



#### **Dallas Police & Fire Pension System**

**Investment Summary**Quarter Ending **September** 30, 2016

December 8, 2016

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# Q3 2016 Market Update



## Index Performance Summary as of 09/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Sept	YTD
EM Local Credit	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	2.0%	17.1%
EM Equity	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	1.3%	16.0%
US High Yield	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.7%	15.1%
US Long Treasuries	-12.9%	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	8.2%	6.4%	-0.4%	-1.6%	14.7%
Global Credit	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	0.7%	11.1%
US Small/Mid Cap	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	0.5%	10.8%
Commodities	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	3.1%	8.9%
US Large Cap	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	0.0%	7.8%
US Credit	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.1%	5.8%
Int'l Developed Equity	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	1.2%	1.7%

S&P 500 = US Large Cap Russell 2500 = US Small/Mid Cap MSCI EAFE = International Developed Equity MSCI EM = Emerging Market Equity Barclays Agg = US Credit Barclays Long Treasury = US Long Treasuries
Barclays High Yield = US HY
WGBI = Global Credit
GBI-EM Global Diversified = EM Local Credit
Bloomberg Commodity = Commodities

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse



# Index Performance Summary as of 09/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Sept	YTD
Barclays US STRIPS 20+ Yr	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	11.4%	9.6%	-0.2%	-2.8%	21.8%
JPM GBI-EM Global Div	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	2.0%	17.1%
Barclays US Long Credit	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	6.8%	6.7%	2.3%	-1.1%	16.5%
MSCI EM	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	1.3%	16.0%
Alerian MLP	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	-4.2%	19.7%	1.1%	1.9%	15.9%
Barclays US Govt/Credit Long	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	7.3%	6.5%	1.2%	-1.3%	15.7%
Barclays US Corporate HY	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.7%	15.1%
JPM EMBI Global Diversified	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	5.0%	5.0%	4.0%	0.4%	14.8%
FTSE NAREIT Equity REITs	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	6.0%	7.0%	-1.4%	-1.8%	11.8%
Russell 2000	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	-1.5%	3.8%	9.0%	1.1%	11.5%
Citi WGBI	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	0.7%	11.1%
Russell 2500	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	0.5%	10.8%
Bloomberg Commodity	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	3.1%	8.9%
Russell 1000	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	1.2%	2.5%	4.0%	0.1%	7.9%
S&P 500	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	0.0%	7.8%
Credit Suisse Leveraged Loan	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	1.3%	2.9%	3.1%	0.9%	7.5%
MSCI ACWI	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	0.2%	1.0%	5.3%	0.6%	6.6%
Barclays US Agg Bond	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.1%	5.8%
Barclays US Agg Interm	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.3%	1.4%	0.3%	0.2%	4.1%
Barclays Municipal	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	1.7%	2.6%	-0.3%	-0.5%	4.0%
MSCI EAFE	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	1.2%	1.7%
BC US Govt/Credit 1-3 Yr	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.0%	0.7%	0.0%	0.1%	1.7%
Credit Suisse Hedge Fund	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	-2.2%	0.6%	1.6%	-	0.0%

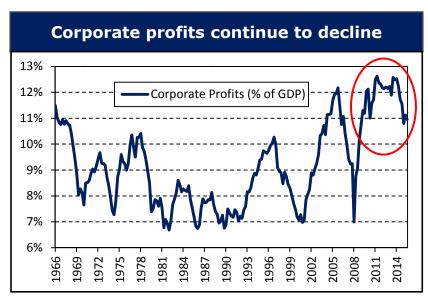
Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse



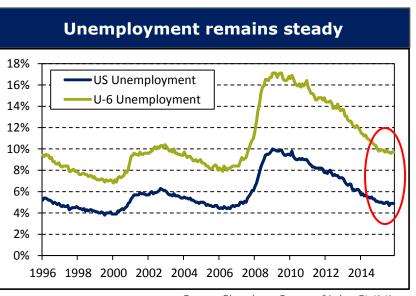
#### US Economic Indicators



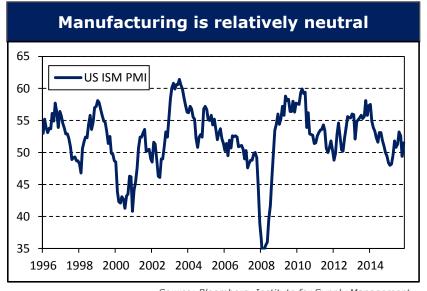
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics



Source: Bloomberg, Bureau of Economic Analysis



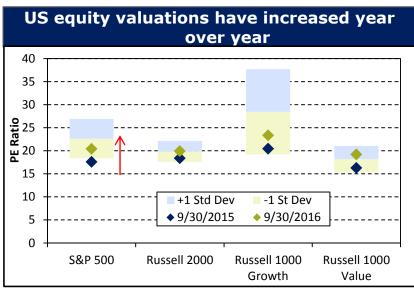
Source: Bloomberg, Bureau of Labor Statistics



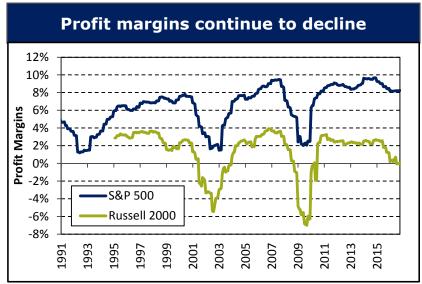
Source: Bloomberg, Institute for Supply Management



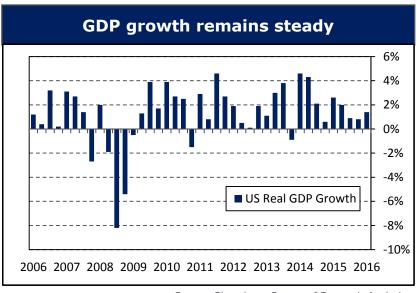
#### **US** Equity



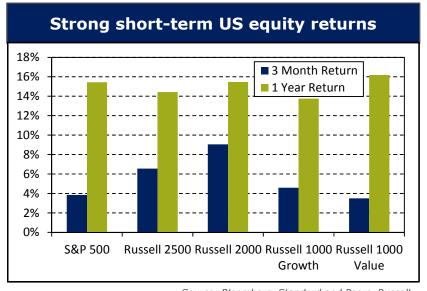
Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive\* Standard deviation calculations based on 20 years of data



Source: Bloomberg, Standard and Poors, Russell



Source: Bloomberg, Bureau of Economic Analysis



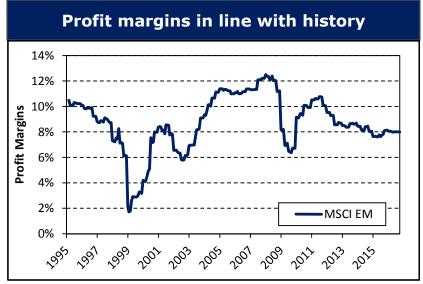
Source: Bloomberg, Standard and Poors, Russell



### **Emerging Markets Equity**

#### Regional valuations similar year over year with the exception of Brazil 30 **Brazil** PE 83.7 25 as of 09/30 **PE Ratio** 20 10 +1 Std Dev -1 St Dev ♦ 9/30/2015 9/30/2016 China Brazil South Africa Russia India South Korea

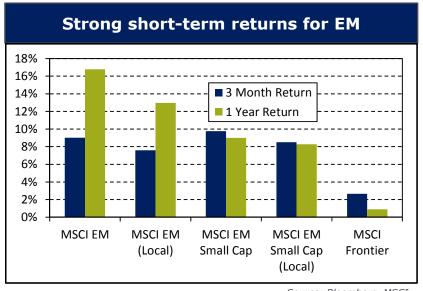
Source: Bloomberg, MSCI Standard deviation calculations based on 20 years of data, with Russia since 01/1998



Source: Bloomberg, MSCI



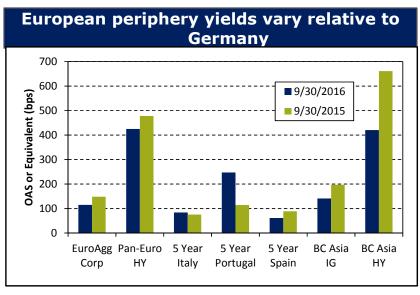
Source: Bloomberg



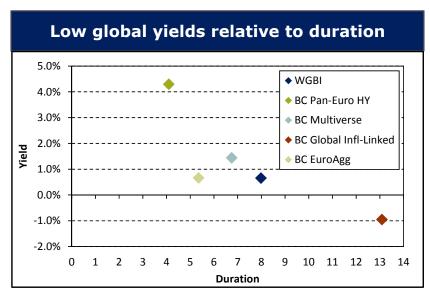
Source: Bloomberg, MSCI



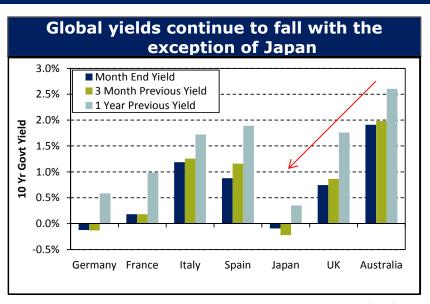
#### International Developed Fixed Income



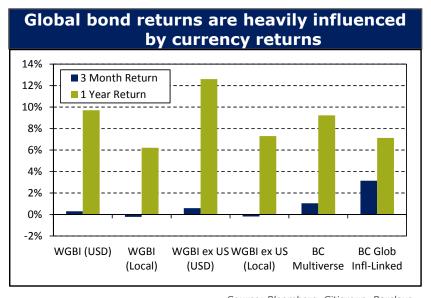
Source: Barclays, Bloomberg, \*European periphery spreads are over equivalent German Bund



Source: Bloomberg, Citigroup, Barclays



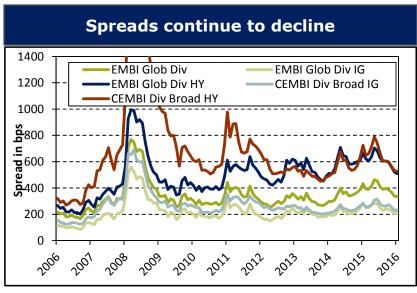
Source: Bloomberg



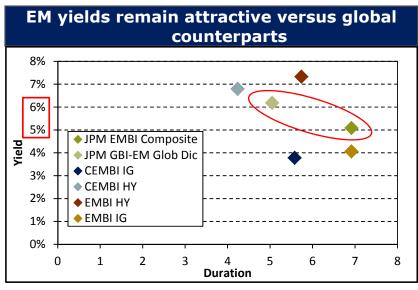
Source: Bloomberg, Citigroup, Barclays



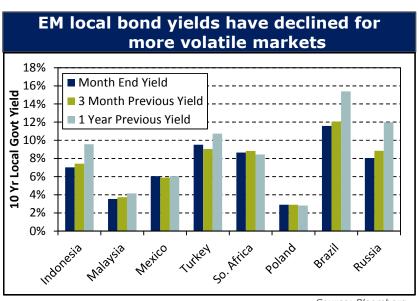
#### Emerging Markets Fixed Income



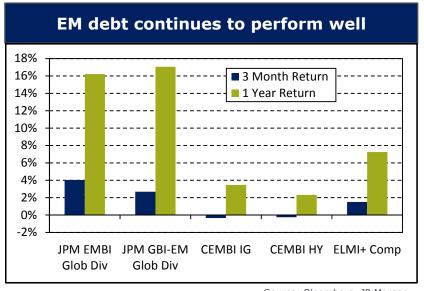
Source: Bloomberg, JP Morgan



Source: Bloomberg, JP Morgan



Source: Bloomberg



Source: Bloomberg, JP Morgan



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# **Q3 2016 Performance & Asset Allocation**



# Asset Allocation: Broad Composites

	Market Value \$	% of Portfolio	Policy %
Total Equity	729,925,600	30.5%	30%
Total Fixed Income	397,065,230	16.6%	33%
Total GAA	199,256,560	8.3%	10%
Total Real Assets	1,031,202,742	43.1%	25%
Cash	175,759,697	7.3%	2%
DPFP Debt	(140,000,000)	-5.8%	
Total DPFP	2,393,209,829	100%	100%

# Asset Allocation: By Asset Class

	Current Allocation \$	Current Allocation %	Policy %
Global Equity	296,161,826	12.4%	20%
Emerging Market Equity		0.0%	5%
Private Equity	433,763,775	18.1%	5%
Total Equity	729,925,600	30.5%	30%
Short-Term Core Bonds		0.0%	2%
High Yield	124,708,703	5.2%	5%
Bank Loans	54,958,518	2.3%	6%
Emerging Market Debt	60,038,342	2.5%	6%
Global Bonds	63,920,796	2.7%	3%
Structured & AR Credit		0.0%	6%
Private Debt	93,438,871	3.9%	5%
Total Fixed Income	397,065,230	16.6%	33%
GTAA	60,434,649	2.5%	3%
Risk Parity	107,445,803	4.5%	5%
Absolute Return	31,376,108	1.3%	2%
Total GAA	199,256,560	8.3%	10%
Real Estate	590,398,985	24.7%	12%
Real Assets – Liquid		0.0%	3%
Natural Resources	263,909,838	11.0%	5%
Infrastructure	176,893,918	7.4%	5%
Total Real Assets	1,031,202,742	43.1%	25%
Cash	175,759,697	7.3%	2%
DPFP Debt	(140,000,000)	-5.8%	
Total	2,393,209,829	100%	100%



# Asset Allocation: Portfolio Lookthrough

	Lookthrough %	Actual %	Policy %
US Equity	5.8%		
Large Cap Equity	0.5%		
Small/Mid Cap Equity	1.2%	1.6%	
International Equity	5.2%		
Emerging Markets Eq	0.8%		5%
Global Equity	0.0%	12.4%	20%
Private Equity	18.1%	18.1%	5%
Total Equity	31.6%		30%
Short-Term Core Bonds	0.0%		2%
High Yield	5.2%	5.2%	5%
Bank Loans	2.3%	2.3%	6%
Emerging Market Debt	2.9%	2.5%	6%
Global Bonds	5.4%	2.7%	3%
Structured & AR Credit	0.0%		6%
Private Debt	3.9%	3.9%	5%
Total Fixed Income	19.7%		33%

	Lookthrough %	Actual %	Policy %
GTAA	0.0%	2.5%	3%
Risk Parity	0.0%	4.5%	5%
Absolute Return	0.0%	1.3%	2%
Hedge Funds	2.6%		
Total GAA	2.6%		10%
Real Estate	25.3%	24.7%	12%
Real Assets – Liquid	0.0%		3%
Natural Resources	11.0%	11.0%	5%
Infrastructure	7.4%	7.4%	5%
Total Real Assets	43.7%		25%
Cash	8.3%	7.3%	2%
DPFP Debt	-5.8%	-5.8%	

#### Dallas Police & Fire Pension

# Trailing Returns: By Broad Composite

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
DPFP	2,393,209,829	100.0	2.4	91	3.3	99	-1.3	99	-2.3	99	1.8	99	3.1	99	2.0	99	6.2	Jun-96
Policy Index			4.0	22	9.2	1	12.3	1	8.3	1	10.4	8	9.0	8	6.2	9		Jun-96
Total Equity	729,925,600	30.5	3.6		5.8	-	10.8		5.6	-	10.9			-			7.3	Dec-10
Total Equity Policy Index			6.0		9.2													Dec-10
Total Fixed Income	397,065,230	16.6	2.7	40	10.7	29	7.4	63	2.7	59	6.2	21	7.8	8	5.9	28	5.9	Jul-06
Total Fixed Income Policy Index			3.5	27	10.4	33												Jul-06
Total GAA	199,256,560	8.3	3.5	53	9.1	28	9.3	30	4.0	63	5.1	90	6.1	69	-		3.4	Jul-07
Total Asset Allocation Policy Index			3.0	72	6.6	40	8.0	64	6.6	31	6.6	73	6.9	48			6.9	Jul-07
Total Real Assets	1,031,202,742	43.1	1.0		-3.1	-	-13.7	-	-9.3	-	-6.2	-		-			-5.4	Dec-10
Total Real Assets Policy Index			2.8		11.7													Dec-10
Cash Equivalents	175,759,697	7.3	0.2		1.1		1.3			-				-	-		1.3	Apr-15
91 Day T-Bills			0.1		0.2		0.2		0.1		0.1		0.1		0.8		0.2	Apr-15

Policy Indexes are calculated using policy benchmarks and weights of the underlying sub composites.

Net of fees returns shown on report are time weighted.



#### Dallas Police & Fire Pension

# Trailing Returns: By Asset Class

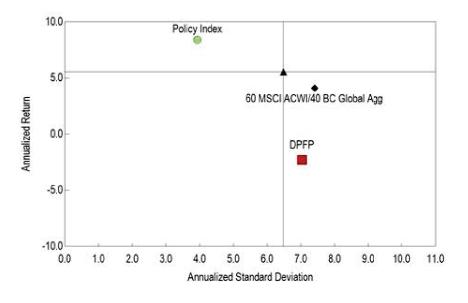
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
DPFP	2,393,209,829	100.0	2.4	91	3.3	99	-1.3	99	-2.3	99	1.8	99	3.1	99	2.0	99	6.2	Jun-96
Policy Index			4.0	22	9.2	1	12.3	1	8.3	1	10.4	8	9.0	8	6.2	9		Jun-96
Global Equity	296,161,826	12.4	6.0	33	7.1	42	12.2	44	6.1	49	10.9	64	8.9	53	4.8	51	5.1	Jul-06
MSCI ACWI Gross			5.4	43	7.1	43	12.6	40	5.7	54	11.2	59	8.3	62	4.9	48	5.2	Jul-06
Private Equity	433,763,775	18.1	1.3		3.9		3.4		-7.4		-1.7		1.1		1.8		2.6	Oct-05
Russell 3000 + 3%			5.2		10.6		18.4		13.7		19.8		16.5		10.6		10.8	Oct-05
Global Bonds	63,920,796	2.7	0.9	83	9.5	44	8.6	44	2.2	67	2.4	71					3.0	Dec-10
Barclays Global Aggregate			0.8	88	9.9	40	8.8	42	2.1	68	1.7	80	2.7	80	4.3	78	2.4	Dec-10
High Yield	124,708,703	5.2	6.1	11	16.6	8	9.6	86	2.2	83	6.8	74	-		-		6.2	Dec-10
Barclays Global High Yield			5.3	29	14.5	25	13.5	8	5.0	29	8.6	24	8.6	7	7.9	1	7.0	Dec-10
Bank Loans	54,958,518	2.3	4.0	22	9.4	45	5.7	78	-	-	-	-	-		-		3.4	Jan-14
S&P/LSTA U.S. Leveraged Loan			3.1	33	7.7	66	5.5	80	3.4	45	5.2	32	5.5	35	4.6	63	3.1	Jan-14
<b>Emerging Markets Debt</b>	60,038,342	2.5	4.5	20	17.3	19	17.5	26	2.7	60	3.9	61	-		-		3.3	Dec-10
50% JPM EMBI/50% JPM GBI-EM			3.1	63	12.9	78	13.7	76	1.4	66	3.2	67					2.8	Dec-10
Private Debt	93,438,871	3.9	-2.9	-	-1.3			-	-	-	-	-	-		-		-1.3	Jan-16
Barclays Global High Yield +2%			5.8		16.2												16.2	Jan-16
Risk Parity	107,445,803	4.5	3.3	58	13.4	1	11.8	27	4.6	54	6.2	84	-		-		6.9	Dec-10
60% MSCI ACWI/40% Barclays Global Agg			3.5	53	8.0	31	10.9	28	4.1	61	7.2	64	5.9	73	4.6	62	5.0	Dec-10
GTAA	60,434,649	2.5	3.9	25	6.1	49	8.6	44	3.0	53	5.7	46					5.3	Dec-10
60% MSCI ACWI/40% Barclays Global Agg			3.5	35	8.0	28	10.9	17	4.1	31	7.2	32	5.9	37	4.6	68	5.0	Dec-10
Absolute Return	31,376,108	1.3	3.1	40	-7.5	99	-2.9	96	3.7	37	4.9	59	-	-	-		4.5	Aug-11
HFRX Absolute Return Index			0.9	78	0.7	86	0.9	80	2.0	69	1.8	95	0.7	96	-0.4	99	1.4	Aug-11
Natural Resources	263,909,838	11.0	1.9	-	2.8		3.3	-	-	-	-	-	-		-		4.7	Apr-15
Natural Resources Benchmark			5.9		23.3		25.9		16.0		15.6						19.5	Apr-15
Infrastructure	176,893,918	7.4	-1.7		-4.9		-6.1	-	-1.1	-			-		-		0.6	Jul-12
Infrastructure Benchmark			2.7		17.2		18.8		10.0								9.1	Jul-12
Real Estate	590,398,985	24.7	1.4	-	-5.1		-21.4	-	-13.9	-	-9.1	-	-6.7		-4.3		3.6	Mar-85
NCREIF Property Index			1.8		6.1		9.2		11.3		11.2		11.1		7.2		8.1	Mar-85
Cash Equivalents	175,759,697	7.3	0.2		1.1		1.3		-	-					-		1.3	Apr-15
91 Day T-Bills			0.1		0.2		0.2		0.1		0.1		0.1		0.8		0.2	Apr-15



#### Total Fund Risk/Return

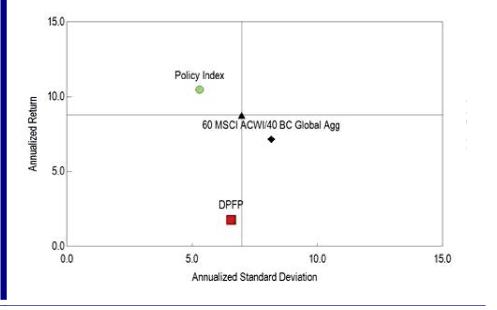
#### 3 Years Ending September 30, 2016

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
DPFP	-2.3%	99	7.0%	74
Policy Index	8.4%	1	3.9%	2
60 MSCI ACWI/40 BC Global Agg	4.1%	91	7.4%	82
InvestorForce Public DB Net Median	5.6%		6.5%	
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
DPFP		Rank		Rank
DPFP Policy Index	Ratio		Ratio RF	
=	Ratio -0.34	99	Ratio RF -0.30	99



#### 5 Years Ending September 30, 2016

Anlzd Ret	Rank	Anlzd Std Dev	Rank
1.8%	99	6.6%	36
10.5%	7	5.3%	5
7.2%	91	8.2%	88
8.8%		7.0%	
Sharpe Ratio	Rank	Sortino Ratio RF	Rank
0.26	99	0.26	99
1.96	2	2.77	5
0.87	99	1.50	97
1.27		2.08	
	1.8% 10.5% 7.2% 8.8% Sharpe Ratio 0.26 1.96 0.87	1.8% 99 10.5% 7 7.2% 91 8.8% Sharpe Rank 0.26 99 1.96 2 0.87 99	1.8% 99 6.6% 10.5% 7 5.3% 7.2% 91 8.2% 8.8% 7.0%  Sharpe Rank Sortino Ratio RF 0.26 99 0.26 1.96 2 2.77 0.87 99 1.50





# Attribution Analysis: By Asset Class – 3 Months Ending September 30, 2016

	Portfolio	Weights	Retu	urns		Attributio	n Effects By	
	DPFP	Policy	DPFP	Index	Selection	Allocation	Interaction	Total
Global Equity	12.4%	20.0%	6.044%	5.429%	0.119%	-0.063%	-0.023%	0.033%
Emerging Markets Equity	0.0%	5.0%	0.000%	9.154%	-0.454%	-0.255%	0.454%	-0.255%
Private Equity	18.1%	5.0%	1.268%	5.161%	-0.195%	0.136%	-0.443%	-0.502%
Short Term Core Bonds	0.0%	2.0%	0.000%	-0.112%	0.002%	0.082%	-0.002%	0.082%
Global Bonds	2.7%	3.0%	0.940%	0.816%	0.004%	-0.013%	0.003%	-0.007%
High Yield	5.2%	5.0%	6.149%	5.302%	0.041%	0.017%	0.009%	0.067%
Bank Loans	2.3%	6.0%	3.998%	3.075%	0.055%	0.035%	-0.037%	0.054%
Structured & A/R Credit	0.0%	6.0%	0.000%	3.614%	-0.218%	0.021%	0.218%	0.021%
Emerging Markets Debt	2.5%	6.0%	4.547%	3.080%	0.087%	0.034%	-0.055%	0.066%
Private Debt	3.9%	5.0%	-2.889%	5.816%	-0.437%	-0.026%	0.117%	-0.347%
GTAA	2.5%	3.0%	3.936%	3.500%	0.013%	0.000%	-0.001%	0.012%
Risk Parity	4.5%	5.0%	3.343%	3.500%	-0.008%	0.003%	-0.009%	-0.014%
Absolute Return	1.3%	2.0%	3.091%	0.892%	0.045%	0.026%	-0.020%	0.051%
Real Estate	24.7%	12.0%	1.426%	1.770%	-0.043%	-0.258%	-0.040%	-0.341%
Liquid Real Assets	0.0%	3.0%	0.000%	1.687%	-0.051%	0.068%	0.051%	0.068%
Natural Resources	11.0%	5.0%	1.859%	5.876%	-0.201%	0.111%	-0.230%	-0.320%
Infrastructure	7.4%	5.0%	-1.720%	2.714%	-0.227%	-0.018%	-0.092%	-0.337%
Cash Equivalents	7.3%	2.0%	0.187%	0.070%	0.002%	-0.086%	0.002%	-0.081%
DPFP Debt	0.0%	0.0%	-0.786%	0.875%	0.000%	0.183%	0.099%	0.283%
Total	105.8%	100.0%	2.489%	3.957%	-1.466%	-0.002%	0.001%	-1.468%

<sup>\*</sup>Total column may not add up due to rounding.



