



WILSHIRE ASSOCIATES

Wilshire Consulting



Kentucky Retirement Systems Pension

Executive Summary of Investment Performance

March 31, 2018



TOTAL FUND

ACTUAL ALLOCATION VS POLICY ALLOCATION

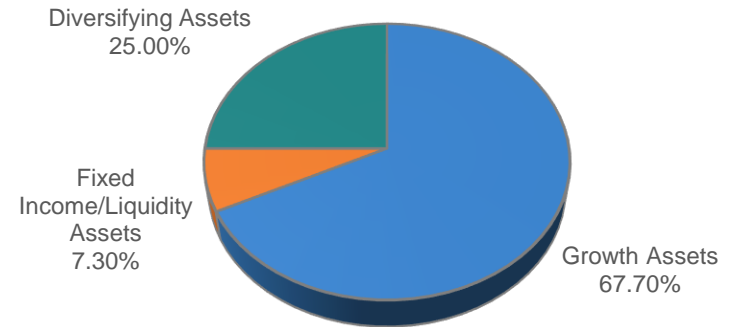
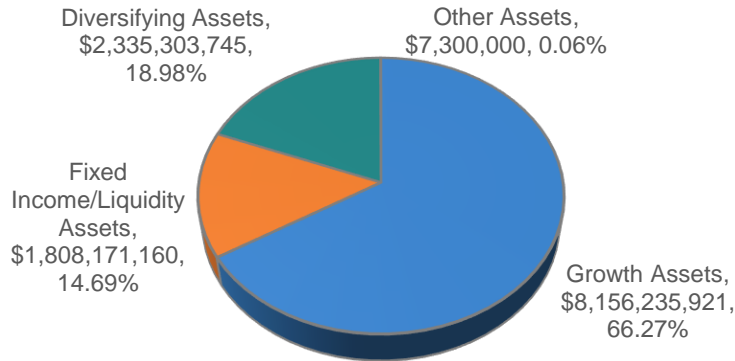
KRS Pension Plan Composite

Asset Class Bucketing

As of March 31, 2018

Total Fund

Policy Index



\$12,301,010,827

ACTUAL ALLOCATION VS POLICY ALLOCATION

KRS Pension Plan Composite

Asset Class Bucketing

As of March 31, 2018

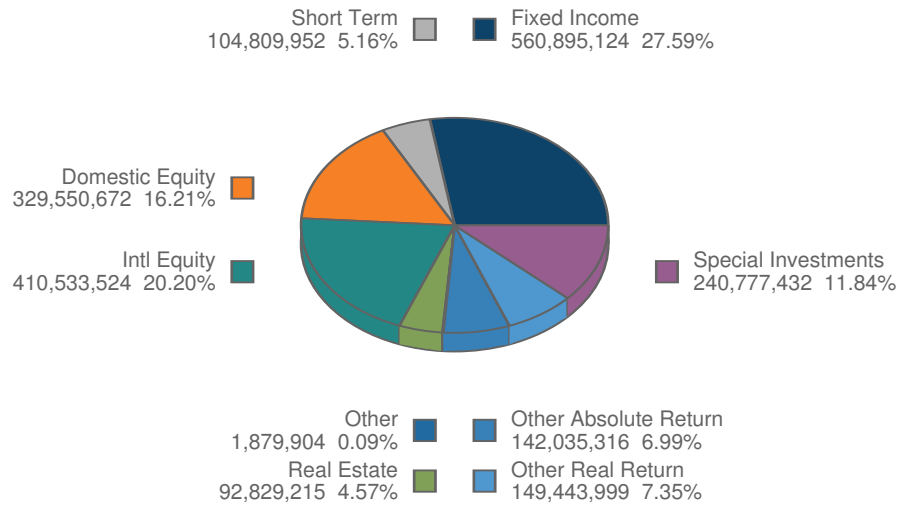
Asset Class / Bucket	Total Pension Allocation		Policy Index	Relative (+/-)
	(\$)	(%)		
U.S. Equity	\$2,480,003,011	20.2%	17.5%	2.7%
Non-U.S. Equity	\$3,035,065,839	24.7%	17.5%	7.2%
Private Equity	\$1,213,536,884	9.9%	10.0%	-0.1%
Credit / High Yield	\$1,427,630,187	11.6%	22.7%	-11.1%
Growth Assets	\$8,156,235,921	66.3%	67.7%	-1.4%
Core Fixed Income	\$1,380,924,725	11.2%	5.1%	6.1%
Cash	\$427,246,435	3.5%	2.2%	1.3%
Fixed Income/Liquidity Assets	\$1,808,171,160	14.7%	7.3%	7.4%
Real Estate	\$571,495,231	4.6%	5.0%	-0.4%
Real Return	\$986,707,056	8.0%	10.0%	-2.0%
Absolute Return	\$777,101,458	6.3%	10.0%	-3.7%
Diversifying Assets	\$2,335,303,745	19.0%	25.0%	-6.0%
Other Assets	\$7,300,000	0.1%	0.0%	0.1%
Total Fund	\$12,307,010,827	100.0%	100.0%	0.0%

