS (SA)	78,348,581	1.89	2.35
Nuveen Real Asset Income (SA)	84,745,832	2.04	1.97
PIMCO:All Asset;Inst (PAAIX)	100,487,051	2.42	-3.80
Tenaska Power Fund II (CF)	228,377	0.01	7.12
Tortoise Capital (CF)	19,154,010	0.46	-27.48
Amerra Ag Fund II (CF)	13,646,488	0.33	7.99
Amerra-AGRI Holding (CF)	8,510,539	0.21	N/A
BTG Pactual Brazil Timberland Fund I, L.P.	2,177,732	0.05	-29.41
Magnetar MTP Energy Fund, L.P.	18,770,253	0.45	-26.18
Magnetar MTP EOF II, L.P.	2,058,212	0.05	N/A
Oberland Capital Healthcare, L.P.	1,118,045	0.03	1.62
Taurus Mining Finance Fund	2,935,613	0.07	3.76

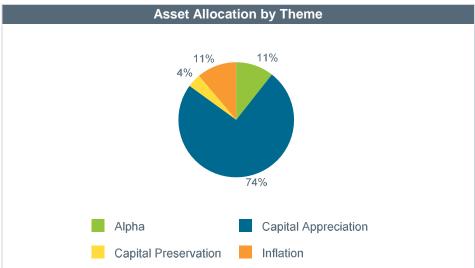
	Allocation		Performance (%
	Market Value (\$)	%	FYTD
Real Estate Composite	208,268,697	5.03	7.67
H/2 Credit Partners (CF)	28,000,000	0.68	-2.04
H/2 Core Real Estate Debt Fund, L.P.	8,158,918	0.20	3.95
Harrison Street Core (CF)	27,968,856	0.67	8.66
Mesa West Core Lending, L.P.	29,741,563	0.72	5.92
Prologis Targeted U.S. Logistics Fund (CF)	21,552,193	0.52	11.28
Stockbridge SmtMkts, L.P.	30,873,802	0.74	9.41
DivcoWest Fund IV, L.P.	9,174,435	0.22	28.74
Greenfield Acquisition Partners VI, L.P.	12,451,861	0.30	14.42
Greenfield Acquisition Partners VII, L.P.	8,233,438	0.20	17.64
Lubert Adler Real Estate Fund VII, L.P.	7,267,522	0.18	-0.83
Rubenstein Properties Fund II, L.P.	7,580,510	0.18	1.21
Walton Street Real Estate Fund VI, L.P.	2,441,742	0.06	10.68
Walton Street Real Estate Fund VII, L.P.	14,718,178	0.36	14.32
Absolute Return Composite	438,471,872	10.58	-6.60
BAAM (SA)	124,461,738	3.00	-1.67
PAAMCO (SA)	106,316,732	2.57	-9.08
Prisma Capital Partners (SA)	128,057,112	3.09	-8.11
Tourbillon Global Master Fund, Ltd	8,969,724	0.22	N/A
Davidson-Kemper, L.P.	9,977,592	0.24	N/A
DSAM Fund, L.P.	5,000,000	0.12	N/A
Glenview Capital (CF)	4,061,811	0.10	N/A
HBK II (CF)	5,047,277	0.12	-5.78
Jana Partners (CF)	4,375,882	0.11	-14.57
Knighthead Capital (CF)	4,573,186	0.11	-10.72
LibreMax Capital (CF)	4,990,899	0.12	-5.13
Luxor Capital (CF)	3,485,432	0.08	-24.96
Myriad Opportunities	8,750,000	0.21	N/A
Pine River (CF)	4,733,224	0.11	-12.22
QMS Diversified Global Macro (CF)	5,308,708	0.13	N/A
Scopia PX, LLC	5,067,762	0.12	-4.81
Coatue Qualified Partners, L.P.	5,294,795	0.13	5.90
Private Equity Composite	320,708,580	7.74	7.75
Cash Equivalent Composite	79,360,341	1.91	0.20
Cash Equivalents (SA)	79,360,341	1.91	0.20
Other Composite	-162,054	0.00	N/A
Custody Fee Accrual (SA)	-162,054	0.00	N/A

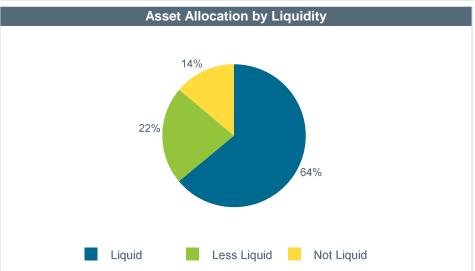
Performance shown is net of fees. Fiscal year ends June 30th. Allocations shown may not sum up to 100% exactly due to rounding. Other Composite consists of BNY fee accruals. Real Estate and Private Equity valuations shown are as of the most recent date available. Market value shown for Emerging Mkts Equity Composite represents fee accruals following liquidation.







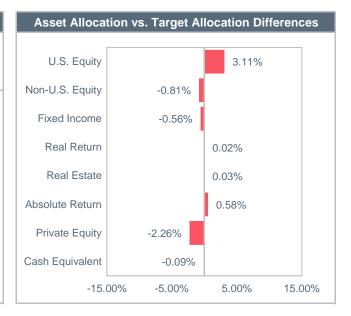




Allocations shown may not sum up to 100% exactly due to rounding. Totals shown may not match due to differences between BNY Mellon's performance and accounting departments. Other Composite consists of BNY fee accruals. Market value shown for Emerging Mkts Equity Composite represents fee accruals following liquidation.



	Asset Allocation v	s. Target Allo	ocation		
	Asset Allocation (\$)	Asset Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)
Total Fund	4,144,164,029	100.00	-	100.00	-
U.S. Equity Composite	1,226,919,842	29.61	21.50	26.50	31.50
Non-U.S. Equity Composite	1,064,570,441	25.69	21.50	26.50	31.50
Fixed Income Composite	473,917,370	11.44	8.00	12.00	16.00
Real Return Composite	332,180,733	8.02	6.00	8.00	10.00
Real Estate Composite	208,268,697	5.03	3.00	5.00	7.00
Absolute Return Composite	438,471,872	10.58	8.00	10.00	12.00
Private Equity Composite	320,708,580	7.74	7.00	10.00	13.00
Cash Equivalent Composite	79,360,341	1.91	-	2.00	4.00



	ndividual Plan As	sset Allocation	Monitor		
	KERS	KERS Haz	CERS	CERS Haz	SPRS
U.S. Equity Composite	Over Max	In Range	In Range	In Range	In Range
Non-U.S. Equity Composite	In Range	In Range	In Range	In Range	In Range
Fixed Income Composite	In Range	In Range	In Range	In Range	In Range
Real Return Composite	In Range	In Range	In Range	In Range	In Range
Real Estate Composite	In Range	In Range	In Range	In Range	In Range
Absolute Return Composite	In Range	In Range	In Range	In Range	In Range
Private Equity Composite	<b>Under Min</b>	<b>Under Min</b>	In Range	In Range	In Range
Cash Equivalent Composite	In Range	In Range	In Range	In Range	In Range

Allocations shown may not sum up to 100% due to rounding and the exclusion of the Other Composite from this page. Other Composite consists of BNY fee accruals. KERS U.S. Equity Composite is over the maximum allocation by 1.49%.

KERS Private Equity Composite is under the minimum allocation by 2.80%. This is an illiquid asset class and may take additional time to bring back into target range. KERS Haz Private Equity Composite is under the minimum allocation by 0.13%. This is an illiquid asset class and may take additional time to bring back into target range.



# Kentucky Retirement Systems - Insurance Plan Plan Comparative Performance

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
Total Fund	1.45	1.45	-1.50	-0.88	4.56	4.55	4.03	-0.12	4.46	12.30	7.22	04/01/1987
Target Allocation Index (I)	0.95	0.95	-1.32	-0.47	5.85	5.75	4.63	1.38	6.05	13.23	7.65	
Difference	0.50	0.50	-0.18	-0.41	-1.29	-1.20	-0.60	-1.50	-1.59	-0.93	-0.43	
KERS (I)	1.33	1.33	-1.84	-1.36	4.13	4.29	3.90	-0.68	4.27	11.87	7.17	04/01/1987
Target Allocation Index (KERS I)	0.95	0.95	-1.64	-0.73	5.66	5.64	4.58	0.96	5.67	13.50	7.63	
Difference	0.38	0.38	-0.20	-0.63	-1.53	-1.35	-0.68	-1.64	-1.40	-1.63	-0.46	
KERS Haz (I)	1.35	1.35	-1.66	-1.06	4.57	4.55	4.03	-0.24	4.51	12.50	7.22	04/01/1987
Target Allocation Index (KERS Haz I)	0.95	0.95	-1.64	-0.73	5.67	5.64	4.58	0.96	5.67	13.52	7.63	
Difference	0.40	0.40	-0.02	-0.33	-1.10	-1.09	-0.55	-1.20	-1.16	-1.02	-0.41	
CERS (I)	1.45	1.45	-1.46	-0.81	4.65	4.60	4.05	-0.01	4.51	12.40	7.23	04/01/1987
Target Allocation Index (CERS I)	0.95	0.95	-1.64	-0.73	5.67	5.64	4.58	0.96	5.67	13.52	7.63	
Difference	0.50	0.50	0.18	-0.08	-1.02	-1.04	-0.53	-0.97	-1.16	-1.12	-0.40	
CERS Haz (I)	1.53	1.53	-1.32	-0.66	4.69	4.62	4.07	0.06	4.51	12.35	7.23	04/01/1987
Target Allocation Index (CERS Haz I)	0.95	0.95	-1.64	-0.73	5.67	5.64	4.58	0.96	5.67	13.52	7.63	
Difference	0.58	0.58	0.32	0.07	-0.98	-1.02	-0.51	-0.90	-1.16	-1.17	-0.40	
SPRS (I)	1.48	1.48	-1.38	-0.71	4.66	4.61	4.06	0.02	4.50	12.38	7.23	04/01/1987
Target Allocation Index (SPRS I)	0.95	0.95	-1.64	-0.73	5.67	5.64	4.58	0.96	5.67	13.52	7.63	
Difference	0.53	0.53	0.26	0.02	-1.01	-1.03	-0.52	-0.94	-1.17	-1.14	-0.40	



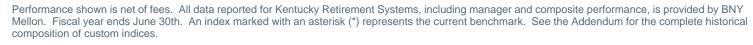
### Kentucky Retirement Systems - Insurance Plan Composite Comparative Performance

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
U.S. Equity Composite	2.15	2.15	-0.19	-0.43	10.53	10.43	-0.48	10.58	33.56	9.21	07/01/1992
R 3000 Index (I)*	0.97	0.97	-0.48	-0.34	11.14	11.02	0.48	12.55	33.55	N/A	
Difference	1.18	1.18	0.29	-0.09	-0.61	-0.59	-0.96	-1.97	0.01	N/A	
Non-U.S. Equity Composite	0.60	0.60	-7.17	-6.13	1.96	0.55	-3.46	-4.28	17.94	1.97	04/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (I)*	-0.12	-0.12	-9.31	-8.66	0.81	0.84	-5.25	-3.44	15.78	1.40	
Difference	0.72	0.72	2.14	2.53	1.15	-0.29	1.79	-0.84	2.16	0.57	
Fixed Income Composite	2.55	2.55	2.29	1.46	2.01	4.37	0.53	3.79	-0.33	6.50	07/01/1992
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (I)*	3.23	3.23	3.37	1.92	2.56	4.19	0.43	5.56	-1.35	6.39	
Difference	-0.68	-0.68	-1.08	-0.46	-0.55	0.18	0.10	-1.77	1.02	0.11	
Real Return Composite	2.68	2.68	-3.62	-4.15	-1.85	N/A	-6.13	3.78	-4.92	2.15	07/01/2011
Real Return Actual Allocation Index (I)*	1.83	1.83	-1.73	-2.58	0.67	N/A	-3.56	3.15	2.29	2.08	
Difference	0.85	0.85	-1.89	-1.57	-2.52	N/A	-2.57	0.63	-7.21	0.07	
Real Estate Composite	2.78	2.78	7.67	9.06	8.44	8.93	8.99	7.46	8.85	8.82	05/01/2009
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	3.11	3.11	10.48	13.96	12.77	12.60	13.87	11.36	11.97	5.54	
Difference	-0.33	-0.33	-2.81	-4.90	-4.33	-3.67	-4.88	-3.90	-3.12	3.28	
Absolute Return Composite	-3.90	-3.90	-6.60	-4.08	3.31	4.10	1.80	4.80	11.99	3.73	04/01/2010
HFRI FOF Diversified Index (Mth Lag)	-3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference	-0.35	-0.35	-0.21	0.88	1.08	2.62	1.02	0.08	3.38	1.40	
Private Equity Composite	2.25	2.25	7.75	13.53	15.77	13.85	15.92	17.51	16.34	9.50	07/01/2002
Private Equity Benchmark (I) [Short Term]	2.25	2.25	7.75	13.53	15.77	13.85	15.92	17.51	16.34	9.50	
Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
R 3000 Index + 3% (Qtr Lag) (I)* [Long Term]	6.28	6.28	0.76	3.49	18.38	14.42	3.51	21.76	25.61	9.64	
Difference	-4.03	-4.03	6.99	10.04	-2.61	-0.57	12.41	-4.25	-9.27	-0.14	
Cash Equivalent Composite	0.09	0.09	0.20	0.25	0.23	0.28	0.21	0.19	0.27	2.80	07/01/1992
Citi 3 Mo T-Bill Index	0.05	0.05	0.07	0.08	0.04	0.05	0.03	0.02	0.05	2.67	
Difference	0.04	0.04	0.13	0.17	0.19	0.23	0.18	0.17	0.22	0.13	