## Attribution Analysis: By Asset Class - 9 Months Ending September 30, 2016

	Portfolio	Weights	Reti	urns		Attributio	n Effects By	
	DPFP	Policy	DPFP	Index	Selection	Allocation	Interaction	Total
Global Equity	12.4%	20.0%	7.139%	7.090%	0.038%	-0.103%	-0.018%	-0.084%
Emerging Markets Equity	0.0%	5.0%	0.000%	16.356%	-0.857%	-0.349%	0.857%	-0.349%
Private Equity	18.1%	5.0%	3.937%	10.586%	-0.284%	0.090%	-0.662%	-0.855%
Short Term Core Bonds	0.0%	2.0%	0.000%	1.324%	-0.028%	0.175%	0.028%	0.175%
Global Bonds	2.7%	3.0%	9.457%	9.850%	-0.009%	0.015%	0.009%	0.015%
High Yield	5.2%	5.0%	16.621%	14.494%	0.102%	0.040%	0.029%	0.171%
Bank Loans	2.3%	6.0%	9.408%	7.722%	0.168%	0.185%	-0.113%	0.240%
Structured & A/R Credit	0.0%	6.0%	0.000%	5.817%	-0.360%	0.250%	0.360%	0.250%
Emerging Markets Debt	2.5%	6.0%	17.344%	16.115%	0.066%	-0.239%	-0.037%	-0.210%
Private Debt	3.9%	5.0%	-1.252%	16.182%	-0.864%	-0.094%	0.244%	-0.714%
GTAA	2.5%	3.0%	6.141%	8.023%	-0.058%	-0.020%	-0.038%	-0.116%
Risk Parity	4.5%	5.0%	13.440%	8.023%	0.257%	-0.038%	0.158%	0.378%
Absolute Return	1.3%	2.0%	-7.512%	0.659%	-0.166%	0.078%	0.064%	-0.024%
Real Estate	24.7%	12.0%	-5.058%	6.131%	-1.361%	-0.578%	-1.555%	-3.494%
Liquid Real Assets	0.0%	3.0%	0.000%	5.012%	-0.155%	0.150%	0.155%	0.150%
Natural Resources	11.0%	5.0%	2.797%	23.336%	-0.664%	1.026%	-1.591%	-1.230%
Infrastructure	7.4%	5.0%	-4.861%	17.189%	-1.074%	0.089%	-0.605%	-1.591%
Cash Equivalents	7.3%	2.0%	1.143%	0.199%	0.020%	-0.176%	0.007%	-0.150%
DPFP Debt	0.0%	0.0%	-0.919%	2.584%	0.000%	0.792%	0.222%	1.014%
Total	105.8%	100.0%	3.375%	9.967%	-5.230%	1.293%	-2.485%	-6.423%

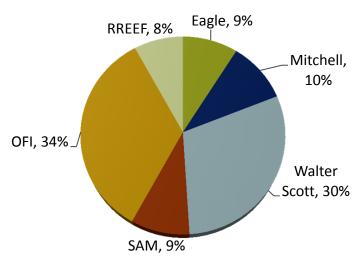
<sup>\*</sup>Total column may not add up due to rounding.



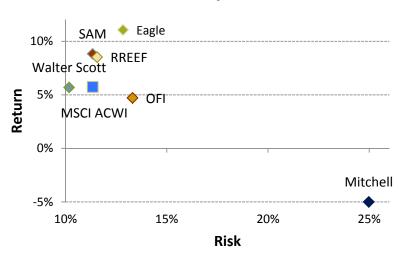
# Global Public Equity: Composite Overview

Manager	Benchmark	Descriptions
Eagle	Russell 2000	US Small Cap
Mitchell	DJ Oil & Gas (EW)	Concentrated energy
OFI	MSCI ACWI	Growth
Pyramis	MSCI ACWI	Core
RREEF	FTSE EPRA/NAREIT Gbl.	Global REITS
SAM	MSCI ACWI	Sustainability theme
Walter Scott	MSCI ACWI	Growth

#### **Global Equity Managers**



### 3-Year Risk/Return



\*May not add to 100% due to rounding.



#### Dallas Police & Fire Pension

### DPFP

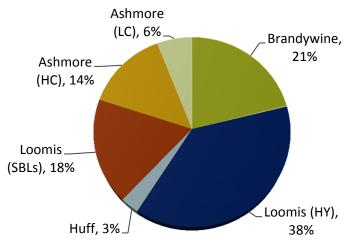
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	2,393,209,829	100.0	2.4	3.3	-1.3	-2.3	1.8	3.1	2.0	6.2	Jun-96
Policy Index InvestorForce Public DB Net Rank			4.0 91	9.2 99	12.3 99	8.3 99	10.4 99	9.0 99	6.2 99	 74	Jun-96 Jun-96
Global Equity	296,161,826	12.4	6.0	7.1	12.2	6.1	10.9	8.9	4.8	5.1	Jul-06
MSCI ACWI Gross eA All Global Equity Net Rank			5. <i>4</i> 33	7.1 42	12.6 44	5.7 49	11.2 64	8.3 53	4.9 51	5.2 51	Jul-06 Jul-06
Eagle Asset	25,877,602	1.1	10.7	16.2	20.8	11.1	16.7	13.9	9.1	9.7	Feb-05
Russell 2000 eA US Small Cap Equity Net Rank			9.0 15	11.5 10	15.5 9	6.7 3	15.8 30	12.5 28	7.1 17	7.6 12	Feb-05 Feb-05
Pyramis	294,953	0.0	4.0	3.7	9.0	5.3	11.2	7.7	4.4	7.9	Mar-02
MSCI ACWI Gross eA All Global Equity Net Rank			5. <i>4</i> 63	7.1 72	12.6 69	5.7 60	11.2 58	8.3 71	4.9 63	6.8 46	Mar-02 Mar-02
Walter Scott	89,417,755	3.7	3.1	7.8	13.6	5.7	11.2			8.2	Dec-09
MSCI ACWI Gross eA All Global Equity Net Rank			5.4 75	7.1 36	12.6 32	5.7 55	11.2 59	8.3	4.9 	8.2 61	Dec-09 Dec-09
OFI	100,296,991	4.2	9.3	0.3	6.3	4.7	12.1	9.2		3.9	Oct-07
MSCI ACWI Gross			5.4	7.1	12.6	5.7	11.2	8.3	4.9	2.9	Oct-07
eA All Global Equity Net Rank			10	94	89	66	43	49		40	Oct-07
RREEF Global REIT	23,752,399	1.0	0.9	9.8	15.4	8.5	9.1	13.9	3.1	12.8	Feb-99
FTSE EPRA/NAREIT Global eA Global REIT Net Rank			1.3 76	10.2 27	14.9 22	7.8 66	12.7 99	10.4 1	3.9 99	9.8	Feb-99 Feb-99
Mitchell Group	30,750,907	1.3	5.6	28.2	21.9	-5.0	4.2	4.0	6.1	10.1	Oct-01
Dow Jones Equal Wtd. Oil & Gas eA All Global Equity Net Rank			4.9 41	17.7 2	10.2 6	-13.6 98	-1.0 96	-3.4 93	-3.9 30	4.3 24	Oct-01 Oct-01
Sustainable Asset Management	25,771,219	1.1	5.8	14.4	21.8	8.8	14.1	9.5		11.4	Nov-08
MSCI ACWI Gross eA All Global Equity Net Rank			5.4 36	7.1 8	12.6 6	5.7 16	11.2 16	8.3 46	4.9	10.4 40	Nov-08 Nov-08



#### Global Fixed Income: Composite Overview

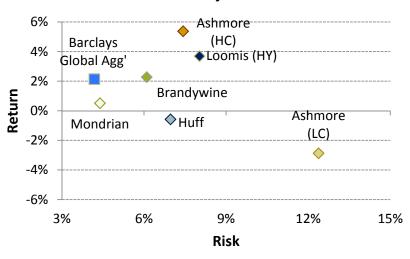
Manager	Benchmark	Asset Class	Descriptions
Brandywine	Barclays Global Aggregate	Global Bonds	Aggressive, but diversified
Mondrian	Barclays Global Aggregate	Global Bonds	Sovereign Debt w/ some Credit
Loomis (HY)	70% MLHY/30% JPM EMBI+	High Yield	Aggressive
Huff	Citi HY Market	High Yield	Diversified
Loomis (BLs)	S&P/LSTA US Levered	Bank Loans	Bank Loans (min 65% of portfolio)
Ashmore (Hard Currency)	JPM EMBI Global Diversified	Emerging Market Debt	Diversified, Hard Currency
Ashmore (Local Currency)	JPM EMBI Global Diversified	Emerging Market Debt	Diversified, Local Currency

#### **Global Fixed Income Managers**



#### \*May not add to 100% due to rounding.

#### 3-Year Risk/Return





#### Dallas Police & Fire Pension

## DPFP

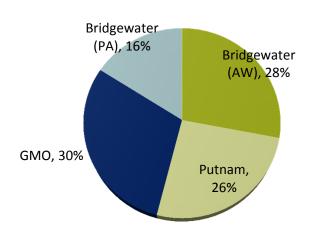
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	2,393,209,829	100.0	2.4	3.3	-1.3	-2.3	1.8	3.1	2.0	6.2	Jun-96
Policy Index			4.0	9.2	12.3	8.3	10.4	9.0	6.2		Jun-96
InvestorForce Public DB Net Rank			91	99	99	99	99	99	99	74	Jun-96
Public Fixed Income	303,626,359	12.7	4.3	14.0	10.6	2.8	6.0	-		5.5	Dec-10
Barclays Global Aggregate			0.8	9.9	8.8	2.1	1.7	2.7	4.3	2.4	Dec-10
Brandywine	63,918,993	2.7	0.9	10.4	10.0	2.3	3.4	5.5	6.1	5.2	Oct-04
Barclays Global Aggregate			0.8	9.9	8.8	2.1	1.7	2.7	4.3	4.1	Oct-04
eA All Global Fixed Inc Net Rank			83	33	29	66	59	35	26	48	Oct-04
Mondrian	1,803	0.0	-0.9	3.2	1.9	0.5	0.5	2.1	4.4	3.3	Oct-03
Barclays Global Aggregate			0.8	9.9	8.8	2.1	1.7	2.7	4.3	4.3	Oct-03
eA All Global Fixed Inc Net Rank			99	92	98	90	96	97	77	99	Oct-03
Loomis Sayles	114,533,075	4.8	7.1	17.6	10.2	3.7	7.9	9.1	7.9	9.7	Oct-98
70% ML High Yield/30% JPM EMBI Plus			4.8	15.5	14.3	6.1	8.0	8.4	7.6	8.3	Oct-98
eA Global High Yield Fixed Inc Net Rank			1	4	84	63	35	1	1	1	Oct-98
W.R. Huff High Yield	10,175,628	0.4	3.4	13.6	7.6	-0.6	4.8	8.9	6.8	6.5	Jun-96
Citi High Yield Market Index			5.5	15.6	12.7	4.8	7.9	8.4	7.3	7.2	Jun-96
eA US High Yield Fixed Inc Net Rank			86	22	88	99	95	16	58	87	Jun-96
Loomis Sayles Senior Rate and Fixed Income	54,958,518	2.3	4.0	9.4	5.7			-		3.4	Jan-14
S&P/LSTA U.S. Leveraged Loan			3.1	7.7	5.5	3.4	5.2	5.5	4.6	3.1	Jan-14
eA All Global Fixed Inc Net Rank			22	45	78					40	Jan-14
Ashmore AEMDF	41,655,569	1.7	5.4	16.8	17.4	5.4	5.7	7.0	7.3	8.5	Feb-05
JP Morgan EMBI Global Diversified			4.0	14.8	16.2	8.2	7.8	7.9	7.7	7.9	Feb-05
eA All Emg Mkts Fixed Inc Net Rank			7	29	28	44	51	34	43	27	Feb-05
Ashmore AEMLCB	18,382,773	0.8	2.8	18.7	17.8	-2.9	0.0			-0.8	Mar-11
JP Morgan GBI EM Global Diversified TR USD			2.7	17.1	17.1	-2.6	0.1	2.2	5.5	-0.3	Mar-11
eA All Emg Mkts Fixed Inc Net Rank			72	6	23	91	83			84	Mar-11



### Global Asset Allocation: Composite Overview

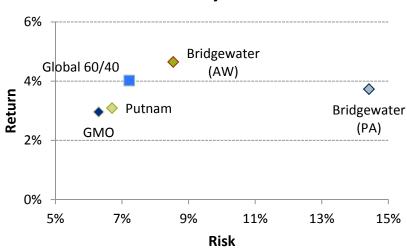
Manager	Benchmark	Asset Class	Descriptions
Bridgewater (All Weather)	Global 60/40	Risk Parity	Passive approach
Bridgewater (Pure Alpha)	HFRX Absolute Return	Absolute Return	Global Macro Hedge Fund
GMO	Global 60/40	GTAA	Unconstrained
Putnam	Global 60/40	Risk Parity	Active approach

#### **GAA Managers**



#### \*May not add to 100% due to rounding.

#### 3-Year Risk/Return





#### Dallas Police & Fire Pension

# DPFP

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	2,393,209,829	100.0	2.4	3.3	-1.3	-2.3	1.8	3.1	2.0	6.2	Jun-96
Policy Index InvestorForce Public DB Net Rank			4.0 91	9.2 99	12.3 99	8.3 99	10.4 99	9. <i>0</i> 99	6.2 99	 74	Jun-96 Jun-96
Total GAA	199,256,560	8.3	3.5	9.1	9.3	4.0	5.1	6.1		3.4	Jul-07
Total Asset Allocation Policy Index eA Global Balanced Net Rank			3. <i>0</i> 53	6.6 28	8.0 30	6.6 63	6.6 90	6.9 69		6.9 68	Jul-07 Jul-07
Bridgewater All Weather	56,575,562	2.4	3.8	14.1	12.7	4.7	5.9	9.3		5.8	Sep-07
Global 60/40			3.5	8.0	9.6	7.2	6.8	6.6		6.7	Sep-07
eA Global TAA Net Rank			27	1	8	23	45	1		6	Sep-07
Putnam	50,870,241	2.1	2.5	9.3	8.1	3.1	5.5			5.8	Dec-09
Global 60/40			3.5	8.0	9.5	7.0	6.9			7.0	Dec-09
eA Global Balanced Net Rank			74	28	61	77	89			69	Dec-09
GMO	60,434,649	2.5	3.9	6.1	8.6	3.0	5.7	5.6		4.3	Sep-07
Global 60/40			3.5	8.0	9.5	7.0	6.9	7.1		7.1	Sep-07
eA Global TAA Net Rank			25	49	44	53	46	40		48	Sep-07
Bridgewater Pure Alpha	31,376,108	1.3	3.1	-7.5	-2.9	3.7	4.9			4.5	Aug-11
HFRX Absolute Return			0.9	0.7	2.2	4.7	5.3			5.3	Aug-11
eA Global TAA Net Rank			40	99	96	37	59			31	Aug-11



#### Dallas Police & Fire Pension

#### **Footnotes**

- 1. **Mitchell Group** was included in the Global Natural Resources composite from 10/1/2001 to 3/31/2015 and included in the Global Equity composite from 4/1/2015 to present.
- 2. Sustainable Asset Management was included in the Global Natural Resources composite from 11/1/2008 to 3/31/2015 and included in the Global Equity composite from 4/1/2015 to present.
- **3. Hudson Clean Energy** was included in the Global Natural Resources composite from 1/1/2010 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and the Private Equity composite from 1/1/2016 to present.
- **4. RREEF** was included in the Real Estate composite from 2/1/1999 to 12/31/2009 and included in the Global Equity composite from 1/1/2010 to present.
- **5. Highland Crusader** was included in the Global Fixed Income composite from 7/1/2003 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- **6. Highland Capital Management** was included in the Global Fixed Income composite from 1/1/2007 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- 7. **Lone Star Fund VII, LP** was included in the Global Fixed Income composite from 10/1/2011 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- **8. Lone Star Fund VIII, LP** was included in the Global Fixed Income composite from 10/1/2013 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- **9. Lone Star Fund IX, LP** was included in the Global Fixed Income composite from 10/1/2014 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- **10. Oaktree Fund IV & 2x Loan Fund** was included in the Global Fixed Income composite from 1/1/2002 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- **11. Ashmore Capital GSSF IV** was included in the Private Markets composite from 10/1/2007 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
- 12. Global Infrastructure composite was included in the Private Markets composite history until 6/30/2012.
- **13. Private Equity composite** includes Private Credit managers until 12/31/2015. From 01/01/2016 to present the Private Equity and Credit managers are now in separate composites.
- 14. Policy index changed on 4/1/2016 from 20% MSCI ACWI, 15% S&P 500+2%, 10% Global Natural Resources Benchmark, 15% Barclays Global Agg, 20% CPI+5%, 10% CPI +5%, 15% NCREIF PI to 20% MSCI ACWI (gross), 5% MSCI EM Equity (gross), 5% Russell 3000 +3%, 2% Barclays UST 1-3 Yr, 3% Barclays Global Agg, 5% Barclays Global HY, 6% S&P Leveraged Loan Index, 6% HFRI RV: FI (50/50- Abs/Corp), 6%50% JPM EMBI/50% JPM GBI-EM, 5% Barclays Global HY +2%, 5% S&P Global Nat Res, 5% S&P Global Infra, 12% NCREIF, 3% CPI +5%, 5% 60% MSCI ACWI/40% Barclays Global Agg, 3% 60% MSCI ACWI/40% Barclays Global Agg, 2% HFRX Abs Ret Index, 2% 90 Day T-Bill.
- **15. Natural Resources** benchmark changed from the Global Natural Resources benchmark from 12/1/2010 to 12/31/2015 to the S&P Global Natural Resources benchmark 1/1/2016 to present.
- 16. Infrastructure benchmark changed from CPI +5% from 7/1/2012 to 12/31/2015 to S&P Global Infrastructure benchmark 1/1/2016 to present.
- **17. Total Asset Allocation** benchmark changed from CPI+ 5% from 7/1/2007 to 12/31/2015 to 80% 60/40 MSCI ACWI & Barclays Global Agg and 20% HFRX Absolute Return Index 1/1/2016 to present.
- **18. Bridgewater All Weather** benchmark changed from 91 Day T Bills +6% from 9/1/2007 to 12/31/2015 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
- **19. GMO** benchmark changed from CPI +5% from 9/1/2007 to 12/31/2015 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
- 20. Putnam benchmark changed from CPI +5% from 12/1/2009 to 12/31/2016 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
- 21. Bridgewater Pure Alpha benchmark changed from 91 Day T Bills +6% from 8/1/2011 to 12/31/2015 to HFRX Absolute Return Index 1/1/2016 to present.



### Policy Compliance Test: Traditional Managers

# 3 Year Rolling Excess Return Violations:

Manager	Return Rank	NEPC Recommendation
Global Equity		
Pyramis	60	N/A
OFI	66	HOLD
RREEF Gbl REIT	66	PENDING
Mitchell Group	98	PENDING
Walter Scott	55	HOLD
Public Fixed Income		
Brandywine	66	HOLD
Mondrian	90	N/A
Loomis Sayles	63	HOLD
W.R. Huff High Yield	99	N/A
Ashmore AEMLCB	91	PENDING
GAA		
Putnam	77	PENDING
GMO	53	PENDING

# 3 Year Rolling Risk-Adjusted Excess Return Violations:

	<b>Sharpe Ratio</b>	NEPC
Manager	Rank	Recommendation
Global Equity		
Pyramis	60	N/A
OFI	74	HOLD
RREEF Gbl REIT	60	PENDING
Mitchell Group	96	PENDING
Public Fixed Income	•	
Brandywine	77	HOLD
Mondrian	90	N/A
Loomis Sayles HY	76	HOLD
W.R. Huff HY	99	N/A
Ashmore AEMDF	48	PENDING
Ashmore AEMLCB	86	PENDING
GAA		
Putnam	66	PENDING
GMO	54	PENDING
Bridgewater Pure		
Alpha	77	HOLD

# Qualitative Concerns:

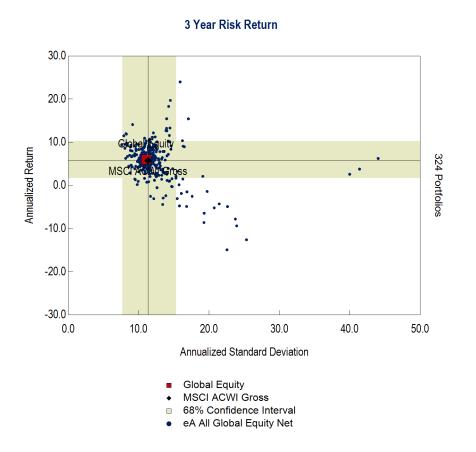
	NEPC
Manager	Status
N/A	N/A

Pending denotes that the recommendation to terminate will be discussed at the 12/8/16 Board meeting.