ACTUAL ALLOCATION VS POLICY ALLOCATION

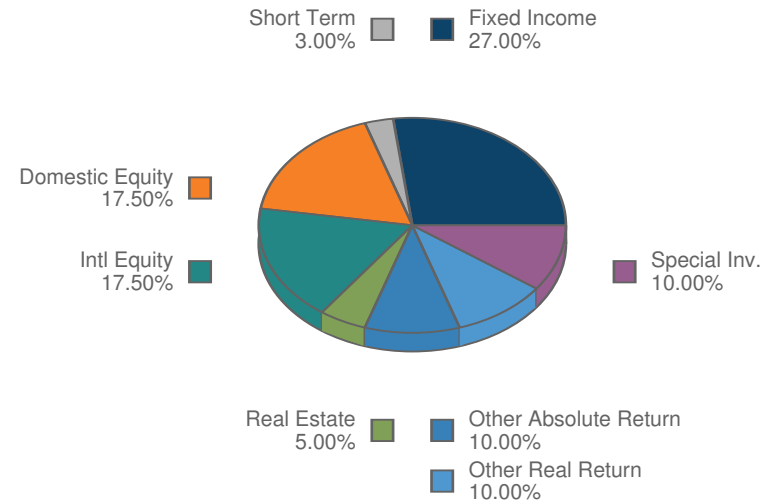
KERS Pension Plan Composite

As of March 31, 2018

Total Fund



Policy Index



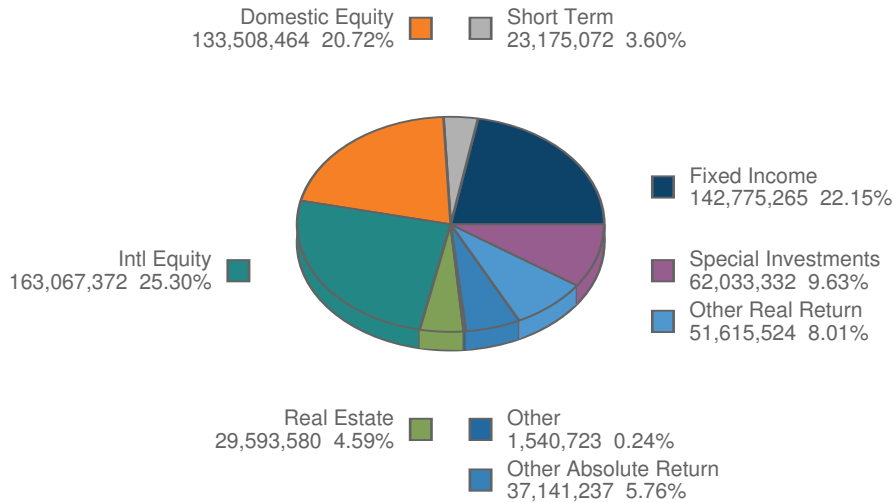
\$2,032,755,138

ACTUAL ALLOCATION VS POLICY ALLOCATION

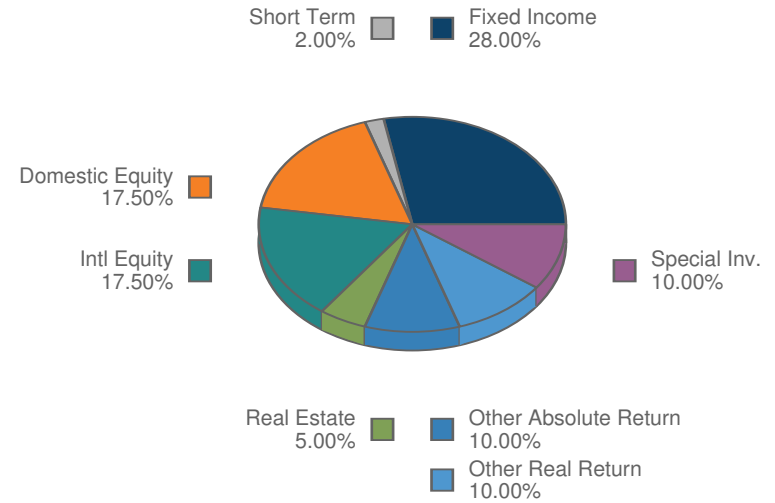
KERS (H) Pension Plan Composite

As of March 31, 2018

Total Fund



Policy Index



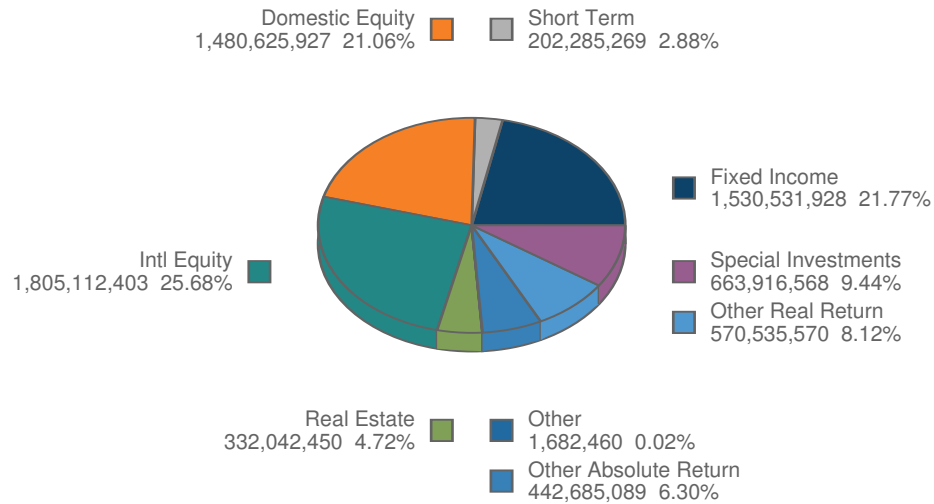
\$644,450,570

ACTUAL ALLOCATION VS POLICY ALLOCATION

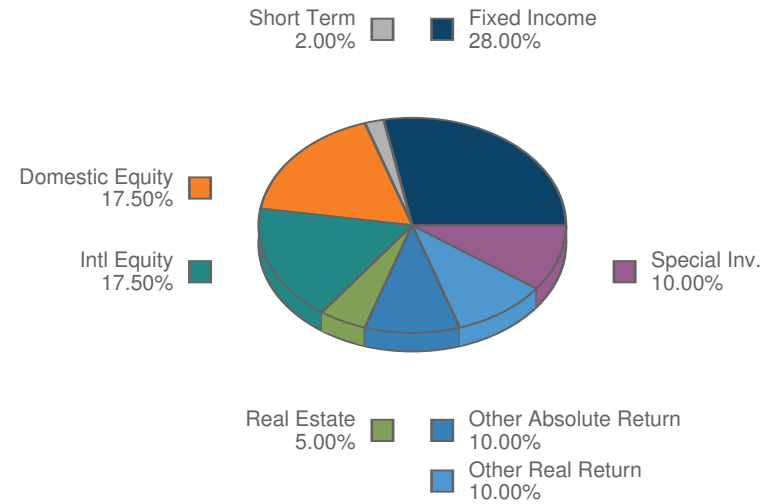
CERS Pension Plan Composite

As of March 31, 2018

Total Fund



Policy Index



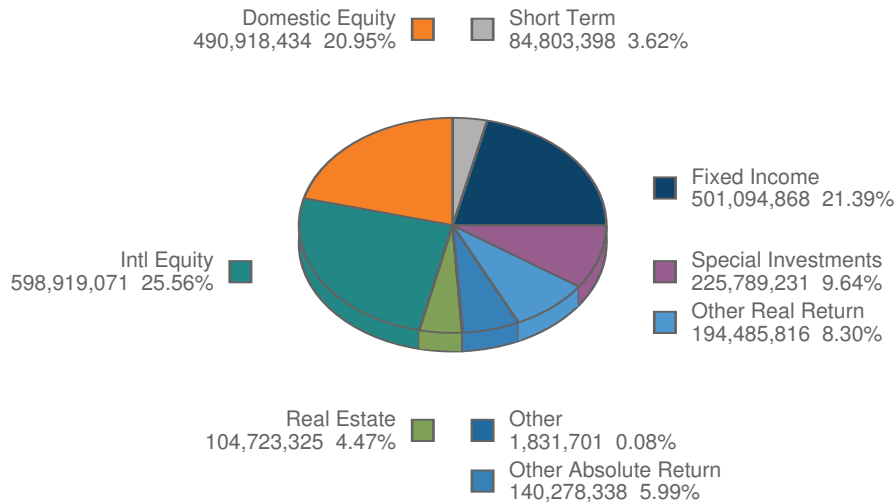
\$7,029,417,664

ACTUAL ALLOCATION VS POLICY ALLOCATION

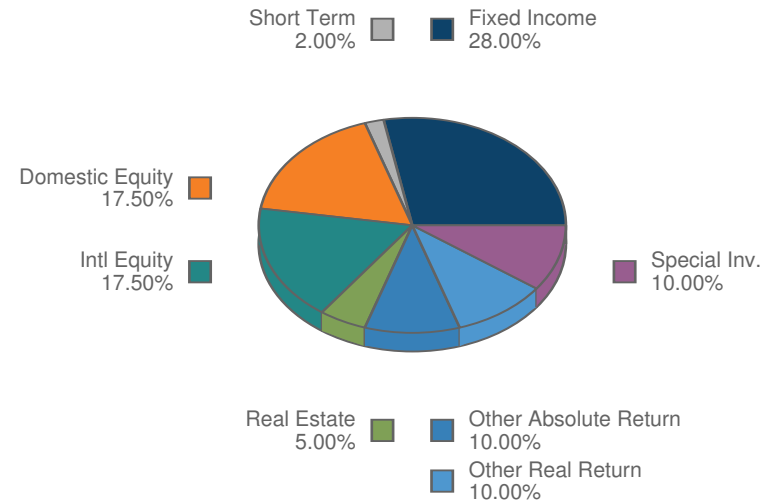
CERS (H) Pension Plan Composite

As of March 31, 2018

Total Fund



Policy Index



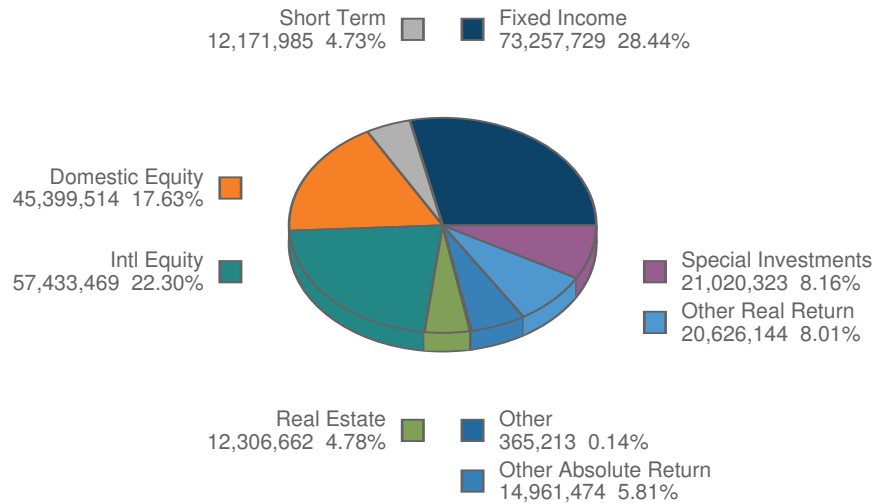
\$2,342,844,181

ACTUAL ALLOCATION VS POLICY ALLOCATION

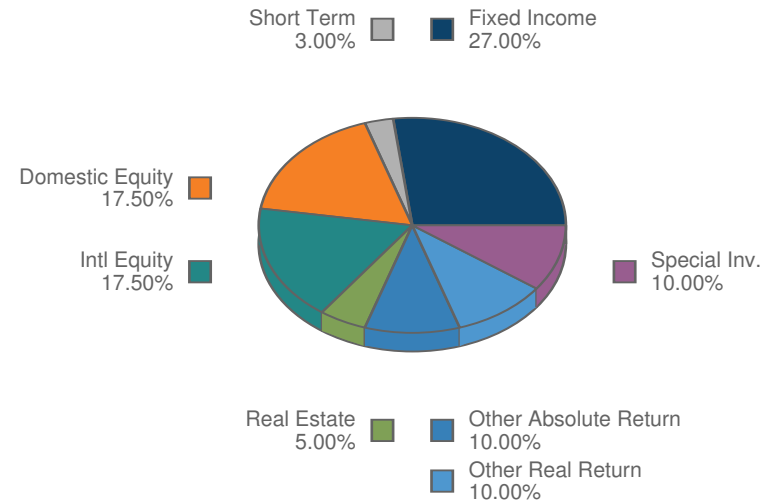
SPRS Pension Plan Composite

As of March 31, 2018

Total Fund



Policy Index

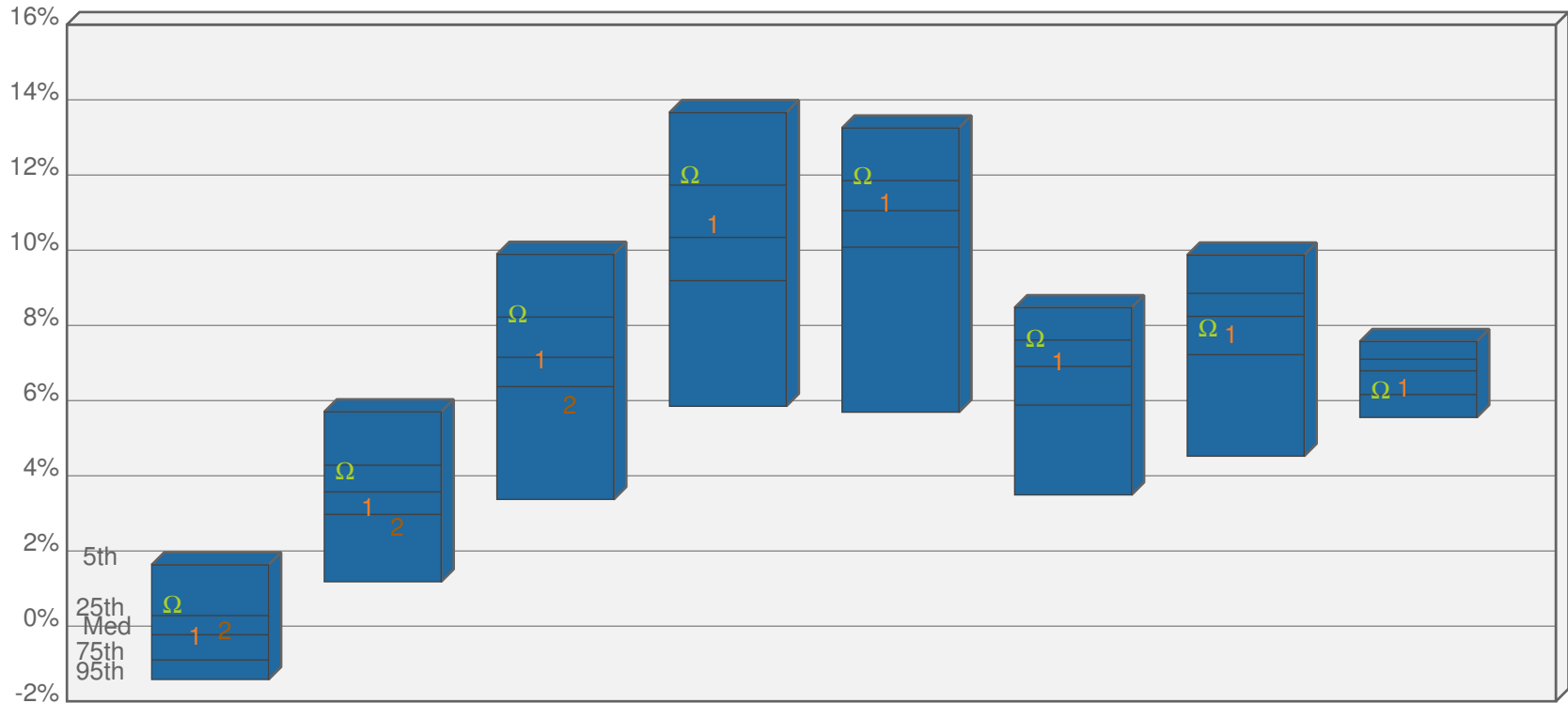


\$257,542,513

PERFORMANCE COMPARISON

KRS Pension Plan Composite

Periods Ended March 31, 2018



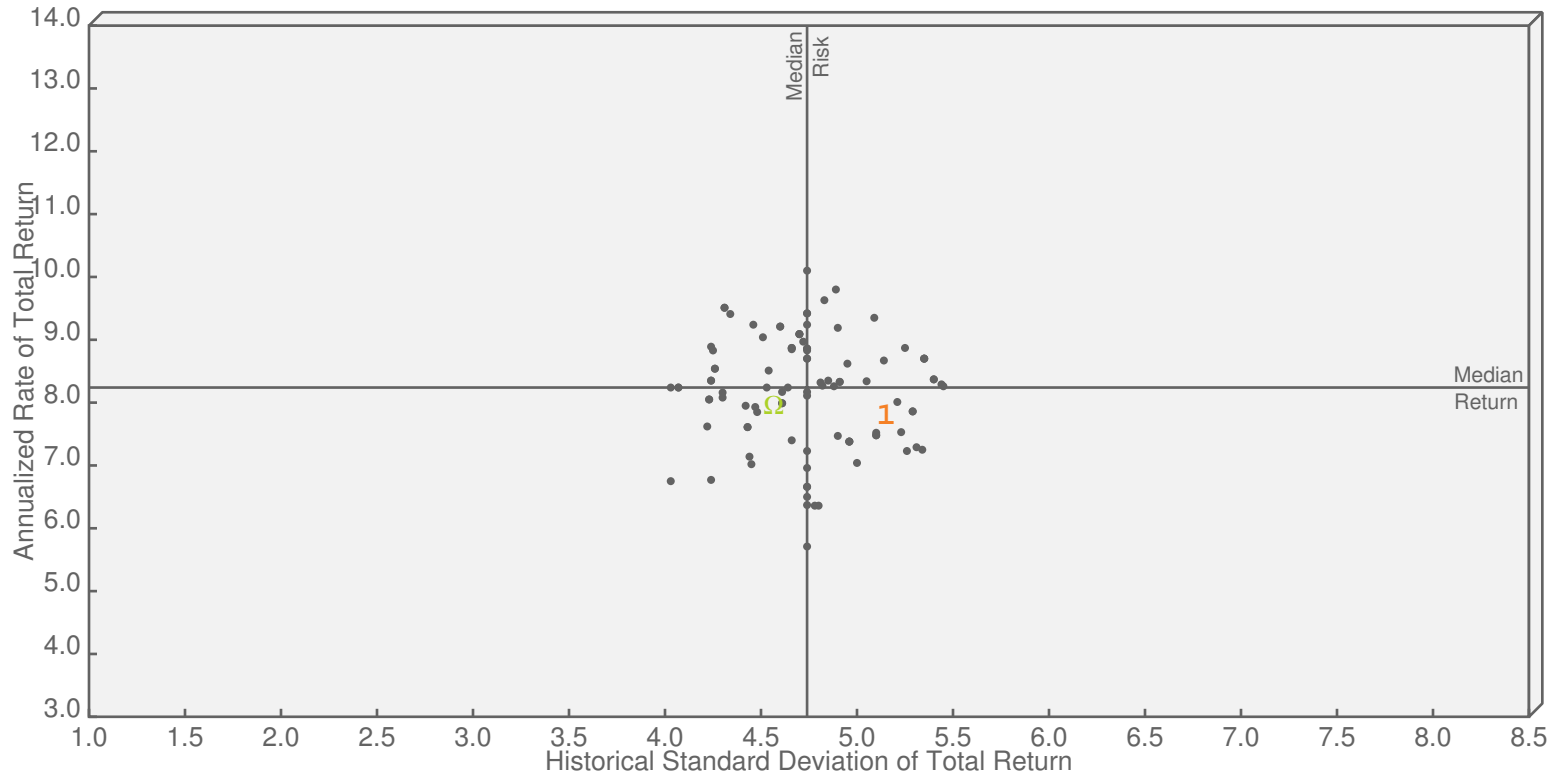
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Ω KRS Pension Plan	0.60 (15)	4.15 (29)	8.32 (22)	12.01 (20)	12.00 (21)	7.67 (23)	7.93 (60)	6.30 (70)
1 KRS Allocation I	-0.25 (51)	3.17 (67)	7.09 (50)	10.69 (44)	11.27 (42)	7.03 (44)	7.77 (62)	6.35 (67)
2 KRS IPS Benchmark	-0.11 (47)	2.65 (79)	5.90 (80)					
5th %tile	1.63	5.70	9.89	13.66	13.25	8.47	9.87	7.57
25th %tile	0.28	4.28	8.22	11.73	11.85	7.61	8.85	7.10
Median	-0.23	3.57	7.15	10.34	11.05	6.91	8.24	6.79
75th %tile	-0.90	2.97	6.37	9.19	10.08	5.88	7.22	6.16
95th %tile	-1.42	1.18	3.37	5.85	5.69	3.49	4.52	5.55
Number of Funds	137	137	135	135	135	135	133	112

*TUCS Total Ret of Master Trusts - Public Universe - Gross of Fees

RISK / RETURN ANALYSIS

KRS Pension Plan

Five Years Ending March 31, 2018



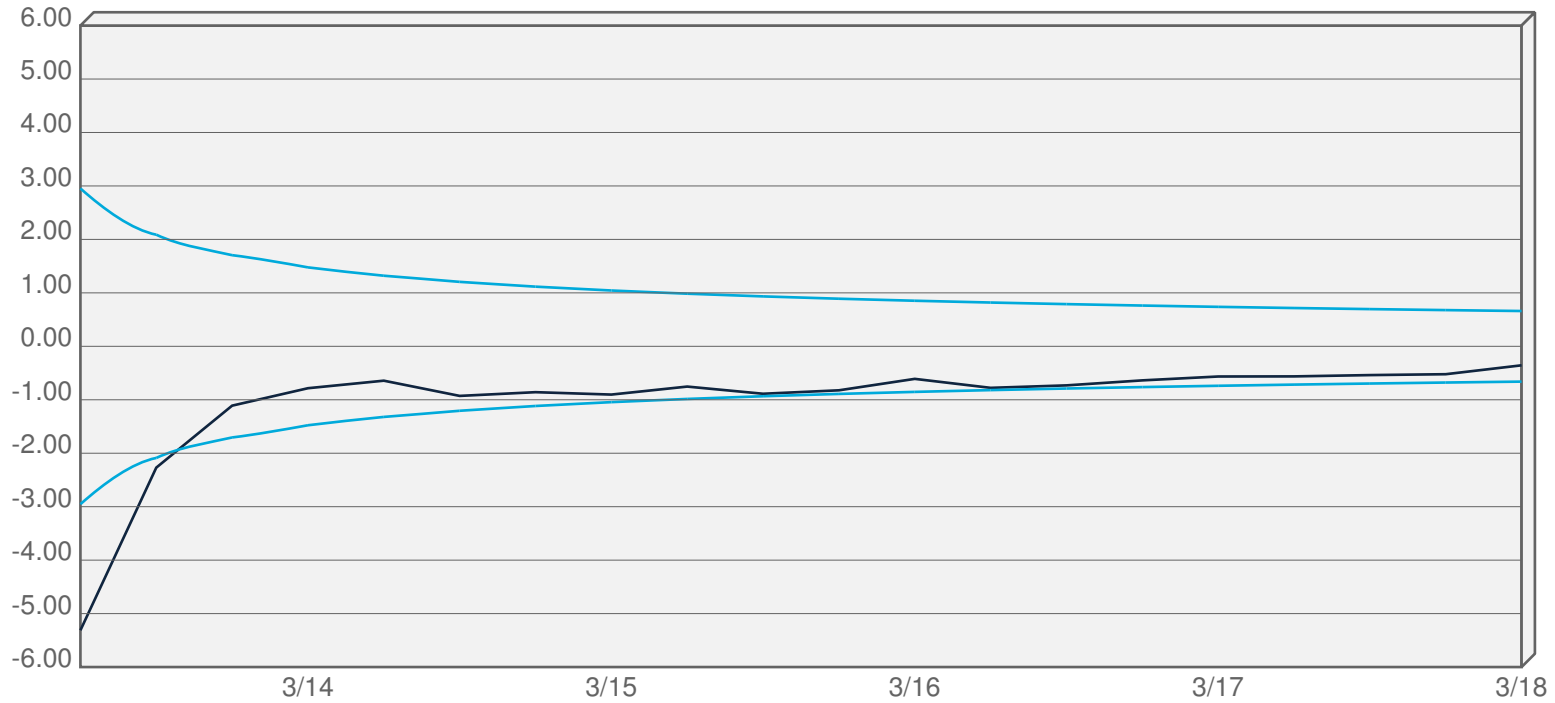
Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
KRS Pension Plan	Ω	7.93	60	4.59	62
KRS Allocation Index	1	7.77	62	5.18	26
Median		8.24		4.74	

*TUCS Total Returns of Master Trusts - Public Universe - Gross of Fees

CUMULATIVE SKILL ANALYSIS

KRS Pension Plan Composite

Five Years Ending March 31, 2018



— Quarterly NOF Value Added vs. KRS Allocation Index

— 80% Confidence Band

Excess Return:	-0.36	Information Ratio:	-0.40
Excess Risk:	0.90	T-Stat:	-0.89

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
KRS Pension Plan									
Net of Fee Return	0.41	3.80	7.72	11.19	7.03	7.38	5.98	3/31/84	9.19
KRS Allocation Index	-0.25	3.17	7.09	10.69	7.03	7.77	6.35	3/31/84	9.32
Value Added	0.66	0.63	0.63	0.50	0.00	-0.39	-0.37	3/31/84	-0.13
KRS IPS Benchmark	-0.11	2.65	5.90						
KERS Pension Plan									
Net of Fee Return	0.30	3.22	7.43	10.72	6.52	7.10	5.84	3/31/84	9.14
KERS Allocation Index	-0.45	2.45	6.29	9.50	6.13	7.16	6.05	3/31/84	9.23
Value Added	0.75	0.78	1.14	1.22	0.39	-0.07	-0.21	3/31/84	-0.08
KERS IPS Benchmark	-0.33	2.37	5.95						
Assumed Rate 5.25%	1.29	2.59	3.91						
KERS (H) Pension Plan									
Net of Fee Return	0.39	3.84	8.38	11.91	7.34	7.56	6.07	3/31/84	9.21
KERS (H) Allocation Index	-0.22	3.32	7.75	11.44	7.15	7.80	6.36	3/31/84	9.32
Value Added	0.61	0.51	0.63	0.47	0.19	-0.24	-0.29	3/31/84	-0.11
KERS (H) IPS Benchmark	-0.08	2.69	6.35						
Assumed Rate 6.25%	1.53	3.08	4.65						
CERS Pension Plan									
Net of Fee Return	0.42	3.90	8.44	11.97	7.35	7.57	6.07	3/31/84	9.21
CERS Allocation Index	-0.20	3.35	7.78	11.47	7.16	7.81	6.36	3/31/84	9.32
Value Added	0.62	0.55	0.66	0.49	0.19	-0.23	-0.29	3/31/84	-0.11
CERS IPS Benchmark	-0.07	2.71	6.38						
Assumed Rate 6.25%	1.53	3.08	4.65						

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
CERS (H) Pension Plan									
Net of Fee Return	0.42	3.89	8.43	11.95	7.37	7.58	6.08	3/31/84	9.21
CERS (H) Allocation Index	-0.19	3.36	7.81	11.50	7.17	7.81	6.37	3/31/84	9.32
Value Added	0.60	0.52	0.62	0.45	0.21	-0.23	-0.29	3/31/84	-0.11
CERS (H) IPS Benchmark	-0.05	2.73	6.40						
Assumed Rate 6.25%	1.53	3.08	4.65						
SPRS Pension Plan									
Net of Fee Return	0.23	3.30	7.42	10.64	6.27	6.92	5.75	3/31/84	9.12
SPRS Allocation Index	-0.36	2.78	6.87	10.31	6.66	7.49	6.21	3/31/84	9.27
Value Added	0.60	0.53	0.55	0.33	-0.39	-0.57	-0.46	3/31/84	-0.16
SPRS IPS Benchmark	-0.24	2.50	6.06						
Assumed Rate 5.25%	1.29	2.59	3.91						