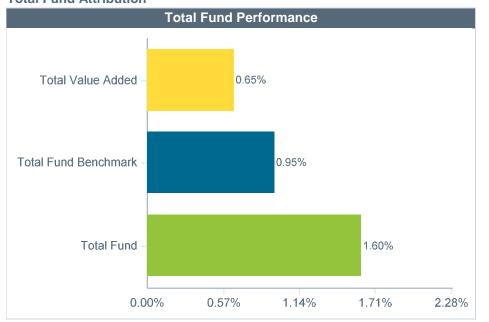
### Kentucky Retirement Systems - Insurance Plan Composite Comparative Performance

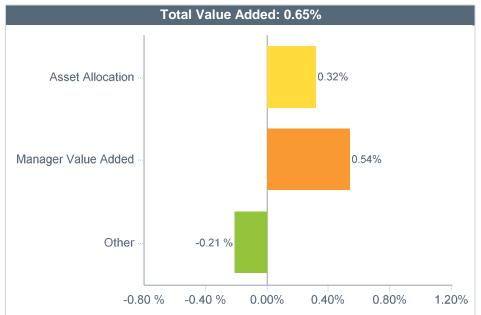
	7 Years	10 Years	12 Years	15 Years	20 Years	25 Years
U.S. Equity Composite	16.18	6.68	7.28	6.23	7.94	N/A
R 3000 Index (I)*	16.91	6.90	7.43	6.27	8.16	N/A
Difference	-0.73	-0.22	-0.15	-0.04	-0.22	N/A
Non-U.S. Equity Composite	9.03	2.12	4.96	4.90	N/A	N/A
MSCI ACW Ex US Investable Mkt Index (Gross) (I)*	9.38	1.71	4.57	4.39	N/A	N/A
Difference	-0.35	0.41	0.39	0.51	N/A	N/A
Fixed Income Composite	5.09	5.36	4.78	5.94	6.36	N/A
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (I)*	5.00	5.21	4.64	5.79	6.19	6.69
Difference	0.09	0.15	0.14	0.15	0.17	N/A
Real Return Composite	N/A	N/A	N/A	N/A	N/A	N/A
Real Return Actual Allocation Index (I)*	N/A	N/A	N/A	N/A	N/A	N/A
Difference	N/A	N/A	N/A	N/A	N/A	N/A
Real Estate Composite	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	5.47	5.55	7.23	6.94	8.42	6.52
Difference	N/A	N/A	N/A	N/A	N/A	N/A
Absolute Return Composite	N/A	N/A	N/A	N/A	N/A	N/A
HFRI FOF Diversified Index (Mth Lag)	3.45	1.73	2.68	3.24	4.81	5.99
Difference	N/A	N/A	N/A	N/A	N/A	N/A
Private Equity Composite	15.59	8.86	9.43	N/A	N/A	N/A
Private Equity Benchmark (I) [Short Term]	15.59	8.86	9.43	N/A	N/A	N/A
Difference	0.00	0.00	0.00	N/A	N/A	N/A
R 3000 Index + 3% (Qtr Lag) (I)* [Long Term]	19.52	9.23	9.28	8.05	9.12	N/A
Difference	-3.93	-0.37	0.15	N/A	N/A	N/A
Cash Equivalent Composite	0.27	1.41	1.66	1.69	2.53	N/A
Citi 3 Mo T-Bill Index	0.08	1.07	1.31	1.42	2.37	2.78
Difference	0.19	0.34	0.35	0.27	0.16	N/A

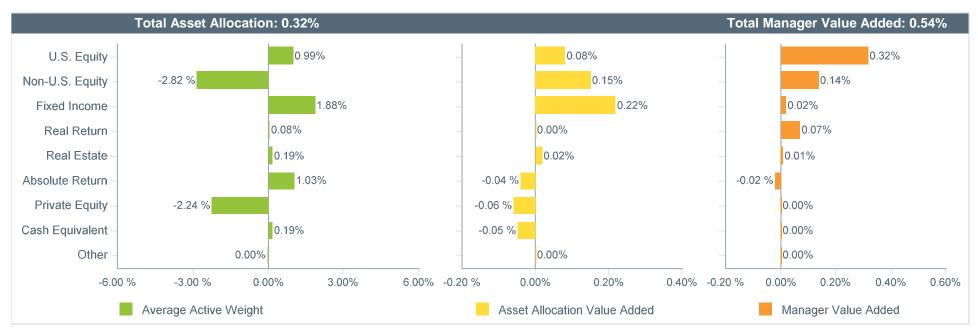




Kentucky Retirement Systems - Insurance Plan Total Fund vs. Target Allocation Index (I) Total Fund Attribution



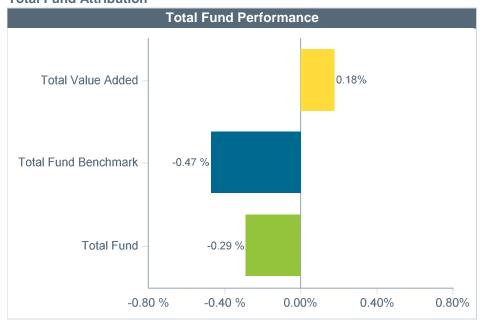




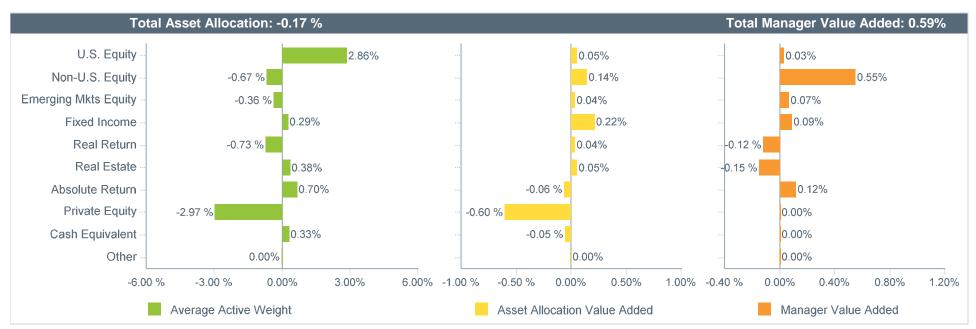
Performance shown is gross of fees. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows.



Kentucky Retirement Systems - Insurance Plan Total Fund vs. Target Allocation Index (I) Total Fund Attribution







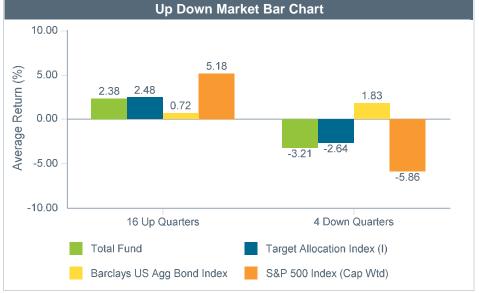
Performance shown is gross of fees. Calculation is based on monthly periodicity. Allocation to "Other" is the contribution of other residual factors, including market timing and cash flows.



			Histori	cal Statistics - 5 `	<b>Years</b>			
	Total Fund	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Real Estate Composite	Absolute Return Composite	Private Equity Composite	Cash Equivalent Composite
Standard Deviation	6.86	12.82	14.89	3.11	3.61	3.40	6.20	0.16
Sharpe Ratio	0.67	0.83	0.11	1.37	2.38	1.18	2.12	1.58
Downside Risk	4.34	7.50	10.65	1.79	0.87	1.96	0.79	0.00
Excess Return	4.61	10.70	1.59	4.26	8.57	4.00	13.15	0.25

			Correlation	Matrix - 5 Year	s			
	Total Fund	U.S. Equity Composite	Non-U.S. Equity Composite	Fixed Income Composite	Real Estate Composite	Absolute Return Composite	Private Equity Composite	Cash Equivalent Composite
Total Fund	1.00							
U.S. Equity Composite	0.92	1.00						
Non-U.S. Equity Composite	0.96	0.87	1.00					
Fixed Income Composite	0.51	0.31	0.48	1.00				
Real Estate Composite	-0.18	-0.16	-0.23	-0.28	1.00			
Absolute Return Composite	-0.12	-0.18	-0.15	-0.26	0.23	1.00		
Private Equity Composite	-0.08	-0.14	-0.16	-0.19	0.55	0.29	1.00	
Cash Equivalent Composite	0.13	0.06	0.17	0.09	-0.04	0.01	-0.06	1.00

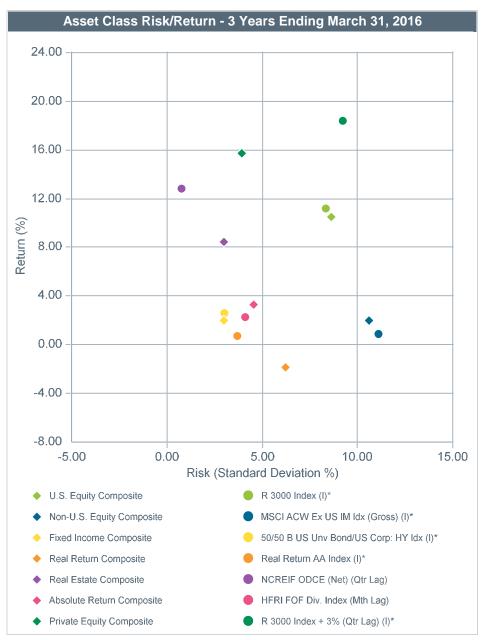


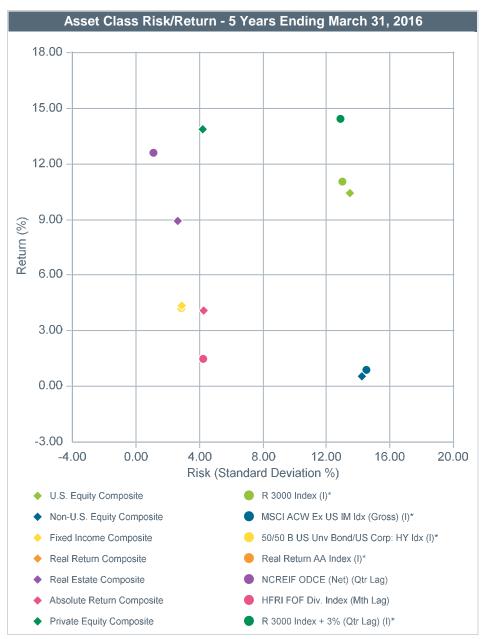






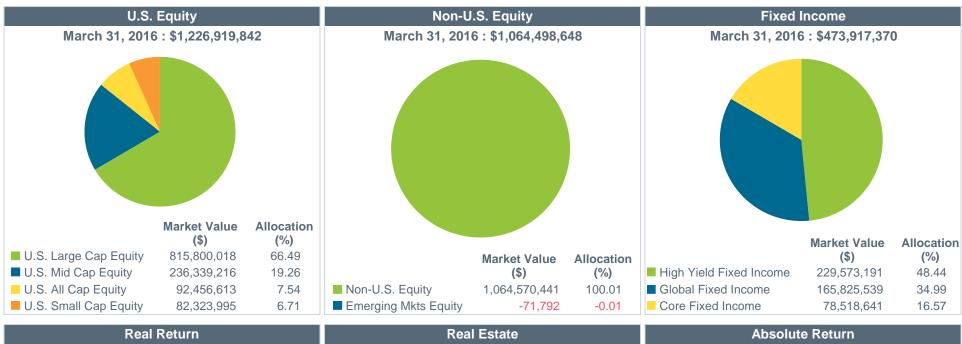


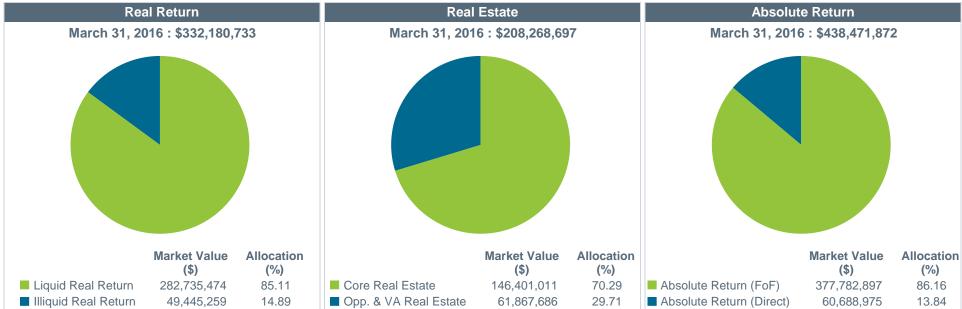




Performance shown is net of fees. Composites with less history than the specified time period will not appear in the chart.







Allocations shown may not sum to 100% exactly due to rounding. Insurance Transition account is included in U.S. Large Cap Equity. Market value shown for Emerging Mkts Equity Composite represents fee accruals following liquidation.