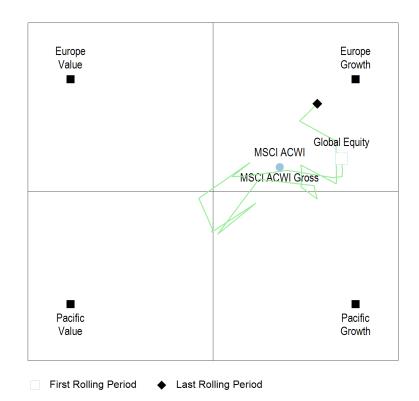


# Portfolio Review





#### 3 Year Style Analysis



#### **Characteristics**

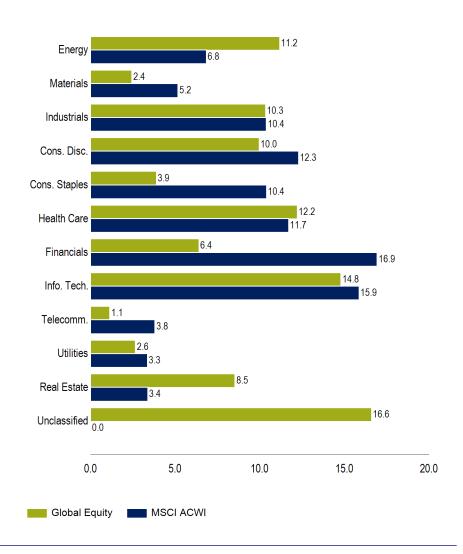
	Portfolio	MSCI ACWI
Number of Holdings	611	2,470
Weighted Avg. Market Cap. (\$B)	54.6	91.9
Median Market Cap. (\$B)	7.3	8.5
Price To Earnings	23.0	21.6
Price To Book	4.3	3.3
Price To Sales	4.0	2.7
Return on Equity (%)	16.9	15.6
Yield (%)	1.9	2.5
Beta	1.0	1.0
R-Squared	1.0	1.0

#### **Regional Allocation**

MSCI ACWI

Region Weighting	
North America ex U.S.	3.24
United States	52.50
Europe Ex U.K.	14.86
United Kingdom	6.07
Pacific Basin Ex Japan	5.30
Japan	8.00
Emerging Markets	9.73
Other	0.30

#### **Equity Sector Allocation**



#### **Top Ten Holdings**

JP MORGAN U S GOVT AGENCY SHARESMONTHLY VARIABLE 12/31/2049	16.7%
KEYENCE	1.2%
COLGATE-PALM.	1.2%
ALPHABET 'C'	1.2%
INDITEX	1.1%
LVMH	1.1%
ADOBE SYSTEMS	1.0%
WALT DISNEY	1.0%
MCGRAW HILL FINANCIAL	1.0%
SCHLUMBERGER	0.9%

#### **Equity Sector Attribution**

		Attribution Effects			R	Returns		Sector Weights	
	Total	Selection	Allocation	Interaction					
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.3%	0.2%	-0.1%	0.1%	5.8%	2.3%	10.2%	7.1%	
Materials	-0.1%	0.0%	-0.1%	0.0%	10.6%	9.8%	3.1%	4.9%	
Industrials	0.1%	0.0%	0.0%	0.0%	6.5%	6.1%	11.9%	10.4%	
Consumer Discretionary	0.1%	0.1%	0.0%	0.0%	7.5%	6.6%	11.4%	12.4%	
Consumer Staples	0.3%	0.1%	0.3%	0.0%	-0.1%	-0.3%	6.0%	11.0%	
Health Care	0.0%	0.1%	-0.1%	0.0%	1.0%	0.2%	13.9%	12.4%	
Financials	-0.4%	-0.4%	-0.1%	0.0%	5.4%	7.5%	16.8%	19.9%	
Information Technology	-0.1%	-0.2%	0.2%	-0.1%	11.6%	13.4%	16.7%	14.3%	
Telecommunication Services	0.2%	0.1%	0.2%	-0.1%	1.9%	-1.5%	1.8%	4.1%	
Utilities	0.1%	0.1%	0.1%	0.0%	-0.4%	-3.0%	2.7%	3.6%	
Real Estate	0.0%						0.0%	0.0%	
Cash	-0.3%	0.0%	-0.3%	0.0%	0.1%		5.3%	0.0%	
Portfolio	0.2%	= 0.2%	+ 0.1%	+ -0.1%	5.6%	5.3%	100.0%	100.0%	



#### **Top Positive Contributors**

#### **Top Negative Contributors**

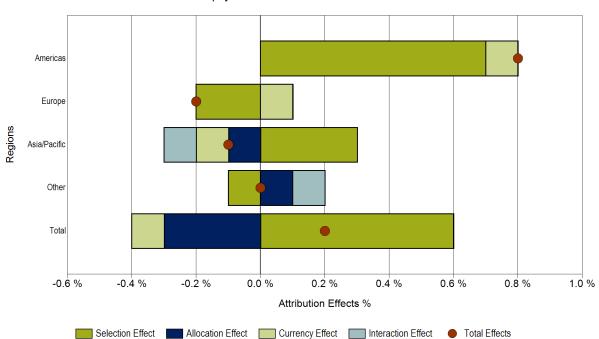
	Relative			Relative	
	Contribution %	Return %		Contribution %	Return <sup>c</sup>
MCGRAW HILL FINANCIAL	0.1%	18.3%	APPLE	-0.2%	18.9%
SAP	0.1%	21.5%	AMAZON.COM	-0.1%	17.0%
ADOBE SYSTEMS	0.1%	13.3%	MICROSOFT	-0.1%	13.3%
INDITEX	0.1%	11.6%	COGNIZANT TECH.SLTN.'A'	-0.1%	-16.6%
NIDEC	0.1%	22.0%	TOYOTA MOTOR	-0.1%	15.9%
LVMH	0.1%	12.9%	HSBC HDG. (ORD \$0.50)	-0.1%	22.4%
KOMATSU	0.1%	33.1%	BANK OF AMERICA	-0.1%	18.5%
MURATA MANUFACTURING	0.1%	17.0%	QUALCOMM	-0.1%	28.9%
EOG RES.	0.1%	16.2%	NOVO NORDISK 'B'	0.0%	-21.5%
KEYENCE	0.1%	7.6%	AETNA	0.0%	-5.3%

#### **Country Allocation** Manager Index Manager Index Allocation (USD) Allocation (USD) Return (USD) Return (USD) **Americas** Brazil\* 0.2% 0.8% -20.4% 11.4% 1.5% 3.2% 5.0% Canada 2.2% Mexico\* 0.0% 0.4% -2.3% -4.2% 3.9% **United States** 56.7% 53.1% 5.5% **Total-Americas** 58.3% 57.8% 5.3% 4.0% Europe 0.2% 15.8% Austria 0.1% 16.9% 4.4% 0.1% 0.5% 6.2% Belgium Denmark 0.7% 0.7% -14.0% -6.1% Finland 0.1% 0.3% 12.1% 7.4% France 4.6% 6.4% 3.2% 7.7% Germany 3.4% 2.9% 10.0% 9.9% Ireland 0.1% 0.2% 6.8% 7.5% 0.5% 0.6% 2.9% 2.3% Italy Luxembourg 0.0% 0.0% 1.8% 5.3% Netherlands 0.8% 1.0% -2.1% 9.6% Norway 6.4% 0.1% 0.2% 1.3% Portugal 0.0% 0.0% 9.8% 6.5% Spain 1.6% 1.0% 10.6% 9.4% Sweden 1.5% 0.9% -0.1% 7.5% Switzerland 4.2% 2.7% 3.1% 2.6% United Kingdom 4.5% 3.6% 6.4% 1.8% 5.4% **Total-Europe** 22.3% 21.7% 4.5%

# Country Allocation Versus MSCI ACWI Gross - Quarter Ending September 30, 2016

	Torono moor from Grood Quarter Enumg Coptember 66, 2016									
	Mai	nager	Index	Manager	Index					
	Allocation (	USD)	Allocation (USD)	Return (USD)	Return (USD)					
AsiaPacific										
Australia		1.3%	2.4%	3.2%	8.0%					
China*		0.3%	2.7%	22.9%	13.9%					
Hong Kong		2.3%	1.1%	6.9%	11.9%					
India*		0.4%	0.9%	4.0%	6.2%					
Japan		8.8%	7.8%	12.2%	8.5%					
Korea*		0.1%	1.5%	-4.5%	11.0%					
Philippines*		0.1%	0.2%	1.7%	-4.6%					
Singapore		0.3%	0.4%	4.9%	-0.1%					
Taiwan*		0.5%	1.3%	16.6%	12.3%					
Total-AsiaPac	ific 1	4.0%	19.2%	10.3%	9.3%					
Other										
Israel		0.1%	0.3%	-7.5%	-2.1%					
Total-Other		0.1%	1.4%	-7.5%	3.8%					
Totals										
Developed	g	3.1%	89.5%	5.8%	4.9%					
Emerging*		1.5%	10.5%	8.3%	9.1%					
Cash		5.3%		0.1%						

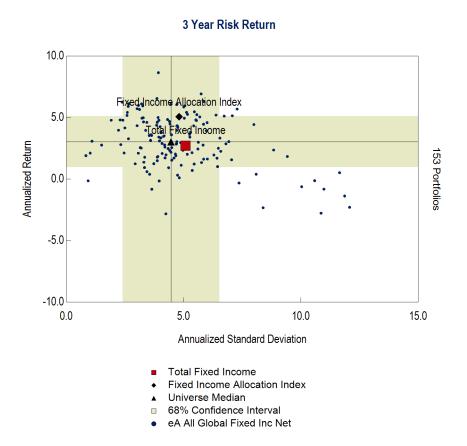
Global Equity Performance Attribution vs. MSCI ACWI Gross



	Returns and Weights					Attribution Effects					
	Manager	Index	Manager	Index	Selection	Allocation	Currency	Interaction	Total		
	Return	Return	Weight	Weight	Effect	Effect	Effect	Effect	Effects		
Totals											
Americas	5.3%	4.0%	58.3%	57.8%	0.7%	0.0%	0.1%	0.0%	0.8%		
Europe	4.5%	5.4%	22.3%	21.7%	-0.2%	0.0%	0.1%	0.0%	-0.2%		
Asia/Pacific	10.3%	9.3%	14.0%	19.2%	0.3%	-0.1%	-0.1%	-0.1%	-0.1%		
Other	-7.5%	3.8%	0.1%	1.4%	-0.1%	0.1%	0.0%	0.1%	0.0%		
Cash	0.1%		5.3%	0.0%	0.0%	-0.3%	0.0%	0.0%	-0.3%		
Total	5.6%	5.3%	100.0%	100.0%	0.6%	-0.3%	-0.1%	0.0%	0.2%		
Totals											
Developed	5.8%	4.9%	93.1%	89.5%	0.8%	0.0%	0.1%	0.0%	0.9%		
Emerging*	8.3%	9.1%	1.5%	10.5%	0.0%	-0.2%	-0.1%	0.0%	-0.4%		
Cash	0.1%		5.3%	0.0%	0.0%	-0.3%	0.0%	0.0%	-0.3%		



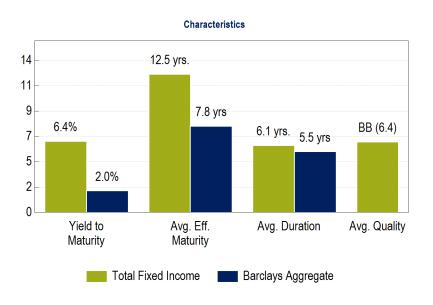
#### Total Fixed Composite

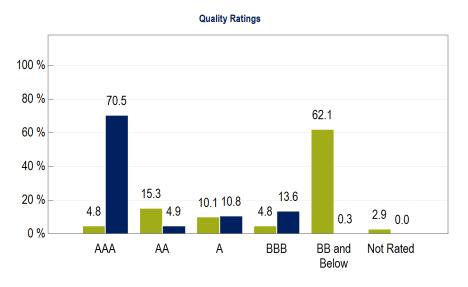


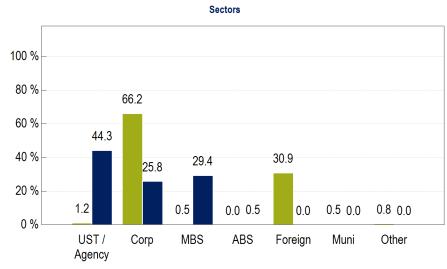
#### 3 Year Style Analysis



#### Total Fixed Composite









## Manager Role in Portfolio

Eagle manages the domestic small cap portfolio

## Organizational Profile

- Eagle Asset Management was founded in 1976 and is a wholly owned subsidiary of Raymond James Financial, Inc. Eagle became a Registered Investment Advisor in 1984.
- Retail products form the core of their business

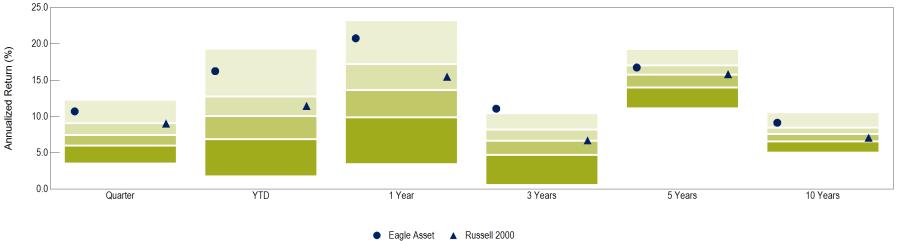
## Investment Strategy Commentary

- Fundamental, bottom-up approach
- Seeks companies with sustainable competitive advantages
- Favors companies that have strong management, conservative accounting, low-cost relative production costs, and high barriers to entry

## Due Diligence Notes

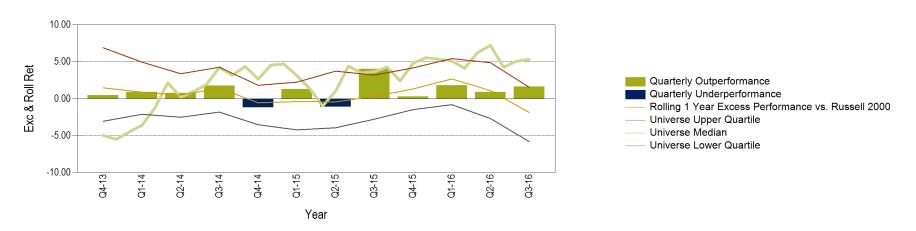
 Stacey Pittman, Assistant Portfolio Manager on the Small Cap Core Institutional product, has left the firm due to a reduction in workforce on the team.

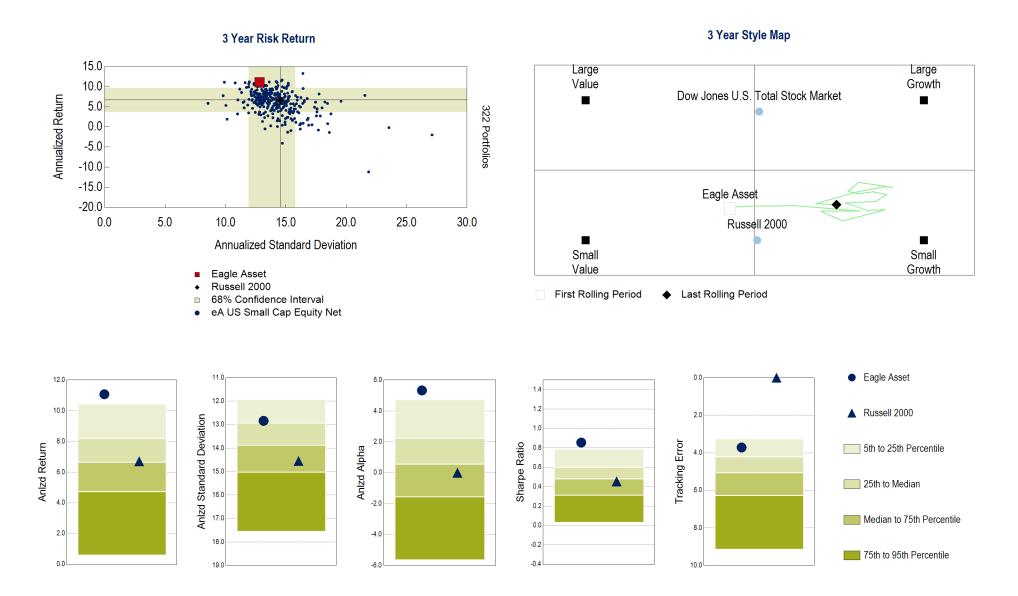




eA US Small Cap Equity Net Accounts

#### **Annualized Excess Performance**







## Characteristics

	Portfolio	Russell 2000
Number of Holdings	119	1,961
Weighted Avg. Market Cap. (\$B)	2.5	1.8
Median Market Cap. (\$B)	2.0	0.7
Price To Earnings	21.9	22.2
Price To Book	3.4	2.8
Price To Sales	3.2	2.7
Return on Equity (%)	13.0	10.2
Yield (%)	1.3	1.3
Beta		1.0
R-Squared		1.0

# **Equity Sector Attribution**

		Attribution Effects			R	eturns	Sector Weights	
	Total	Selection	Allocation	Interaction				
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.4%	0.4%	0.0%	0.0%	23.4%	10.4%	2.9%	3.1%
Materials	-0.1%	-0.1%	0.0%	0.0%	9.4%	12.6%	5.0%	4.5%
Industrials	-0.5%	-0.5%	0.0%	0.0%	5.8%	9.2%	15.5%	14.1%
Consumer Discretionary	0.1%	0.0%	0.1%	0.0%	4.0%	3.9%	11.8%	13.6%
Consumer Staples	0.1%	0.1%	0.0%	0.0%	4.1%	2.3%	2.6%	3.2%
Health Care	-0.6%	-0.6%	0.0%	0.0%	8.9%	13.4%	13.1%	13.6%
Financials	-0.6%	-0.6%	0.0%	0.0%	5.1%	7.4%	26.2%	25.8%
Information Technology	-0.2%	-0.4%	0.1%	0.0%	14.5%	16.6%	18.5%	16.6%
Telecommunication Services	0.1%		0.1%			-5.0%	0.0%	1.0%
Utilities	0.5%	-0.1%	0.5%	0.1%	-7.0%	-5.2%	1.1%	4.4%
Real Estate	0.0%						0.0%	0.0%
Cash	-0.3%	0.0%	-0.3%	0.0%	0.1%		3.1%	0.0%
Portfolio	-1.3%	= -1.8%	+ 0.6%	+ -0.1%	7.8%	9.0%	100.0%	100.0%



## **Top Positive Contributors**

## **Top Negative Contributors**

	Relative			Relative	
	Contribution %	Return %		Contribution %	Return %
ARGAN	0.5%	41.9%	SERVICEMASTER GLB.HDG.	-0.2%	-15.4%
LOGMEIN	0.5%	43.4%	CYRUSONE	-0.2%	-13.9%
CEPHEID	0.3%	71.3%	LIGAND PHARMS.'B'	-0.2%	-14.4%
CALLON PTL.DEL.	0.3%	39.8%	EXPONENT	-0.1%	-12.3%
CONVERGYS	0.3%	22.1%	CASEY'S GENERAL STORES	-0.1%	-8.5%
INTERSIL 'A'	0.2%	63.2%	LIFEPOINT HEALTH	-0.1%	-9.4%
BURLINGTON STORES	0.2%	21.5%	TEXAS ROADHOUSE	-0.1%	-14.0%
RADIAN GP.	0.2%	30.1%	ALLETE	-0.1%	-7.0%
SPORTSMANS WHSE.HDG.	0.2%	30.5%	RUTHS HOSPITALITY GROUP	-0.1%	-11.1%
LIBERTY VENTURES 'A'	0.2%	18.7%	CATO 'A'	-0.1%	-11.9%

Manager Role in Portfolio

Represents the core international equity holding (Select Int'l Fund until 12/31/2009).
 Effective January 1, 2010, transitioned to a global core equity mandate (Select Global Fund).

Organizational Profile

Fidelity Management Trust Company (and now Pyramis) was established by Fidelity
Investments (FMR Corp) in 1981 as a wholly-owned subsidiary to provide investment
management services for institutional clients. Pyramis' organizational structure is closely
linked with Fidelity Management & Research Company (FMRCo), the mutual fund division of
Fidelity responsible for retail and institutional investment management. FMTC and FMRCo
work side-by-side as one investment organization. Fidelity Investments is 100% employeeowned.

 It should be noted that there were a lot of senior management changes in late 2005, however, nothing that directly impacts this strategy.

 In May 2010, Fidelity announced that Ronald O'Hanley, former President & CEO of BNY Mellon Asset Management, would be joining the firm as President of its new Asset Management and Corporate Services division.

 In June 2011, Pyramis announced that Ravi Mantha, PM for the Select Emerging Markets portfolio since 2008, was leaving. John Chow, who currently manages US equities, will be joining the Select team.

### Investment Strategy Commentary

Select International Fund (until 12/31/2009)

 Core, bottom-up security selection combined with a quantitative, index-like country allocation strategy

 Objective of the product is to add value through security selection, while closely matching the country allocation of the MSCI EAFE Index

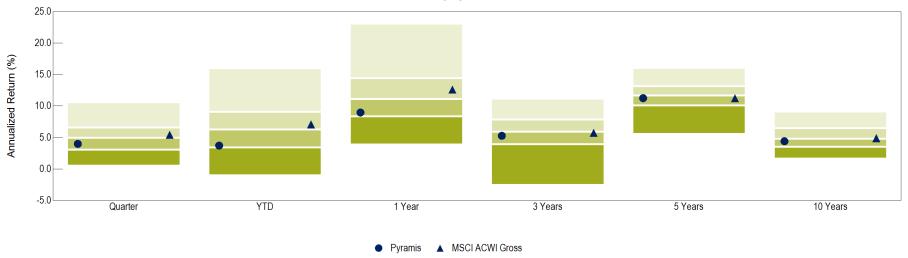
Select Global Fund as of January 1, 2010

- Global core, active, fundamental bottom-up security selection, with quantitative risk controls.
   Portfolio is constructed in a modular fashion, combining seven regional sub-portfolios (US, Canada, Japan, UK, Europe ex-UK, Japan Pacific ex-Japan, and emerging markets).
- . The benchmark also changed to the MSCI ACWI from the MSCI EAFE as of Jan. 1, 2010.