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
US Equity Composite									
Net of Fee Return	-0.69	5.26	9.85	12.76	9.43	12.26	9.33	3/31/84	11.32
Russell 3000	-0.64	5.65	10.48	13.81	10.22	13.03	9.72	3/31/84	11.35
Value Added	-0.04	-0.39	-0.63	-1.06	-0.79	-0.78	-0.38	3/31/84	-0.03
Non-US Equity Composite									
Net of Fee Return	0.19	5.73	12.90	19.99	7.94	7.34	4.08	6/30/00	3.58
Policy Index	-1.06	4.11	10.72	17.42	6.79	6.44	3.32	6/30/00	3.74
Value Added	1.26	1.63	2.18	2.56	1.15	0.90	0.76	6/30/00	-0.17
Fixed Income Composite									
Net of Fee Return	-0.30	0.14	1.21	2.89	3.88	3.62	4.82	3/31/84	7.55
Policy Index	-1.13	-0.69	0.79	2.65	4.46	3.83	4.67	3/31/84	7.36
Value Added	0.83	0.84	0.42	0.24	-0.58	-0.21	0.15	3/31/84	0.18
Bloomberg Global Aggregate	1.36	2.45	4.26	6.97	3.14	1.49	2.57		
Real Return Composite									
Net of Fee Return	-0.50	0.26	1.77	2.42	3.28	1.80		6/30/11	3.82
Real Return Index (P)	-1.84	-1.30	-0.85	-0.97	1.25	1.62		6/30/11	2.37
Value Added	1.33	1.57	2.63	3.38	2.03	0.19		6/30/11	1.45
Real Estate Composite									
Net of Fee Return	2.31	4.67	7.37	9.77	9.55	8.97	7.97	6/30/84	6.04
NCREIF ODCE NOF 1 Quarter Lag	1.85	3.52	5.04	6.66	9.42	10.52	4.07		
Value Added	0.46	1.15	2.32	3.11	0.13	-1.55	3.89		
Absolute Return Composite									
Net of Fee Return	1.61	2.94	4.99	5.46	2.13	4.14		3/31/10	4.22
HFRI FOF Div (1 Month Lag)	1.43	3.13	4.78	5.73	1.84	3.50		3/31/10	3.09
Value Added	0.18	-0.19	0.21	-0.27	0.29	0.65		3/31/10	1.12

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Private Equity Composite									
Net of Fee Return	3.40	6.66	11.70	17.93	11.60	12.99	8.32	6/30/02	11.18
KRS Short Term PE Index	3.40	6.66	11.71	17.93	11.60	12.99	8.32	6/30/02	11.18
Value Added	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	6/30/02	-0.00
Russell 3000 +3% Qtr Lag	7.12	12.85	17.34	25.09	15.44	19.78	13.01	6/30/02	11.13
Cash Composite									
Net of Fee Return	0.57	1.23	1.52	1.75	1.00	0.76	0.82	12/31/87	3.61
91-Day Treasury Bill	0.35	0.63	0.90	1.10	0.53	0.34	0.34	12/31/87	3.30
Value Added	0.22	0.59	0.62	0.65	0.48	0.42	0.48	12/31/87	0.31
Other Assets									
Net of Fee Return	0.00	0.00	0.00	0.00	0.00	0.32	0.19	3/31/99	3.20

CUSTOM BENCHMARK SPECIFICATION

KRS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KRS Allocation Index	6/84	6/17	100.00	KRS Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			25.20	MSCI ACWI Ex USA IMI Index (\$G)
			25.60	Russell 3000
			7.00	Bloomberg Universal
			7.00	Bloomberg High Yield
			8.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	KRS Short Term PE Benchmark
			2.20	91-Day Treasury Bill
	12/17	3/18	10.00	HFRI Diversified Index
			9.00	Bloomberg High Yield
			9.00	Bloomberg Universal
2.20			91-Day Treasury Bill	
23.20			MSCI ACWI Ex USA IMI (\$N)	
5.00			NCREIF ODCE NOF 1 Quarter Lag	
KRS IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			22.70	Bloomberg High Yield
			5.10	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	KRS Short Term PE Benchmark
2.20	91-Day Treasury Bill			

CUSTOM BENCHMARK SPECIFICATION

KRS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KRS IPS Benchmark (cont.)	12/17	3/18	2.20	91-Day Treasury Bill
			10.00	KRS Short Term PE Benchmark
			10.00	HFRI FOF Div (1 Month Lag)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	Real Return Index (P)
			5.10	Bloomberg Universal
			22.70	Bloomberg High Yield
			17.50	MSCI ACWI Ex USA IMI (\$N)
17.50	Russell 3000			

CUSTOM BENCHMARK SPECIFICATION

KERS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KERS Allocation Index	6/84	6/17	100.00	KERS Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			5.00	91-Day Treasury Bill
			10.00	KERS Short Term PE Benchmark
			3.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	Real Return Index (P)
			5.00	Bloomberg Global Aggregate
			5.00	Bloomberg High Yield
			10.00	Bloomberg Aggregate
			22.00	Russell 3000
			20.00	MSCI ACWI Ex USA IMI Index (\$G)
	12/17	3/18	10.00	HFRI Diversified Index
			20.00	Russell 3000
			10.00	KERS Short Term PE Benchmark
			8.00	Real Return Index (P)
5.00			NCREIF ODCE NOF 1 Quarter Lag	
18.00			MSCI ACWI Ex USA IMI (\$N)	
3.00			91-Day Treasury Bill	
12.00			Bloomberg Universal	
		14.00	Bloomberg High Yield	
KERS IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			17.00	Bloomberg High Yield
			10.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	KERS Short Term PE Benchmark

CUSTOM BENCHMARK SPECIFICATION

KERS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KERS IPS Benchmark (cont.)			3.00	91-Day Treasury Bill
	12/17	3/18	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI (\$N)
			17.00	Bloomberg High Yield
			10.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	KERS Short Term PE Benchmark
		3.00	91-Day Treasury Bill	
Assumed Rate 5.25%	9/17	3/18	100.00	Assumed Rate 5.25%

CUSTOM BENCHMARK SPECIFICATION

KERS (H) Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KERS (H) Allocation Index	6/84	6/17	100.00	KERS (H) Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			2.00	91-Day Treasury Bill
			10.00	KERS (H) Short Term PE Benchmark
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			8.00	Real Return Index (P)
			6.00	Bloomberg High Yield
			6.00	Bloomberg Universal
			26.50	Russell 3000
	26.50	MSCI ACWI Ex USA IMI Index (\$G)		
	12/17	3/18	10.00	HFRI Diversified Index
			24.50	Russell 3000
			10.00	KERS (H) Short Term PE Benchmark
			8.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
24.50			MSCI ACWI Ex USA IMI (\$N)	
2.00			91-Day Treasury Bill	
8.00			Bloomberg Universal	
8.00	Bloomberg High Yield			
KERS (H) IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			24.00	Bloomberg High Yield
			4.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	KERS (H) Short Term PE Benchmark
2.00	91-Day Treasury Bill			

CUSTOM BENCHMARK SPECIFICATION

KERS (H) Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
KERS (H) IPS Benchmark (cont.)	12/17	3/18	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI (\$N)
			24.00	Bloomberg High Yield
			4.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	KERS (H) Short Term PE Benchmark
		2.00	91-Day Treasury Bill	
Assumed Rate 6.25%	9/17	3/18	100.00	Assumed Rate 6.25%

CUSTOM BENCHMARK SPECIFICATION

CERS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
CERS Allocation Index	6/84	6/17	100.00	CERS Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			2.00	91-Day Treasury Bill
			10.00	CERS Short Term PE Benchmark
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			8.00	Real Return Index (P)
			6.00	Bloomberg High Yield
			6.00	Bloomberg Universal
			26.50	Russell 3000
	26.50	MSCI ACWI Ex USA IMI Index (\$G)		
	12/17	3/18	10.00	HFRI Diversified Index
			24.50	Russell 3000
			10.00	CERS Short Term PE Benchmark
			8.00	Real Return Index (P)
5.00			NCREIF ODCE NOF 1 Quarter Lag	
24.50			MSCI ACWI Ex USA IMI (\$N)	
2.00			91-Day Treasury Bill	
8.00			Bloomberg Universal	
8.00	Bloomberg High Yield			
CERS IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			24.00	Bloomberg High Yield
			4.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	CERS Short Term PE Benchmark
2.00	91-Day Treasury Bill			

CUSTOM BENCHMARK SPECIFICATION

CERS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
CERS IPS Benchmark (cont.)	12/17	3/18	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI (\$N)
			24.00	Bloomberg High Yield
			4.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	CERS Short Term PE Benchmark
			2.00	91-Day Treasury Bill
Assumed Rate 6.25%	9/17	3/18	100.00	Assumed Rate 6.25%

CUSTOM BENCHMARK SPECIFICATION

CERS (H) Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
CERS (H) Allocation Index	6/84	6/17	100.00	CERS (H) Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			2.00	91-Day Treasury Bill
			10.00	CERS (H) Short Term PE Benchmark
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			8.00	Real Return Index (P)
			6.00	Bloomberg High Yield
			6.00	Bloomberg Universal
			26.50	Russell 3000
	26.50	MSCI ACWI Ex USA IMI Index (\$G)		
	12/17	3/18	10.00	HFRI Diversified Index
			8.00	Bloomberg High Yield
			8.00	Bloomberg Universal
2.00			91-Day Treasury Bill	
24.50			MSCI ACWI Ex USA IMI (\$N)	
5.00			NCREIF ODCE NOF 1 Quarter Lag	
8.00			Real Return Index (P)	
10.00			CERS (H) Short Term PE Benchmark	
24.50	Russell 3000			
CERS (H) IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			24.00	Bloomberg High Yield
			4.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	CERS (H) Short Term PE Benchmark
2.00	91-Day Treasury Bill			

CUSTOM BENCHMARK SPECIFICATION

CERS (H) Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
CERS (H) IPS Benchmark (cont.)	12/17	3/18	2.00	91-Day Treasury Bill
			10.00	CERS (H) Short Term PE Benchmark
			10.00	HFRI FOF Div (1 Month Lag)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	Real Return Index (P)
			4.00	Bloomberg Universal
			24.00	Bloomberg High Yield
			17.50	MSCI ACWI Ex USA IMI (\$N)
			17.50	Russell 3000
Assumed Rate 6.25%	9/17	3/18	100.00	Assumed Rate 6.25%

CUSTOM BENCHMARK SPECIFICATION

SPRS Pension Plan

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
SPRS Allocation Index	6/84	6/17	100.00	SPRS Allocation Index
	9/17	9/17	10.00	HFRI Diversified Index
			3.00	91-Day Treasury Bill
			10.00	SPRS Short Term PE Benchmark
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			8.00	Real Return Index (P)
			9.00	Bloomberg High Yield
			9.00	Bloomberg Universal
			23.00	Russell 3000
			23.00	MSCI ACWI Ex USA IMI Index (\$G)
	12/17	3/18	10.00	HFRI Diversified Index
			21.00	Russell 3000
			10.00	SPRS Short Term PE Benchmark
			8.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
21.00			MSCI ACWI Ex USA IMI (\$N)	
3.00			91-Day Treasury Bill	
11.00			Bloomberg Universal	
11.00	Bloomberg High Yield			
SPRS IPS Benchmark	9/17	9/17	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI Index (\$G)
			17.00	Bloomberg High Yield
			10.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	SPRS Short Term PE Benchmark
3.00	91-Day Treasury Bill			

CUSTOM BENCHMARK SPECIFICATION

SPRS Pension Plan

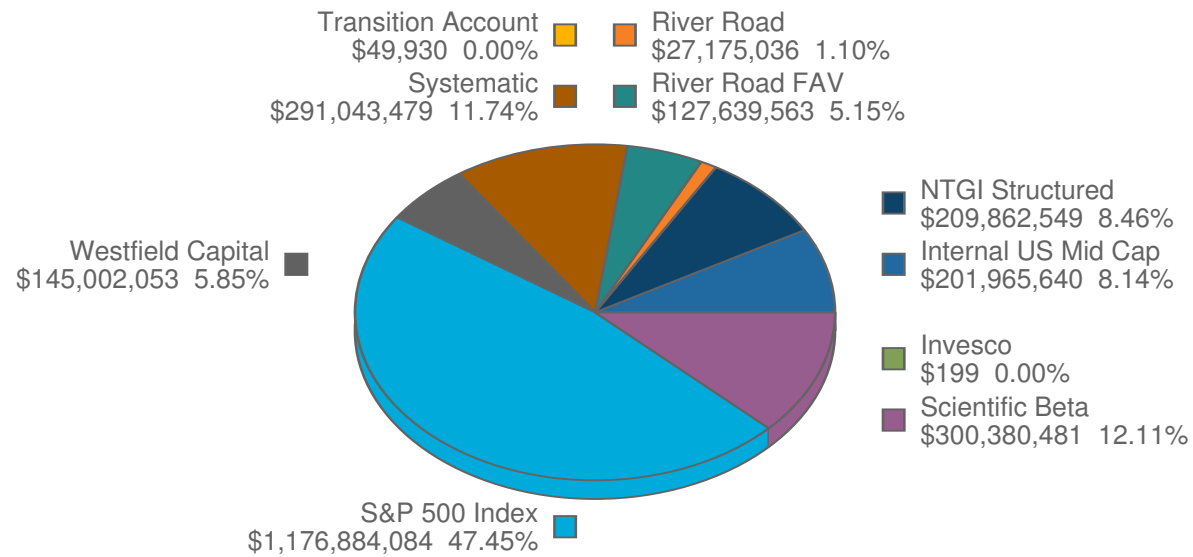
March 31, 2018

	Quarter Start	Quarter End	Percent	Description
SPRS IPS Benchmark (cont.)	12/17	3/18	17.50	Russell 3000
			17.50	MSCI ACWI Ex USA IMI (\$N)
			17.00	Bloomberg High Yield
			10.00	Bloomberg Universal
			10.00	Real Return Index (P)
			5.00	NCREIF ODCE NOF 1 Quarter Lag
			10.00	HFRI FOF Div (1 Month Lag)
			10.00	SPRS Short Term PE Benchmark
			3.00	91-Day Treasury Bill
Assumed Rate 5.25%	9/17	3/18	100.00	Assumed Rate 5.25%



US EQUITY

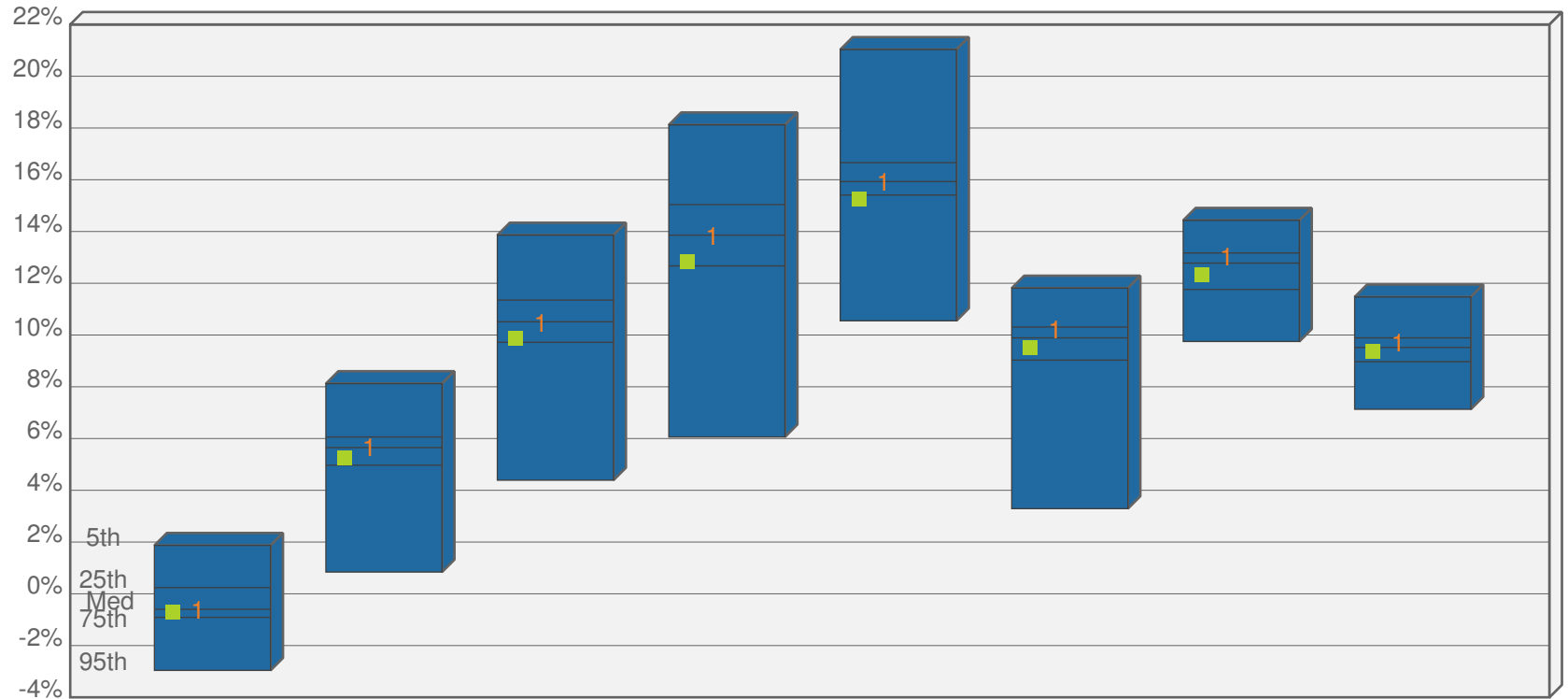
Wilshire Consulting
MANAGER ALLOCATION
 US Equity Composite
As of March 31, 2018