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
River Road Asset Management (SA)	7.75	7.75	5.63	2.73	9.82	N/A	-3.97	9.86	32.64	11.25	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	6.11	6.11	7.69	4.78	0.74	N/A	0.16	-2.84	-0.05	0.59	
Westwood Management (SA)	0.60	0.60	-5.19	-5.39	8.92	N/A	-2.78	10.44	34.21	9.17	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	-1.04	-1.04	-3.13	-3.34	-0.16	N/A	1.35	-2.26	1.52	-1.49	
Westfield Capital (SA)	-3.21	-3.21	-6.92	-8.57	10.42	N/A	-1.42	12.82	39.06	10.90	07/01/2011
Russell 3000 Grth Index	0.34	0.34	1.07	1.34	13.16	12.00	5.09	12.44	34.23	12.52	
Difference	-3.55	-3.55	-7.99	-9.91	-2.74	N/A	-6.51	0.38	4.83	-1.62	
U.S. All Cap Equity Composite	-0.40	-0.40	-4.77	-5.97	9.60	N/A	-2.26	11.13	36.25	10.15	07/01/2011
Russell 3000 Index	0.97	0.97	-0.48	-0.34	11.14	11.01	0.48	12.55	33.55	11.63	
Difference	-1.37	-1.37	-4.29	-5.63	-1.54	N/A	-2.74	-1.42	2.70	-1.48	
Internal S&P 500 Index (SA)	1.27	1.27	1.50	1.77	11.78	11.60	1.46	13.63	32.27	6.20	07/01/2001
S&P 500 Index (Cap Wtd)*	1.35	1.35	1.50	1.78	11.82	11.56	1.38	13.69	32.39	6.09	
Difference	-0.08	-0.08	0.00	-0.01	-0.04	0.04	0.08	-0.06	-0.12	0.11	
U.S. Large Cap Equity Composite	2.25	2.25	2.49	2.76	N/A	N/A	1.53	13.29	N/A	12.06	07/01/2013
Russell 1000 Index	1.17	1.17	0.39	0.50	11.52	11.35	0.92	13.24	33.11	11.56	
Difference	1.08	1.08	2.10	2.26	N/A	N/A	0.61	0.05	N/A	0.50	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal US Mid Cap (SA)	4.29	4.29	-2.23	-3.27	N/A	N/A	-2.39	N/A	N/A	5.05	08/01/2014
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	4.90	
Difference	0.51	0.51	0.33	0.33	N/A	N/A	-0.21	N/A	N/A	0.15	
Sasco Capital Inc. (SA)	5.19	5.19	-6.95	-9.21	4.30	N/A	-14.31	6.99	32.23	8.59	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	1.27	1.27	-5.50	-5.82	-5.58	N/A	-9.53	-7.76	-1.23	-5.99	
Systematic Financial Management (SA)	0.77	0.77	-5.57	-7.28	6.03	N/A	-5.14	5.09	34.70	10.90	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	-3.15	-3.15	-4.12	-3.89	-3.85	N/A	-0.36	-9.66	1.24	-3.68	
U.S. Mid Cap Equity Composite	3.62	3.62	-3.39	-4.85	N/A	N/A	-4.74	3.65	N/A	7.38	07/01/2013
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	9.96	
Difference	-0.16	-0.16	-0.83	-1.25	N/A	N/A	-2.56	-6.12	N/A	-2.58	
NT Structured Small Cap (SA)	0.31	0.31	-7.45	-7.12	8.35	N/A	-3.27	5.80	39.24	9.62	07/01/2011
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	7.96	
Difference	1.83	1.83	2.69	2.64	1.51	N/A	1.14	0.91	0.42	1.66	
U.S. Small Cap Equity Composite	0.30	0.30	-7.46	-7.12	N/A	N/A	-3.34	5.93	N/A	8.01	07/01/2013
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	6.31	
Difference	1.82	1.82	2.68	2.64	N/A	N/A	1.07	1.04	N/A	1.70	
U.S. Equity Composite	2.15	2.15	-0.19	-0.43	10.53	10.43	-0.48	10.58	33.56	9.21	07/01/1992
R 3000 Index (I)*	0.97	0.97	-0.48	-0.34	11.14	11.02	0.48	12.55	33.55	N/A	
Difference	1.18	1.18	0.29	-0.09	-0.61	-0.59	-0.96	-1.97	0.01	N/A	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Lazard Int'l Strategic Equity (SA)	-0.08	-0.08	-7.08	-4.65	N/A	N/A	-0.61	N/A	N/A	-4.24	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.18	0.18	2.36	4.13	N/A	N/A	4.64	N/A	N/A	3.91	
LSV Int'l Concentrated Value Equity (SA)	-0.62	-0.62	-10.81	-9.89	N/A	N/A	-5.97	N/A	N/A	-8.41	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-0.36	-0.36	-1.37	-1.11	N/A	N/A	-0.72	N/A	N/A	-0.26	
BTC ACWI Ex US Fund (CF)	0.53	0.53	-8.80	-8.30	0.46	N/A	-5.62	-3.88	14.68	6.19	06/01/2012
MSCI ACW Ex US Index (Net)	-0.38	-0.38	-9.66	-9.19	0.32	0.31	-5.66	-3.87	15.29	6.08	
Difference	0.91	0.91	0.86	0.89	0.14	N/A	0.04	-0.01	-0.61	0.11	
American Century Non-US Growth Equity (SA)	-3.05	-3.05	-6.65	-7.70	N/A	N/A	-0.89	N/A	N/A	-5.70	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-2.79	-2.79	2.79	1.08	N/A	N/A	4.36	N/A	N/A	2.45	
Franklin Templeton Non-US Equity (SA)	0.31	0.31	-4.43	-2.93	N/A	N/A	0.60	N/A	N/A	-3.69	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.57	0.57	5.01	5.85	N/A	N/A	5.85	N/A	N/A	4.46	
BTC ACWI Ex US Small Cap Fund (CF)	0.37	0.37	-4.77	-0.72	N/A	N/A	2.85	-3.90	N/A	6.60	07/01/2013
MSCI ACW Ex US Sm Cap Index (Net)	0.68	0.68	-4.63	-0.60	3.67	2.39	2.60	-4.03	19.73	5.73	
Difference	-0.31	-0.31	-0.14	-0.12	N/A	N/A	0.25	0.13	N/A	0.87	
Non-U.S. Equity Composite	0.60	0.60	-7.17	-6.13	1.96	0.55	-3.46	-4.28	17.94	1.97	04/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (I)*	-0.12	-0.12	-9.31	-8.66	0.81	0.84	-5.25	-3.44	15.78	1.40	
Difference	0.72	0.72	2.14	2.53	1.15	-0.29	1.79	-0.84	2.16	0.57	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
NISA Core Agg Fixed Income (SA)	3.34	3.34	4.18	2.46	2.71	N/A	0.77	6.16	-2.12	3.67	07/01/2011
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.49	
Difference	0.31	0.31	0.47	0.50	0.21	N/A	0.22	0.19	-0.10	0.18	
Core Fixed Income Composite	3.57	3.57	4.44	2.77	N/A	N/A	0.59	3.63	N/A	3.10	07/01/2013
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.61	
Difference	0.54	0.54	0.73	0.81	N/A	N/A	0.04	-2.34	N/A	-0.51	
Cerberus KRS Levered Loan Opps, L.P.	2.39	2.39	6.42	9.52	N/A	N/A	9.29	N/A	N/A	8.15	09/01/2014
S&P-LSTA Lvg'd Loan Index	1.55	1.55	-1.92	-1.25	1.85	3.23	-0.69	1.60	5.29	-0.17	
Difference	0.84	0.84	8.34	10.77	N/A	N/A	9.98	N/A	N/A	8.32	
Columbia HY Fixed Income (SA)	3.23	3.23	0.16	0.07	3.66	N/A	-0.17	4.45	6.04	6.77	11/01/2011
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	5.45	
Difference	-0.12	-0.12	3.86	3.76	1.82	N/A	4.30	2.00	-1.40	1.32	
Marathon Bluegrass Credit Fund	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	01/01/2016
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	3.35	
Difference	-3.35	-3.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3.35	
Shenkman Capital (SA)	1.66	1.66	-2.14	-1.29	1.18	N/A	-0.38	-1.32	5.61	3.34	07/01/2011
Shenkman Blended Index	1.55	1.55	-1.92	-1.25	2.53	4.52	-0.69	2.98	6.42	4.64	
Difference	0.11	0.11	-0.22	-0.04	-1.35	N/A	0.31	-4.30	-0.81	-1.30	
Waterfall (SA)	-1.54	-1.54	-1.25	-0.20	6.72	N/A	2.82	8.91	12.30	9.43	07/01/2011
Opportunistic FI Blended Index	1.72	1.72	-2.76	-2.64	1.32	3.26	-2.73	2.16	5.06	3.29	
Difference	-3.26	-3.26	1.51	2.44	5.40	N/A	5.55	6.75	7.24	6.14	
High Yield Fixed Income Composite	0.80	0.80	-1.75	-0.85	N/A	N/A	0.56	4.74	N/A	4.12	07/01/2013
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	2.55	
Difference	-2.55	-2.55	1.95	2.84	N/A	N/A	5.03	2.29	N/A	1.57	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Manulife Asset Mgmt (SA)	2.69	2.69	2.79	1.50	2.45	N/A	0.47	3.19	2.78	4.74	12/01/2011
Barclays US Unv Bond Index*	3.07	3.07	2.66	1.60	-0.03	1.35	-3.29	0.48	-2.19	0.78	
Difference	-0.38	-0.38	0.13	-0.10	2.48	N/A	3.76	2.71	4.97	3.96	
Global Fixed Income Composite	2.69	2.69	2.57	1.64	N/A	N/A	0.69	2.54	N/A	2.69	07/01/2013
Barclays Gbl Agg Bond Index	5.90	5.90	5.81	4.57	0.87	1.81	-3.15	0.59	-2.60	1.99	
Difference	-3.21	-3.21	-3.24	-2.93	N/A	N/A	3.84	1.95	N/A	0.70	
Fixed Income Composite	2.55	2.55	2.29	1.46	2.01	4.37	0.53	3.79	-0.33	6.50	07/01/1992
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (I)*	3.23	3.23	3.37	1.92	2.56	4.19	0.43	5.56	-1.35	6.39	
Difference	-0.68	-0.68	-1.08	-0.46	-0.55	0.18	0.10	-1.77	1.02	0.11	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal TIPS (SA)	3.63	3.63	2.35	2.38	-0.27	3.23	0.26	3.02	-7.78	4.81	10/01/2003
Internal US TIPS Blend	3.60	3.60	1.99	1.84	-1.00	2.84	-0.52	2.63	-8.61	4.46	
Difference	0.03	0.03	0.36	0.54	0.73	0.39	0.78	0.39	0.83	0.35	
Nuveen Real Asset Income (SA)	4.71	4.71	1.97	-0.33	N/A	N/A	N/A	N/A	N/A	-0.15	02/01/2015
Nuveen Real Asset Custom Index	5.17	5.17	4.07	1.30	N/A	N/A	N/A	N/A	N/A	1.16	
Difference	-0.46	-0.46	-2.10	-1.63	N/A	N/A	N/A	N/A	N/A	-1.31	
PIMCO:All Asset;Inst (PAAIX)	7.26	7.26	-3.80	-4.03	-1.08	N/A	-10.43	3.34	-1.66	2.91	12/01/2011
Barclays US Trsy Infl Notes: 1-10 Yr Index	3.60	3.60	1.99	1.84	-0.72	1.88	-0.52	0.91	-5.58	0.67	
Difference	3.66	3.66	-5.79	-5.87	-0.36	N/A	-9.91	2.43	3.92	2.24	
Tenaska Power Fund II (CF)	0.00	0.00	7.12	10.54	-0.99	1.23	16.85	-0.88	-16.55	-1.59	10/01/2008
Tortoise Capital (CF)	-5.93	-5.93	-27.48	-29.74	-3.63	5.78	-26.95	14.90	36.32	12.77	08/01/2009
Alerian MLP Index	-4.17	-4.17	-27.41	-31.83	-10.31	-0.55	-32.59	4.80	27.58	7.86	
Difference	-1.76	-1.76	-0.07	2.09	6.68	6.33	5.64	10.10	8.74	4.91	
Amerra Ag Fund II (CF)	-1.75	-1.75	7.99	9.90	8.42	N/A	14.34	8.63	0.06	6.18	12/01/2012
Amerra-AGRI Holding (CF)	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.34	08/01/2015
BTG Pactual Brazil Timberland Fund I, L.P.	-23.70	-23.70	-29.41	-29.41	N/A	N/A	-17.41	N/A	N/A	-29.27	12/01/2014
Magnetar MTP Energy Fund, L.P.	-10.65	-10.65	-26.18	-24.20	N/A	N/A	-15.63	2.98	N/A	-7.79	07/01/2013
Magnetar MTP EOF II, L.P.	-15.97	-15.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.97	08/01/2015
Oberland Capital Healthcare, L.P.	0.00	0.00	1.62	2.53	N/A	N/A	-27.53	N/A	N/A	-21.04	10/01/2014
Taurus Mining Finance Fund	2.02	2.02	3.76	2.53	N/A	N/A	N/A	N/A	N/A	2.53	04/01/2015
Real Return Composite	2.68	2.68	-3.62	-4.15	-1.85	N/A	-6.13	3.78	-4.92	2.15	07/01/2011
Real Return Actual Allocation Index (I)*	1.83	1.83	-1.73	-2.58	0.67	N/A	-3.56	3.15	2.29	2.08	
Difference	0.85	0.85	-1.89	-1.57	-2.52	N/A	-2.57	0.63	-7.21	0.07	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
H/2 Credit Partners (CF)	0.33	0.33	-2.04	1.60	3.42	N/A	2.11	6.57	4.51	5.30	07/01/2011
H/2 Core Real Estate Debt Fund, L.P.	2.47	2.47	3.95	5.75	N/A	N/A	4.06	2.80	N/A	3.74	10/01/2013
Harrison Street Core (CF)	2.69	2.69	8.66	6.65	8.95	N/A	7.00	12.03	6.81	7.37	05/01/2012
Mesa West Core Lending, L.P.	2.08	2.08	5.92	7.55	N/A	N/A	7.29	4.68	N/A	5.79	05/01/2013
Prologis Targeted U.S. Logistics Fund (CF)	4.60	4.60	11.28	11.58	N/A	N/A	13.54	N/A	N/A	12.14	10/01/2014
Stockbridge SmtMkts, L.P.	2.85	2.85	9.41	12.59	N/A	N/A	11.30	N/A	N/A	10.28	05/01/2014
DivcoWest Fund IV, L.P.	7.95	7.95	28.74	34.41	N/A	N/A	28.79	N/A	N/A	19.00	03/01/2014
Greenfield Acquisition Partners VI, L.P.	3.30	3.30	14.42	14.19	18.02	N/A	18.77	16.59	11.34	14.98	12/01/2012
Greenfield Acquisition Partners VII, L.P.	6.99	6.99	17.64	18.68	N/A	N/A	15.29	N/A	N/A	11.32	07/01/2014
Lubert Adler Real Estate Fund VII, L.P.	0.00	0.00	-0.83	-1.56	N/A	N/A	-0.33	N/A	N/A	-14.29	07/01/2014
Rubenstein Properties Fund II, L.P.	-1.93	-1.93	1.21	0.36	N/A	N/A	11.17	44.51	N/A	16.46	07/01/2013
Walton Street Real Estate Fund VI, L.P.	4.21	4.21	10.68	14.26	14.41	12.79	12.99	16.41	15.24	-23.76	05/01/2009
Walton Street Real Estate Fund VII, L.P.	3.92	3.92	14.32	15.16	N/A	N/A	16.78	15.13	N/A	15.23	07/01/2013
Real Estate Composite	2.78	2.78	7.67	9.06	8.44	8.93	8.99	7.46	8.85	8.82	05/01/2009
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	3.11	3.11	10.48	13.96	12.77	12.60	13.87	11.36	11.97	5.54	
Difference	-0.33	-0.33	-2.81	-4.90	-4.33	-3.67	-4.88	-3.90	-3.12	3.28	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
BAAM (SA)	-3.42	-3.42	-1.67	0.38	5.86	N/A	6.11	7.91	11.51	6.51	09/01/2011
PAAMCO (SA)	-3.38	-3.38	-9.08	-6.63	2.58	N/A	-2.05	3.81	14.91	3.88	09/01/2011
Prisma Capital Partners (SA)	-4.37	-4.37	-8.11	-4.83	2.26	N/A	2.54	3.18	9.75	3.39	09/01/2011
Tourbillon Global Master Fund, Ltd	-10.93	-10.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.30	11/01/2015
Davidson-Kemper, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.22	02/01/2016
DSAM Fund, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Glenview Capital (CF)	-15.93	-15.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-18.76	11/01/2015
HBK II (CF)	-2.37	-2.37	-5.78	-4.01	N/A	N/A	-1.46	3.93	N/A	0.40	12/01/2013
Jana Partners (CF)	-6.29	-6.29	-14.57	-13.80	N/A	N/A	-5.99	N/A	N/A	-8.08	09/01/2014
Knighthead Capital (CF)	-3.52	-3.52	-10.72	-12.21	N/A	N/A	-10.22	5.59	N/A	-3.89	01/01/2014
LibreMax Capital (CF)	-3.02	-3.02	-5.13	-4.23	N/A	N/A	-0.16	N/A	N/A	-0.11	08/01/2014
Luxor Capital (CF)	-11.17	-11.17	-24.96	-21.34	N/A	N/A	-16.70	N/A	N/A	-16.51	04/01/2014
Myriad Opportunities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Pine River (CF)	-5.90	-5.90	-12.22	-8.48	N/A	N/A	0.09	N/A	N/A	-2.82	05/01/2014
QMS Diversified Global Macro (CF)	5.36	5.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.17	11/01/2015
Scopia PX, LLC	-3.80	-3.80	-4.81	-3.18	N/A	N/A	0.92	N/A	N/A	0.95	11/01/2014
Coatue Qualified Partners, L.P.	-0.03	-0.03	5.90	N/A	N/A	N/A	N/A	N/A	N/A	5.90	07/01/2015
Absolute Return Composite	-3.90	-3.90	-6.60	-4.08	3.31	4.10	1.80	4.80	11.99	3.73	04/01/2010
HFRI FOF Diversified Index (Mth Lag)	-3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference	-0.35	-0.35	-0.21	0.88	1.08	2.62	1.02	0.08	3.38	1.40	
Cook Equivalents (CA)	0.00	0.00	0.20	0.25	0.22	0.20	0.24	0.10	0.27	2.00	07/04/4000
Cash Equivalents (SA) Citi 3 Mo T-Bill Index	<b>0.09</b> 0.05	<b>0.09</b> 0.05	<b>0.20</b> 0.07	<b>0.25</b> 0.08	<b>0.23</b> 0.04	<b>0.28</b> 0.05	<b>0.21</b> 0.03	<b>0.19</b> 0.02	0.27	<b>2.80</b> 2.67	07/01/1992
Difference	0.05	0.05	0.07	0.08	0.04	0.05	0.03	0.02	0.05	0.13	
Difference	U.U4			0.17	0.19	0.23	0.18	0.17	0.22	0.13	

Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Net) (AWA) is lagged by one quarter and available quarterly; interim month returns assume a 0.00% return.

Performance shown is net of fees. All data reported for Kentucky Retirement Systems, including manager and composite performance, is provided by BNY Mellon. Fiscal year ends June 30th. An index marked with an asterisk (\*) represents the current benchmark. See the Addendum for the complete historical composition of custom indices. Manager inception dates shown represent the first full month following initial funding.



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
River Road Asset Management (SA)	7.90	7.90	6.08	3.24	10.47	N/A	-3.47	10.60	33.42	11.87	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	6.26	6.26	8.14	5.29	1.39	N/A	0.66	-2.10	0.73	1.21	
IM U.S. All Cap Value Equity (SA+CF) Median	1.87	1.87	-4.18	-3.44	9.61	9.89	-3.25	10.22	34.74	10.40	
Rank	3	3	4	7	32	N/A	52	49	62	22	
Westwood Management (SA)	0.74	0.74	-4.80	-4.97	9.50	N/A	-2.32	11.18	34.79	9.70	07/01/2011
Russell 3000 Val Index	1.64	1.64	-2.06	-2.05	9.08	9.95	-4.13	12.70	32.69	10.66	
Difference	-0.90	-0.90	-2.74	-2.92	0.42	N/A	1.81	-1.52	2.10	-0.96	
IM U.S. All Cap Value Equity (SA+CF) Median	1.87	1.87	-4.18	-3.44	9.61	9.89	-3.25	10.22	34.74	10.40	
Rank	63	63	61	60	52	N/A	42	40	49	61	
Westfield Capital (SA)	-3.05	-3.05	-6.49	-8.18	11.08	N/A	-0.97	13.62	39.90	11.51	07/01/2011
Russell 3000 Grth Index	0.34	0.34	1.07	1.34	13.16	12.00	5.09	12.44	34.23	12.52	
Difference	-3.39	-3.39	-7.56	-9.52	-2.08	N/A	-6.06	1.18	5.67	-1.01	
IM U.S. All Cap Growth Equity (SA+CF) Median	-2.49	-2.49	-4.58	-3.27	10.52	9.75	3.52	8.79	35.96	10.21	
Rank	58	58	69	94	45	N/A	88	18	21	24	
U.S. All Cap Equity Composite	-0.25	-0.25	-4.36	-5.56	10.21	N/A	-1.82	11.86	36.97	10.72	07/01/2011
Russell 3000 Index	0.97	0.97	-0.48	-0.34	11.14	11.01	0.48	12.55	33.55	11.63	
Difference	-1.22	-1.22	-3.88	-5.22	-0.93	N/A	-2.30	-0.69	3.42	-0.91	
Internal S&P 500 Index (SA)	1.27	1.27	1.50	1.77	11.78	11.60	1.46	13.64	32.27	6.20	07/01/2001
S&P 500 Index (Cap Wtd)*	1.35	1.35	1.50	1.78	11.82	11.56	1.38	13.69	32.39	6.09	
Difference	-0.08	-0.08	0.00	-0.01	-0.04	0.04	0.08	-0.05	-0.12	0.11	
IM U.S. Large Cap Index Equity (SA+CF) Median	1.29	1.29	0.92	0.84	11.59	11.42	0.95	13.28	32.56	5.79	
Rank	53	53	37	34	45	24	23	36	82	13	
U.S. Large Cap Equity Composite	2.25	2.25	2.49	2.76	N/A	N/A	1.53	13.29	N/A	12.06	07/01/2013
Russell 1000 Index	1.17	1.17	0.39	0.50	11.52	11.35	0.92	13.24	33.11	11.56	
Difference	1.08	1.08	2.10	2.26	N/A	N/A	0.61	0.05	N/A	0.50	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal US Mid Cap (SA)	4.29	4.29	-2.23	-3.27	N/A	N/A	-2.39	N/A	N/A	5.05	08/01/2014
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	4.90	
Difference	0.51	0.51	0.33	0.33	N/A	N/A	-0.21	N/A	N/A	0.15	
IM U.S. Mid Cap Equity (SA+CF) Median	0.65	0.65	-4.39	-4.76	10.27	9.75	-1.19	9.76	36.37	4.05	
Rank	11	11	29	34	N/A	N/A	65	N/A	N/A	31	
Sasco Capital Inc. (SA)	5.34	5.34	-6.56	-8.99	4.81	N/A	-14.10	7.69	32.98	9.10	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	1.42	1.42	-5.11	-5.60	-5.07	N/A	-9.32	-7.06	-0.48	-5.48	
IM U.S. Mid Cap Value Equity (SA+CF) Median	3.00	3.00	-3.15	-3.94	10.22	10.23	-3.88	11.73	36.06	14.50	
Rank	15	15	78	85	100	N/A	99	74	81	100	
Systematic Financial Management (SA)	0.88	0.88	-5.27	-7.11	6.47	N/A	-4.97	5.69	35.33	11.33	07/01/2012
Russell Mid Cap Val Index	3.92	3.92	-1.45	-3.39	9.88	10.52	-4.78	14.75	33.46	14.58	
Difference	-3.04	-3.04	-3.82	-3.72	-3.41	N/A	-0.19	-9.06	1.87	-3.25	
IM U.S. Mid Cap Value Equity (SA+CF) Median	3.00	3.00	-3.15	-3.94	10.22	10.23	-3.88	11.73	36.06	14.50	
Rank	81	81	69	77	95	N/A	65	87	55	93	
U.S. Mid Cap Equity Composite	3.67	3.67	-3.24	-4.77	N/A	N/A	-4.64	4.11	N/A	7.71	07/01/2013
S&P Mid Cap 400 Index (Cap Wtd)	3.78	3.78	-2.56	-3.60	9.46	9.52	-2.18	9.77	33.50	9.96	
Difference	-0.11	-0.11	-0.68	-1.17	N/A	N/A	-2.46	-5.66	N/A	-2.25	
NT Structured Small Cap (SA)	0.34	0.34	-7.35	-7.01	8.48	N/A	-3.15	5.92	39.43	9.75	07/01/2011
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	7.96	
Difference	1.86	1.86	2.79	2.75	1.64	N/A	1.26	1.03	0.61	1.79	
IM U.S. Small Cap Core Equity (SA+CF) Median	0.02	0.02	-6.78	-6.41	9.62	9.72	-1.39	6.57	41.01	10.33	
Rank	45	45	59	58	64	N/A	72	56	66	57	
U.S. Small Cap Equity Composite	0.34	0.34	-7.36	-7.01	N/A	N/A	-3.22	6.04	N/A	8.12	07/01/2013
Russell 2000 Index	-1.52	-1.52	-10.14	-9.76	6.84	7.20	-4.41	4.89	38.82	6.31	
Difference	1.86	1.86	2.78	2.75	N/A	N/A	1.19	1.15	N/A	1.81	
U.S. Equity Composite	2.18	2.18	-0.11	-0.37	10.67	10.55	-0.40	10.75	33.78	9.23	07/01/1992
R 3000 Index (I)*	0.97	0.97	-0.48	-0.34	11.14	11.02	0.48	12.55	33.55	N/A	
Difference	1.21	1.21	0.37	-0.03	-0.47	-0.47	-0.88	-1.80	0.23	N/A	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Lazard Int'l Strategic Equity (SA)	-0.04	-0.04	-6.87	-4.55	N/A	N/A	-0.42	N/A	N/A	-3.92	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.22	0.22	2.57	4.23	N/A	N/A	4.83	N/A	N/A	4.23	
IM International Value Equity (SA+CF) Median	-1.32	-1.32	-7.47	-6.06	3.61	3.37	-0.87	-4.04	23.80	-6.37	
Rank	32	32	40	36	N/A	N/A	44	N/A	N/A	27	
LSV Int'l Concentrated Value Equity (SA)	-0.53	-0.53	-10.51	-9.53	N/A	N/A	-5.50	N/A	N/A	-7.85	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-0.27	-0.27	-1.07	-0.75	N/A	N/A	-0.25	N/A	N/A	0.30	
IM International Value Equity (SA+CF) Median	-1.32	-1.32	-7.47	-6.06	3.61	3.37	-0.87	-4.04	23.80	-6.37	
Rank	38	38	77	78	N/A	N/A	88	N/A	N/A	70	
BTC ACWI Ex US Fund (CF)	0.54	0.54	-8.82	-8.31	0.49	N/A	-5.63	-3.83	14.73	6.22	06/01/2012
MSCI ACW Ex US Index (Net)	-0.38	-0.38	-9.66	-9.19	0.32	0.31	-5.66	-3.87	15.29	6.08	
Difference	0.92	0.92	0.84	0.88	0.17	N/A	0.03	0.04	-0.56	0.14	
IM International Core Equity (SA+CF) Median	-1.75	-1.75	-7.00	-5.45	4.00	3.94	1.12	-3.49	23.97	9.71	
Rank	18	18	66	78	95	N/A	95	55	97	94	
American Century Non-US Growth Equity (SA)	-2.94	-2.94	-6.32	-7.33	N/A	N/A	-0.56	N/A	N/A	-5.32	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	-2.68	-2.68	3.12	1.45	N/A	N/A	4.69	N/A	N/A	2.83	
IM International Growth Equity (SA+CF) Median	-1.98	-1.98	-5.86	-3.48	3.96	4.23	2.95	-3.37	22.89	-3.37	
Rank	70	70	56	84	N/A	N/A	82	N/A	N/A	78	
Franklin Templeton Non-US Equity (SA)	0.42	0.42	-4.09	-2.56	N/A	N/A	0.95	N/A	N/A	-3.26	07/01/2014
MSCI ACW Ex US Index (Gross)	-0.26	-0.26	-9.44	-8.78	0.76	0.76	-5.25	-3.44	15.78	-8.15	
Difference	0.68	0.68	5.35	6.22	N/A	N/A	6.20	N/A	N/A	4.89	
IM International Growth Equity (SA+CF) Median	-1.98	-1.98	-5.86	-3.48	3.96	4.23	2.95	-3.37	22.89	-3.37	
Rank	19	19	39	42	N/A	N/A	71	N/A	N/A	49	
BTC ACWI Ex US Small Cap Fund (CF)	0.40	0.40	-4.69	-0.60	N/A	N/A	2.97	-3.79	N/A	6.73	07/01/2013
MSCI ACW Ex US Sm Cap Index (Net)	0.68	0.68	-4.63	-0.60	3.67	2.39	2.60	-4.03	19.73	5.73	
Difference	-0.28	-0.28	-0.06	0.00	N/A	N/A	0.37	0.24	N/A	1.00	
IM International Small Cap Equity (SA+CF) Median	-0.73	-0.73	-1.78	2.57	8.37	7.20	10.46	-3.14	31.05	9.17	
Rank	28	28	75	79	N/A	N/A	89	58	N/A	73	
Non-U.S. Equity Composite	0.67	0.67	-6.96	-5.96	2.20	0.70	-3.27	-4.02	18.22	2.03	04/01/2000