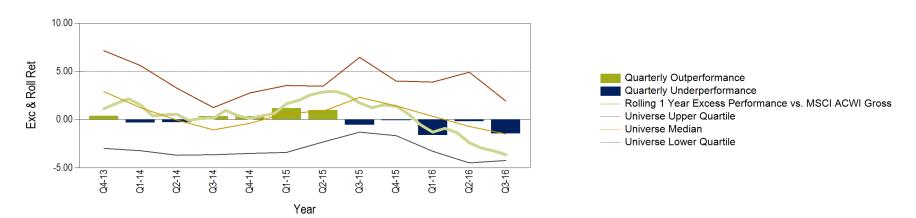
Due Diligence Notes

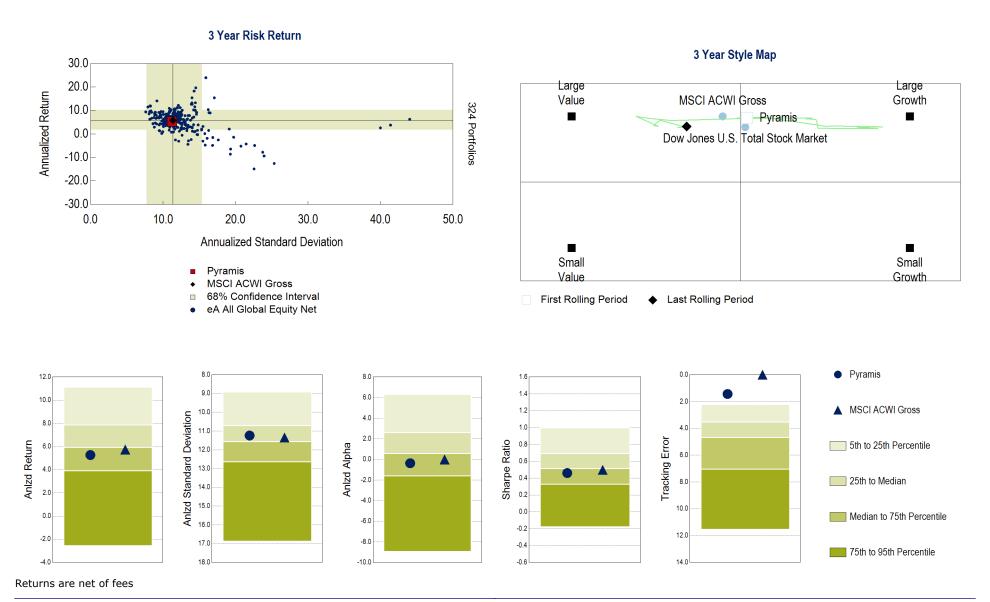
On January 7, 2013, Pyramis announced that Pam R. Holding would be joining to take on the new role of Head of Portfolio Management. She will be leading the U.S., Global/International, and Alternatives equity portfolio management teams and responsible for strategy and process, risk oversight and execution of client investments at the portfolio level and will report to Chief Investment Officer, Young Chin.





#### **Annualized Excess Performance**







### Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	125	2,470
Weighted Avg. Market Cap. (\$B)	41.5	91.9
Median Market Cap. (\$B)	21.5	8.5
Price To Earnings	25.0	21.6
Price To Book	2.3	3.3
Price To Sales	2.2	2.7
Return on Equity (%)	10.3	15.6
Yield (%)	1.9	2.5
Beta		1.0
R-Squared		1.0

## **Equity Sector Attribution**

		Attribution Effects			R	eturns	Sector Weights	
	Total	Selection	Allocation	Interaction				
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0%	0.0%	0.0%	0.0%	1.9%	2.3%	5.7%	7.1%
Materials	-0.2%	-0.1%	0.0%	0.0%	6.5%	9.8%	4.7%	4.9%
Industrials	-0.1%	-0.1%	0.0%	0.0%	4.8%	6.1%	9.5%	10.4%
Consumer Discretionary	0.1%	0.2%	0.0%	-0.1%	8.0%	6.6%	10.4%	12.4%
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-1.6%	-0.3%	10.5%	11.0%
Health Care	-0.4%	-0.4%	0.0%	0.0%	-3.3%	0.2%	12.3%	12.4%
Financials	-0.4%	-0.4%	-0.1%	0.0%	5.5%	7.5%	16.2%	19.9%
Information Technology	-0.2%	0.1%	-0.2%	-0.1%	13.9%	13.4%	11.7%	14.3%
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-0.7%	-1.5%	4.1%	4.1%
Utilities	0.0%	-0.1%	0.1%	0.0%	-6.3%	-3.0%	2.6%	3.6%
Real Estate	0.0%		-				0.0%	0.0%
Cash	-0.6%	0.0%	-0.6%	0.0%	0.1%		12.3%	0.0%
Portfolio	-1.9%	= -1.0%	+ -0.8%	+ -0.1%	3.5%	5.3%	100.0%	100.0%



## **Top Positive Contributors**

## **Top Negative Contributors**

	Relative			Relative	
	Contribution %	Return %		Contribution %	Return %
HEWLETT-PACKARD	0.1%	24.8%	SERES THERAPEUTICS	-0.1%	-57.7%
GENERAL MOTORS	0.1%	13.6%	REYNOLDS AMERICAN	-0.1%	-11.8%
SAP	0.1%	21.5%	MICROSOFT	-0.1%	13.3%
NINTENDO	0.1%	84.8%	EXTRA SPACE STRG.	-0.1%	-13.3%
ANADARKO PETROLEUM	0.1%	19.1%	TOYOTA MOTOR	-0.1%	15.9%
ACTIVISION BLIZZARD	0.1%	11.8%	AMSURG	-0.1%	-13.5%
ADOBE SYSTEMS	0.1%	13.3%	MEAD JOHNSON NUTRITION	-0.1%	-12.5%
ADIDAS	0.1%	21.4%	BRISTOL MYERS SQUIBB	-0.1%	-26.7%
APACHE	0.0%	15.3%	COGNIZANT TECH.SLTN.'A'	-0.1%	-16.6%
LYONDELLBASELL INDS.CL.A	0.0%	9.6%	PUBLIC STORAGE	0.0%	-12.0%

## Manager Role in Portfolio

- Global Equity All Cap Growth (added in Q4 2009)

## Organizational Profile

- Walter Scott was established in 1983 as an investment management firm specializing in equity investment across global mandates. In October, 2006, Walter Scott became a wholly owned subsidiary within The Mellon Financial Corporation (Mellon). Similar to Mellon's other investment management subsidiaries, Walter Scott operates autonomously in terms of business activities, investment research, portfolio management and investment administration. The investment decisions reflected within WS client portfolios reflect it independent investment research.
- In July of 2007, The Bank of New York Company, Inc. and Mellon Financial Corporation completed their merger with senior managers from both organizations heading business and support functions.

## Investment Strategy Commentary

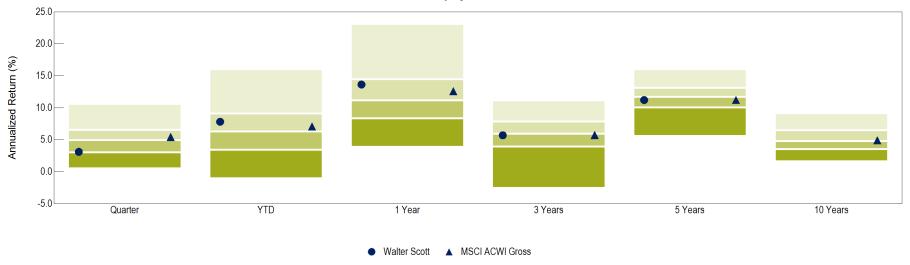
- Walter Scott's fundamental, bottoms-up approach combines detailed financial research with business and industry analysis. The primary focus is upon stock selection, finding companies capable of generating wealth internally at 20% per annum, and compounding at this rate into the future.
- Walter Scott will no own more than 5% of a company's market capitalization, although it may hold a
  greater proportion of its free float ,subject to their confidence level in the business' prospects. The final
  portfolio will be a low turnover growth portfolio that is concentrated in 40-60 names.

## Due Diligence Notes

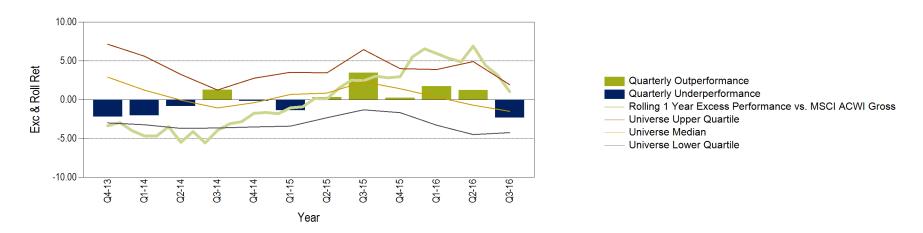
- On February 8, 2013, Walter Scott announced that Ian Clark stepped down as main board Executive Director. Mr. Clark still maintained his title of Founder and remained involved with the firm, although not in an active investment role. With Mr. Clark stepping down, the total board size moved from 11 to 10 individuals. There were no plans to replace him on the board, but thoughts were that they would do so over the next 12-18 months.
- Effective December 31, 2013, Mr. Clark formally ended his employment.
- Walter Scott has been planning for succession and the founders relinquished stock coverage and management of the research process a long time ago.
- On June 13, 2013, Dr. Kenneth Lyall passed away. Dr. Lyall held various roles throughout the development of Walter Scott & Partners Limited and more recently as our Chairman. Dr. Lyall joined the firm in its first year in 1983 and played a major role in the firm's growth from those early years. In an investment career with Walter Scott & Partners Limited spanning 30 years, Ken contributed heavily to its development and investment success.





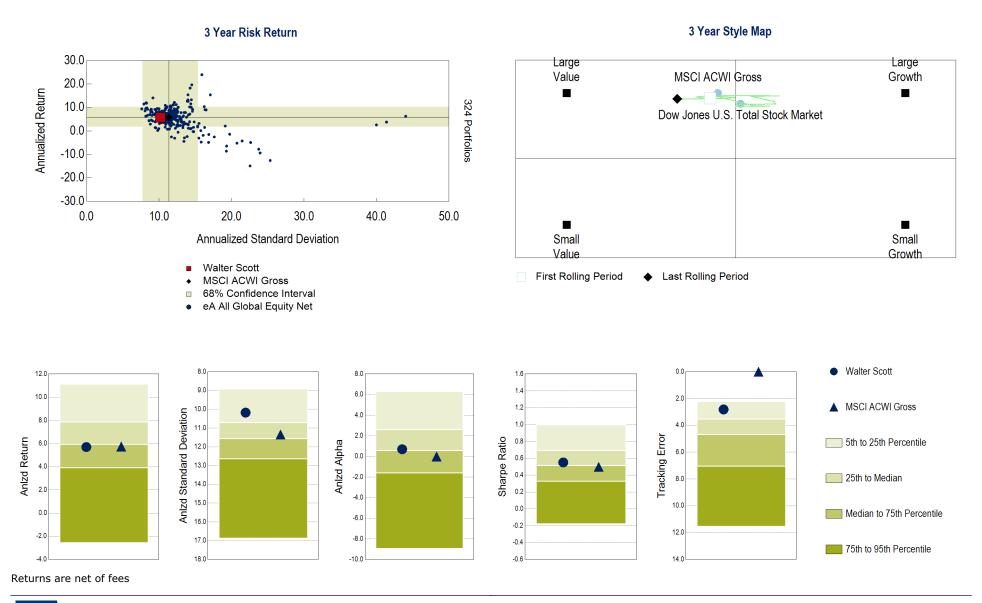


#### **Annualized Excess Performance**



Returns are net of fees







### Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	55	2,470
Weighted Avg. Market Cap. (\$B)	91.2	91.9
Median Market Cap. (\$B)	50.4	8.5
Price To Earnings	25.4	21.6
Price To Book	6.0	3.3
Price To Sales	4.0	2.7
Return on Equity (%)	22.2	15.6
Yield (%)	2.0	2.5
Beta		1.0
R-Squared		1.0

# **Equity Sector Attribution**

			Attribution Effects			eturns	Secto	Sector Weights	
	Total	Selection	Allocation	Interaction					
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.2%	0.2%	0.0%	0.0%	5.4%	2.3%	7.9%	7.1%	
Materials	0.2%	0.2%	0.0%	0.0%	14.2%	9.8%	5.2%	4.9%	
Industrials	0.1%	0.2%	0.0%	0.0%	8.3%	6.1%	6.7%	10.4%	
Consumer Discretionary	-0.7%	-0.5%	0.1%	-0.3%	2.2%	6.6%	18.5%	12.4%	
Consumer Staples	0.1%	0.0%	0.2%	0.0%	-0.5%	-0.3%	8.2%	11.0%	
Health Care	-1.2%	-0.5%	-0.5%	-0.3%	-3.2%	0.2%	22.2%	12.4%	
Financials	-0.5%		-0.4%			7.5%	0.0%	19.9%	
Information Technology	-0.6%	-0.8%	0.7%	-0.5%	7.6%	13.4%	23.7%	14.3%	
Telecommunication Services	0.3%	0.4%	0.2%	-0.2%	7.6%	-1.5%	1.8%	4.1%	
Utilities	0.2%	0.2%	0.0%	0.0%	3.5%	-3.0%	3.3%	3.6%	
Real Estate	0.0%						0.0%	0.0%	
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	<del></del>	2.5%	0.0%	
Portfolio	-1.9%	= -0.5%	+ 0.0%	+ -1.4%	3.5%	5.3%	100.0%	100.0%	



### **Top Positive Contributors**

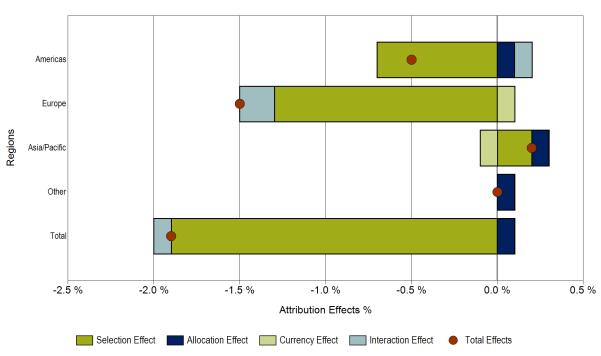
### **Top Negative Contributors**

	Relative			Relative	
	Contribution %	Return %		Contribution %	Return %
KOMATSU	0.5%	33.1%	NOVO NORDISK 'B'	-0.3%	-21.5%
SHIN-ETSU CHEMICAL	0.4%	19.9%	COGNIZANT TECH.SLTN.'A'	-0.3%	-16.6%
TAIWAN SEMICON.SPN.ADR 1:5	0.4%	16.6%	C R BARD	-0.1%	-4.5%
EOG RES.	0.4%	16.2%	RECKITT BENCKISER GROUP	-0.1%	-5.0%
MASTERCARD	0.3%	15.8%	STARBUCKS	-0.1%	-4.9%
ADOBE SYSTEMS	0.3%	13.3%	NIKE 'B'	-0.1%	-4.4%
AMPHENOL 'A'	0.3%	13.5%	ROCHE HOLDING	-0.1%	-5.4%
INTUITIVE SURGICAL	0.2%	9.6%	AUTOMATIC DATA PROC.	-0.1%	-3.4%
INDITEX	0.2%	11.6%	STRYKER	-0.1%	-2.5%
DENSO	0.2%	15.0%	TJX	-0.1%	-2.9%

Country Allocation										
	Manager	Index	Manager	Index						
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)						
Americas										
Canada	1.9%	3.2%	1.2%	5.0%						
United States	48.4%	53.1%	2.9%	3.9%						
Total-Americas	50.3%	57.8%	2.8%	4.0%						
Europe										
Denmark	1.8%	0.7%	-21.5%	-6.1%						
France	5.7%	3.2%	2.5%	6.4%						
Spain	2.1%	1.0%	11.6%	9.4%						
Sweden	1.5%	0.9%	-2.9%	7.5%						
Switzerland	9.9%	3.1%	0.0%	2.7%						
United Kingdom	4.1%	6.4%	-1.4%	3.6%						
Total-Europe	25.2%	21.7%	-0.5%	5.4%						

	Country A	Allocation		
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
Australia	2.5%	2.4%	-1.1%	8.0%
Hong Kong	6.7%	1.1%	4.0%	11.9%
Japan	10.5%	7.8%	14.5%	8.5%
Taiwan*	2.3%	1.3%	16.6%	12.3%
Total-AsiaPacific	22.1%	19.2%	9.8%	9.3%
Totals				
Developed	95.2%	89.5%	3.2%	4.9%
Emerging*	2.3%	10.5%	16.6%	9.1%
Cash	2.5%		0.1%	

Walter Scott Performance Attribution vs. MSCI ACWI Gross



	Returns and Weights					Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects	
Totals										
Americas	2.8%	4.0%	50.3%	57.8%	-0.7%	0.1%	0.0%	0.1%	-0.5%	
Europe	-0.5%	5.4%	25.2%	21.7%	-1.3%	0.0%	0.1%	-0.2%	-1.5%	
Asia/Pacific	9.8%	9.3%	22.1%	19.2%	0.2%	0.1%	-0.1%	0.0%	0.2%	
Other		3.8%	0.0%	1.4%		0.1%	0.0%		0.0%	
Cash	0.1%		2.5%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	
Total	3.5%	5.3%	100.0%	100.0%	-1.9%	0.1%	0.0%	-0.1%	-1.9%	
Totals										
Developed	3.2%	4.9%	95.2%	89.5%	-1.6%	0.0%	0.1%	-0.1%	-1.6%	
Emerging*	16.6%	9.1%	2.3%	10.5%	0.9%	-0.2%	-0.1%	-0.7%	-0.2%	
Cash	0.1%		2.5%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	



# Manager Role in Portfolio

Represents global equity allocation

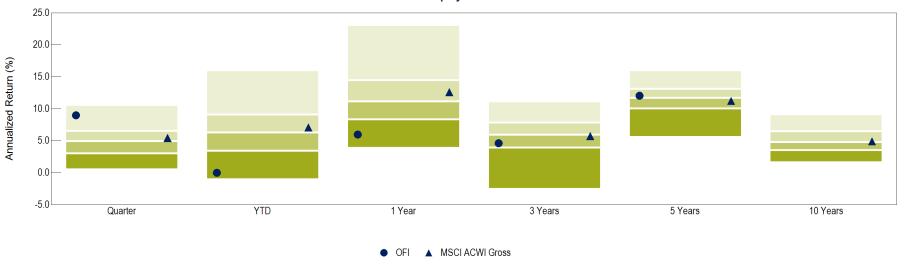
## Organizational Profile

 OFI is a wholly owned subsidiary of Oppenheimer Funds, Inc. with primary office locations in Boston, New York, Denver, and Bellefonte, PA.

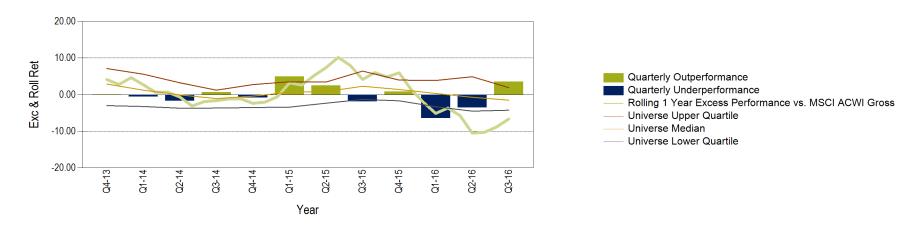
## Investment Strategy Commentary

- Fundamental bottom-up stock picking, contrarian, and theme oriented (MANTRA) with a long term view of growth
- Themes are structural (i.e. new technologies, aging population, etc.) and of long-duration. Sub-themes and industries are constantly evolving.
- Position size based on level of conviction and performance potential, and the existing country and sector exposures.
- Largest positions reflect best ideas, and not index weight.