PERFORMANCE COMPARISON

US Equity Composite

Periods Ended March 31, 2018



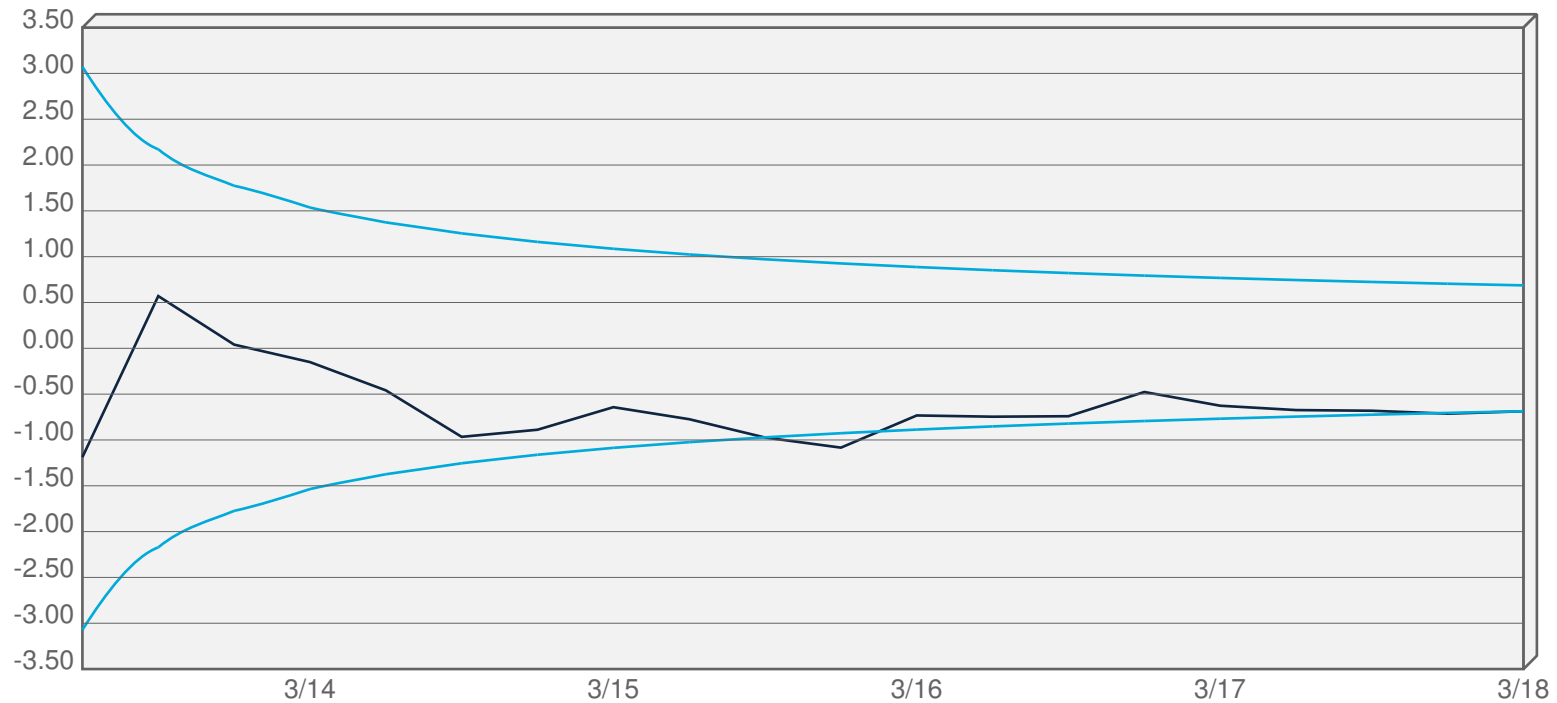
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ US Equity Composite	-0.66 (54)	5.30 (65)	9.92 (69)	12.87 (70)	15.32 (76)	9.55 (63)	12.39 (64)	9.42 (60)
┆ Russell 3000	-0.64 (51)	5.65 (50)	10.48 (52)	13.81 (55)	15.92 (50)	10.22 (30)	13.03 (38)	9.72 (37)
5th %tile	1.87	8.12	13.86	18.12	21.03	11.81	14.43	11.47
25th %tile	0.24	6.06	11.35	15.04	16.66	10.31	13.17	9.89
Median	-0.60	5.65	10.51	13.86	15.93	9.89	12.78	9.52
75th %tile	-0.91	4.97	9.72	12.67	15.41	9.03	11.76	8.97
95th %tile	-2.96	0.84	4.39	6.06	10.55	3.29	9.75	7.13
Number of Funds	109	108	105	104	100	93	78	66

*TUCS Total Ret of US Equity Investment Pools Universe - Gross of Fees

CUMULATIVE SKILL ANALYSIS

US Equity Composite

Five Years Ending March 31, 2018



— Quarterly NOF Value Added vs. Russell 3000

— 80% Confidence Band

Excess Return:	-0.69	Information Ratio:	-0.74
Excess Risk:	0.93	T-Stat:	-1.64

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
S&P 500 Index									
Net of Fee Return	-0.71	5.91	10.65	13.97	10.73	13.25	9.79	6/30/01	7.22
Standard & Poor's 500	-0.76	5.84	10.58	13.99	10.78	13.31	9.49	6/30/01	6.81
Value Added	0.04	0.07	0.07	-0.02	-0.05	-0.06	0.30	6/30/01	0.41
Scientific Beta									
Net of Fee Return	0.29	6.43	9.67	13.30				6/30/16	14.10
Standard & Poor's 500	-0.76	5.84	10.58	13.99				6/30/16	16.36
Value Added	1.05	0.60	-0.91	-0.69				6/30/16	-2.27
River Road									
Net of Fee Return	-3.32	0.65	2.91	3.13	7.07	9.61		6/30/11	10.65
Russell 3000 Value	-2.82	2.11	5.45	6.81	7.87	10.71		6/30/11	11.41
Value Added	-0.50	-1.46	-2.54	-3.68	-0.80	-1.10		6/30/11	-0.76
River Road FAV									
Net of Fee Return	0.12	1.29	4.86	8.77				6/30/16	17.34
Russell 3000 Value	-2.82	2.11	5.45	6.81				6/30/16	12.32
Value Added	2.94	-0.82	-0.59	1.97				6/30/16	5.02
Westfield Capital									
Net of Fee Return	2.83	8.07	14.12	20.31	8.25	13.20		6/30/11	12.80
Russell 3000 Growth	1.48	9.20	15.68	21.06	12.57	15.32		6/30/11	14.30
Value Added	1.34	-1.13	-1.56	-0.75	-4.32	-2.12		6/30/11	-1.50
Systematic									
Net of Fee Return	-3.25	4.61	10.71	10.43	7.27	9.75		6/30/12	12.51
Russell Mid Cap Value	-2.50	2.86	5.07	6.50	7.23	11.10		6/30/12	14.01
Value Added	-0.75	1.75	5.64	3.93	0.04	-1.35		6/30/12	-1.51

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

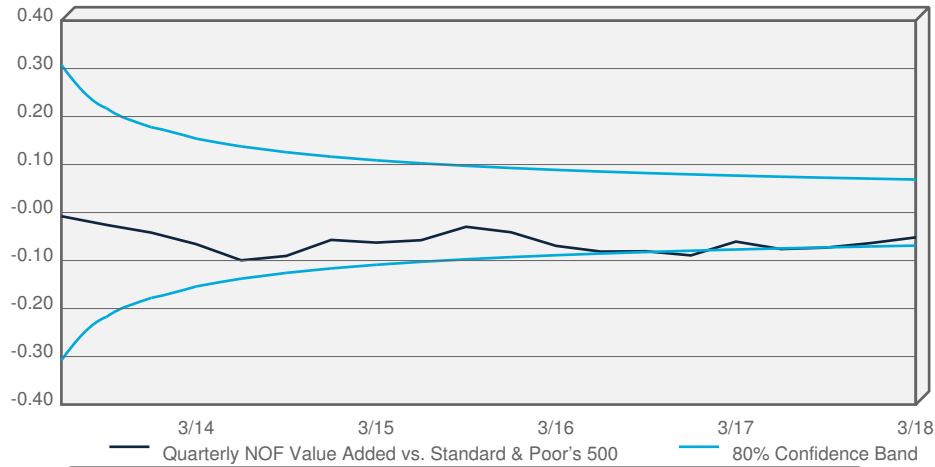
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Internal US Mid Cap									
Net of Fee Return	-0.60	5.75	9.18	11.32	8.97			9/30/14	11.15
S&P 400 Mid Cap	-0.77	5.43	8.83	10.97	8.96			9/30/14	11.18
Value Added	0.17	0.32	0.35	0.35	0.01			9/30/14	-0.02
NTGI Structured									
Net of Fee Return	-0.04	3.29	9.20	11.93	8.83	12.21	11.06	9/30/99	10.26
Russell 2000	-0.08	3.25	9.11	11.79	8.39	11.47	9.84	9/30/99	8.57
Value Added	0.05	0.04	0.10	0.13	0.44	0.75	1.22	9/30/99	1.70
Transition Account									
Net of Fee Return	0.37	0.71	1.09	1.31	2.12	83.51		6/30/11	55.97
US Equity Composite									
Net of Fee Return	-0.69	5.26	9.85	12.76	9.43	12.26	9.33	3/31/84	11.32
Russell 3000	-0.64	5.65	10.48	13.81	10.22	13.03	9.72	3/31/84	11.35
Value Added	-0.04	-0.39	-0.63	-1.06	-0.79	-0.78	-0.38	3/31/84	-0.03

INVESTMENT MANAGER ANALYSIS

S&P 500 Index

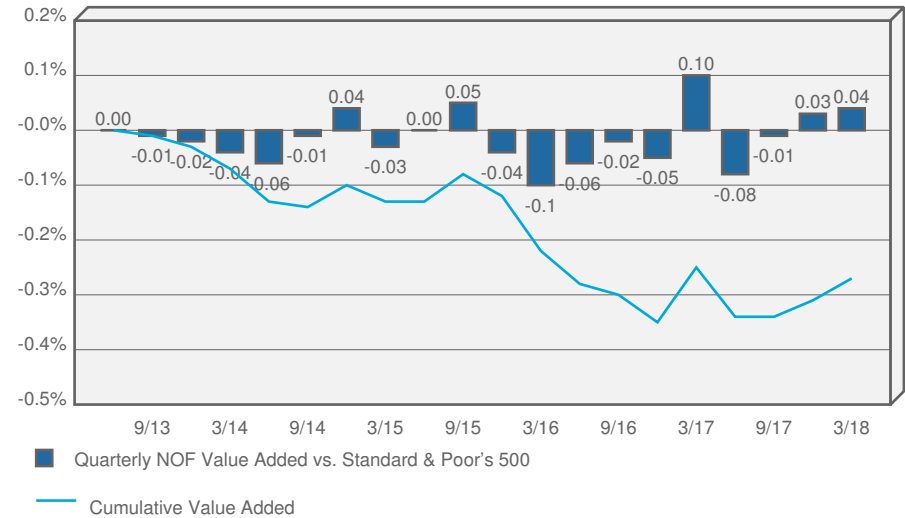
March 31, 2018

Cumulative Skill Analysis vs Benchmark

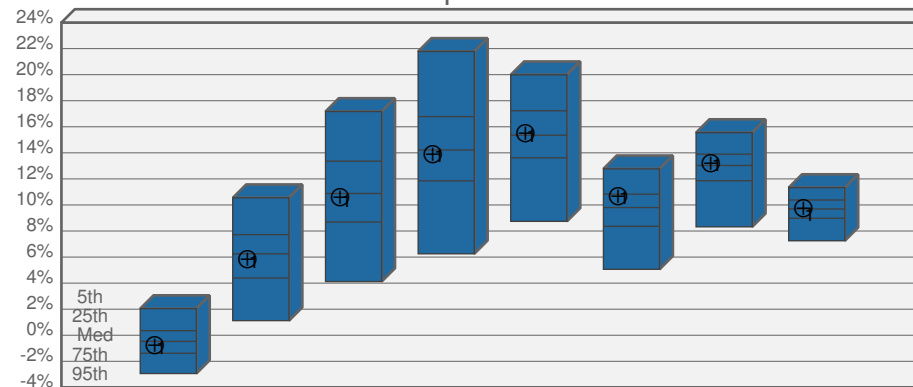


Excess Return:	-0.05	Information Ratio:	-0.55
Excess Risk:	0.09	T-Stat:	-1.24

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊕ S&P 500 Index	-0.71 (58)	5.91 (54)	10.65 (53)	13.97 (51)	15.54 (45)	10.73 (27)	13.25 (45)	9.79 (46)
1 Standard & Poo	-0.76 (60)	5.84 (55)	10.58 (53)	13.99 (51)	15.57 (44)	10.78 (25)	13.31 (42)	9.49 (56)
Median	-0.47	6.25	10.88	14.22	15.35	9.80	13.03	9.69
Number of Funds	174	174	174	174	172	170	164	139

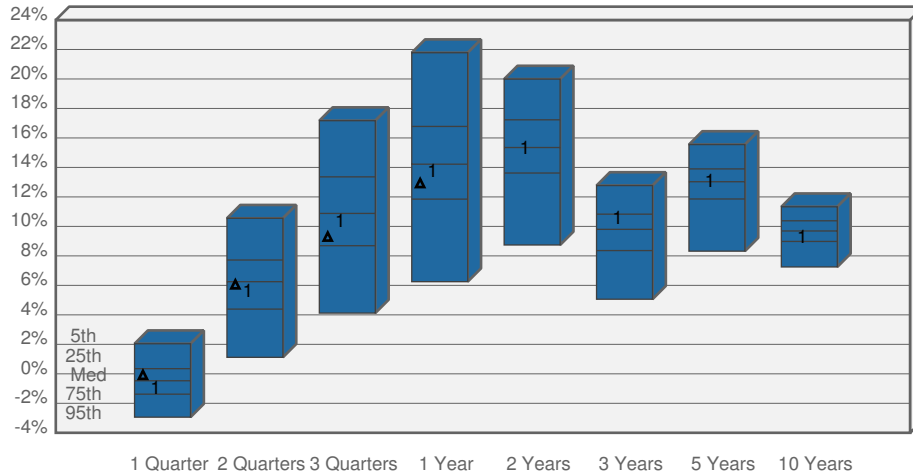
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Scientific Beta