MSCI ACW Ex US Investable Mkt Index (Gross) (I)*	-0.12	-0.12	-9.31	-8.66	0.81	0.84	-5.25	-3.44	15.78	1.40	
Difference	0.79	0.79	2.35	2.70	1.39	-0.14	1.98	-0.58	2.44	0.63	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
NISA Core Agg Fixed Income (SA)	3.50	3.50	4.42	2.69	2.89	N/A	0.83	6.38	-1.95	3.84	07/01/2011
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.49	
Difference	0.47	0.47	0.71	0.73	0.39	N/A	0.28	0.41	0.07	0.35	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.04	3.04	3.70	2.06	2.71	4.14	0.81	6.14	-1.56	3.89	
Rank	2	2	6	7	27	N/A	49	36	71	54	
Core Fixed Income Composite	3.55	3.55	4.49	2.73	N/A	N/A	0.68	3.91	N/A	3.28	07/01/2013
Barclays US Agg Bond Index	3.03	3.03	3.71	1.96	2.50	3.78	0.55	5.97	-2.02	3.61	
Difference	0.52	0.52	0.78	0.77	N/A	N/A	0.13	-2.06	N/A	-0.33	
Cerberus KRS Levered Loan Opps, L.P.	3.00	3.00	8.67	12.82	N/A	N/A	13.09	N/A	N/A	10.93	09/01/2014
S&P-LSTA Lvg'd Loan Index	1.55	1.55	-1.92	-1.25	1.85	3.23	-0.69	1.60	5.29	-0.17	
Difference	1.45	1.45	10.59	14.07	N/A	N/A	13.78	N/A	N/A	11.10	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	-1.75	
Rank	29	29	1	1	N/A	N/A	1	N/A	N/A	1	
Columbia HY Fixed Income (SA)	3.33	3.33	0.48	0.39	4.09	N/A	0.16	4.84	6.60	7.19	11/01/2011
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	5.45	
Difference	-0.02	-0.02	4.18	4.08	2.25	N/A	4.63	2.39	-0.84	1.74	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	5.82	
Rank	18	18	11	14	7	N/A	15	9	71	8	
Marathon Bluegrass Credit Fund	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	01/01/2016
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	3.35	
Difference	-3.35	-3.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3.35	
IM U.S. High Yield Bonds (SA+CF) Median	2.50	2.50	-3.10	-2.57	2.42	5.14	-2.27	2.72	7.63	2.50	
Rank	96	96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96	
Shenkman Capital (SA)	1.79	1.79	-1.77	-0.80	1.68	N/A	0.12	-0.83	6.12	3.83	07/01/2011
Shenkman Blended Index	1.55	1.55	-1.92	-1.25	2.53	4.52	-0.69	2.98	6.42	4.64	
Difference	0.24	0.24	0.15	0.45	-0.85	N/A	0.81	-3.81	-0.30	-0.81	
Waterfall (SA)	-1.40	-1.40	-0.84	0.36	7.85	N/A	3.82	10.73	14.94	10.77	07/01/2011
Opportunistic FI Blended Index	1.72	1.72	-2.76	-2.64	1.32	3.26	-2.73	2.16	5.06	3.29	
Difference	-3.12	-3.12	1.92	3.00	6.53	N/A	6.55	8.57	9.88	7.48	
High Yield Fixed Income Composite	0.98	0.98	-1.16	-0.05	N/A	N/A	1.54	5.48	N/A	4.92	07/01/2013
Barclays US Corp: Hi Yld Index	3.35	3.35	-3.70	-3.69	1.84	4.93	-4.47	2.45	7.44	2.55	
Difference	-2.37	-2.37	2.54	3.64	N/A	N/A	6.01	3.03	N/A	2.37	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Manulife Asset Mgmt (SA)	2.75	2.75	2.97	1.72	2.75	N/A	0.73	3.51	3.12	5.04	12/01/2011
Barclays US Unv Bond Index*	3.07	3.07	2.66	1.60	-0.03	1.35	-3.29	0.48	-2.19	0.78	
Difference	-0.32	-0.32	0.31	0.12	2.78	N/A	4.02	3.03	5.31	4.26	
Global Fixed Income Composite	2.75	2.75	2.73	1.84	N/A	N/A	0.90	2.83	N/A	2.98	07/01/2013
Barclays Gbl Agg Bond Index	5.90	5.90	5.81	4.57	0.87	1.81	-3.15	0.59	-2.60	1.99	
Difference	-3.15	-3.15	-3.08	-2.73	N/A	N/A	4.05	2.24	N/A	0.99	
Fixed Income Composite	2.63	2.63	2.54	1.73	2.36	4.75	0.88	4.18	0.08	6.58	07/01/1992
50/50 Barclays US Unv Bond/US Corp: Hi Yld Index (I)*	3.23	3.23	3.37	1.92	2.56	4.19	0.43	5.56	-1.35	6.39	
Difference	-0.60	-0.60	-0.83	-0.19	-0.20	0.56	0.45	-1.38	1.43	0.19	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
Internal TIPS (SA)	3.63	3.63	2.35	2.38	-0.23	3.25	0.26	3.08	-7.73	4.82	10/01/2003
Internal US TIPS Blend	3.60	3.60	1.99	1.84	-1.00	2.84	-0.52	2.63	-8.61	4.46	
Difference	0.03	0.03	0.36	0.54	0.77	0.41	0.78	0.45	0.88	0.36	
IM U.S. TIPS (SA+CF) Median	4.24	4.24	2.39	1.56	-0.69	2.97	-1.40	3.52	-8.24	4.63	
Rank	67	67	54	1	10	23	1	67	36	16	
Nuveen Real Asset Income (SA)	4.89	4.89	2.47	0.36	N/A	N/A	N/A	N/A	N/A	0.55	02/01/2015
Nuveen Real Asset Custom Index	5.17	5.17	4.07	1.30	N/A	N/A	N/A	N/A	N/A	1.16	
Difference	-0.28	-0.28	-1.60	-0.94	N/A	N/A	N/A	N/A	N/A	-0.61	
PIMCO:All Asset;Inst (PAAIX)	7.26	7.26	-3.80	-4.03	-1.08	N/A	-10.43	3.34	-1.66	2.91	12/01/2011
Barclays US Trsy Infl Notes: 1-10 Yr Index	3.60	3.60	1.99	1.84	-0.72	1.88	-0.52	0.91	-5.58	0.67	
Difference	3.66	3.66	-5.79	-5.87	-0.36	N/A	-9.91	2.43	3.92	2.24	
Tenaska Power Fund II (CF)	0.00	0.00	7.83	11.67	-0.26	1.68	18.41	-0.69	-15.95	-0.30	10/01/2008
Tortoise Capital (CF)	-5.78	-5.78	-27.12	-29.50	-2.92	6.47	-26.68	15.93	37.66	13.33	08/01/2009
Alerian MLP Index	-4.17	-4.17	-27.41	-31.83	-10.31	-0.55	-32.59	4.80	27.58	7.86	
Difference	-1.61	-1.61	0.29	2.33	7.39	7.02	5.91	11.13	10.08	5.47	
Amerra Ag Fund II (CF)	-1.75	-1.75	11.26	14.15	11.57	N/A	21.01	10.65	1.14	8.95	12/01/2012
Amerra-AGRI Holding (CF)	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.43	08/01/2015
BTG Pactual Brazil Timberland Fund I, L.P.	-22.78	-22.78	-26.75	-26.75	N/A	N/A	-11.97	N/A	N/A	-25.14	12/01/2014
Magnetar MTP Energy Fund, L.P.	-10.43	-10.43	-26.00	-24.01	N/A	N/A	-15.63	2.98	N/A	-7.71	07/01/2013
Magnetar MTP EOF II, L.P.	-15.61	-15.61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.61	08/01/2015
Oberland Capital Healthcare, L.P.	0.00	0.00	14.74	16.89	N/A	N/A	14.09	N/A	N/A	6.85	10/01/2014
Taurus Mining Finance Fund	4.27	4.27	9.71	8.41	N/A	N/A	N/A	N/A	N/A	8.41	04/01/2015
Real Return Composite	2.78	2.78	-3.22	-3.68	-1.52	N/A	-5.53	3.94	-4.82	2.37	07/01/2011
Real Return Actual Allocation Index (I)*	1.83	1.83	-1.73	-2.58	0.67	N/A	-3.56	3.15	2.29	2.08	
Difference	0.95	0.95	-1.49	-1.10	-2.19	N/A	-1.97	0.79	-7.11	0.29	



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
H/2 Credit Partners (CF)	0.33	0.33	-2.04	1.60	3.42	N/A	2.11	6.57	4.51	5.30	07/01/2011
H/2 Core Real Estate Debt Fund, L.P.	2.69	2.69	4.17	5.97	N/A	N/A	4.06	2.80	N/A	3.83	10/01/2013
Harrison Street Core (CF)	2.93	2.93	9.33	7.51	9.24	N/A	7.61	12.03	6.81	7.59	05/01/2012
Mesa West Core Lending, L.P.	2.29	2.29	6.56	8.40	N/A	N/A	8.10	5.45	N/A	6.46	05/01/2013
Prologis Targeted U.S. Logistics Fund (CF)	5.23	5.23	12.72	13.02	N/A	N/A	14.32	N/A	N/A	13.11	10/01/2014
Stockbridge SmtMkts, L.P.	3.08	3.08	10.13	13.33	N/A	N/A	11.78	N/A	N/A	10.66	05/01/2014
DivcoWest Fund IV, L.P.	9.81	9.81	38.28	46.60	N/A	N/A	38.42	N/A	N/A	25.36	03/01/2014
Greenfield Acquisition Partners VI, L.P.	4.23	4.23	19.04	18.83	21.25	N/A	24.88	18.30	12.15	17.81	12/01/2012
Greenfield Acquisition Partners VII, L.P.	9.07	9.07	23.08	24.89	N/A	N/A	19.62	N/A	N/A	16.20	07/01/2014
Lubert Adler Real Estate Fund VII, L.P.	0.00	0.00	1.35	1.86	N/A	N/A	4.60	N/A	N/A	-5.46	07/01/2014
Rubenstein Properties Fund II, L.P.	2.43	2.43	7.97	8.16	N/A	N/A	16.23	50.33	N/A	21.99	07/01/2013
Walton Street Real Estate Fund VI, L.P.	4.55	4.55	11.78	15.77	15.85	13.64	14.49	18.01	16.08	-23.34	05/01/2009
Walton Street Real Estate Fund VII, L.P.	4.33	4.33	15.60	16.78	N/A	N/A	18.34	16.89	N/A	16.98	07/01/2013
Real Estate Composite	3.34	3.34	9.27	10.87	9.40	9.51	10.49	8.07	9.02	9.24	05/01/2009
NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	3.11	3.11	10.48	13.96	12.77	12.60	13.87	11.36	11.97	5.54	
Difference	0.23	0.23	-1.21	-3.09	-3.37	-3.09	-3.38	-3.29	-2.95	3.70	