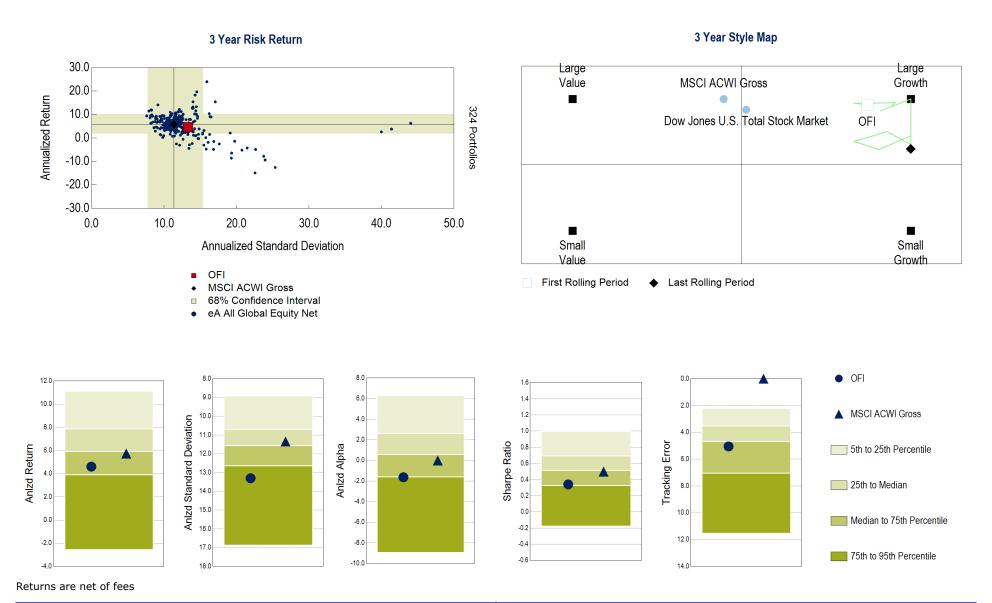


#### **Annualized Excess Performance**



Returns are net of fees







### Characteristics

	Portfolio	MSCI World
Number of Holdings	84	1,637
Weighted Avg. Market Cap. (\$B)	68.9	96.7
Median Market Cap. (\$B)	28.4	10.9
Price To Earnings	24.7	21.9
Price To Book	4.1	3.4
Price To Sales	3.8	2.7
Return on Equity (%)	16.9	15.4
Yield (%)	1.9	2.5
Beta		1.0
R-Squared		1.0

#### Equity Sector Attribution

		Attribution Effects			R	Returns		Sector Weights		
	Total	Selection	Allocation	Interaction						
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark		
Energy	0.3%	0.5%	0.2%	-0.4%	10.7%	1.6%	1.6%	7.0%		
Materials	-0.1%	0.5%	-0.2%	-0.4%	20.7%	9.7%	0.9%	4.8%		
Industrials	0.0%	-0.1%	0.0%	0.0%	5.9%	6.2%	12.8%	10.9%		
Consumer Discretionary	1.0%	0.9%	0.0%	0.2%	13.7%	6.3%	13.8%	12.6%		
Consumer Staples	0.4%	0.3%	0.3%	-0.2%	1.2%	-0.4%	5.9%	11.3%		
Health Care	0.5%	0.6%	-0.1%	0.1%	4.3%	0.1%	15.6%	13.5%		
Financials	0.6%	0.6%	0.0%	0.0%	10.2%	7.1%	18.8%	19.2%		
Information Technology	0.9%	-0.1%	0.9%	0.0%	12.8%	12.9%	24.9%	13.3%		
Telecommunication Services	0.2%	0.1%	0.1%	0.0%	2.7%	-2.3%	2.0%	3.8%		
Utilities	0.3%	0.1%	0.3%	-0.1%	1.2%	-3.4%	0.0%	3.6%		
Real Estate	0.0%						0.0%	0.0%		
Cash	-0.2%	0.0%	-0.2%	0.0%	0.1%		3.8%	0.0%		
Portfolio	4.0%	= 3.5%	+ 1.4%	+ -0.8%	8.9%	4.9%	100.0%	100.0%		



## **Top Positive Contributors**

# **Top Negative Contributors**

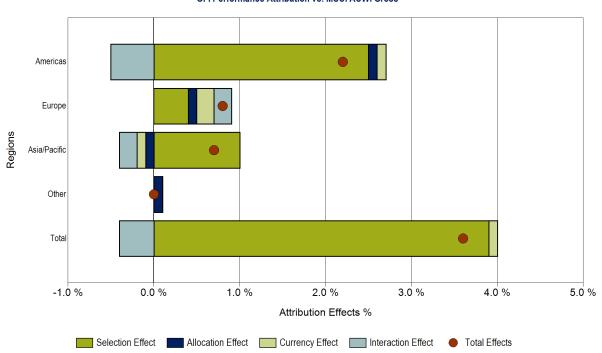
	Relative			Relative	
	Contribution %	Return %		Contribution %	Return %
MCGRAW HILL FINANCIAL	0.6%	18.3%	AETNA	-0.2%	-5.3%
SAP	0.5%	21.5%	BANCA MONTE DEI PASCHI	-0.1%	-50.4%
NIDEC	0.4%	22.0%	EMBRAER SPNS ADR 1:4	-0.1%	-20.4%
MURATA MANUFACTURING	0.4%	17.0%	ANTHEM	-0.1%	-4.1%
KERING	0.3%	24.9%	WALT DISNEY	-0.1%	-4.4%
MAXIM INTEGRATED PRDS.	0.3%	12.8%	ERICSSON 'B'	-0.1%	-4.7%
TWITTER	0.2%	36.3%	GILEAD SCIENCES	0.0%	-4.6%
BMW PREF.	0.2%	14.8%	INTUIT	0.0%	-1.2%
ALPHABET 'A'	0.2%	14.3%	DEUTSCHE BANK	0.0%	-5.3%
JD.COM 'A' ADR 1:2	0.2%	22.9%	ROCHE HOLDING	0.0%	-5.4%

# OFI

	Country A	Allocation		
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
Americas				
Brazil*	0.6%	0.8%	-20.4%	11.4%
United States	46.0%	53.1%	8.8%	3.9%
Total-Americas	46.5%	57.8%	8.5%	4.0%
Europe				
Denmark	0.3%	0.7%	5.9%	-6.1%
Finland	0.0%	0.3%	1.2%	7.4%
France	7.3%	3.2%	12.4%	6.4%
Germany	8.8%	2.9%	11.5%	9.9%
Italy	1.4%	0.6%	0.7%	2.3%
Spain	3.5%	1.0%	10.2%	9.4%
Sweden	3.1%	0.9%	-1.9%	7.5%
Switzerland	4.1%	3.1%	5.1%	2.7%
United Kingdom	4.8%	6.4%	2.4%	3.6%
Total-Europe	33.4%	21.7%	7.7%	5.4%

	Country A	Allocation		
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
China*	1.1%	2.7%	22.9%	13.9%
India*	1.3%	0.9%	4.0%	6.2%
Japan	13.9%	7.8%	14.8%	8.5%
Total-AsiaPacific	16.3%	19.2%	14.5%	9.3%
Totals				
Developed	93.3%	89.5%	9.3%	4.9%
Emerging*	2.9%	10.5%	6.2%	9.1%
Cash	3.8%		0.1%	

OFI Performance Attribution vs. MSCI ACWI Gross



	Returns and Weights					Attribution Effects				
	Manager	Index	Manager	Index	Selection	Allocation	Currency	Interaction	Total	
	Return	Return	Weight	Weight	Effect	Effect	Effect	Effect	Effects	
Totals										
Americas	8.5%	4.0%	46.5%	57.8%	2.5%	0.1%	0.1%	-0.5%	2.2%	
Europe	7.7%	5.4%	33.4%	21.7%	0.4%	0.1%	0.2%	0.2%	0.8%	
Asia/Pacific	14.5%	9.3%	16.3%	19.2%	1.0%	-0.1%	-0.1%	-0.2%	0.7%	
Other		3.8%	0.0%	1.4%		0.1%	0.0%		0.0%	
Cash	0.1%		3.8%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	
Total	8.9%	5.3%	100.0%	100.0%	3.9%	0.0%	0.1%	-0.4%	3.6%	
Totals										
Developed	9.3%	4.9%	93.3%	89.5%	3.8%	0.0%	0.2%	0.2%	4.1%	
Emerging*	6.2%	9.1%	2.9%	10.5%	-0.2%	-0.2%	-0.1%	0.1%	-0.4%	
Cash	0.1%		3.8%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	

# Manager Role in Portfolio

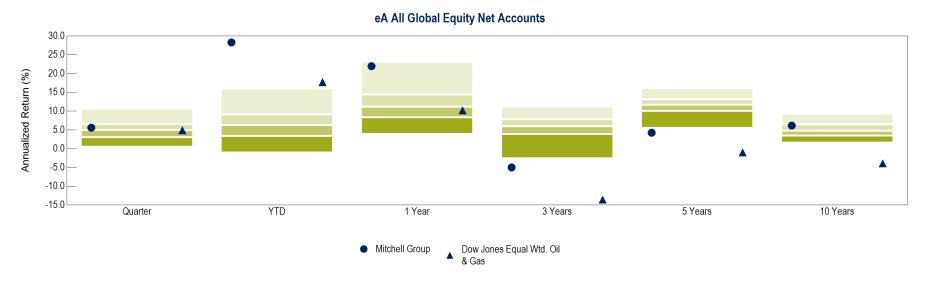
- Global Natural Resources Manager
- Modest portfolio sector play in public energy stocks
- Potential bear market and inflation hedge within the equity portfolio

# Organizational Profile

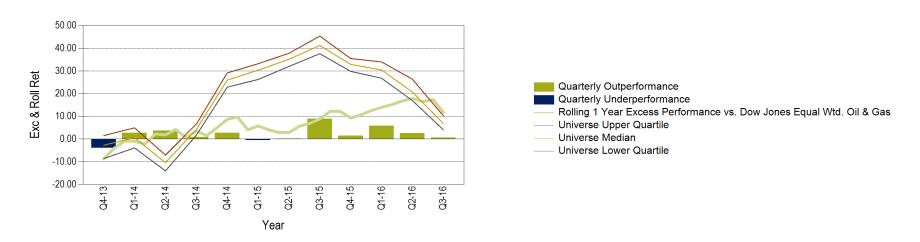
 Founded in 1989 and wholly-owned by its employees, this boutique investment firm is solely focused on publicly traded energy stocks

# Investment Strategy Commentary

- Combination top-down, bottom-up investment approach
  - Top down focus: supply/demand forecasting, evaluate and anticipate political developments both domestically and overseas
  - Bottom-up focus: detailed analysis of assets, cash flow, and financial strength

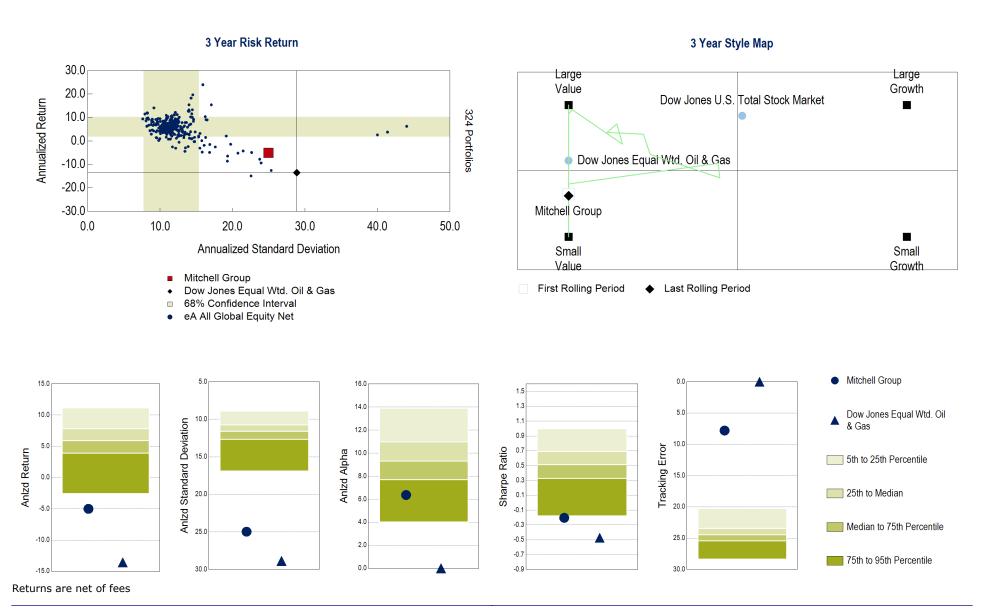


#### **Annualized Excess Performance**



Returns are net of fees







### Characteristics

	Portfolio	S&P 500 Energy
Number of Holdings	29	37
Weighted Avg. Market Cap. (\$B)	30.4	149.0
Median Market Cap. (\$B)	13.4	19.3
Price To Earnings	-4.3	13.3
Price To Book	2.5	2.2
Price To Sales	2.7	2.1
Return on Equity (%)	-3.9	3.9
Yield (%)	1.2	2.7
Beta		1.0
R-Squared		1.0

## **Equity Sector Attribution**

		Attribution Effects			R	Returns		Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark		
Energy	3.1%	3.3%	0.0%	-0.2%	5.5%	2.2%	94.0%	100.0%		
Materials	0.0%						0.0%	0.0%		
Industrials	0.0%						0.0%	0.0%		
Consumer Discretionary	0.0%						0.0%	0.0%		
Consumer Staples	0.0%						0.0%	0.0%		
Health Care	0.0%						0.0%	0.0%		
Financials	0.0%						0.0%	0.0%		
Information Technology	0.0%						0.0%	0.0%		
Telecommunication Services	0.0%						0.0%	0.0%		
Utilities	0.0%						0.0%	0.0%		
Real Estate	0.0%						0.0%	0.0%		
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%		6.0%	0.0%		
Portfolio	3.0%	= 3.3%	+ -0.1%	+ -0.2%	5.2%	2.2%	100.0%	100.0%		



**EXXON MOBIL** 

**ENERGEN** 

**APACHE** 

CIMAREX EN.

**PDC ENERGY** 

MARATHON OIL

**BAKER HUGHES** 

**DEVON ENERGY** 

### **Top Positive Contributors**

#### Relative Contribution % Return % 1.5% -6.1% 0.8% 21.9% 22.8% PIONEER NTRL.RES. 0.7% ANADARKO PETROLEUM 0.6% 19.1% 19.7% 0.6% 0.5% 12.7% 16.4% 0.5%

0.4%

0.3%

0.2%

15.3% 5.7%

12.2%

### **Top Negative Contributors**

	Relative	
	Contribution %	Return %
WILLIAMS	-0.5%	43.0%
RANGE RES.	-0.4%	-10.1%
ROYAL DUTCH SHELL A ADR 1:2	-0.4%	-7.6%
HESS	-0.3%	-10.3%
EQT	-0.2%	-6.2%
NEWFIELD EXPLORATION	-0.1%	-1.6%
EOG RES.	-0.1%	16.2%
SUPERIOR ENERGY SVS.	0.0%	-2.8%
WPX ENERGY	0.0%	41.7%
CABOT OIL & GAS 'A'	0.0%	0.3%

## Manager Role in Portfolio

Global Natural Resources manager

## Organizational Profile

- SAM USA is an SEC registered Investment Adviser fully dedicated to global, regional and thematic sustainable investing.
- SAM USA's parent company, SAM was founded in 1995 as an independent asset management company specializing in sustainability investments.
- In February 2007, Robeco Group acquired a 64% stake in SAM, with the remaining 36% held by SAM's management and employees. Since the alliance with Robeco, an employment participation plan has been created, leading to a 38% ownership of SAM by employees and management.
- On January 1, 2011, Michael Baldinger, former head of Global Clients & Marketing, replaced Sander Van Eijken as CEO, who stepped down in February of 2010. Neil Johnson was named the new head of Global Clients & Marketing.
- SAM is headquartered in New York, NY and has offices in Zurich, Switzerland, Sonoma, CA, and Boston, MA.

## Investment Strategy Commentary

- A disciplined, well-structured process that strives for an optimal risk/return profile, highlighting stock selection as the predominant return source.
- The portfolio construction is bottom-up driven. Stocks are weighted within the portfolio according to the results of the DCF valuation and their expected upside potential.
- Portfolios are monitored and rebalanced on a continuous basis.
- Even theme portfolios have strong biases in terms of sectors or risk factors (small caps), so asset selection remains an important risk and performance source.
- Risk management is executed with quantitative risk models on a monthly basis.

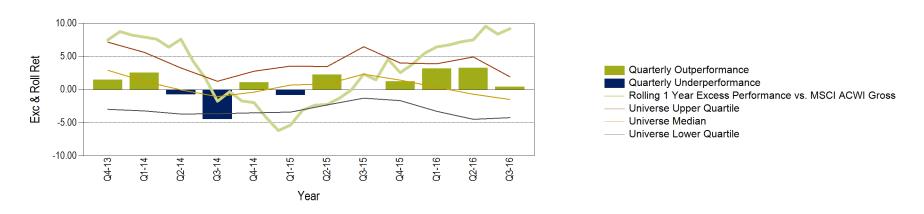
## Due Diligence Notes

 On February 19, 2013, it was announced that ORIX Corporation, a publicly-traded, Tokyo-based diversified financial services company, would be acquiring approximately 90.01% of Robeco from Rabobank. In this agreement, Rabobank will retain 9.99% of Robeco and will continue to maintain and expand Robeco's business platform.





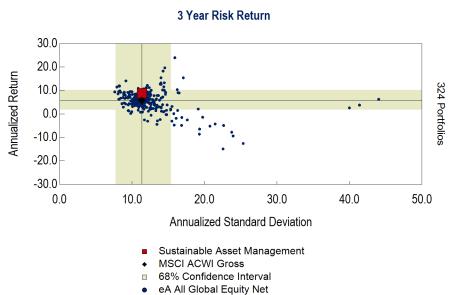
#### **Annualized Excess Performance**



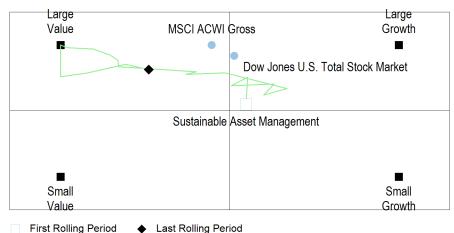
Returns are net of fees

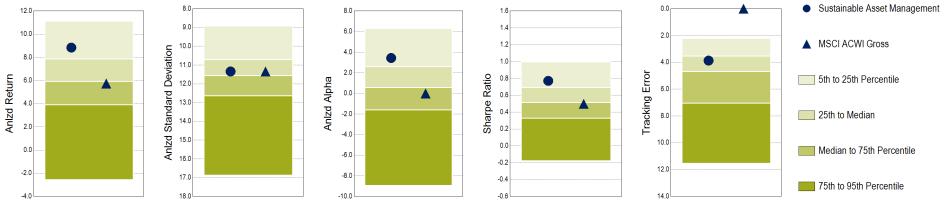


September 30, 2016









Returns are net of fees



September 30, 2016

### Characteristics

	Portfolio	MSCI World
Number of Holdings	90	1,637
Weighted Avg. Market Cap. (\$B)	13.5	96.7
Median Market Cap. (\$B)	5.0	10.9
Price To Earnings	26.3	21.9
Price To Book	3.8	3.4
Price To Sales	2.3	2.7
Return on Equity (%)	15.4	15.4
Yield (%)	1.9	2.5
Beta		1.0
R-Squared		1.0

# **Equity Sector Attribution**

		Attribution Effects			R	eturns	Secto	r Weights
	Total	Selection	Allocation	Interaction				
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.2%	-	0.2%			1.6%	0.0%	7.0%
Materials	-0.3%	-0.3%	-0.1%	0.1%	3.5%	9.7%	3.2%	4.8%
Industrials	1.4%	0.2%	0.4%	0.7%	8.0%	6.2%	49.0%	10.9%
Consumer Discretionary	-0.2%	-0.4%	-0.1%	0.4%	5.6%	6.3%	3.8%	12.6%
Consumer Staples	0.7%	1.1%	0.5%	-0.9%	10.4%	-0.4%	1.6%	11.3%
Health Care	1.1%	1.1%	0.0%	0.0%	8.5%	0.1%	13.4%	13.5%
Financials	-0.5%	-0.9%	-0.4%	0.8%	-0.7%	7.1%	0.7%	19.2%
Information Technology	-0.7%	-0.3%	-0.6%	0.1%	10.5%	12.9%	6.1%	13.3%
Telecommunication Services	0.3%		0.3%			-2.3%	0.0%	3.8%
Utilities	-0.5%	0.2%	-1.3%	0.7%	0.9%	-3.4%	19.8%	3.6%
Real Estate	0.0%						0.0%	0.0%
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%		2.3%	0.0%
Portfolio	1.5%	= 0.7%	+ -1.2%	+ 2.0%	6.4%	4.9%	100.0%	100.0%



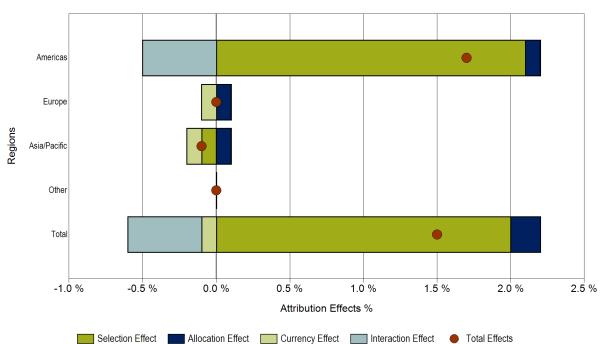
### **Top Negative Contributors**

Top Positive	Contributors			Relative	
	Relative Contribution %	Return %		Contribution %	
XYLEM	0.7%	17.8%	AQUA AMERICA	-0.1%	
THERMO FISHER SCIENTIFIC	0.4%	7.8%	AMERICAN WATER WORKS	-0.1%	
WATERS	0.4%	12.7%	UNITED UTILITIES GROUP	-0.1%	
SMITH (AO)	0.3%	12.4%	COWAY	-0.1%	
ANDRITZ	0.3%	15.4%	PENNON GROUP	-0.1%	
VEOLIA ENVIRONNEMENT	0.3%	6.5%	NOVOZYMES	-0.1%	
SEKISUI CHEMICAL	0.3%	18.0%	WASTE MANAGEMENT	-0.1%	
TRIMBLE NAVIGATION	0.3%	17.2%	CAL.WATER SER.	-0.1%	
TETRA TECH	0.2%	15.7%	ELIS	0.0%	
WEIR GROUP	0.2%	15.7%	CHINA EVERBRIGHT WATER	0.0%	

Country Allocation								
	Manager	Index	Manager	Index				
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)				
Americas								
Brazil*	0.0%	0.0%	9.7%	11.3%				
Canada	0.6%	3.6%	-2.4%	5.0%				
Mexico*	0.4%	0.0%	-4.2%	-2.2%				
United States	47.4%	59.4%	7.6%	3.9%				
Total-Americas	48.3%	63.0%	7.4%	4.0%				
Europe								
Austria	2.1%	0.1%	15.4%	16.9%				
Denmark	0.9%	0.7%	-7.8%	-6.1%				
Finland	0.8%	0.4%	13.3%	7.4%				
France	8.0%	3.6%	4.9%	6.4%				
Germany	2.5%	3.2%	9.4%	9.9%				
Netherlands	0.4%	1.2%	-4.5%	9.6%				
Sweden	0.4%	1.0%	9.6%	7.5%				
Switzerland	5.5%	3.4%	7.3%	2.7%				
United Kingdom	12.1%	7.2%	2.0%	3.6%				
Total-Europe	32.7%	23.5%	5.1%	5.3%				

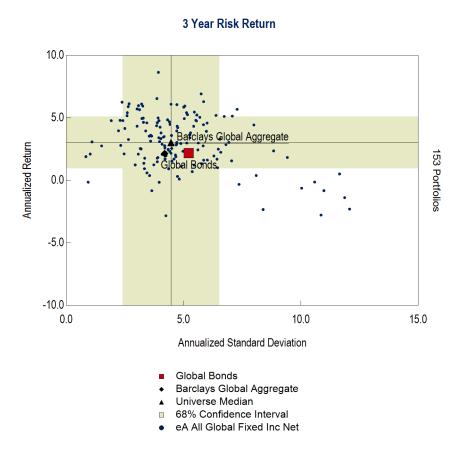
Country Allocation								
	Manager	Index	Manager	Index				
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)				
AsiaPacific								
Australia	0.1%	2.7%	69.5%	8.0%				
Hong Kong	4.9%	1.2%	8.2%	11.9%				
Japan	7.5%	8.7%	10.1%	8.5%				
Korea*	1.8%	0.0%	-4.5%	11.0%				
Philippines*	1.2%	0.0%	1.7%	-5.3%				
Singapore	1.1%	0.5%	-4.4%	-0.1%				
Total-AsiaPacific	16.6%	13.2%	6.8%	8.4%				
Totals								
Developed	94.3%	100.0%	6.8%	4.9%				
Emerging*	3.4%	0.0%	-2.3%					
Cach	2 30/		0.10/					