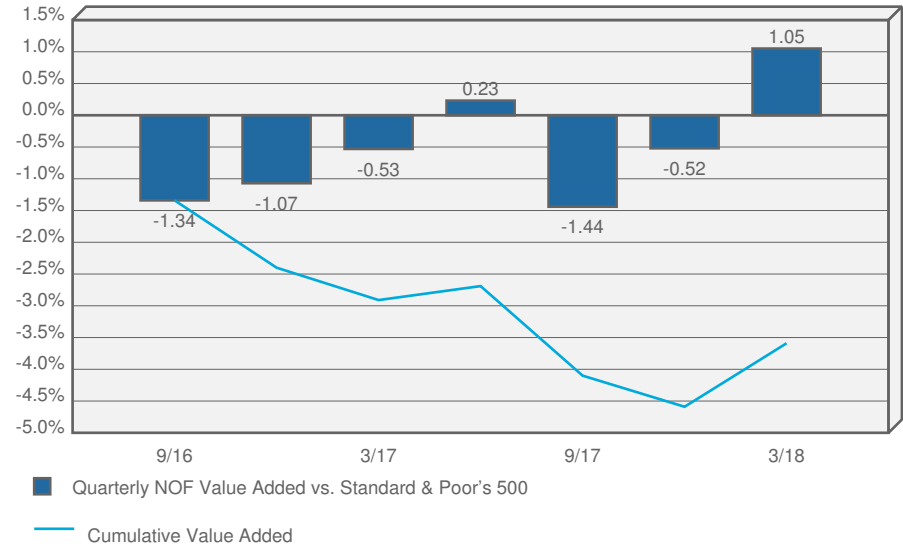
March 31, 2018

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ Scientific Bet	0.29 (27)	6.43 (48)	9.67 (63)	13.30 (58)				
1 Standard & Poo	-0.76 (60)	5.84 (55)	10.58 (53)	13.99 (51)	15.57 (44)	10.78 (25)	13.31 (42)	9.49 (56)
Median	-0.47	6.25	10.88	14.22	15.35	9.80	13.03	9.69
Number of Funds	174	174	174	174	172	170	164	139

Value-Added Analysis vs Benchmark



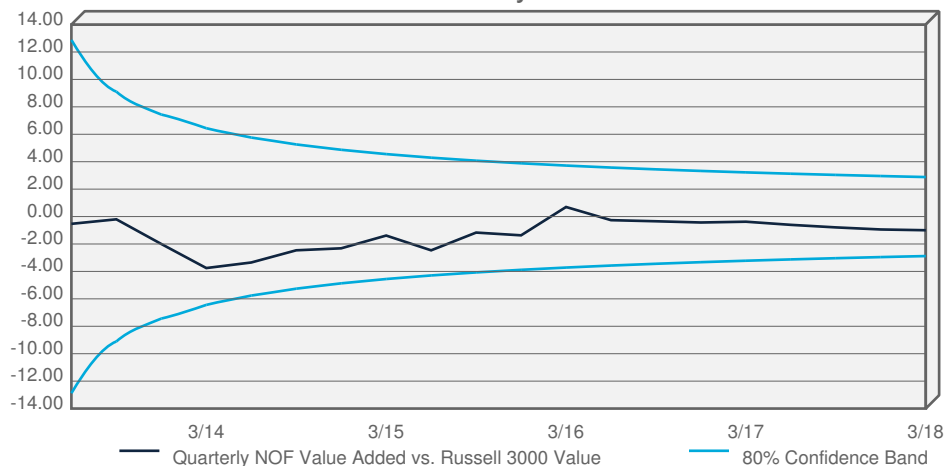
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

River Road

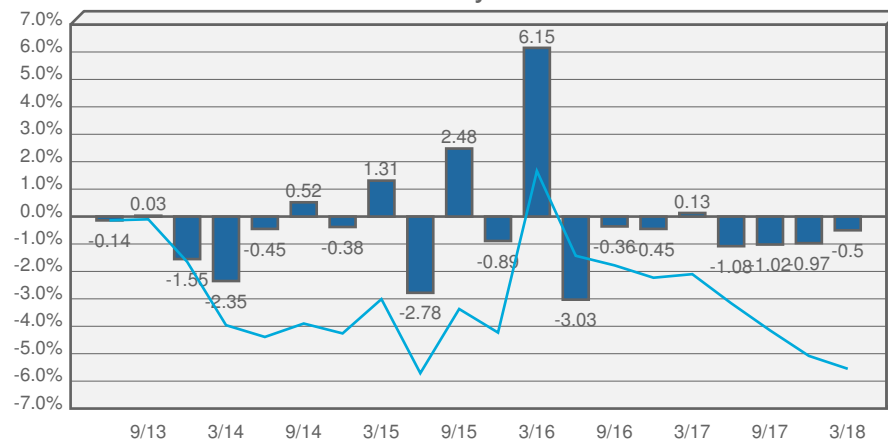
March 31, 2018

Cumulative Skill Analysis vs Benchmark



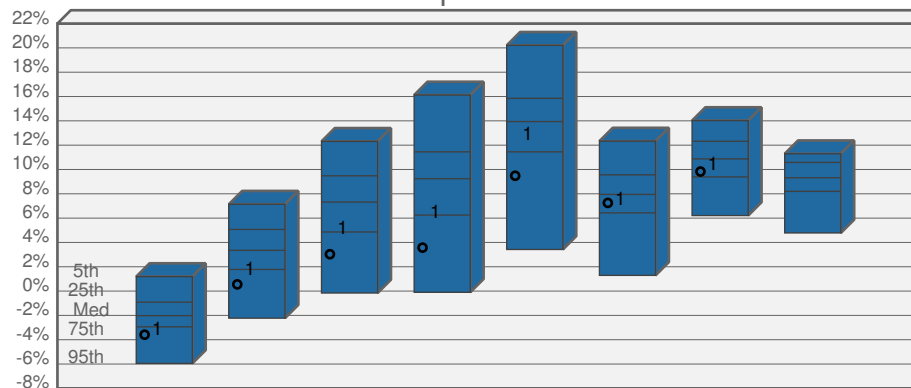
Excess Return:	-1.00	Information Ratio:	-0.25
Excess Risk:	3.92	T-Stat:	-0.57

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Russell 3000 Value
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
○ River Road	-3.15 (79)	0.99 (81)	3.47 (81)	4.01 (84)	9.92 (82)	7.69 (56)	10.27 (62)	
1 Russell 3000 V	-2.82 (71)	2.11 (67)	5.45 (70)	6.81 (68)	13.20 (55)	7.87 (53)	10.71 (53)	
Median	-2.02	3.35	7.32	9.24	13.94	7.95	10.87	9.32
Number of Funds	85	85	85	85	85	83	77	63

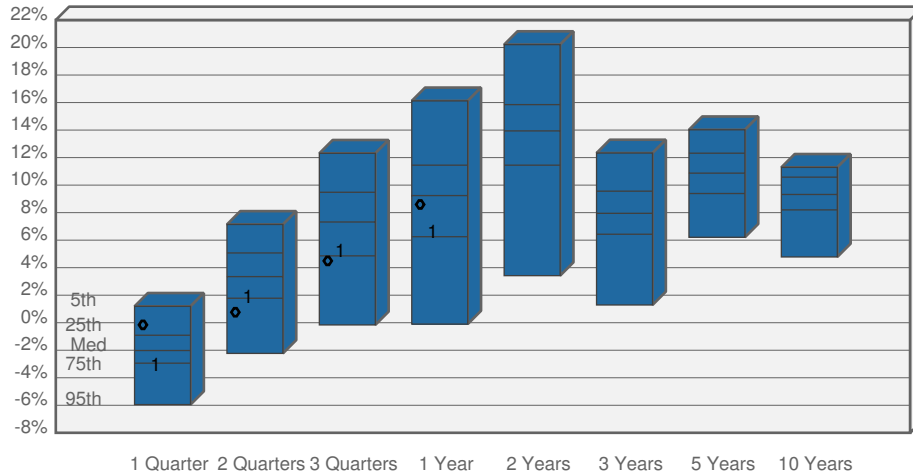
*Compass Total Returns of Active Combination Value Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

River Road FAV

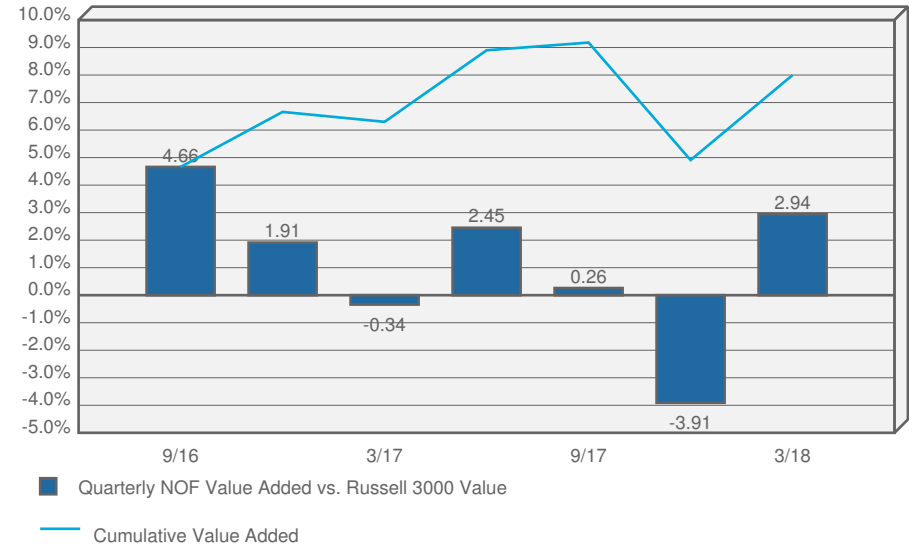
March 31, 2018

Performance Comparison vs Peer Universe*



○ River Road FAV	0.23 (10)	1.15 (78)	4.88 (74)	8.98 (50)				
1 Russell 3000 V	-2.82 (71)	2.11 (67)	5.45 (70)	6.81 (68)				
Median	-2.02	3.35	7.32	9.24	13.94	7.95	10.87	9.32
Number of Funds	85	85	85	85	85	83	77	63

Value-Added Analysis vs Benchmark



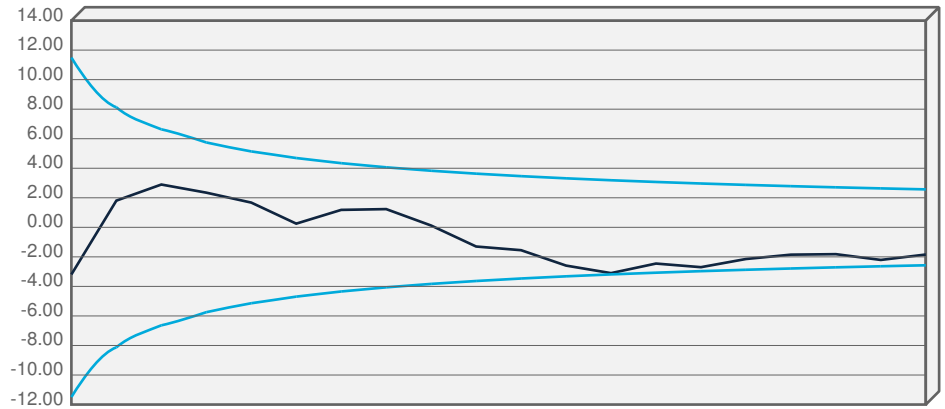
*Compass Total Returns of Active Combination Value Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Westfield Capital

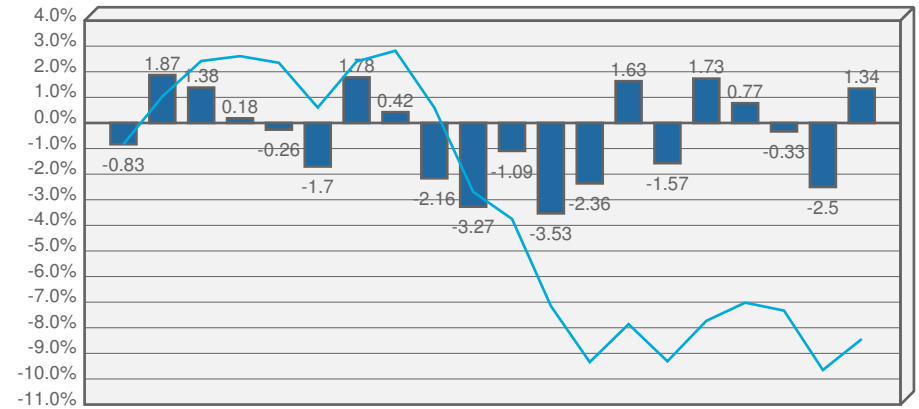
March 31, 2018

Cumulative Skill Analysis vs Benchmark



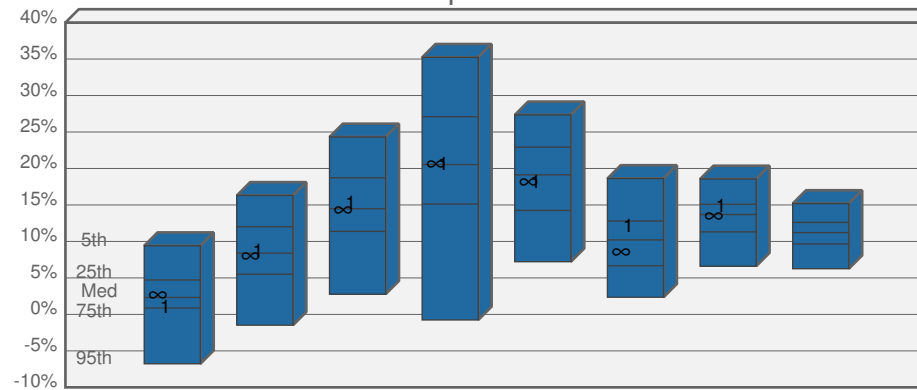
Excess Return:	-1.84	Information Ratio:	-0.53
Excess Risk:	3.49	T-Stat:	-1.18

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Russell 3000 Growth
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ Westfield Capi	2.98 (42)	8.38 (51)	14.60 (48)	20.99 (46)	18.43 (53)	8.84 (63)	13.84 (41)	
1 Russell 3000 G	1.48 (67)	9.20 (45)	15.68 (42)	21.06 (46)	18.64 (53)	12.57 (25)	15.32 (24)	
Median	2.32	8.39	14.48	20.54	19.13	10.21	13.69	11.21
Number of Funds	64	64	64	64	63	63	62	47

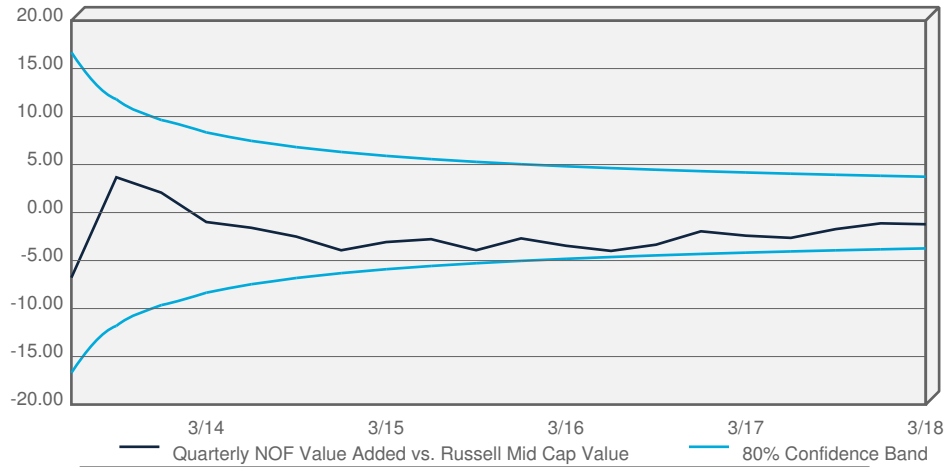
*Compass Total Returns of Active Combination Growth Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Systematic