,	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	2015	2014	2013	Since Incep.	Inception Date
BAAM (SA)	-3.29	-3.29	-1.35	0.71	5.97	N/A	6.30	7.91	11.51	6.59	09/01/2011
PAAMCO (SA)	-3.38	-3.38	-9.08	-6.63	2.58	N/A	-2.05	3.81	14.91	3.88	09/01/2011
Prisma Capital Partners (SA)	-4.34	-4.34	-8.27	-5.00	2.20	N/A	2.32	3.18	9.75	3.35	09/01/2011
Tourbillon Global Master Fund, Ltd	-10.68	-10.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-9.77	11/01/2015
Davidson-Kemper, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	02/01/2016
DSAM Fund, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Glenview Capital (CF)	-15.48	-15.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-18.06	11/01/2015
HBK II (CF)	-2.00	-2.00	-5.35	-3.57	N/A	N/A	-1.38	3.93	N/A	0.60	12/01/2013
Jana Partners (CF)	-5.82	-5.82	-14.68	-13.91	N/A	N/A	-6.58	N/A	N/A	-8.15	09/01/2014
Knighthead Capital (CF)	-3.20	-3.20	-10.42	-11.92	N/A	N/A	-10.22	5.59	N/A	-3.75	01/01/2014
LibreMax Capital (CF)	-2.10	-2.10	-4.23	-3.32	N/A	N/A	-0.16	N/A	N/A	0.46	08/01/2014
Luxor Capital (CF)	-10.82	-10.82	-24.02	-20.35	N/A	N/A	-15.99	N/A	N/A	-15.99	04/01/2014
Myriad Opportunities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/01/2016
Pine River (CF)	-5.66	-5.66	-11.31	-7.52	N/A	N/A	0.88	N/A	N/A	-2.29	05/01/2014
QMS Diversified Global Macro (CF)	7.05	7.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.27	11/01/2015
Scopia PX, LLC	-3.44	-3.44	-3.67	-2.02	N/A	N/A	1.74	N/A	N/A	1.81	11/01/2014
Coatue Qualified Partners, L.P.	1.61	1.61	8.85	N/A	N/A	N/A	N/A	N/A	N/A	8.85	07/01/2015
Absolute Return Composite	-3.77	-3.77	-6.43	-3.90	3.37	4.13	1.84	4.80	11.99	3.77	04/01/2010
HFRI FOF Diversified Index (Mth Lag)	-3.55	-3.55	-6.39	-4.96	2.23	1.48	0.78	4.72	8.61	2.33	
Difference	-0.22	-0.22	-0.04	1.06	1.14	2.65	1.06	0.08	3.38	1.44	
Cash Equivalents (SA)	0.09	0.09	0.20	0.25	0.23	0.28	0.21	0.19	0.27	2.80	07/01/1992
Citi 3 Mo T-Bill Index	0.05	0.05	0.07	0.08	0.04	0.05	0.03	0.02	0.05	2.67	31,01,1002
Difference	0.04	0.04	0.13	0.17	0.19	0.23	0.18	0.17	0.22	0.13	

Performance for Absolute Return managers and the HFRI FOF Diversified Index is lagged by one month.

Performance for the NCREIF ODCE Index (Net) (AWA) is lagged by one quarter and available quarterly; interim month returns assume a 0.00% return.



US Equity Review As of March 31, 2016

#### **First Quarter Review**

#### **Broad Market**

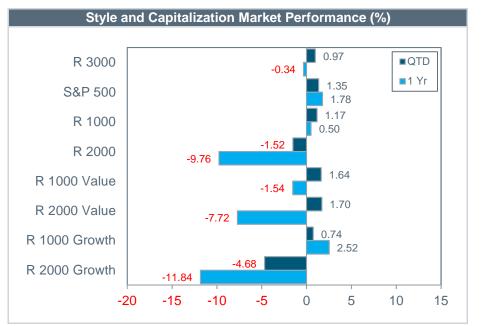
Despite a sharp uptick in volatility, the US equity market finished the quarter in positive territory, as strong March gains erased heavy losses incurred during January's market sell-off.

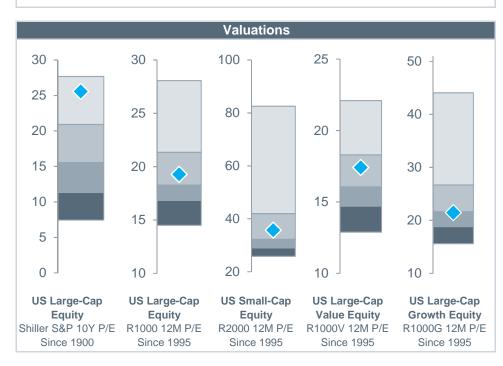
#### **Market Cap**

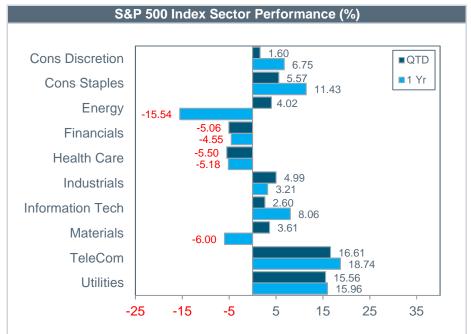
In terms of capitalization, mid cap outperformed all other market cap ranges, with the Russell Mid Cap Index returning 2.2%. Large and mega cap stocks ended the quarter positive, while small and micro cap continued to lag, as the Russell 2000 Index and the Russell Micro Cap index returned -1.5% and -5.4%, respectively.

#### **Style and Sector**

In sharp contrast to 2015, value outperformed growth across the market cap spectrum for the quarter.







Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Non-US Equity Review
As of March 31, 2016

#### First Quarter Review

#### **Developed Markets**

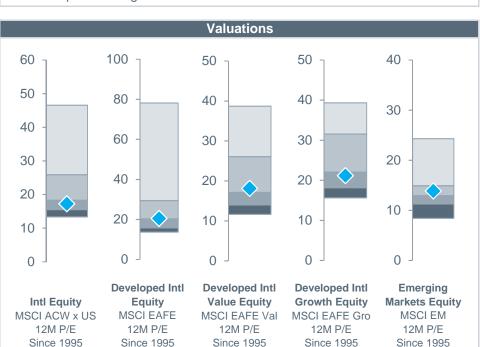
Developed international markets had a strong rebound in March, but remained negative for the quarter. Japan was one of the largest performance detractors for the quarter. Reacting to a 1.4% decline in GDP during the previous quarter, the BoJ adopted a negative interest rate policy for the first time in history.

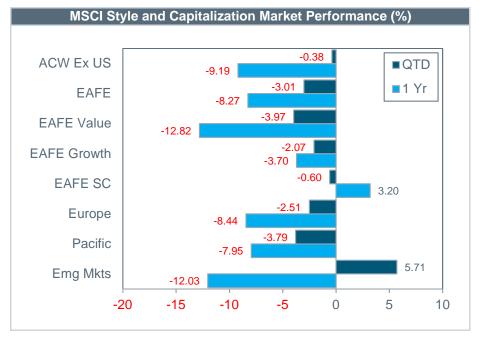
#### **Emerging Markets**

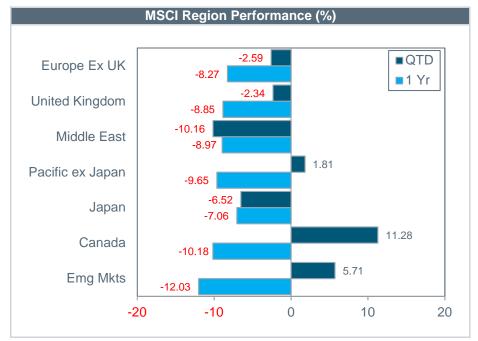
Performance from emerging markets diverged positively for the quarter following a year of significantly better returns from developed markets. The rebound in March pushed emerging market equity returns well into positive territory for the quarter.

#### Market Cap & Style

Small cap developed stocks outperformed their larger counterparts. Value, yet again, underperformed growth by a significant margin in the developed space. In emerging markets, large cap outperformed small cap stocks and value outperformed growth.









P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

All returns are shown net of foreign taxes on dividends.



Fixed Income Review As of March 31, 2016

#### First Quarter Review

#### **Broad Market**

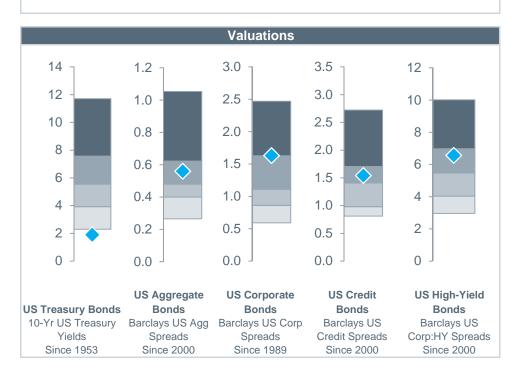
The Fed's shift toward a more accommodative monetary policy forecast for 2016 led to a decline in Treasury yields, while the rebound in energy prices had a positive impact on credit and market volatility stabilized after increasing in December and January.

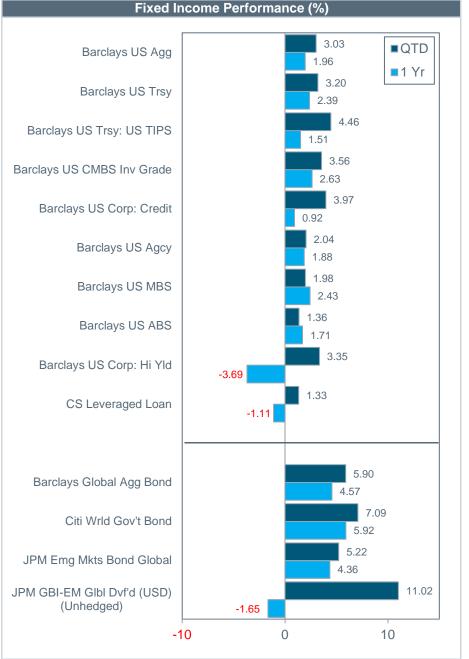
#### **Credit Market**

High yield bonds rebounded with a 3.2% return. Declining interest rates detracted from floating rate bank loans, but improvement in the credit markets allowed bank loans to post positive performance with a return of 1.5%.

#### **Emerging Market Debt**

Local currency emerging markets bonds had a very strong quarter due to the weakening of the US Dollar and a recovery of energy prices. Local currency bonds finished the quarter with a return of 11.0% while hard currency emerging markets debt finished the quarter with a return of 5.0%.







Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.



As of March 31, 2016 **Alternatives Review** 

#### First Quarter Review - Absolute Return

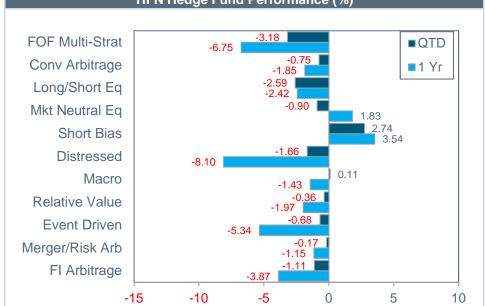
#### **General Market - Hedge Funds**

The hedge fund industry performed poorly during the first guarter of 2016. with a variety of factors contributing to the uninspired returns. As it relates to the Fund of Hedge Fund ("FoHF") managers RVK follows closely, the most consistent relative detractor was negative alpha from Long/Short Equity ("ELS"), in part due to tactical over-weights to heavily trafficked sectors like healthcare, technology, and financials, which underperformed. The best performing strategies during the quarter were systematic managed futures/CTAs.

#### **General Market - Global Tactical Asset Allocation (GTAA)**

There was dispersion among returns for strategies with exposures beyond US fixed income and US equity. Managers positioned for interest rate increases in the US lagged due to the Fed's accommodative stance. Macrooriented, fundamental value-based approaches, which were underweight US

# equities relative to emerging markets, provided the strongest performance over the quarter. **HFN Hedge Fund Performance (%)**



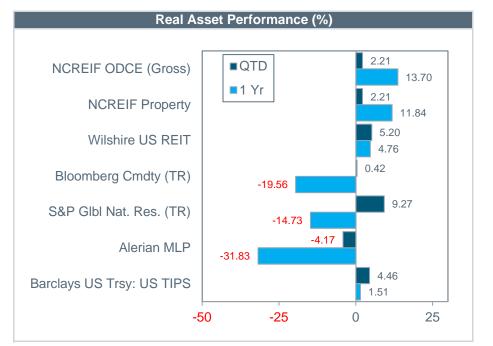
#### First Quarter Review - Real Assets

#### **General Market - Diversified Inflation Strategies (DIS)**

Some measures of inflation increased over the guarter, driving strong relative performance. However, market expectations for inflation in 10 year Treasuries remain muted at around 1.6%, about the same level at the beginning of the quarter. DIS managers with REIT exposure, precious metals, and non-US dollar denominated emerging markets exposures provided the strongest performance. Strategies that avoided natural resource equity exposure significantly underperformed DIS peers.

#### General Market - Real Estate

Real Estate was not immune to the effects of broader uncertainty and volatility in the global markets during Q1. In the US, cap rates flattened in certain property sectors for the first time in six years and property valuations showed modest changes as a whole. Core US real estate increased its run of consecutive quarters of positive returns to 25 quarters, albeit with relatively muted growth at 2.2% percent as reported by the NCREIF ODCE Index.