#### Sustainable Asset Management Performance Attribution vs. MSCI World

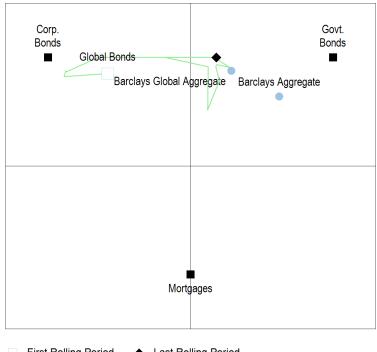


	Returns and Weights				Attribution Effects				
	Manager	Manager Index Ma	Manager	r Index	Selection	Allocation	Currency	Interaction	Total
	Return	Return	Weight	Weight	Effect	Effect	Effect	Effect	Effects
Totals									
Americas	7.4%	4.0%	48.3%	63.0%	2.1%	0.1%	0.0%	-0.5%	1.7%
Europe	5.1%	5.3%	32.7%	23.5%	0.0%	0.1%	-0.1%	0.0%	0.0%
Asia/Pacific	6.8%	8.4%	16.6%	13.2%	-0.1%	0.1%	-0.1%	0.0%	-0.1%
Other		-2.1%	0.0%	0.3%		0.0%	0.0%		0.0%
Cash	0.1%		2.3%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Total	6.4%	4.9%	100.0%	100.0%	2.0%	0.2%	-0.1%	-0.5%	1.5%
Totals									
Developed	6.8%	4.9%	94.3%	100.0%	2.1%	0.0%	-0.2%	-0.1%	1.8%
Emerging*	-2.3%		3.4%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.2%
Cash	0.1%		2.3%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%

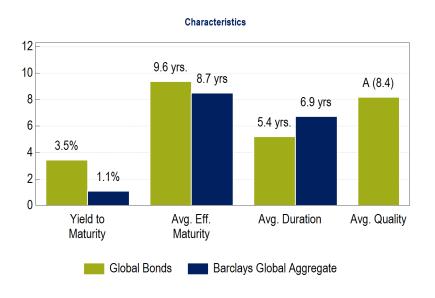


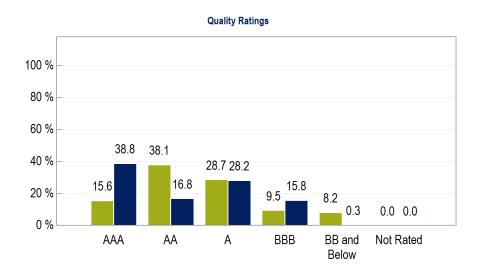


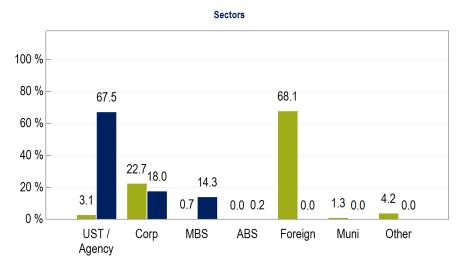
#### 3 Year Style Analysis



## Global Bonds









## Manager Role in Portfolio

One of two global fixed income managers

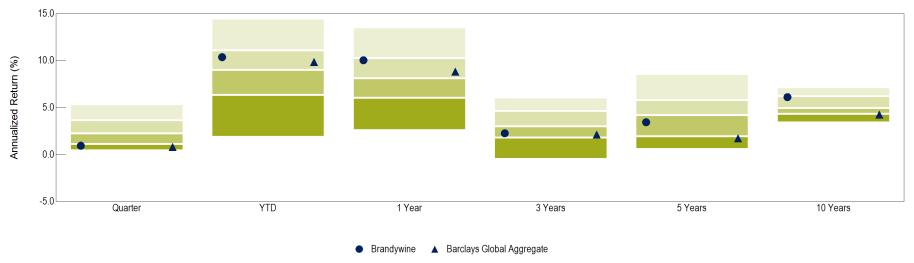
## Organizational Profile

 Brandywine Asset Management, LLC is a wholly-owned, independent subsidiary of Legg Mason, Inc. Prior to October 2001, they were Brandywine Asset Management, Inc. Of note, their senior investment professionals have non-competes with Legg Mason, Inc. for up to 6 years.

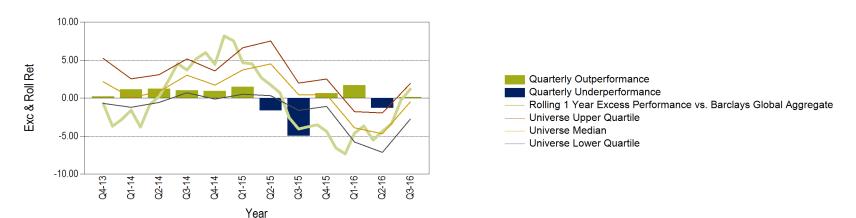
## Investment Strategy Commentary

- Brandywine attempts to invest in bonds with the highest real yield, manage currencies to protect principle and increase returns, avoid index-like weights, limit risk and patiently rotate countries
- Secular trends drive bond markets and opportunities exist to add value by identifying trends which capitalize on the dynamics of liquidity cycles and business cycles in each country
- Currency valuations that Brandywine considers extreme are hedged





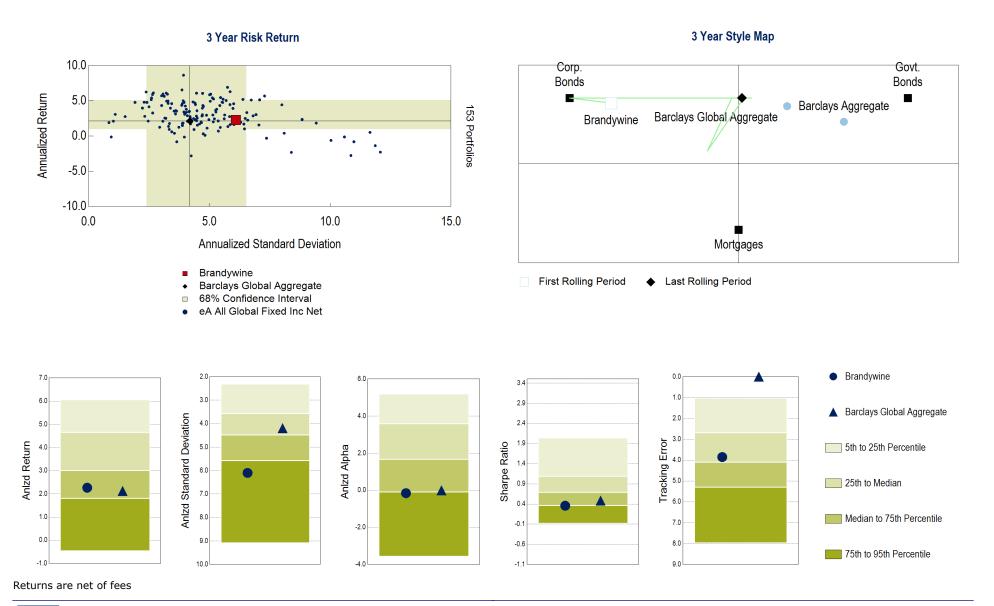
#### **Annualized Excess Performance**



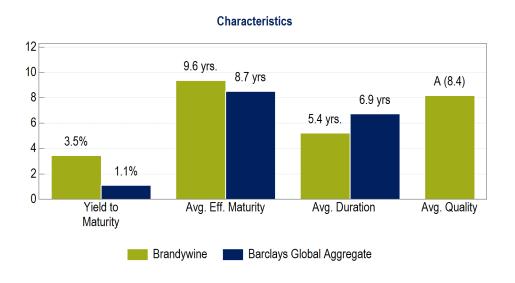
Returns are net of fees

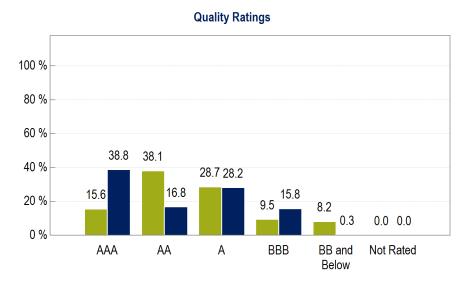


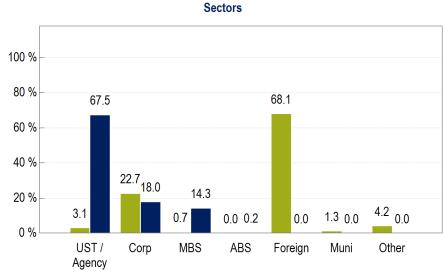
September 30, 2016









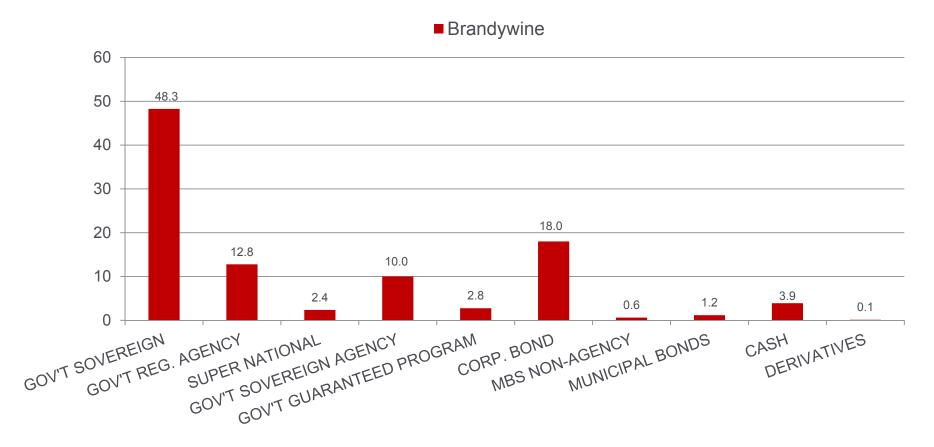


Characteristics	Brandywine
Average Coupon	4.2
Average Maturity	10.0
Modified Duration	5.2
Number of Issues	49
Yield to Maturity	3.4

Source: Brandywine, September 2016

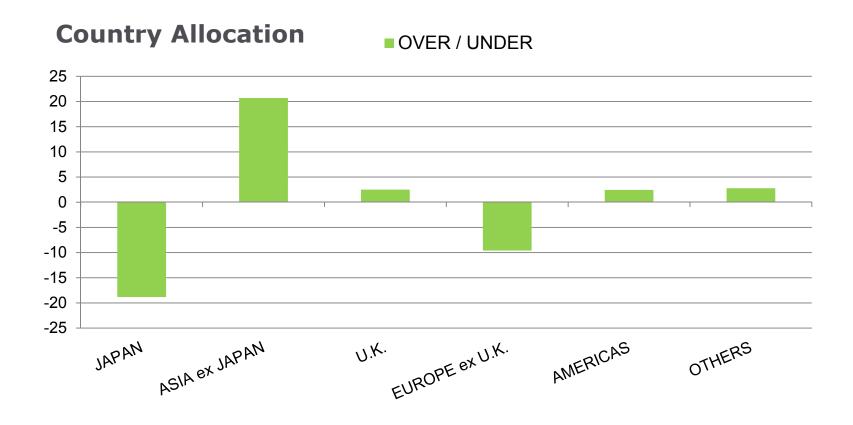


### **Sector Allocation**



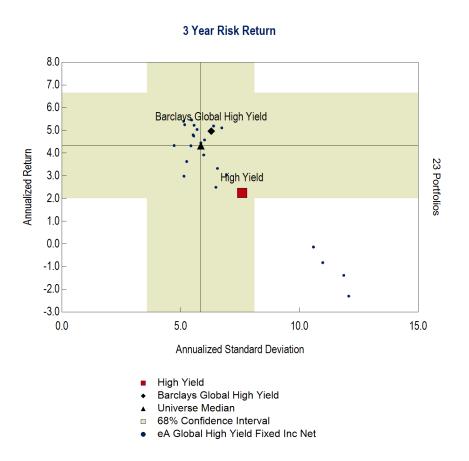
Source: Brandywine, Septmber 2016



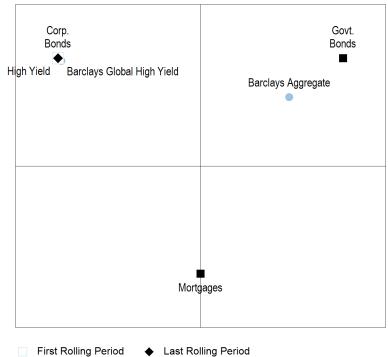


Source: Brandywine, September 2016

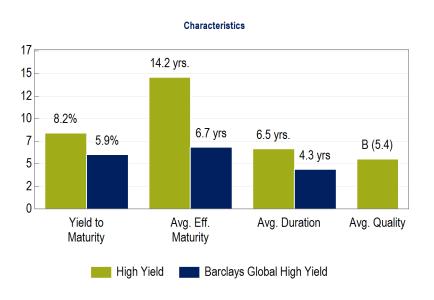


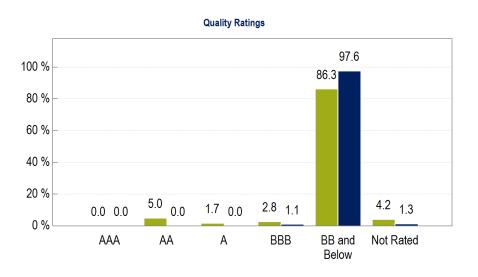


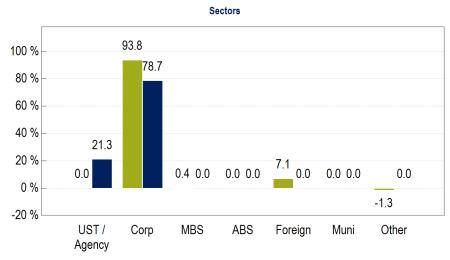
#### 3 Year Style Analysis



# High Yield









## Manager Role in Portfolio

Global opportunistic fixed income manager operating in public securities markets

# Organizational Profile

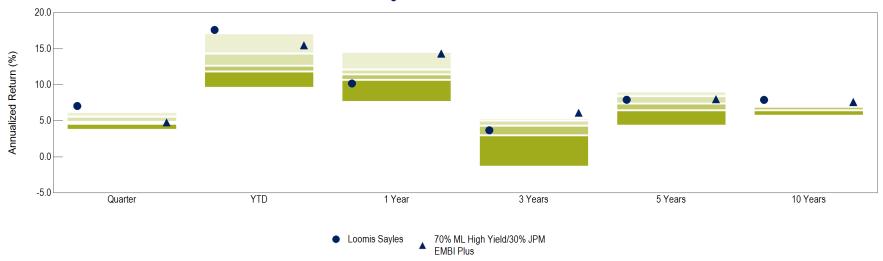
- Originally founded in 1926, Loomis Sayles is now a wholly-owned subsidiary of CDC IXIS Asset Management
- Loomis is highly regarded for its credit research skills

# Investment Strategy Commentary

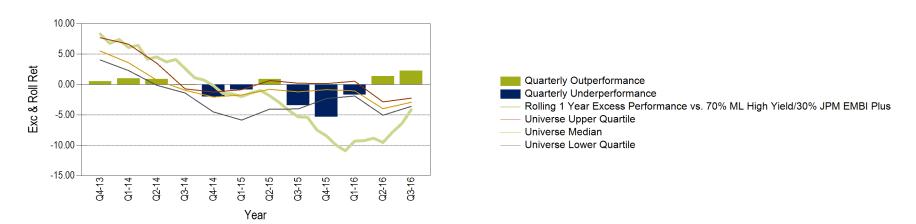
- Bottom-up selection with top-down "awareness"
- Bond Policy Committee provides top-down, macro view of market conditions
- Investment professionals from research, portfolio management and trading collaborate for bottom-up selection in eleven specific sectors



#### eA Global High Yield Fixed Inc Net Accounts

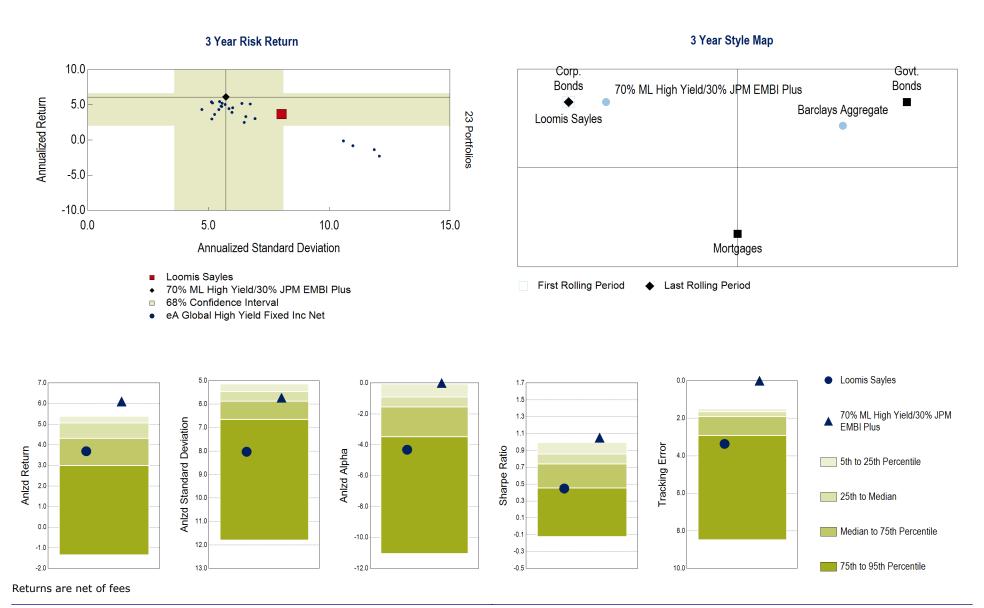


#### **Annualized Excess Performance**



Returns are net of fees





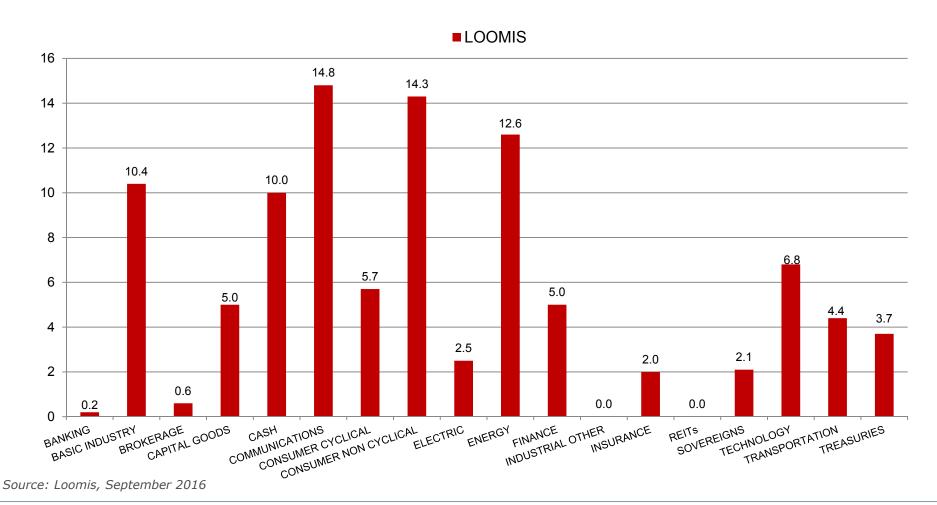


Characteristics	Loomis
Average Maturity (Yrs)	7.0
Duration(Yrs)	4.4
Average Quality	B1
Yield(%)	7.0

Source: Loomis September 2016

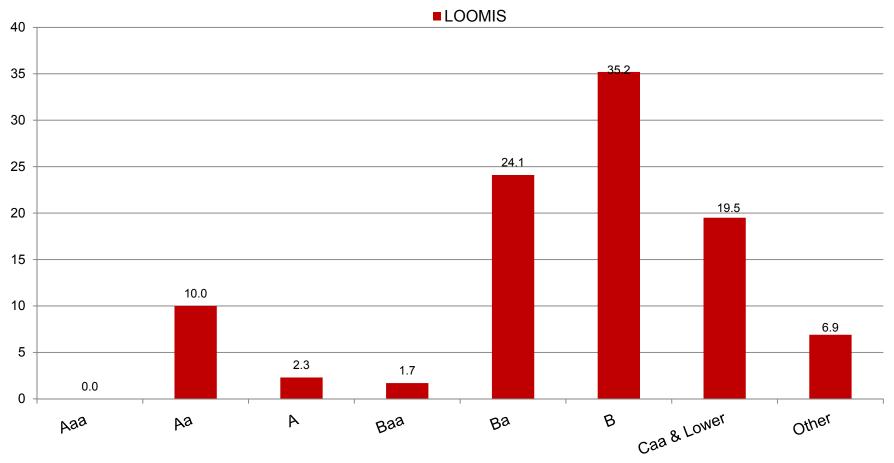


## **Sector Allocation**



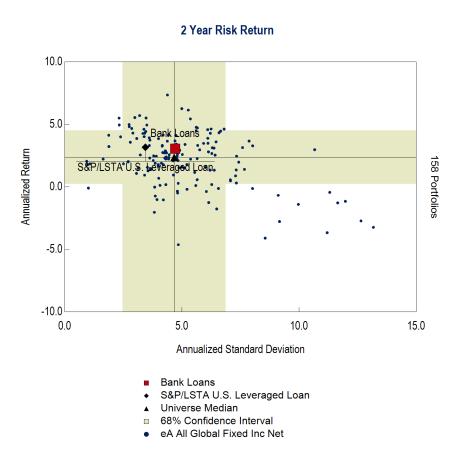


# **Quality Allocation**

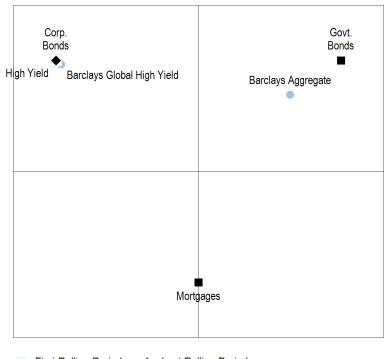


Source: Loomis, September 2016





#### 3 Year Style Analysis



♦ Last Rolling Period

### Loomis Sayles Senior Floating Rate and Fixed Income

### Manager Role in Portfolio

- Seeks to provide a high level of current income by using a value driven, opportunistic approach and macro-guided portfolio construction
- Provides some protection in a rising rate environment

### Organizational Profile

- Originally founded in 1926, Loomis Sayles is now a wholly-owned subsidiary of Natixis Global Asset Management.
- Loomis is highly regarded for its credit research skills

### Investment Strategy Commentary

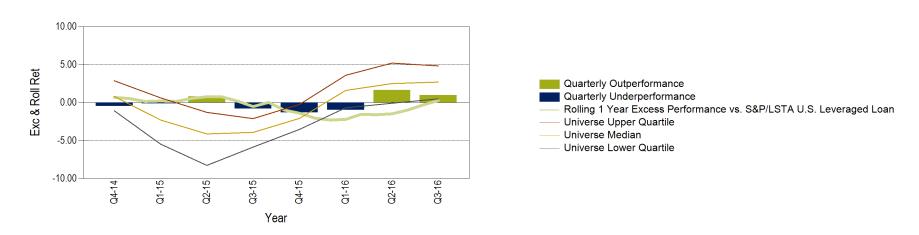
- Allocations to out of benchmark securities for offensive and defensive purposes
- Must invest at least 65% in floating rate loans
- May invest up to 35% of assets in other fixed income securities
- May invest up to 20% of assets in non-US issuers, including 10% in emerging market debt securities
- May use leverage through borrowing up to 33.33% of the Fund's total assets after such borrowing