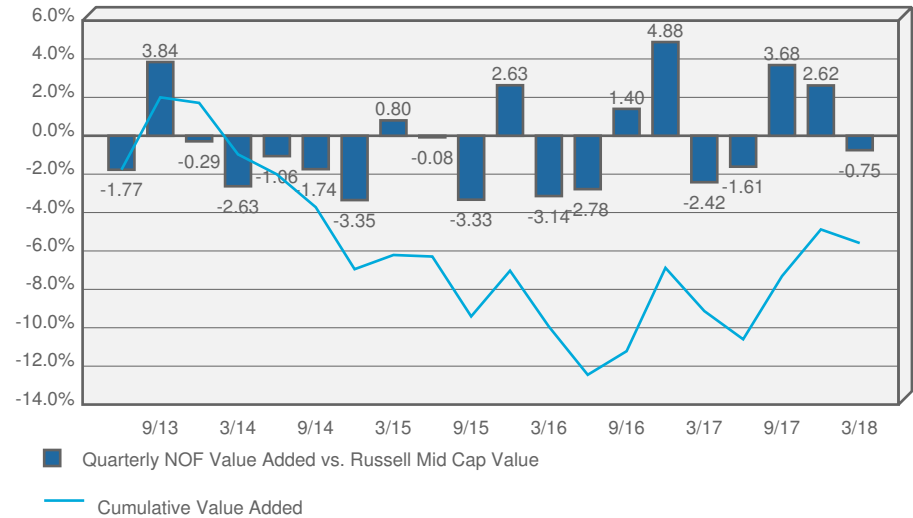
March 31, 2018

Cumulative Skill Analysis vs Benchmark

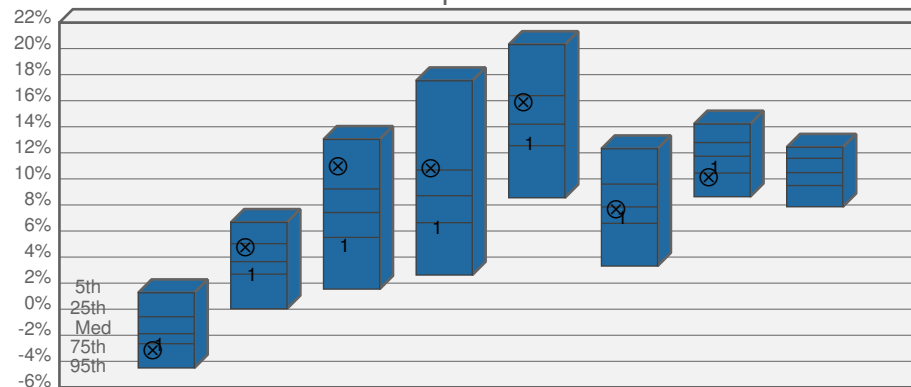


Excess Return:	-1.22	Information Ratio:	-0.24
Excess Risk:	5.08	T-Stat:	-0.54

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ Systematic	-3.14 (82)	4.82 (31)	11.03 (6)	10.87 (20)	15.91 (29)	7.68 (56)	10.18 (77)	
1 Russell Mid Ca	-2.50 (73)	2.86 (67)	5.07 (80)	6.50 (79)	12.96 (67)	7.23 (66)	11.10 (66)	
Median	-1.88	3.65	7.42	8.71	14.20	7.85	11.74	10.48
Number of Funds	86	86	86	86	86	86	84	75

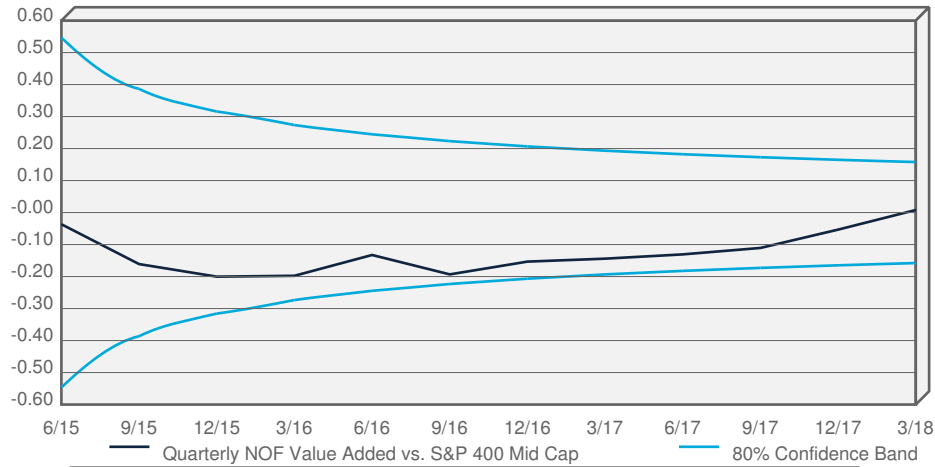
*Compass Total Returns of Active Midcap Value Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Internal US Mid Cap

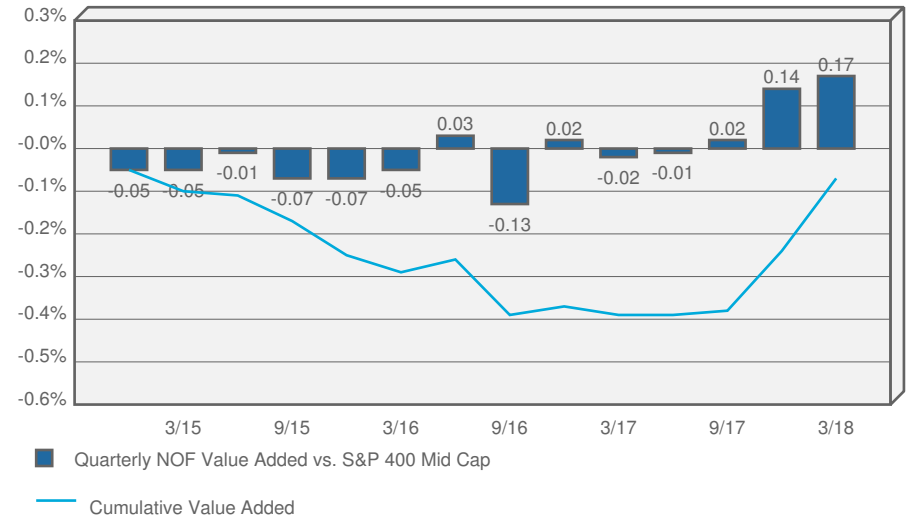
March 31, 2018

Cumulative Skill Analysis vs Benchmark

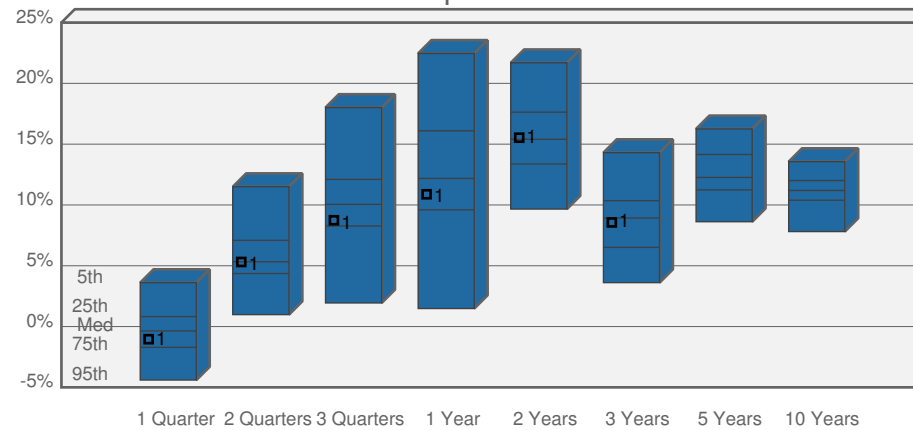


Excess Return:	0.01	Information Ratio:	0.05
Excess Risk:	0.17	T-Stat:	0.08

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Internal US Mi	-0.60 (57)	5.75 (46)	9.18 (62)	11.32 (60)	15.97 (42)	9.00 (48)		
S&P 400 Mid Ca	-0.77 (57)	5.43 (48)	8.83 (64)	10.97 (64)	15.84 (44)	8.96 (49)		
Median	-0.36	5.33	10.05	12.18	15.40	8.92	12.26	11.19
Number of Funds	56	56	56	56	56	56	55	45

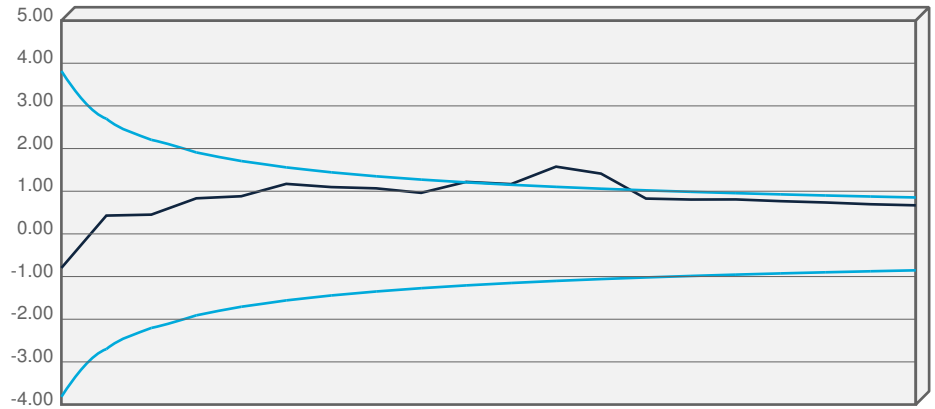
*Compass Total Returns of Active Midcap Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

NTGI Structured

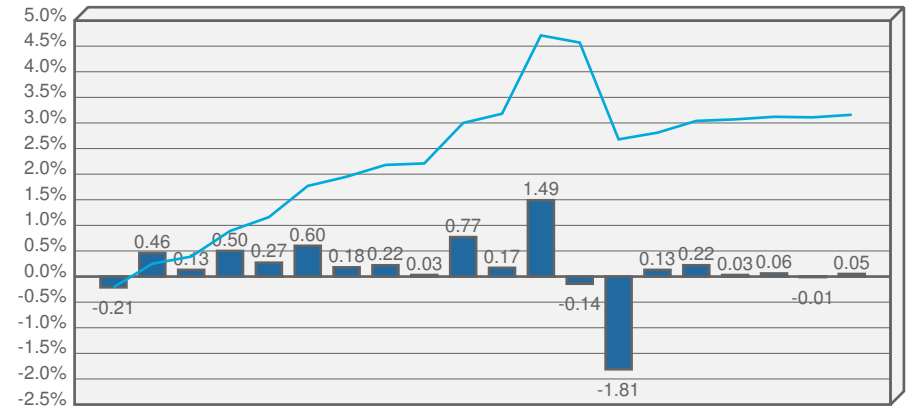
March 31, 2018

Cumulative Skill Analysis vs Benchmark



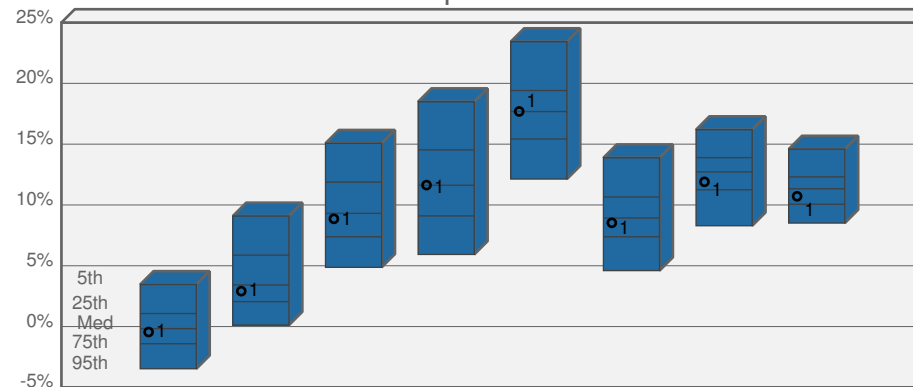
Excess Return:	0.67	Information Ratio:	0.58
Excess Risk:	1.16	T-Stat:	1.29

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Russell 2000
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
○ NTGI Structure	-0.01 (48)	3.35 (51)	9.30 (50)	12.07 (45)	18.13 (44)	8.97 (49)	12.34 (57)	11.15 (53)
■ Russell 2000	-0.08 (48)	3.25 (51)	9.11 (55)	11.79 (46)	18.79 (33)	8.39 (62)	11.47 (71)	9.84 (79)
Median	-0.17	3.42	9.31	11.62	17.68	8.93	12.72	11.33
Number of Funds	131	131	130	130	129	128	125	101

*Compass Total Returns of Active Small Cap Core Equity Portfolios Universe - Gross of Fees

CUSTOM BENCHMARK SPECIFICATION

US Equity Composite

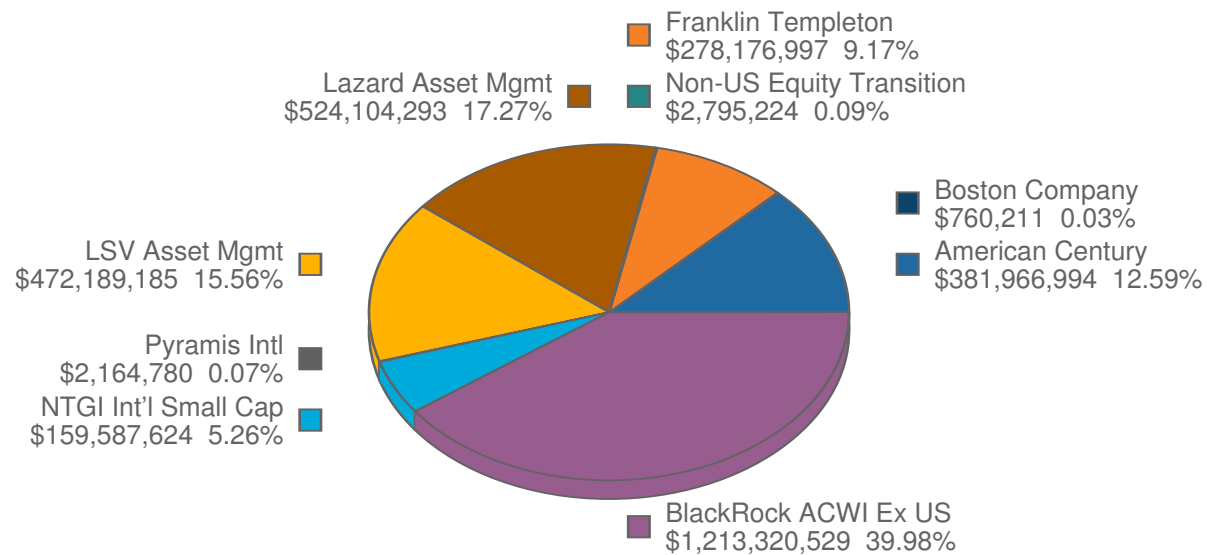
March 31, 2018

	Quarter Start	Quarter End	Percent	Description
Russell 3000	6/84	6/14	100.00	Blended US Equity Index
	9/14	3/18	100.00	Russell 3000



NON-US EQUITY

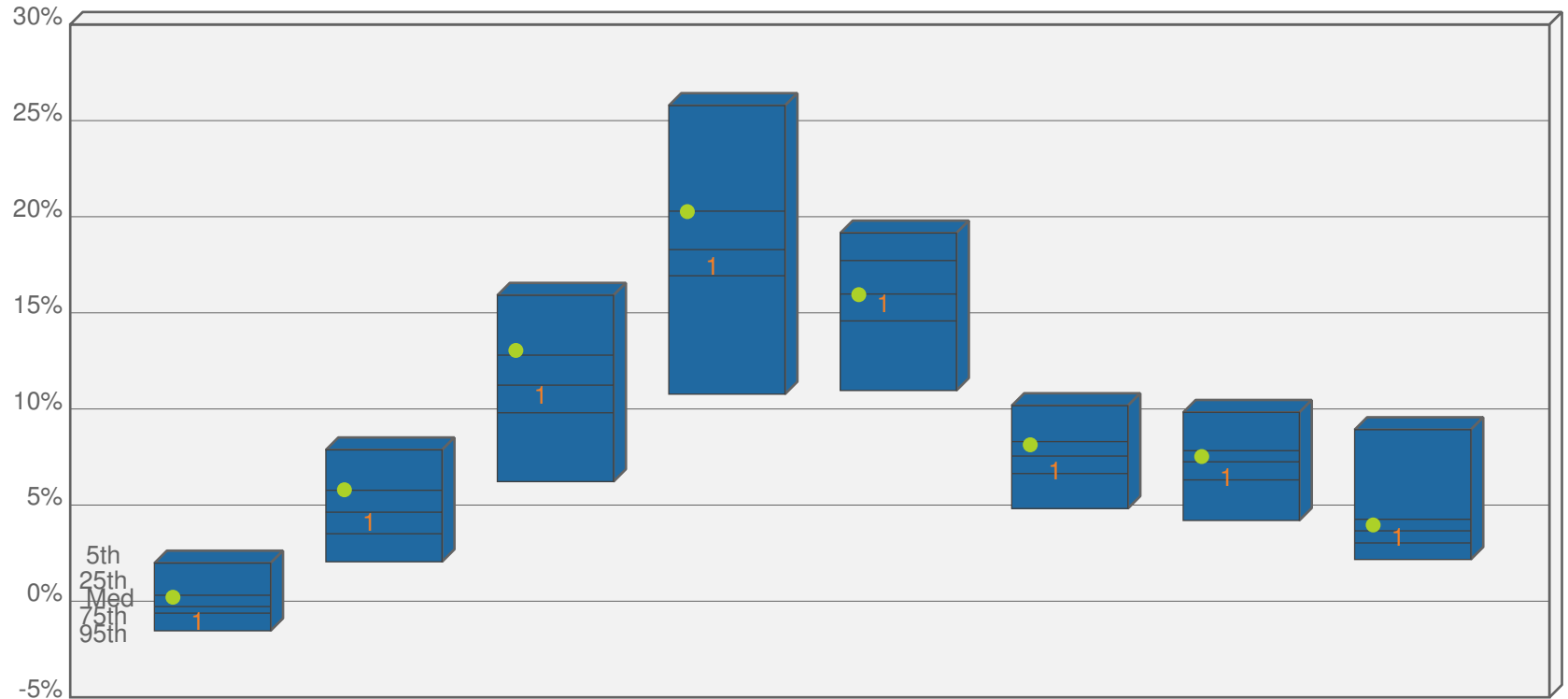
Wilshire Consulting
MANAGER ALLOCATION
Non-US Equity Composite
As of March 31, 2018