Annual Asset Class Performance As of March 31, 2016

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD
Best	25.91	61.34	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	15.01	7.30
1	16.56	55.81	31.45	26.19	32.18	16.23	5.24	58.21	26.86	15.99	18.23	32.39	19.31	9.59	5.71
	14.81	47.25	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	4.23	5.20
	10.25	38.59	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	1.38	4.46
	5.54	36.18	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.34	13.94	5.97	0.55	3.35
	3.58	28.97	13.06	13.54	16.32	9.91	-20.47	27.18	16.36	4.98	16.00	9.10	4.89	0.05	3.03
	3.12	28.68	11.13	6.75	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.81	2.21
	1.78	23.93	10.88	5.33	11.85	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.03	-1.24	1.35
	-1.41	11.93	9.15	4.91	9.85	5.49	-35.65	11.41	10.16	-4.18	8.82	0.07	2.45	-1.44	0.42
	-6.17	9.28	8.56	4.55	4.85	5.00	-37.00	9.72	7.75	-5.55	6.98	-2.02	0.04	-3.30	0.07
	-7.83	8.39	8.46	3.07	4.33	1.87	-39.20	5.93	6.54	-12.14	4.80	-2.60	-2.19	-4.41	-0.60
	-15.94	5.87	6.79	2.84	2.71	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	-1.52
	-20.48	4.10	4.34	2.74	2.07	-1.57	-47.01	0.21	4.77	-15.94	0.11	-8.83	-4.95	-14.92	-3.01
Worst	-22.10	1.15	1.33	2.43	0.41	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	-3.18
									<b>D</b>	NOD					
S&P 50 US Larg		mall (Net)		(Net) - (1	MSCI EM Net) - Int'l Emg Mkts	Barclays US Agg Bond - Fl	Barclays US Corp: Hi Yield - F	1 05 1175	: US - Gov/Cre	OD( edit: (Gros	CE SS) - US F	REIT - Mu	Iti-Strat (	Bloombrg Cmdty (TR) - Commod.	Mo T-Bill -
					g			' FI	Lng -	FI Real E	state				



Kentucky Retirement Systems
As of March 31, 2016

#### Addendum

#### **Performance Comments**

- · Performance shown is net of fees, except where noted.
- 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 and composite performance, is provided by BNY Mellon.
- Real Estate and Private Equity valuations are as of the most recent date available.

#### **Asset Allocation Comments**

- The Private Equity Composite includes Internal Alternative Assets.
- Market values shown include fee accruals.

#### **Manager Transition Comments**

- International Account (SA) (Pension) and Arrowhawk Durable Alpha Fund L.P. were liquidated in December 2012.
- Equitization Assets Program (Pension) and Equitization Assets Program (Insurance) were fully liquidated in January 2013.
- Amerra Ag Fund II (CF) (Pension and Insurance) and Greenfield Acquisition Parters VI (CF) (Pension and Insurance) were funded in January 2013.
- Internal Mid Cap (SA) (Pension and Insurance) and International Account (Insurance) were fully liquidated in March 2013.
- Mesa West Core Lending, L.P. (Pension and Insurance) was funded in May 2013.
- BTC Emerging Markets (CF) (Pension and Insurance) and Walton Street Real Estate Fund VII, L.P. (Pension and Insurance) were funded in June 2013.
- Magnetar MTP Energy Fund, L.P. (Pension and Insurance) and Rubenstein Properties Fund II, L.P., (Pension and Insurance) were funded in July 2013.
- H/2 Core Real Estate Debt Fund, L.P. (Pension and Insurance) was funded in October 2013.
- MKP Opportunity Fund (CF) (Pension and Insurance) was funded in October 2013.
- HBK II (CF) (Pension and Insurance) was funded in November 2013.
- Knighthead Capital (CF) (Pension and Insurance) was funded in December 2013.
- Luxor Capital (CF) (Pension and Insurance) was funded in February 2014.
- DivcoWest Fund IV, L.P. (Pension and Insurance) was funded in March 2014.
- Pine River (CF) (Pension and Insurance) was funded in March 2014.
- Stockbridge SmtMkts, L.P. (Pension and Insurance) was funded in May 2014.
- American Century Non-US Growth Equity (SA) (Pension and Insurance) was funded in June 2014.
- Franklin Templeton Non-US Equity (SA) (Pension and Insurance) was funded in June 2014.
- Lazard Int'l Strategic Equity (SA) (Pension and Insurance) was funded in June 2014.
- LSV Int'l Concentrated Value Equity (SA) (Pension and Insurance) was funded in June 2014.
- Geneva Capital Management (SA) (Pension and Insurance) was liquidated in July 2014.
- Internal US Mid Cap (SA) (Pension and Insurance) was funded in July 2014.
- Greenfield Acquisition Partners VII, L.P. (Pension and Insurance) was funded in July 2014.
- Lubert Adler Real Estate Fund VII, L.P. (Pension and Insurance) was funded in July 2014.
- Jana Partners (CF) (Pension and Insurance) was funded in July 2014.
- LibreMax Capital (CF) (Pension and Insurance) was funded in July 2014.
- Cerberus KRS Levered Loan Opps, L.P. (Pension and Insurance) was funded in September 2014.
- Scopia PX, LLC (Pension and Insurance) was funded in September 2014.
- Oberland Capital Healthcare, L.P. (Pension and Insurance) was funded in October 2014.
- Prologis Targeted U.S. Logistics Fund (CF) (Pension and Insurance) was funded in October 2014.
- MKP Opportunity Fund (CF) (Pension and Insurance) was liquidated in October 2014.
- BTG Pactual Brazil Timberland Fund I, L.P. (Pension and Insurance) was funded in December 2014.
- Nuveen Real Asset Income (SA) (Pension and Insurance) was funded in January 2015.
- Weaver Barksdale TIPS (SA) (Pension) was liquidated in March 2015.



Kentucky Retirement Systems

As of March 31, 2016

- Addendum
- Taurus Mining Finance Fund (Pension and Insurance) was funded in April 2015.
- Coatue Qualified Partners, L.P. (Pension and Insurance) was funded in June 2015.
- Magnetar MTP EOF II, L.P. (Pension and Insurance) was funded in August 2015.
- Amerra-AGRI Holding (CF) (Pension and Insurance) was funded in August 2015.
- Glenview Capital (CF) (Pension and Insurance) was funded in September 2015.
- QMS Diversified Global Macro (CF) (Pension and Insurance) was funded in September 2015.
- Tourbillon Global Master Fund, Ltd (Pension and Insurance) was funded in October 2015.
- The Boston Co. Non-US Value (SA) (Pension and Insurance) was liquidated in November 2015.
- Aberdeen Emg Mkts Equity (CF) (Pension and Insurance) was liquidated in December 2015.
- Stone Harbor (SA) (Pension and Insurance) was liquidated in December 2015.
- Mesa West Real Estate Income Fund II L.P. (Pension and Insurance) was liquidated in December 2015.
- Davidson-Kemper, L.P. (Pension and Insurance) was funded in December 2015.
- Wellington Emg Mkts Equity (CF) (Pension and Insurance) was liquidated in January 2016.
- BTC Emg Mkts Equity (CF) (Pension and Insurance) was liquidated in January 2016.
- Loomis Sayles HY Fixed Income (SA) (Pension and Insurance) was liquidated in January 2016.
- Prima Mortgage Invest Trust, LLC (Pension and Insurance) was liquidated in January 2016.
- Marathon Bluegrass Credit Fund (Pension and Insurance) was funded in January 2016.
- DSAM Fund, L.P. (Pension and Insurance) was funded in March 2016.
- Myriad Opportunities (Pension and Insurance) was funded in March 2016.



omposite/Manager otal Fund Target Allocation Index (P)	Benchmark RVK, Inc. began calculating the custom index as of September 1, 2008. The custom index is calculated monthly and consists of:	<u>Since</u>
	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
	20.50% R 3000 Index 20.00% MSCI ACW Ex US Index (Gross) 2.90% MSCI Emerging Markets Index (Gross) 19.30% Barclays Universal Bond Index 10.00% Consumer Price Index + 3% 4.50% NCREIF ODCE Index (Gross) (AWA) 10.00% HFRI FOF Div Index (Month Lag) 10.00% R 3000 Index +4% (Qtr Lag) 2.80% Citi 3 Mo T-Bill Index	1/1/2013



#### As of March 31, 2016

Composite/Manager	Benchm		Since
Total Fund Target Allocation Index (P) (Cont.)		R 3000 Index	
	20.00%	MSCI ACW Ex US Index (Gross)	
	2.90%	MSCI Emerging Markets Index (Gross)	
	19.30%	Barclays Universal Bond Index	
	10.00%		
		NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	
		HFRI FOF Div Index (Month Lag)	
	10.00%	Private Equity Composite	7/4/0040
	2.80%	Citi 3 Mo T-Bill Index	7/1/2013
	20.50%	R 3000 Index	
	20.00%	MSCI ACW Ex US Index (Gross)	
	2.90%	MSCI Emerging Markets Index (Gross)	
	19.30%	Barclays Universal Bond Index	
	10.00%	Real Return Actual Allocation Index	
		NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	
		HFRI FOF Div Index (Month Lag)	
	10.00%	Private Equity Composite	
	2.80%	Citi 3 Mo T-Bill Index	11/1/2013
	25.60%	R 3000 Index	
	25.20%	MSCI ACW Ex US Investable Market Index (Gross)	
	6.80%	Barclays US Univ Bond Index	
	7.20%	Barclays US Corp HY Index	
	8.00%	Real Return Actual Allocation Index	
	5.00%	NCREIF ODCE Index (Net) (AWA) (Qtr Lag)	
	10.00%	HFRI FOF Div Index (Month Lag)	
	10.00%	Private Equity Composite	
	2.20%	Citi 3 Mo T-Bill Index	1/1/2016



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



Composite/Manager Total Fund Target Allocation Index (I) (Cont.)	Benchm 40.00% 27.00% 3.00% 12.00% 15.00% 3.00%	ark S&P 1500 Composite Index MSCI EAFE Index (Gross) MSCI Emerging Markets Index (Gross) Barclays US Treasury: US TIPS Index R 3000 Index + 4% (Qtr Lag) (I)* Citigroup 3 Mo T-Bill Index	<u>Since</u> 5/1/2008
	24.00% 3.00% 3.00% 12.00%	S&P 1500 Composite Index MSCI World Ex US Index (Gross) MSCI ACW Ex US Index (Gross) MSCI Emerging Markets Index (Gross) 70% Barclays US Treasury: US TIPS Index/30% Barclays US Aggregate Bond Index R 3000 Index + 4% (Qtr Lag) (I)* Citigroup 3 Mo T-Bill Index	7/1/2009
	20.97% 3.45% 19.30% 11.39% 4.31% 10.21% 8.30%	R 3000 Index MSCI ACW Ex US Index (Gross) MSCI Emerging Markets Index (Gross) Barclays US Unv Index Consumer Price Index + 3% NCREIF ODCE Index (Gross) (AWA) HFRI FOF Div Index (Lagged) R 3000 Index +4% (Qtr Lag) Citi 3 Mo T-Bill Index	7/1/2011
	20.00% 4.00% 20.00% 10.00% 5.00% 10.00%	R 3000 Index MSCI ACW Ex US Index (Gross) MSCI Emerging Markets Index (Gross) Barclays Universal Bond Index Consumer Price Index + 3% NCREIF ODCE Index (Gross) (AWA) HFRI FOF Div Index (Month Lag) R 3000 Index +4% (Qtr Lag) Citi 3 Mo T-Bill Index	1/1/2013
	20.00% 4.00% 20.00% 10.00% 5.00% 10.00%	R 3000 Index MSCI ACW Ex US Index (Gross) MSCI Emerging Markets Index (Gross) Barclays Universal Bond Index Consumer Price Index + 3% NCREIF ODCE Index (Net) (AWA) (Qtr Lag) HFRI FOF Div Index (Month Lag) Private Equity Composite Citi 3 Mo T-Bill Index	7/1/2013



#### As of March 31, 2016

Composite/Manager Total Fund Target Allocation Index (I) (Cont.)	mchmark  .00% R 3000 Index  .00% MSCI ACW Ex US Index (Gross)  .00% MSCI Emerging Markets Index (Gross)  .00% Barclays Universal Bond Index  .00% Real Return Actual Allocation Index  .00% NCREIF ODCE Index (Net) (AWA) (Qtr Lag)  .00% HFRI FOF Div Index (Month Lag)  .00% Private Equity Composite  .00% Citi 3 Mo T-Bill Index	Since 11/1/2013
	.50% R 3000 Index .50% MSCI ACW Ex US Investable Market Index (Grost Barclays US Univ Bond Index .00% Barclays US Corp HY Index .00% Real Return Actual Allocation Index .00% NCREIF ODCE Index (Net) (AWA) (Qtr Lag) .00% HFRI FOF Div Index (Month Lag) .00% Private Equity Composite .00% Citi 3 Mo T-Bill Index	ss) 1/1/2016



Composite/Manager 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)	9/1/1006
	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	=///000/
	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
	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
	40 F00/	
	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
	10.0070 1.1 <u>0</u> 000 1.1001	
	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	Inception
		7/4/0044
	100.00% R 3000 Index	7/1/2011



Composite/Manager Non-U.S. Equity Composite (P)	Benchmark The custom index is calculated monthly and consists of:	Since
	100.00% BNY Mellon ADR Index	Inception
	33.00% BNY Mellon ADR Index 67.00% MSCI EAFE Index (Gross)	8/1/2001
	33.00% S&P American Depositary Receipt Index 67.00% MSCI EAFE Index (Gross)	7/1/2002
	27.00% S&P American Depositary Receipt Index 73.00% 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 EAFE Index (Gross) 10.00% MSCI Emerging Markets Index (Gross) 10.00% MSCI ACW Ex US Small Cap Index (Gross)	1/1/2009
	60.00% MSCI World Ex US Index (Gross) 20.00% MSCI ACW Ex US Index (Gross) 10.00% MSCI Emerging Markets Index (Gross) 10.00% MSCI ACW Ex US Small Cap Index (Gross)	7/1/2009
	100.00% MSCI ACW Ex US Index (Gross)	7/1/2011
	100.00% MSCI ACW Ex US Investable Market Index (Gross)	1/1/2016
Non-U.S. Equity Composite (I)	The custom index is calculated monthly and consists of:	
	100.00% BNY Mellon ADR Index	Inception
	25.00% BNY Mellon ADR Index 75.00% MSCI EAFE Index (Gross)	7/1/2001
	25.00% S&P American Depositary Receipt Index 75.00% MSCI EAFE Index (Gross)	7/1/2002
	20.00% S&P American Depositary Receipt Index 80.00% 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