## Loomis Sayles Senior Rate and Fixed Income



#### **Annualized Excess Performance**

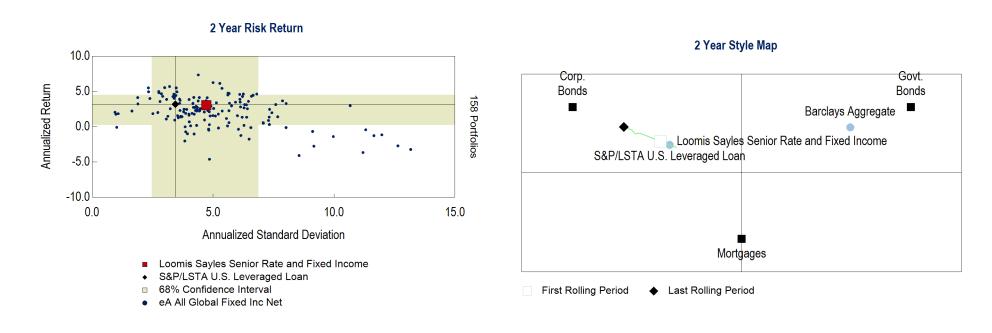


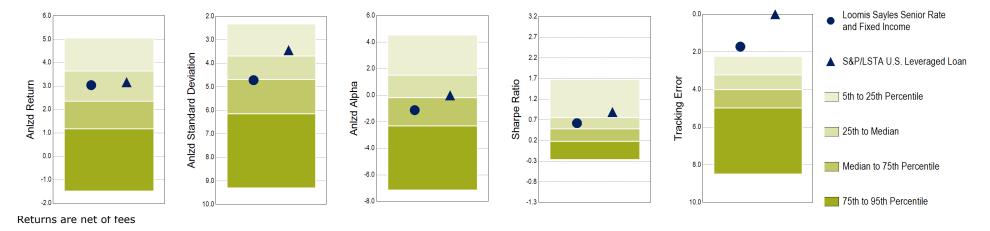
Returns are net of fees



September 30, 2016

## Loomis Sayles Senior Rate and Fixed Income







September 30, 2016

# Loomis Sayles Senior Floating Rate and Fixed Income

Characteristics	<b>Loomis Sayles</b>
Current Yield	6.6
Stated Maturity	4.9
Duration	0.3
Number of Issues	227
Average Quality	В

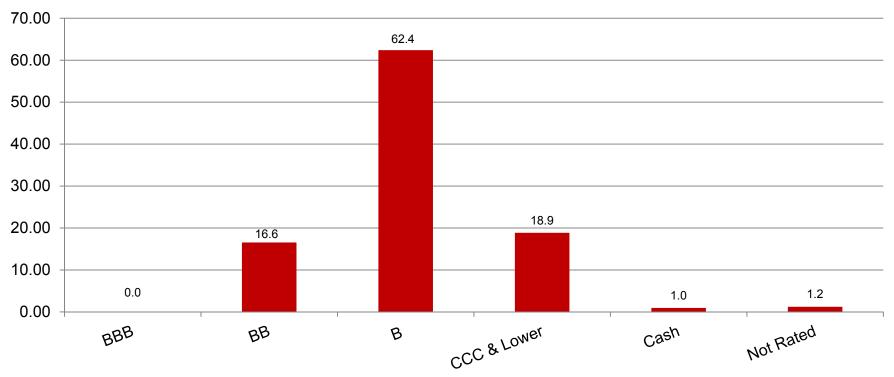
Source: Loomis Sayles, September 2016



## Loomis Sayles Senior Floating Rate and Fixed Income

### **Credit Distribution**



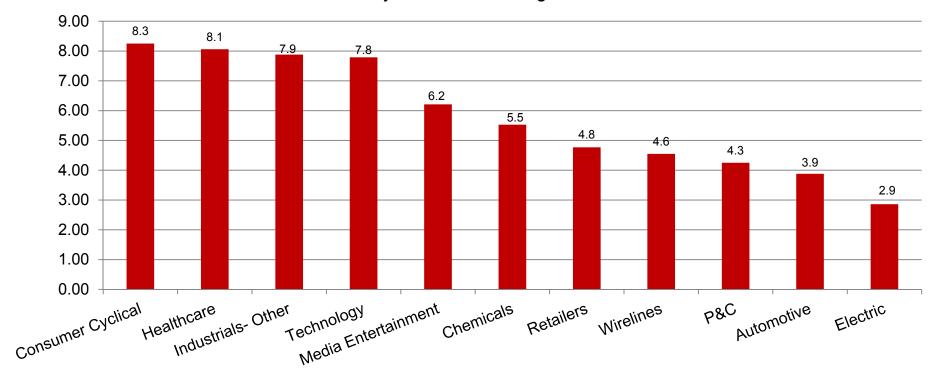


Source: Loomis Sayles, September 2016



### **Sector Distribution**

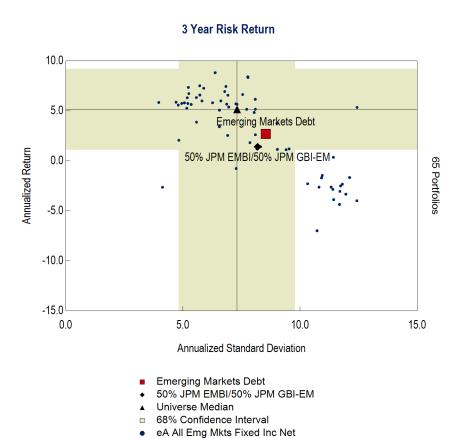
### ■ Loomis Sayles Senior Floating Rate and Fixed Income



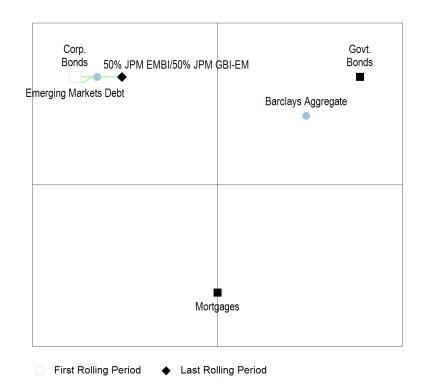
Source: Loomis Sayles, September 2016



## Emerging Markets Debt



#### 3 Year Style Analysis



### Manager Role in Portfolio

Represents the external emerging market debt portion of the global fixed income allocation

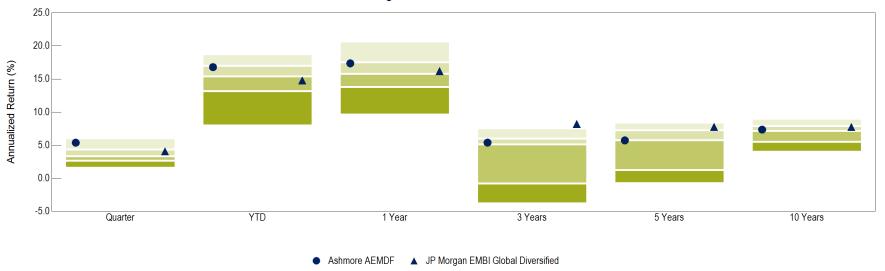
### Organizational Profile

- Established in 1992 with a management buyout in 1998/1999
- Ashmore Group plc, the parent company of Ashmore Investment Management Limited ("AIML" or "Ashmore"), was listed on the London Stock Exchange in October 2006.
- Specialist in emerging market investing

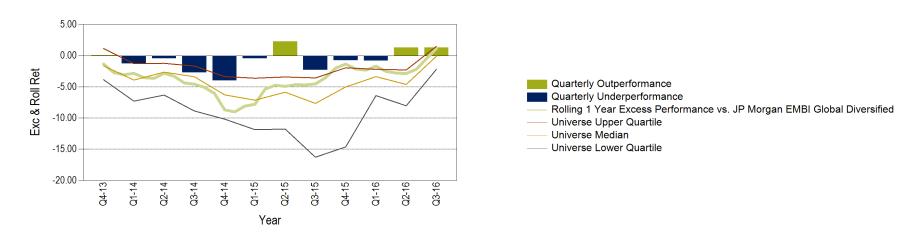
### Investment Strategy Commentary

- Ashmore combines top down thematic approaches with issue-by-issue security selection.
- Process is overseen by an investment committee which meets weekly to approve all strategies and transactions.
- Strong emphasis on risk management in portfolio construction and ongoing monitoring.



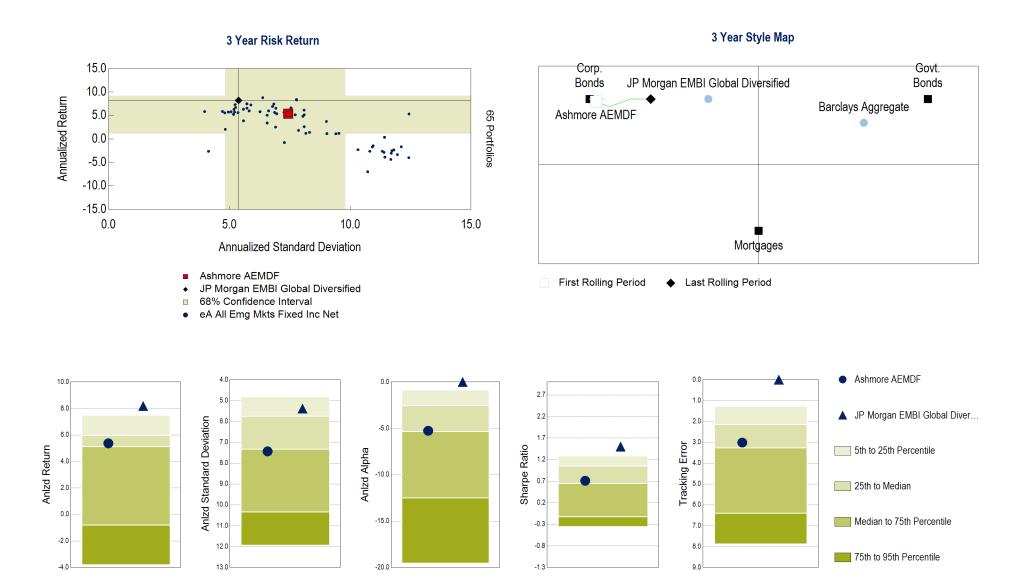


#### **Annualized Excess Performance**



Returns are net of fees







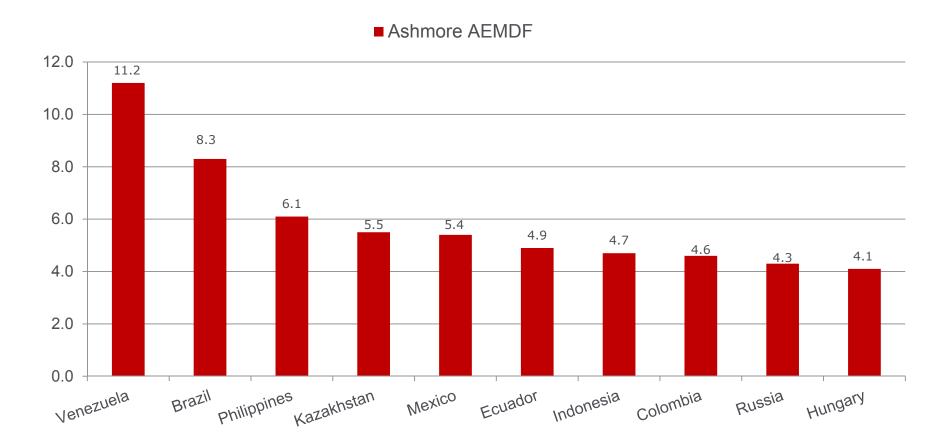
Returns are net of fees

September 30, 2016

Characteristics	Ashmore AEMDF
Average Modified Duration	7.7
Average Life (years)	12.8
Yield	8.0
Sharpe Ratio	0.6
Information Ratio	-0.4
Beta	1.4



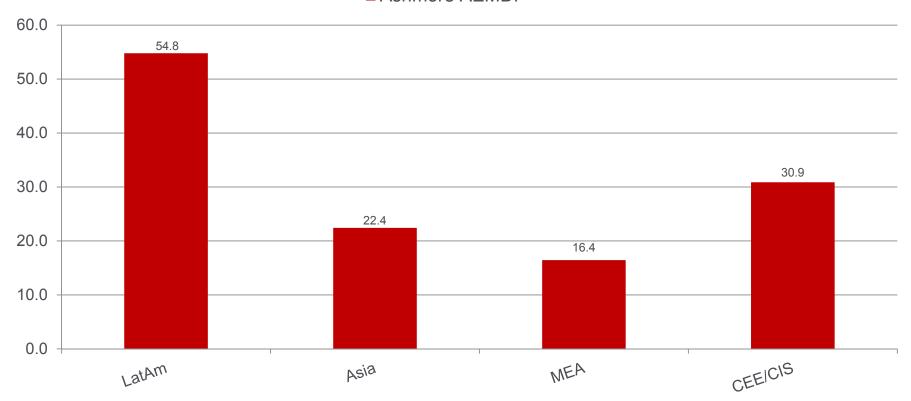
# **Largest Country Positions**



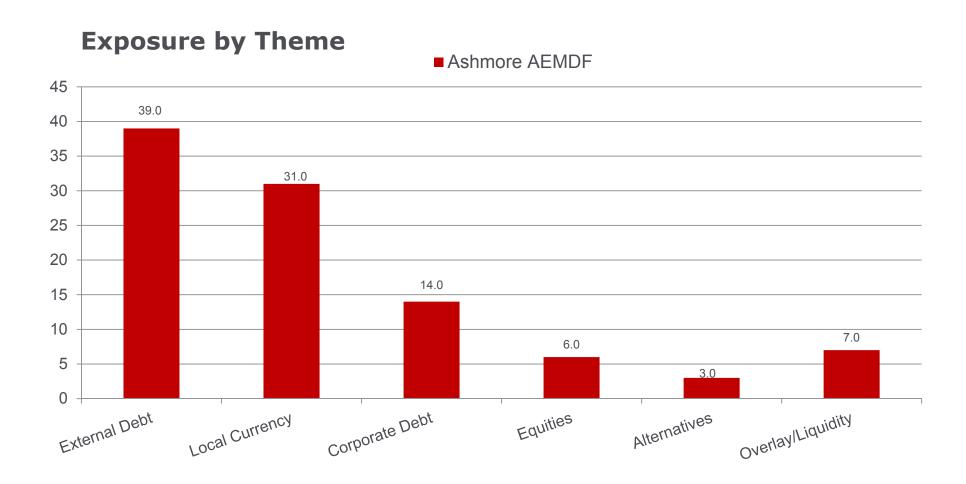


# **Exposure by Region**











### Manager Role in Portfolio

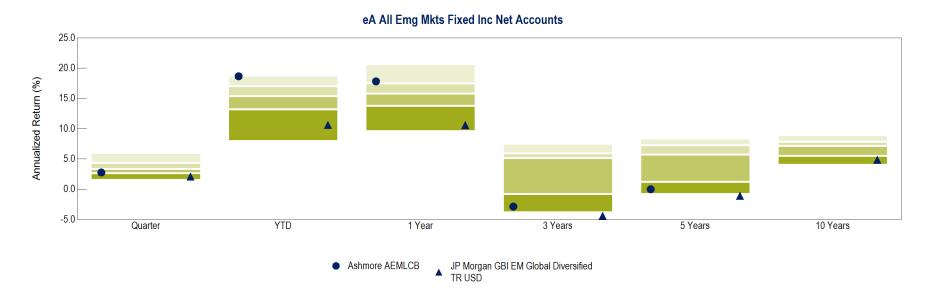
Represents the local emerging market debt portion of the global fixed income allocation

### Organizational Profile

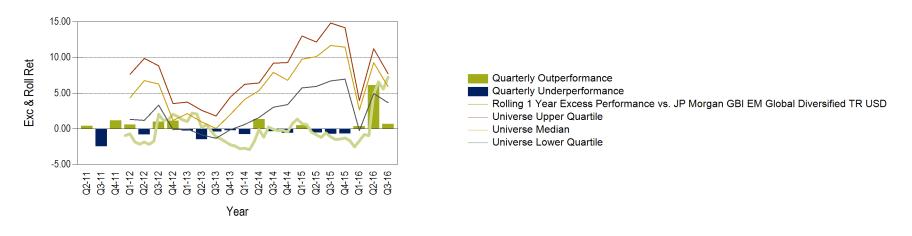
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- Specialist in emerging market investing

### Investment Strategy Commentary

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- Strong emphasis on risk management in portfolio construction and ongoing monitoring.



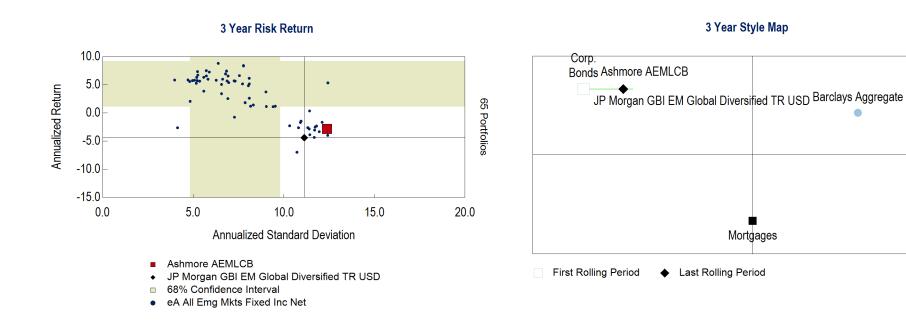
#### **Annualized Excess Performance**

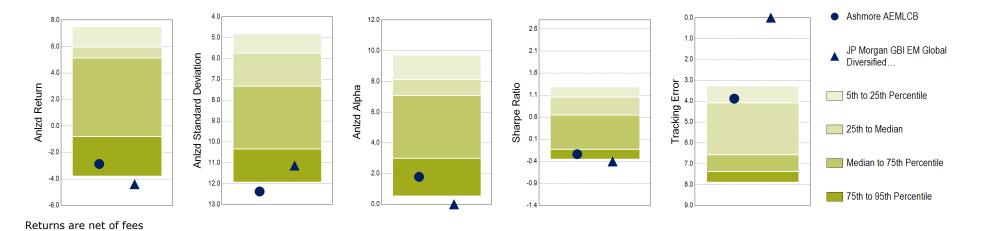


Returns are net of fees



September 30, 2016







September 30, 2016

Govt.

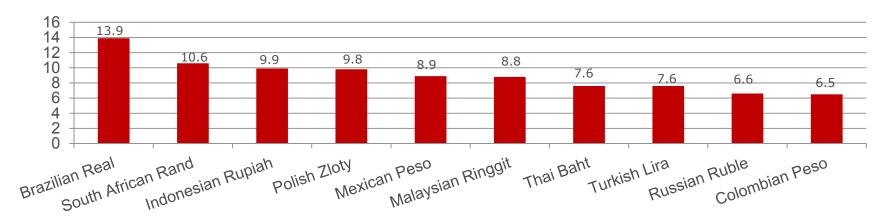
Bonds

Characteristics	Ashmore AEMLCB
Average Modified Duration	5.5
Average Life (years)	7.4
Yield to Maturity	6.5



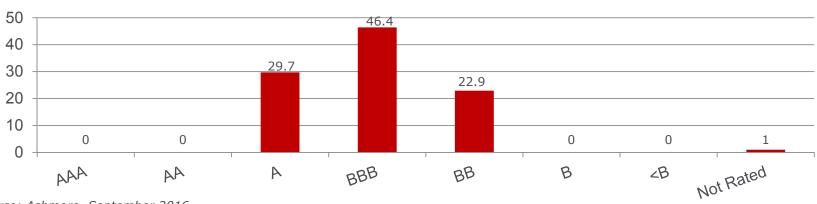
**Top 10 Currency Exposures (% of NAV)** 

■ Ashmore AEMLCB



### **Credit Rating of Debt Instruments (% of NAV)**

■ Ashmore AEMLCB



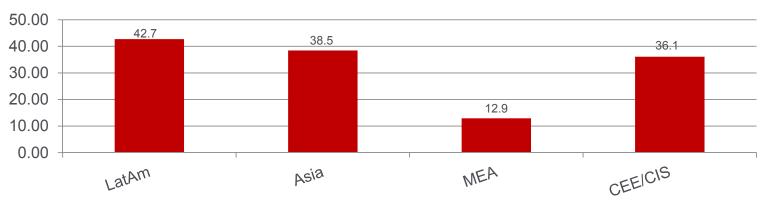
Source: Ashmore, September 2016



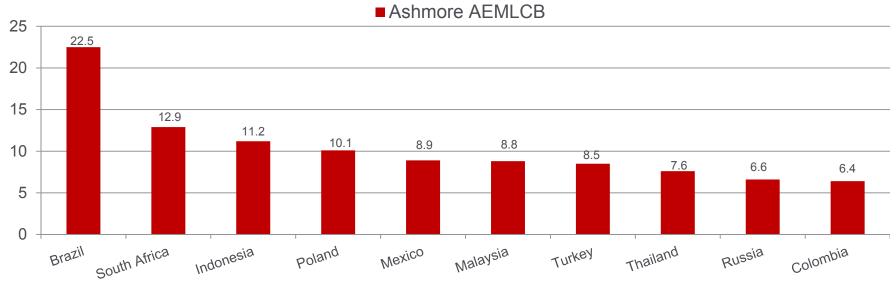
### Ashmore AEMLCB

## **Exposure by Region**

### ■ Ashmore AEMLCB



**Top 10 Country Exposures (% of NAV)** 



Source: Ashmore, September 2016



### Ashmore AEMLCB

#### Top 10 exposures by country Brazil 14.0 South Africa 11.0 11.0 Indonesia Poland 10.1 8.9 Mexico 8.9 Malaysia 8.6 Turkey Thailand 7.7 6.8 Colombia 6.7 Russia Other (11) 24.7 0% 10% 20% 30%

Brazilian Real	14.06
South African Rand	10.68
Indonesian Rupiah	10.02
Polish Zloty	9.96
Mexican Peso	8.93
Malaysian Ringgit	8.92
Thai Baht	7.75
Turkish Lira	7.70
Russian Ruble	6.70
Colombian Peso	6.55
Other (14)	8.72

0%

5%

10%

Top 10 exposures by currency

Source: Ashmore, September 2016



15%

# Ashmore AEMLCB

Credit rating of debt instruments	Fund
AAA	0.0%
AA	0.0%
A	22.3%
BBB	62.3%
BB	14.3%
В	0.0%
<b< td=""><td>0.0%</td></b<>	0.0%
Not rated	1.1%

Top 10 holdings	Fund	
Brazil Bltn 0% 01/01/2019	5.4%	
Colombia Tes 7% 04/05/2022	4.2%	
Mexican Udibonos Cpi 4% 13/06/2019	3.8%	
India Government Bond 7.59% 11/01/2026	3.1%	
Brazil Ntnf 10% 01/01/2021 - Lc	2.4%	
Rep Of South Africa 7% 28/02/2031 R213	2.2%	
Indonesia Govt 9% 15/03/2029 Fr71	1.7%	
Thailand Govt 3.4% 17/06/2036	1.6%	
Rep Of South Africa 7.75% 28/02/2023	1.6%	
Rep Of South Africa 10.5% 21/12/2026 R186	1.6%	
Total	27.7%	
Total number of holdings	116	

Source: Ashmore, September 2016



### Highland Crusader Fund

### Manager Role in Portfolio

 Invests in financially stressed and distressed companies. Part of the Private Debt strategy.