PERFORMANCE COMPARISON

Non-US Equity Composite

Periods Ended March 31, 2018

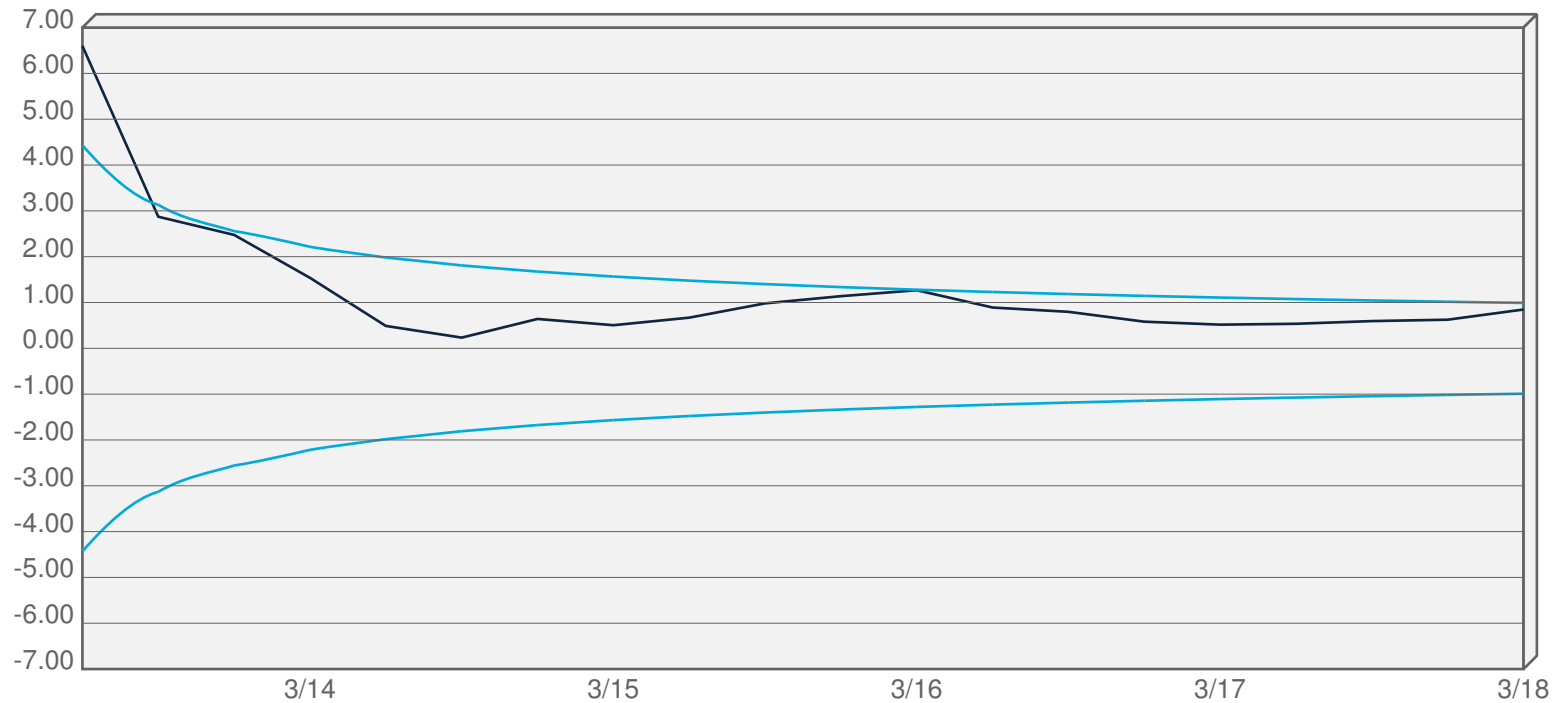


	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
● Non-US Equity Composite	0.27 (29)	5.86 (21)	13.11 (17)	20.33 (21)	16.01 (48)	8.20 (28)	7.59 (32)	4.03 (37)
1 Policy Index	-1.06 (84)	4.11 (64)	10.72 (60)	17.42 (68)	15.47 (61)	6.79 (71)	6.44 (67)	3.32 (63)
5th %tile	1.98	7.87	15.91	25.78	19.15	10.17	9.82	8.92
25th %tile	0.31	5.77	12.80	20.29	17.72	8.30	7.83	4.26
Median	-0.28	4.63	11.24	18.29	15.98	7.55	7.25	3.66
75th %tile	-0.62	3.51	9.80	16.93	14.58	6.64	6.31	3.03
95th %tile	-1.54	2.05	6.22	10.77	10.96	4.82	4.20	2.17
Number of Funds	64	64	63	63	61	58	54	39

*TUCS Total Ret of Non-US Equity Investment Pools Universe - Gross of Fees

CUMULATIVE SKILL ANALYSIS

Non-US Equity Composite
Five Years Ending March 31, 2018



— Quarterly NOF Value Added vs. Policy Index

— 80% Confidence Band

Excess Return:	0.85	Information Ratio:	0.63
Excess Risk:	1.35	T-Stat:	1.41

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
BlackRock ACWI Ex US									
Net of Fee Return	-1.29	3.68	10.11	16.59	6.44	6.10		6/30/09	7.88
MSCI ACWI X US (N)	-1.18	3.76	10.16	16.53	6.18	5.89		6/30/09	7.68
Value Added	-0.11	-0.08	-0.05	0.06	0.26	0.21		6/30/09	0.20
American Century									
Net of Fee Return	3.11	8.60	20.36	30.23	8.20			6/30/14	5.86
Policy Index	-1.06	4.11	10.61	17.24	6.73			6/30/14	3.77
Value Added	4.17	4.50	9.75	12.99	1.47			6/30/14	2.09
Franklin Templeton									
Net of Fee Return	2.27	8.26	19.42	26.49	11.63			6/30/14	8.15
Policy Index	-1.06	4.11	10.61	17.24	6.73			6/30/14	3.77
Value Added	3.33	4.15	8.80	9.24	4.90			6/30/14	4.39
Lazard Asset Mgmt									
Net of Fee Return	1.62	8.34	14.41	22.65	7.68			6/30/14	5.32
Policy Index	-1.06	4.11	10.61	17.24	6.73			6/30/14	3.77
Value Added	2.68	4.24	3.80	5.41	0.94			6/30/14	1.56
LSV Asset Mgmt									
Net of Fee Return	-1.12	4.28	8.89	14.65	6.51			6/30/14	3.84
Policy Index	-1.06	4.11	10.61	17.24	6.73			6/30/14	3.77
Value Added	-0.05	0.18	-1.72	-2.59	-0.23			6/30/14	0.08
NTGI Int'l Small Cap									
Net of Fee Return	0.28	6.65	14.04	20.83	10.68	9.00		12/31/08	13.05
MSCI ACWI X US Small Cap (N)	-0.35	6.19	13.51	20.59	10.40	8.57		12/31/08	13.27
Value Added	0.64	0.46	0.53	0.24	0.28	0.43		12/31/08	-0.22

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

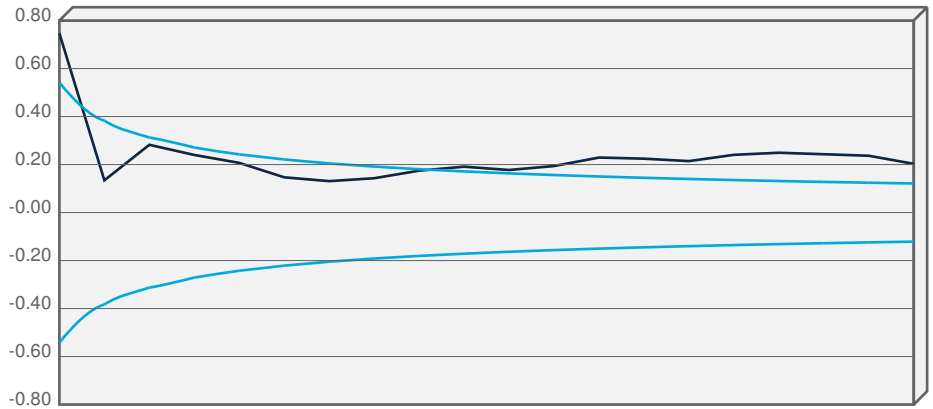
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Non-US Equity Transition Net of Fee Return	6.77	3.13	6.00	10.33	-3.67			6/30/14	-1.25
Non-US Equity Composite Net of Fee Return	0.19	5.73	12.90	19.99	7.94	7.34	4.08	6/30/00	3.58
Policy Index	-1.06	4.11	10.72	17.42	6.79	6.44	3.32	6/30/00	3.74
Value Added	1.26	1.63	2.18	2.56	1.15	0.90	0.76	6/30/00	-0.17

INVESTMENT MANAGER ANALYSIS

BlackRock ACWI Ex US

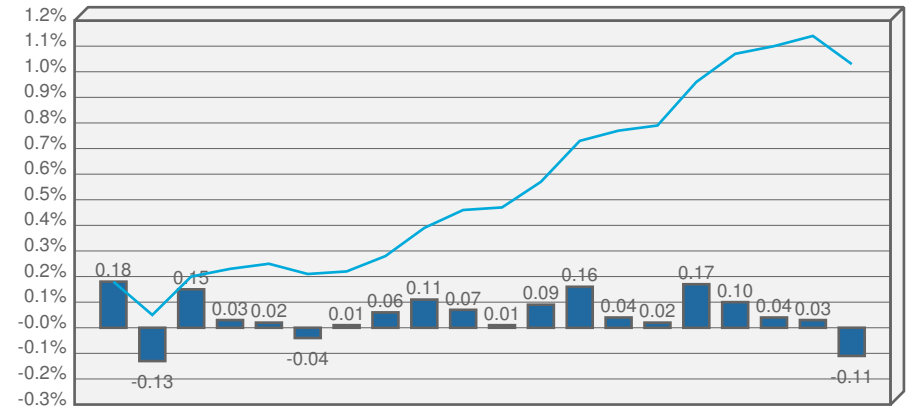
March 31, 2018

Cumulative Skill Analysis vs Benchmark



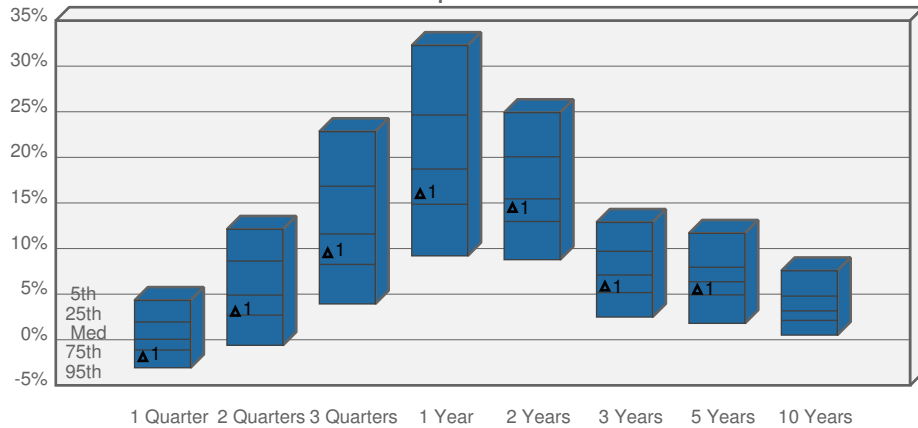
Excess Return:	0.20	Information Ratio:	1.23
Excess Risk:	0.16	T-Stat:	2.75

Value-Added Analysis vs Benchmark



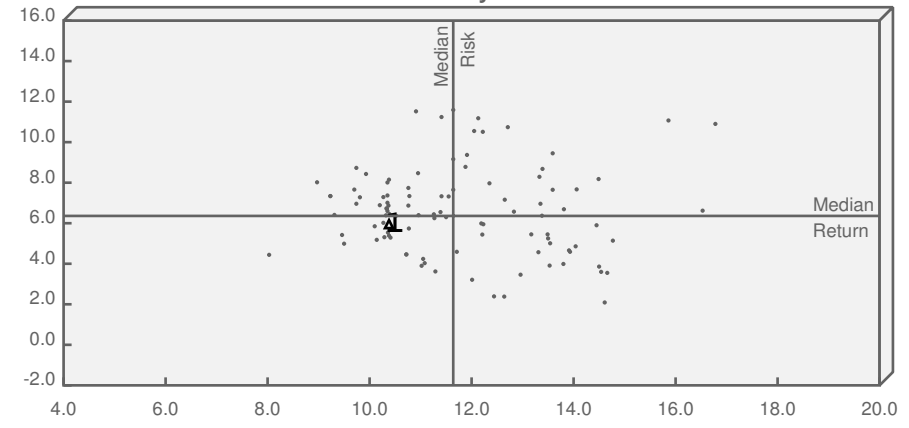
Quarterly NOF Value Added vs. MSCI ACWI X US (N)	Cumulative Value Added
--	------------------------

Performance Comparison vs Peer Universe*



▲ BlackRock ACWI	-1.29 (78)	3.68 (61)	10.11 (60)	16.59 (62)	15.07 (54)	6.44 (57)	6.10 (55)
■ MSCI ACWI X US	-1.18 (76)	3.76 (60)	10.16 (60)	16.53 (63)	14.82 (56)	6.18 (61)	5.89 (60)
Median	0.05	4.90	11.60	18.72	15.45	7.10	6.36
Number of Funds	2546	2480	2441	2385	2197	1921	1522

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
BlackRock ACWI Ex US	▲	6.10	55	10.59	71
MSCI ACWI X US (N)	■	5.89	60	10.60	71
Median		6.36		11.64	

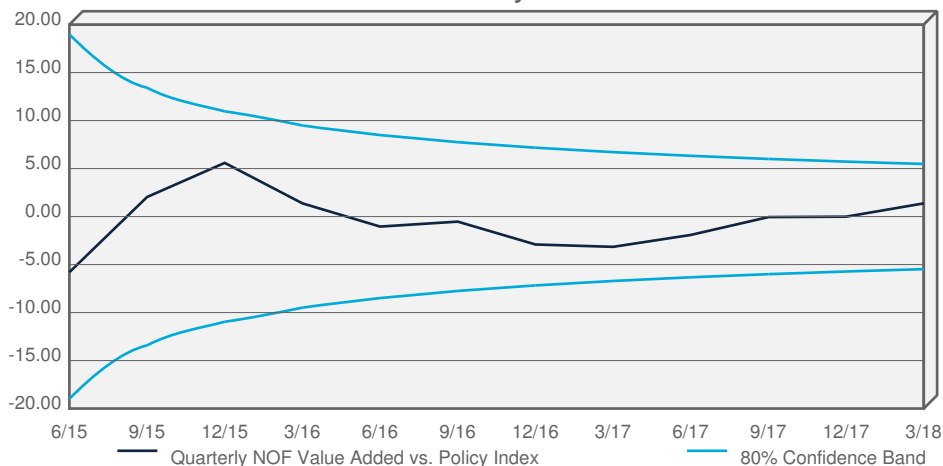
*Lipper Total Returns of International Equity Mutual Funds Universe - Net of Fees