Composite/Manager Non-U.S. Equity Composite (I) (Cont.)	Benchmark 100.00% MSCI ACW Ex US Index (Gross)	<u>Since</u> 7/1/2011
	100.00% MSCI ACW Ex US Investable Market Index (Gross)	1/1/2016
Fixed Income Composite (P)	The custom index is calculated monthly and consists of:	
	80.00% Barclays US Govt/Credit Bond Index 20.00% BofA ML 1-3 Year US Treasury Index	Inception
	54.00% Barclays US Govt/Credit Bond Index 27.00% Barclays US Tsry: US TIPS Index 19.00% Barclays US Agg Bond Index	7/1/2001
	38.00% Barclays US Agg Bond Index 35.00% Barclays US Govt/Credit Bond Index 27.00% Barclays US Tsry: US TIPS Index	7/1/2003
	71.43% Barclays US Agg Bond Index 28.57% Barclays US Tsry: US TIPS Index	7/1/2007
	100.00% Barclays US Unv Bond Index	7/1/2011
	50.00% Barclays US Unv Bond Index 50.00% Barclays US Corp: Hi Yld Index	1/1/2016
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
	70.00% Barclays US Tsry: US TIPS Index 30.00% Barclays US Agg Bond Index	4/1/2011
	100.00% Barclays US Unv Bond Index	7/1/2011
	50.00% Barclays US Unv Bond Index 50.00% Barclays US Corp: Hi Yld Index	1/1/2016
Real Estate Composite (P) & Real Estate Composite (I)	The custom index is calculated monthly and consists of:	
	100.00% NCREIF Property Index (Net) (AWA) (Qtr Lag)	Inception
Real Return Actual Allocation Index (P) & Real Return Actual Allocation Index (I)	The custom index is calculated monthly and consists of:	
	100.00% Consumer Price Index + 3%	Inception
	100.00% Real Return Actual Allocation Index	11/1/2013



# As of March 31, 2016

<u>Composite/Manager</u> Private Equity Composite (P) [Long Term]	Benchmark The custom index is calculated monthly and consists of:	
	60.00% S&P 1500 Composite Index 40.00% Barclays US Corp: High Yield Index	Inception
	100.00% R 3000 Index + 4% (Qtr Lag)	7/1/2011
	100.00% R 3000 Index + 3% (Qtr Lag)	1/1/2016
Private Equity Composite (P) [Short Term]	The custom index is calculated monthly and consists of:  100.00% Pension Private Equity Composite	Inception
Private Equity Composite (I) [Long Term]	The custom index is calculated monthly and consists of:	
	80.00% S&P 1500 Composite Index 20.00% Barclays US Corp: High Yield Index	Inception
	100.00% R 3000 Index + 4% (Qtr Lag)	7/1/2011
	100.00% R 3000 Index + 3% (Qtr Lag)	1/1/2016
Private Equity Composite (I) [Short Term]	The custom index is calculated monthly and consists of:	
	100.00% Insurance Private Equity Composite	Inception



# As of March 31, 2016

Composite/Manager Internal S&P 500 Index (SA)	Benchmark The custom index is calculated monthly and consists of:			
	100.00% S&P 1500 Composite Index	Inception		
	100.00% S&P 500 Index (Cap Wtd)	7/1/2011		
Waterfall (SA) Opportunistic FI Blended Index	The blended index is calculated monthly and consists of:			
Opportunistic Fi Bienaea Inaex	60.00% Barclays US Corp: High Yield Index 40.00% Barclays US ABS Floating Rate Index	Inception		
Shenkman Capital (SA) Shenkman Blended Index	The blended index is calculated monthly and consists of:			
Shenkman Biended Index	50.00% Barclays US Corp: High Yield Index 50.00% Barclays US High Yield Loans Index	Inception		
	100.00% S&P/LSTA Leveraged Loan Index	7/1/2014		
Internal TIPS (SA) Internal US TIPS Blend	The blended index is calculated monthly and consists of:			
internal OS TIPS Bienu	100.00% Barclays US Trsy: US TIPS Index	Inception		
	100.00% Barclays Global Investors US IL 1-10 Years Index	10/1/2014		
Nuveen Real Asset Income (SA) Nuveen Real Asset Custom Index	The blended index is calculated monthly and consists of:			
	33.00% S&P Global Infrastructure Index 20.00% Barclays US Corp: High Yield Index 20.00% BofA Merrill Lynch REIT Preferred Index 15.00% MSCI US REIT Index 12.00% BofA Merrill Lynch Preferred Stock, Fixed Rate Index	Inception		
Manulife Asset Mgmt (SA)	The blended index is calculated monthly and consists of:			
	100.00% Barclays Multiverse Index	Inception		
	100.00% Barclays US Unv Bond Index	1/1/2016		



Composite/Manager KERS (P) Target Allocation Index	Benchmark The blended index is calculated monthly and consists of:	
	Total Fund Target Allocation Index (P)	Inception
	22.00%       R 3000 Index         20.00%       MSCI ACW Ex US Index (Gross)         10.00%       Barclays US Agg Bond Index         5.00%       Barclays US Corp: Hi Yld Index         5.00%       Barclays Global Agg Bond Index         10.00%       Consumer Price Index + 3%         3.00%       NCREIF ODCE (Net) (Qtr Lag)         10.00%       HFRI FOF Diversified (Mth Lag)         10.00%       Private Equity Composite         5.00%       Citi 3 Mo T-Bill Index	7/1/2013
	22.00% R 3000 Index 20.00% MSCI ACW Ex US Index (Gross) 10.00% Barclays US Agg Bond Index 5.00% Barclays US Corp: Hi Yld Index 5.00% Barclays Global Agg Bond Index 10.00% Real Return Actual Allocation Index 3.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 5.00% Citi 3 Mo T-Bill Index	11/1/2013
	22.00% R 3000 Index 20.00% MSCI ACW Ex US Investable Market Index (Gross) 10.00% Barclays US Univ Bond Index 12.00% Barclays US Corp: Hi Yld Index 8.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 3.00% Citi 3 Mo T-Bill Index	1/1/2016
KERS Haz (P) Target Allocation Index, CERS (P) Target Allocation Index, &	The blended index is calculated monthly and consists of:	
CERS Haz (P) Target Allocation Index	Total Fund Target Allocation Index (P)  20.00% R 3000 Index	Inception
	20.00% MSCI ACW Ex US Index (Gross) 4.00% MSCI Emg Mkts Index (Gross) 9.00% Barclays US Agg Bond Index 5.00% Barclays US Corp: Hi Yld Index 5.00% Barclays Global Agg Bond Index 10.00% Consumer Price Index + 3% 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 2.00% Citi 3 Mo T-Bill Index	7/1/2013



Composite/Manager KERS Haz (P) Target Allocation Index, CERS (P) Target Allocation Index, & CERS Haz (P) Target Allocation Index (Cont.)	Benchmark  20.00% R 3000 Index  20.00% MSCI ACW Ex US Index (Gross)  4.00% MSCI Emg Mkts Index (Gross)  9.00% Barclays US Agg Bond Index  5.00% Barclays US Corp: Hi Yld Index  5.00% Barclays Global Agg Bond Index  10.00% Real Return Actual Allocation Index  5.00% NCREIF ODCE (Net) (Qtr Lag)  10.00% HFRI FOF Diversified (Mth Lag)  10.00% Private Equity Composite  2.00% Citi 3 Mo T-Bill Index	<u>Since</u>
	26.50% R 3000 Index 26.50% MSCI ACW Ex US Investable Market Index (Gross) 6.00% Barclays US Univ Bond Index 6.00% Barclays US Corp: Hi Yld Index 8.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 2.00% Citi 3 Mo T-Bill Index	1/1/2016
SPRS (P) Target Allocation Index	The blended index is calculated monthly and consists of:	
	Total Fund Target Allocation Index (P)	Inception
	20.00% R 3000 Index 20.00% MSCI ACW Ex US Index (Gross) 4.00% MSCI Emg Mkts Index (Gross) 8.00% Barclays US Agg Bond Index 5.00% Barclays US Corp: Hi Yld Index 5.00% Barclays Global Agg Bond Index 10.00% Consumer Price Index + 3% 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 3.00% Citi 3 Mo T-Bill Index	7/1/2013
	20.00% R 3000 Index 20.00% MSCI ACW Ex US Index (Gross) 4.00% MSCI Emg Mkts Index (Gross) 8.00% Barclays US Agg Bond Index 5.00% Barclays US Corp: Hi Yld Index 5.00% Barclays Global Agg Bond Index 10.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 3.00% Citi 3 Mo T-Bill Index	11/1/2013



Composite/Manager	Benchmark		
SPRS (P) Target Allocation Index (Cont.)	23.00% R 3000 Index 23.00% MSCI ACW Ex US Investable Market Index (Gross) 9.00% Barclays US Univ Bond Index 9.00% Barclays US Corp: Hi Yld Index 8.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 3.00% Citi 3 Mo T-Bill Index	1/1/2016	
KERS (I) Target Allocation Index	The blended index is calculated monthly and consists of:		
	Total Fund Target Allocation Index (I)	Inception	
	20.00%       R 3000 Index         20.00%       MSCI ACW Ex US Index (Gross)         4.00%       MSCI Emg Mkts Index (Gross)         10.00%       Barclays US Agg Bond Index         5.00%       Barclays US Corp: Hi Yld Index         5.00%       Barclays Global Agg Bond Index         10.00%       Consumer Price Index + 2.5%         5.00%       NCREIF ODCE (Net) (Qtr Lag)         10.00%       HFRI FOF Diversified (Mth Lag)         10.00%       Private Equity Composite         1.00%       Citi 3 Mo T-Bill Index	7/1/2013	
	20.00% R 3000 Index 20.00% MSCI ACW Ex US Index (Gross) 4.00% MSCI Emg Mkts Index (Gross) 10.00% Barclays US Agg Bond Index 5.00% Barclays US Corp: Hi Yld Index 5.00% Barclays Global Agg Bond Index 10.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 1.00% Citi 3 Mo T-Bill Index	11/1/2013	
	26.50% R 3000 Index 26.50% MSCI ACW Ex US Investable Market Index (Gross) 6.00% Barclays US Univ Bond Index 6.00% Barclays US Corp: Hi Yld Index 8.00% Real Return Actual Allocation Index 5.00% NCREIF ODCE (Net) (Qtr Lag) 10.00% HFRI FOF Diversified (Mth Lag) 10.00% Private Equity Composite 2.00% Citi 3 Mo T-Bill Index	1/1/2016	



Composite/Manager KERS Haz (I) Target Allocation Index, CERS (I) Target Allocation Index , & SPRS (I) Target Allocation Index  SPRS (I) Target Allocation Index	The blen	Benchmark The blended index is calculated monthly and consists of:  Total Fund Target Allocation Index (I)		
	20.00% 20.00% 4.00% 10.00% 5.00% 10.00% 5.00%		Inception	
	1.00%	Citi 3 Mo T-Bill Index	7/1/2013	
	4.00% 10.00% 5.00% 5.00% 10.00% 5.00% 10.00%	R 3000 Index MSCI ACW Ex US Index (Gross) MSCI Emg Mkts Index (Gross) Barclays US Agg Bond Index Barclays US Corp: Hi Yld Index Barclays Global Agg Bond Index Real Return Actual Allocation Index NCREIF ODCE (Net) (Qtr Lag) HFRI FOF Diversified (Mth Lag) Private Equity Composite Citi 3 Mo T-Bill Index	11/1/2013	
		R 3000 Index MSCI ACW Ex US Investable Market Index (Gross) Barclays US Univ Bond Index Barclays US Corp: Hi Yld Index Real Return Actual Allocation Index NCREIF ODCE (Net) (Qtr Lag) HFRI FOF Diversified (Mth Lag) Private Equity Composite Citi 3 Mo T-Bill Index	1/1/2016	



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. Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager. 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:

S&P	Moody's	Explanation	S&P	Moody's	Explanation
Higher Credit Quality – Investment Grade		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	
Α	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 -**

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.

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.

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.

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.

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.

Mutual Fund Performance - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

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 100 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 more than 140 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 ≥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	Bank Loans	50
TIPS	95	Stable Value (Plan Sponsor Directed)	50
US Large Cap Equity	95	Absolute Return Strategies	35
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	Not Liquid Investments	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITS	85	Plus Only Real Estate	5
Non-US Small Cap Equity	85	Private Equity Funds of Funds	5
Emerging Markets Equity	85		
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:

#### Alpha

Absolute Return Strategies Currency Overlay

#### Capital Appreciation

Public Equity Private Equity Preferred Securities High Yield Convertible Fixed Income TALF Funds Distressed Debt

**Emerging Market Fixed Income** Value Added Real Estate Opportunistic Real Estate

### Capital Preservation

Core Fixed Income CMBS Fixed Income Asset Backed Fixed Income Domestic Core Plus Fixed Income Mortgage Backed Fixed Income International Developed Fixed Income

Cash Equivalents Stable Value

### Inflation

TIPS **Bank Loans** Core Real Estate Real Return Inflation Hedges REITS Commodities

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

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.



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