### Organizational Profile

- Established in 1990 as a standalone investment division of Protective Life Insurance Company. In 1997, the founders purchased Protective's interest.
- Specialists in leveraged loans and high yield

### Investment Strategy Commentary

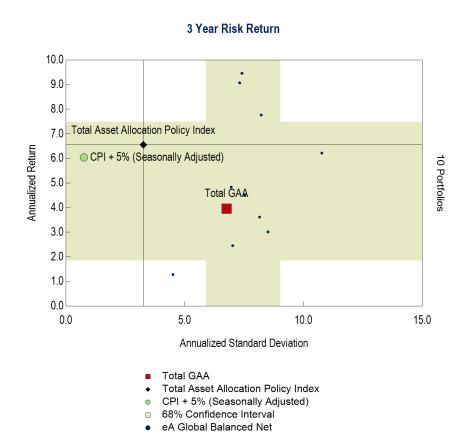
- Seeks to maximize value through influence or control of the corporate workout and restructuring process.
- Investment positions are generally monetized within 12 to 24 months of initial investment.

### Notable Occurrences

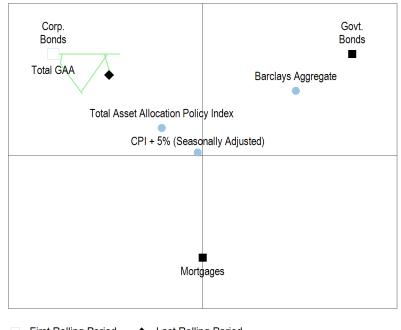
- The fund unwound on November 15, 2008
- A working group has been formulated and will work with a mediator to come to a final conclusion.



### Total GAA



#### 3 Year Style Analysis

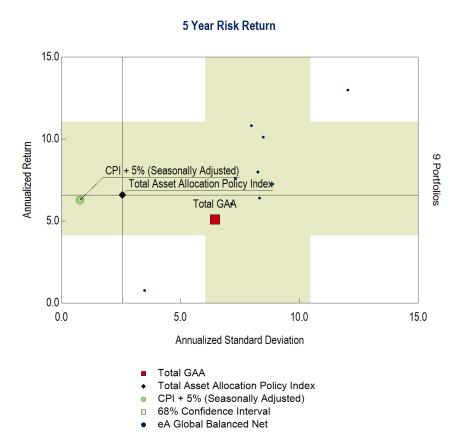


First Rolling Period ◆ Last Rolling Period

Returns are net of fees



### Total Asset Allocation



#### 5 Year Style Analysis

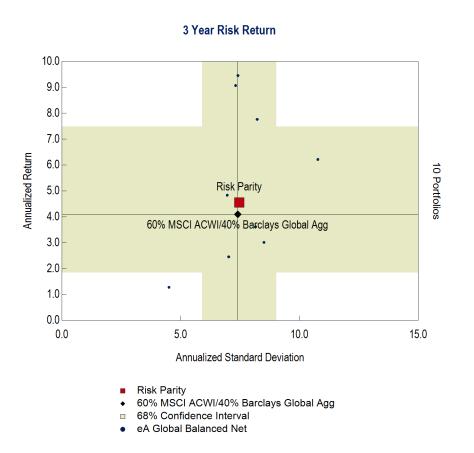


Returns are net of fees



September 30, 2016

# Risk Parity

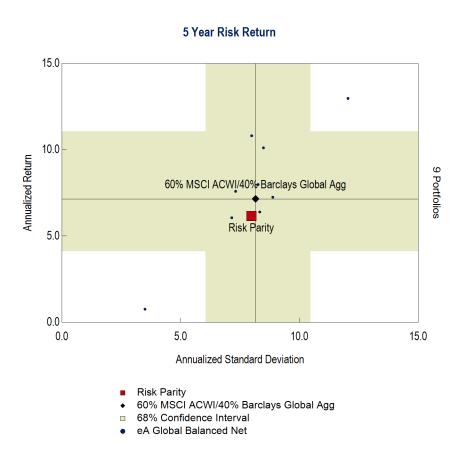


#### 3 Year Style Analysis



♦ Last Rolling Period

# Risk Parity



#### 5 Year Style Analysis



### Organizational Profile

- Bridgewater Associates began offering investment services in 1975, initially providing money management and consulting services in the global credit and currency markets to corporations in the management of income statement and balance sheet exposures.
   Bridgewater registered with the SEC as an investment advisor in 1990 and has been managing assets for institutional investors ever since.
- Bridgewater is headquartered in Westport, Connecticut and has approximately \$72 billion in assets under management. Bridgewater is and has always been 100% employee (current and former) owned.

### Investment Strategy Commentary

- The framework for constructing the All Weather Strategy is to diversify based on exposure to expectations of inflation and growth and to allocate risk (not capital) equally across these four economic environments (high and low growth, high and low inflation.)
- Allocations are based on Bridgewater's understanding of the relationship between asset classes and economic environments. This is quite different from traditional portfolio construction which utilizes mean-variance optimization.
- The strategy invests in a diversified set of asset classes with the objective of balancing risk equally across the possibility of rising or falling economic growth as well as rising or falling inflation. Asset classes in the All Weather strategy include equities, credit spreads, commodities, nominal and inflation-linked bonds, and emerging market debt spreads.
- Asset class exposures are continually adjusted to optimize performance (leverage and deleveraging asset classes).
- Forecasted to have similar returns to a split 60% equity and 40% fixed income portfolio.

### Portfolio Positioning

- Overlay allocation to Pure Alpha started in third quarter of 2011.



# Bridgewater All Weather Fund

### Bridgewater All Weather Fund II, Ltd.

Exposure Report September 30, 2016

> Exposure as a % of Portfolio Value

Nominal Bonds		
Australia	7.8%	
Canada	0.0%	
Euroland	0.0%	
United Kingdom	0.0%	
United States	36.1%	
Western Europe ex Euroland	0.0%	
Total Nominal Bonds	44.0%	
Corporate Credit	15.0%	
Inflation-Indexed Bonds		
Australia	1.5%	
Canada	2.3%	
Euroland	15.4%	
Sweden	1.5%	
United Kingdom	8.5%	
United States	19.5%	
Total Inflation-Indexed Bonds	48.7%	
Formation Market Securit		
Emerging Market Credit		
Argentina Brazil	1.1% 1.8%	
	0.7%	
Colombia Indonesia	1.7%	
Mexico	1.7%	
Peru	0.9%	
Philippines	0.6%	
Russia	1.8%	
South Africa	0.6%	
Turkey	1.7%	
Venezuela	0.0%	
Total Emerging Market Credit	12.1%	

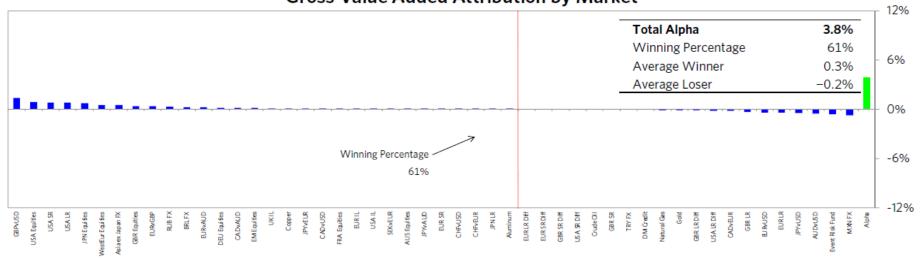
Equities	
Australia	2.5%
Canada	1.6%
Emerging Markets	4.6%
France	1.8%
Germany	2.9%
Hong Kong	0.8%
Japan	3.9%
United Kingdom	3.2%
United States	9.8%
Western Europe	3.5%
Total Equities	34.8%
Commodifies	
Aluminum	2.3%
Coffee	0.4%
Copper	2.2%
Com	0.4%
Cotton	0.2%
Gold	8.5%
Lean Hogs	0.3%
Live Cattle	0.5%
Natural Gas	1.4%
Nickel	1.0%
Oil and Petroleum Products	5.3%
Silver	0.1%
Soybean Meal	0.3%
Soybean Oil	0.2%
Soybeans	0.5%
Sugar	0.6%
Wheat	0.3%
Zinc	1.0%
Total Commodities	26.5%

Source: Bridgewater



### Bridgewater

# Bridgewater Pure Alpha Major Markets Strategy 21% Volatility: 2016 Q3 Gross Value Added Attribution by Market

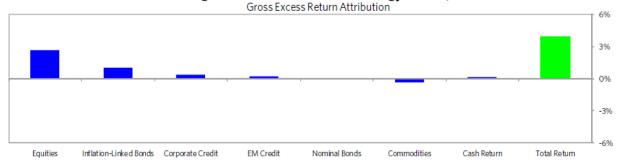


#### Bridgewater All Weather 12% Strategy: 2016 Q3

Gross Excess Return Attribution by Economic Environment

	Growth	Inflation	
Rising	Return 1.9%	Return 0.5%	
Falling	Return 0.9%	Return 0.4%	
	≈ <b>Risk Premiums &amp; Discount Rates</b> 3.8% Excess Return Over Cash		

Plus Cash Return = 0.1% Total All Weather Return = 3.9% Bridgewater All Weather 12% Strategy: 2016 Q3



Source: Bridgewater



### Putnam

### Manager Role in Portfolio

- Global Asset Allocation Mandate (added in Q4 2009)

### Organizational Profile

- Putnam was founded in 1937 with the creation of one of the first balanced mutual funds, consisting of both stocks and bonds. This fund exists to this day and remains one of the most popular offerings in their product lineup.
- In 1970, the firm was acquired by Marsh & McLennan Companies, Inc., a diversified firm offering insurance and reinsurance broking, consulting, and investment management services.
- On August 3, 2007, the sale of Putnam Investments by Marsh and McLennan Companies (MMC) to Great-West Lifeco Inc., a subsidiary of Power Financial Corporation, was completed. Great-West Lifeco Inc. is a financial services holding company with interests in the life insurance, health insurance, retirement savings, investment management and reinsurance businesses.

#### Investment Strategy Commentary

- Putnam Total Return's objective is to meet investors' needs for absolute return in different economic environments, including those in which stocks and bonds struggle.
- Seeks to achieve positive absolute return through the combination of a strategic beta portfolio and diversified alpha portfolio.
- The beta portfolio has been designed to provide high current yield, protect against inflation, limit downside risk and to balance the risk contribution from asset classes.
- The alpha portfolio seeks to add 100-250 basis points of excess return, with volatility of approximately 200 basis points, at the fund level by individual teams.

### Due Diligence Notes

- Jeff Knight, Head of Asset Allocation and the lead Portfolio Manager for Putnam's Total Return strategy, tendered his resignation on January 29th. Jeff's resignation was unexpected and is a significant loss for Putnam. As Head of Asset Allocation, Jeff oversaw approximately \$10 billion in multi-asset mandates including risk parity, asset allocation strategies and balanced funds. The reason for Jeff's departure is unclear. The 4 senior portfolio managers of the Total Return Fund will remain at Putnam and have been promoted to co-heads of the Asset Allocation Group. The four senior PMs are Robert Kea, James Fetch, Robert Schoen, and Jason Vaillancourt. As part of their retention, 4 PMs have been given increases in compensation, bonuses, and equity stakes. After this announcement NEPC put Putnam's Total Return strategy on Client Review.



## Putnam

### Risk weight summary as of September 30, 2016

	Risk factor weight (%)
Common factor risk	
Equity	48.32
Rates	-0.09
Credit	21.65
Inflation	30.13

Source: Putnam, September 2016



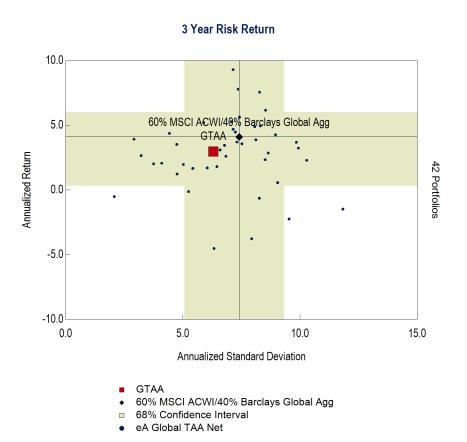
### Portfolio weight summary as of September 30, 2016

Asset Class	Physical Weight	Derivative Exposure	Total Current Weight	Index Proxy
U.S. Equity	15.82%	1.55%	17.38%	Russell 3000 Index
Non-U.S. Equity	9.85%	0.00%	9.85%	MSCI EAFE Index
Emerging-Market Equity	0.00%	5.20%	5.20%	MSCI Emerging Markets Index
U.S. High-Yield Bond	12.59%	1.94%	14.53%	JP Morgan High Yield Developed Index
Emerging-Market Bond	0.00%	4.95%	4.95%	JPM EM Global Bond Index
U.S. Investment-Grade Bond	12.84%	-4.63%	8.21%	Barclays Aggregate Bond Index
Non-U.S. Government Bond	0.00%	24.72%	24.72%	Citi WGBI ex US Index
U.S. TIPS	0.00%	29.72%	29.72%	Barclays TIPS Index
Commodities	0.00%	17.90%	17.90%	GSCI Index
REITs	3.30%	0.00%	3.30%	MSCI REIT Index
Cash	45.59%	-81.34%	-35.75%	3 month U.S. Treasury Bill

data as of September 30, 2016

Source: Putnam, September 2016





#### 3 Year Style Analysis

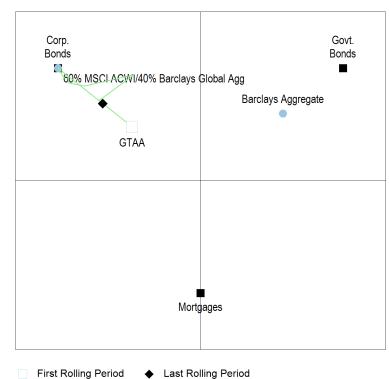


First Rolling Period

◆ Last Rolling Period



#### 5 Year Style Analysis



### **GMO**

### Manager Role in Portfolio

- GMO manages a portion of the Global Asset Allocation mandate

### Organizational Profile

- GMO was founded in 1977 as a private investment firm to serve institutional clients
- Initial products were designed around the firm's value-oriented discipline until GMO's quantitative division was launched in 1982, providing a way to augment existing strategies and disciplines.
- GMO has a wide range of products across global asset classes, and are known for their contrarian, often bearish view of the marketplace.

### Investment Strategy Commentary

- Real return Global Balanced Asset Allocation (until 11/30/2010)
  - Portfolio construction based on seven year asset class forecasts developed by GMO quantitative team led by Jeremy Grantham and Ben Inker
  - Product seeks to add 2-3% above customized blended benchmark (60% MSCI World, 20% BC Aggregate, 20% Cash)
  - In addition to asset classes such as global multi-cap equities, global bonds, emerging markets equities and debt, a GMO fund of GMO hedge funds is used for additional diversification and risk control.
- Global Allocation Absolute Return (GAAR as of 12/2010)
  - Generate relatively strong real returns over a market cycle, by allocating to a potentially wide range of asset classes (including but not limited to Int'l Small Cap, Emerging Market equities, REITs, TIPS, GMO funds, etc.) with regard to a traditional benchmark.
  - Absolute volatility should be in the same general range as traditional balanced portfolios, although the pattern
    of returns may be quite different.

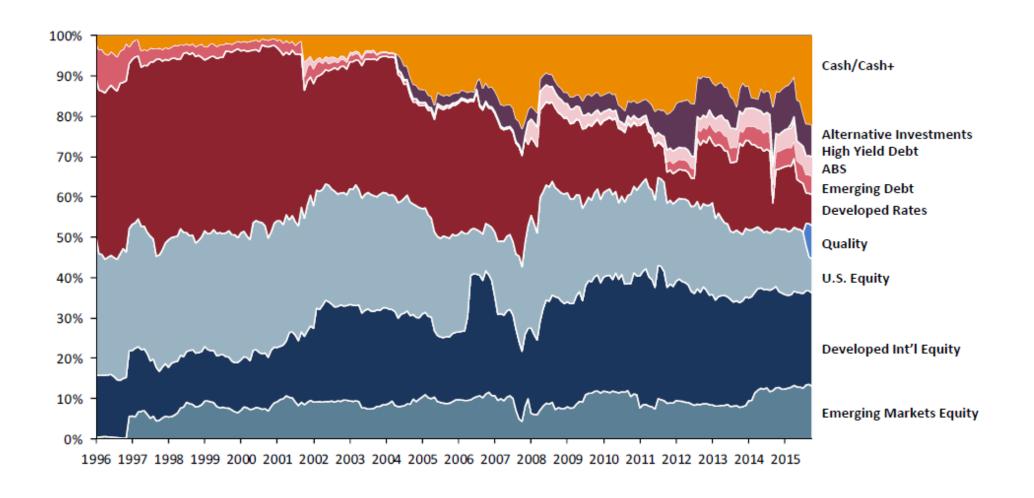
### Due Diligence Notes

- GMO has historically offered equity strategies through both its Global Equity and Asset Allocation teams. These two groups will be combining their individual product offerings into a single set of unified strategies. The unified strategies will be managed with the objective of generating high total returns by investing in equities, and focusing less on managing risk relative to a benchmark. The Global Equity Team will continue with day-to-day portfolio management and the Asset Allocation Team will be responsible for the asset class forecasts and high-level investment oversight.
- Effective immediatley on January 30, 2013, Marc Seidner left the firm PIMCO and will be joining GMO in March to head their Fixed Income team. Mr. Seidner joined PIMCO in 2009 from Harvard and is a well-respected investor. PIMCO expressed that this was a difficult loss for them.



### GMO (Global Asset Allocation)

#### **Historical Allocation**



NEPC, LLC

Source: GMO

# GMO (Global Asset Allocation)

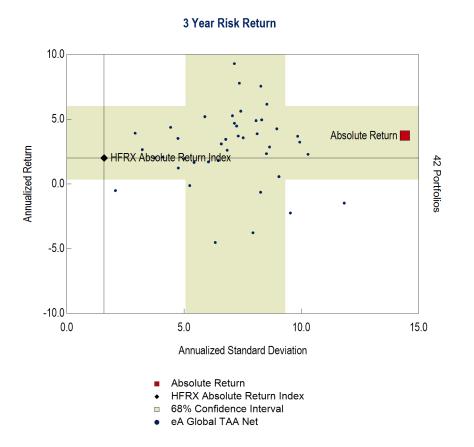
#### **Asset Allocation**

Benchmark 65% Equities/35% Bonds <sup>1</sup>	GMO Active Weighting Decisions <sup>2*</sup>	Strategy
		U.S. 8.3%
U.S. Equities 34.3%	U.S. Equities -18.5%	Quality 8.3%
	International Equities +0.8%	Developed ex-U.S. 23.2%
Int'l. Equities 23.6%	Emerging Equities 5.6%	Emerging Markets 13.0%
Emerging Equities 7.1%	Alternative Strategies +7.8%	Put Selling 2.6%  Systematic Global Macro 3.0%  Relative Value Interest Rates & FX 2.2%  ABS/Structured Products 4.8%
Fixed Income 35.0%	Fixed Income -17.9%	U.S. TIPS 7.8%  Alpha Only 3.0%
	Other +22.2%	Cash & Cash Equivalents 19.2%

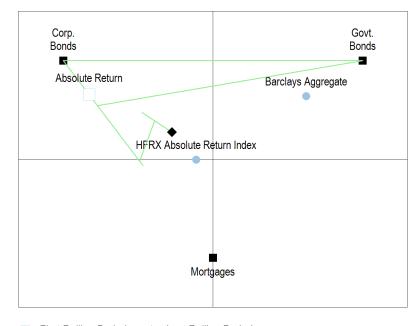
Source: GMO

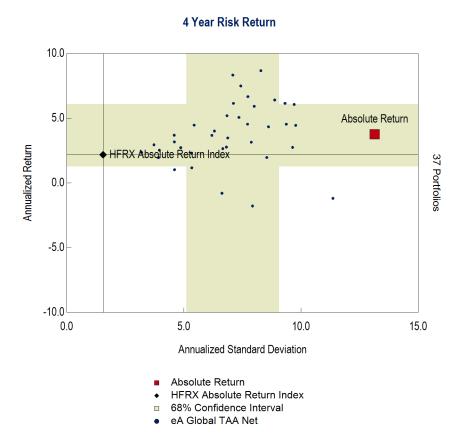


## Absolute Return

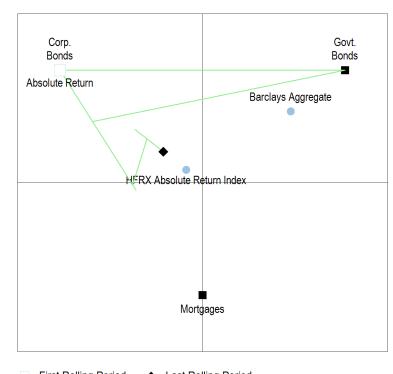


#### 3 Year Style Analysis





### 4 Year Style Analysis



☐ First Rolling Period ◆ Last Rolling Period



### Glossary of Investment Terminology - Risk Statistics

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

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

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

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

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

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

#### Formula:

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

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

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

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

#### Formula:

Calculation Average (X-Y)/Downside Deviation (X-Y) \* 2 Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills) **Standard Deviation** - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

#### Formula:

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

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

#### Formula:

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

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

#### Formula:

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

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

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

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

Source: Investor Force



### Glossary of Investment Terminology

# Of Portfolios/Observations1 – The total number of data points that make up a specified universe

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

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

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

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

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

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

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

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

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

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

**Brinson Hood Beebower (BHB) Attribution¹** - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

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

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

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



### Glossary of Investment Terminology

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

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

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

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

#### Formula:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



### Glossary of Investment Terminology

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

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

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

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

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

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

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

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

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

**Total Return¹** - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe3 - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation - Standard Deviation of Positive Returns

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

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

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

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



### Information Disclosure

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