INVESTMENT MANAGER ANALYSIS

American Century

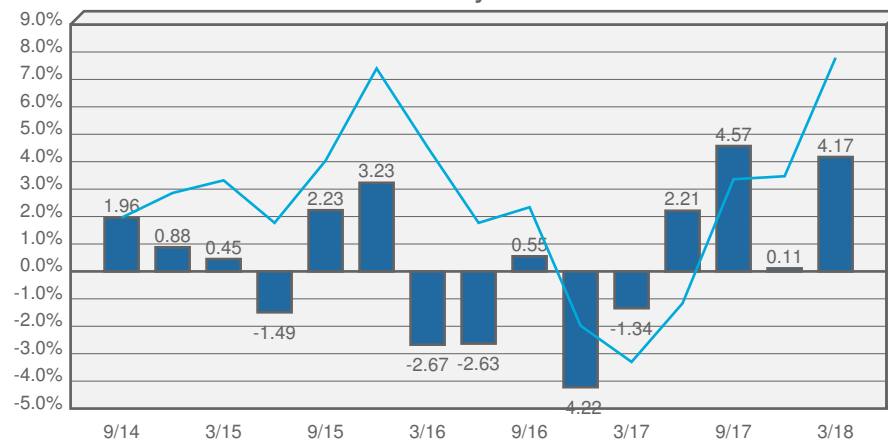
March 31, 2018

Cumulative Skill Analysis vs Benchmark



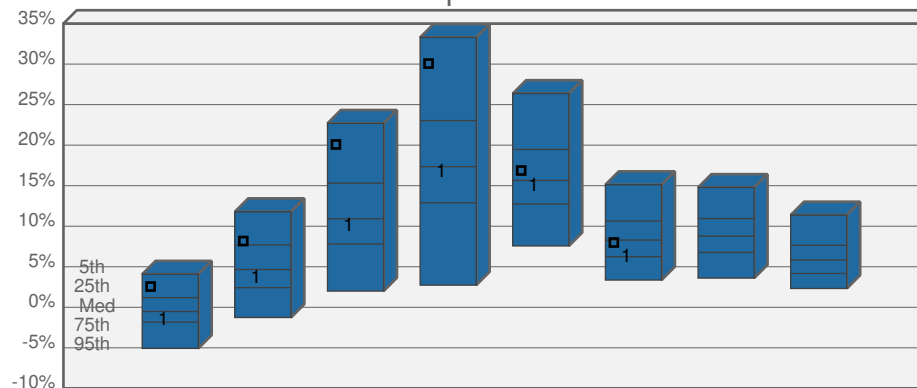
Excess Return:	1.37	Information Ratio:	0.24
Excess Risk:	5.77	T-Stat:	0.41

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. Policy Index
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
□ American Centu	3.22 (7)	8.83 (17)	20.74 (7)	30.72 (7)	17.53 (35)	8.65 (45)		
1 Policy Index	-1.06 (61)	4.11 (56)	10.61 (52)	17.24 (50)	15.46 (51)	6.74 (70)		
Median	-0.52	4.66	10.92	17.35	15.65	8.29	8.77	5.83
Number of Funds	1642	1635	1621	1617	1587	1517	1355	894

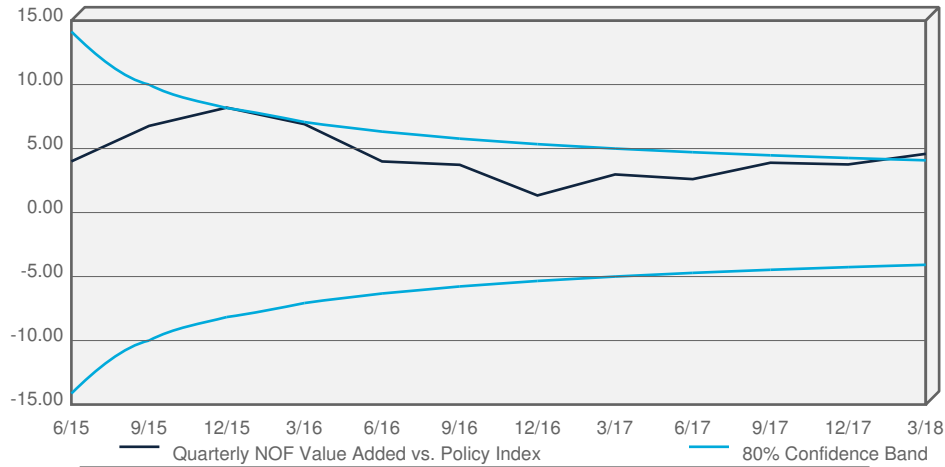
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Franklin Templeton

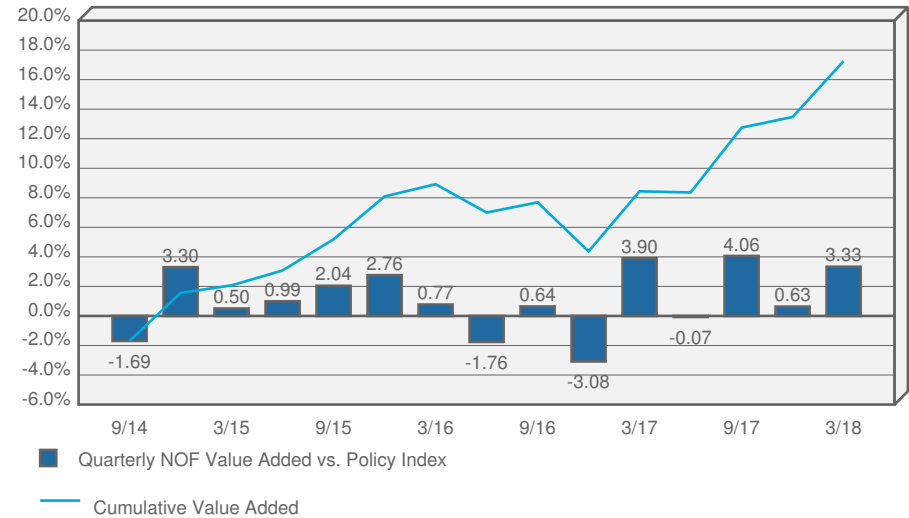
March 31, 2018

Cumulative Skill Analysis vs Benchmark

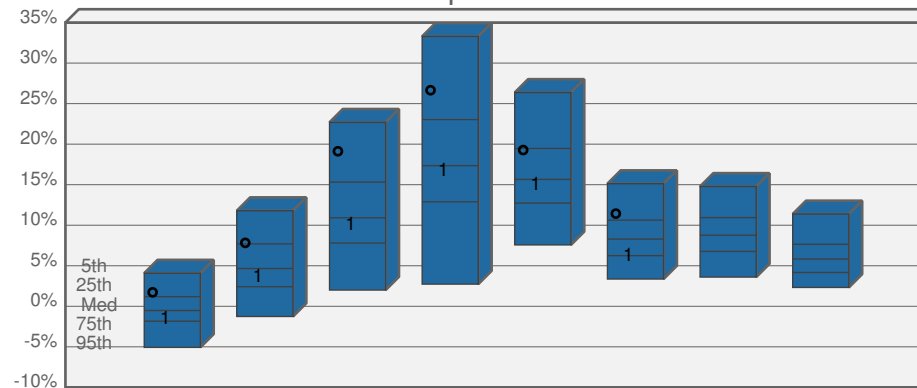


Excess Return:	4.59	Information Ratio:	1.07
Excess Risk:	4.30	T-Stat:	1.85

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
○ Franklin Templ	2.38 (13)	8.48 (20)	19.78 (10)	27.31 (12)	19.93 (22)	12.09 (15)		
1 Policy Index	-1.06 (61)	4.11 (56)	10.61 (52)	17.24 (50)	15.46 (51)	6.74 (70)		
Median	-0.52	4.66	10.92	17.35	15.65	8.29	8.77	5.83
Number of Funds	1642	1635	1621	1617	1587	1517	1355	894

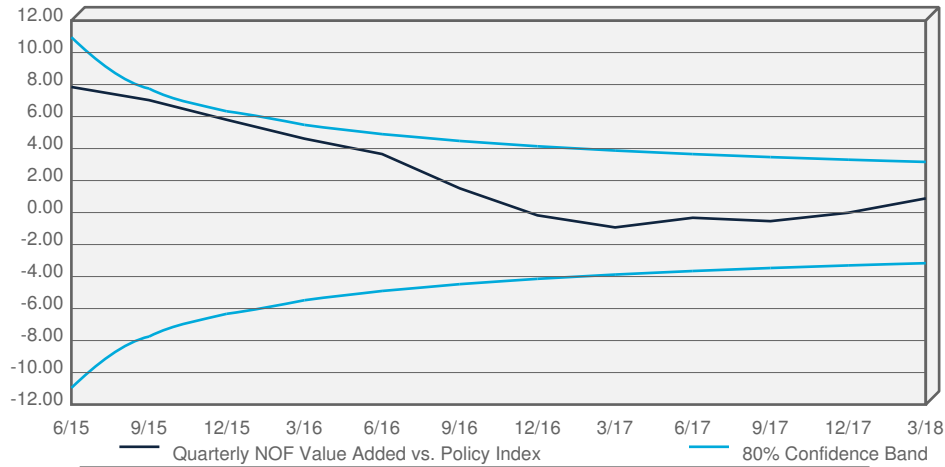
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Lazard Asset Mgmt

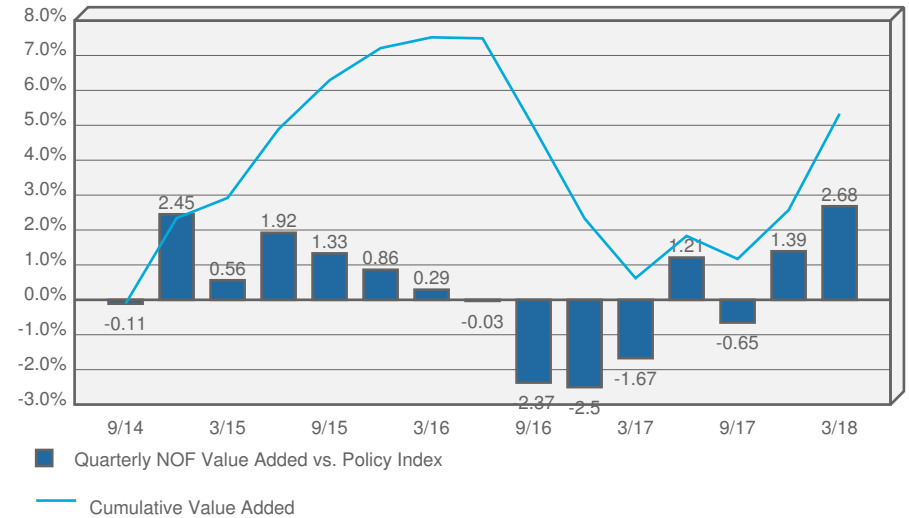
March 31, 2018

Cumulative Skill Analysis vs Benchmark

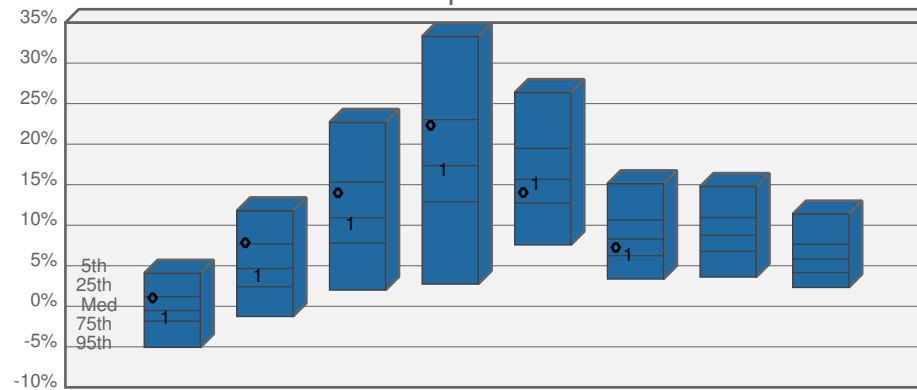


Excess Return:	0.88	Information Ratio:	0.27
Excess Risk:	3.33	T-Stat:	0.46

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◊ Lazard Asset M	1.70 (19)	8.49 (20)	14.65 (27)	22.98 (25)	14.69 (57)	7.92 (54)		
1 Policy Index	-1.06 (61)	4.11 (56)	10.61 (52)	17.24 (50)	15.46 (51)	6.74 (70)		
Median	-0.52	4.66	10.92	17.35	15.65	8.29	8.77	5.83
Number of Funds	1642	1635	1621	1617	1587	1517	1355	894

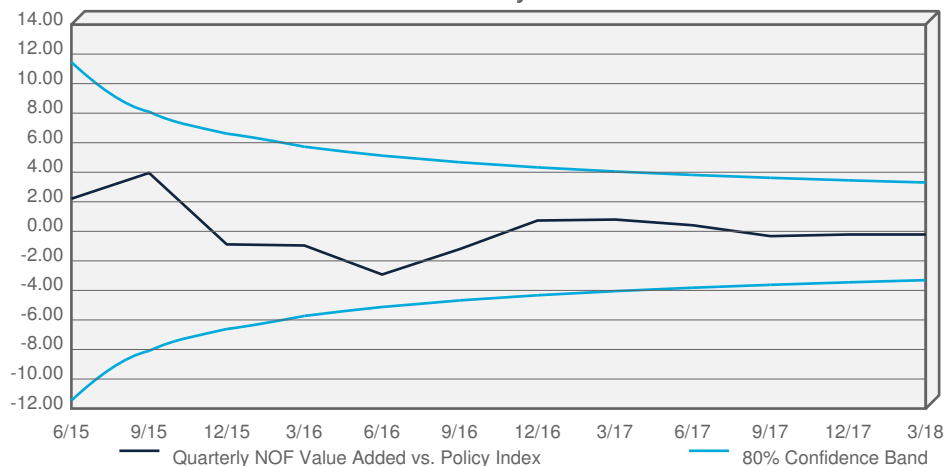
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

LSV Asset Mgmt

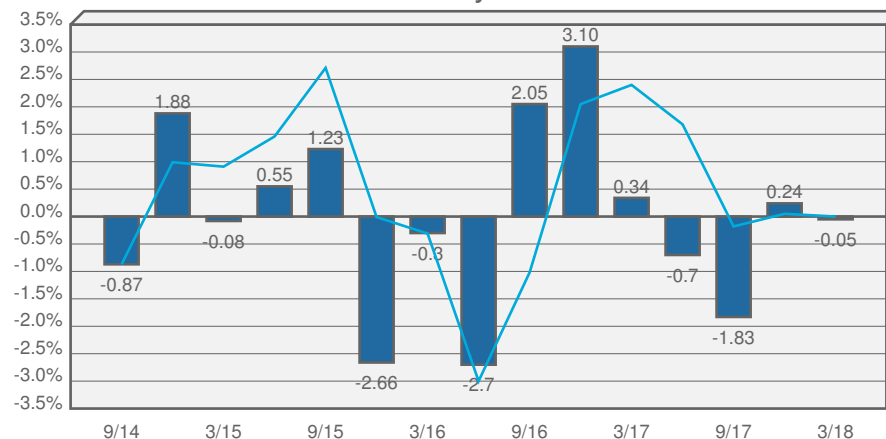
March 31, 2018

Cumulative Skill Analysis vs Benchmark



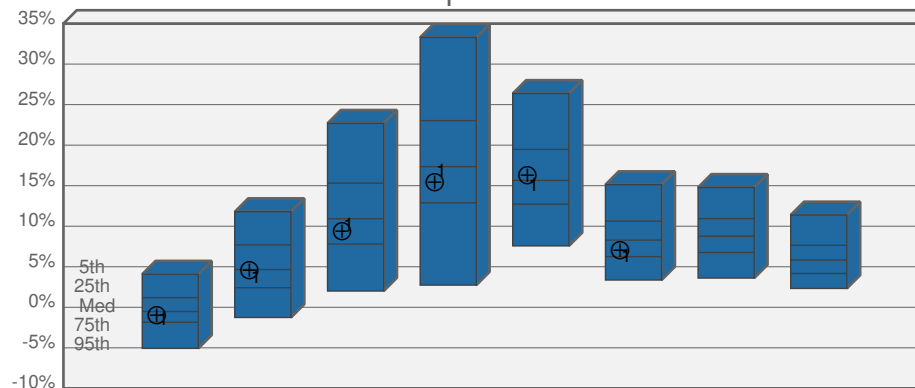
Excess Return:	-0.21	Information Ratio:	-0.06
Excess Risk:	3.48	T-Stat:	-0.11

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. Policy Index
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊕ LSV Asset Mgmt	-0.96 (58)	4.61 (50)	9.41 (62)	15.48 (61)	16.35 (44)	7.12 (65)		
⊠ Policy Index	-1.06 (61)	4.11 (56)	10.61 (52)	17.24 (50)	15.46 (51)	6.74 (70)		
Median	-0.52	4.66	10.92	17.35	15.65	8.29	8.77	5.83
Number of Funds	1642	1635	1621	1617	1587	1517	1355	894

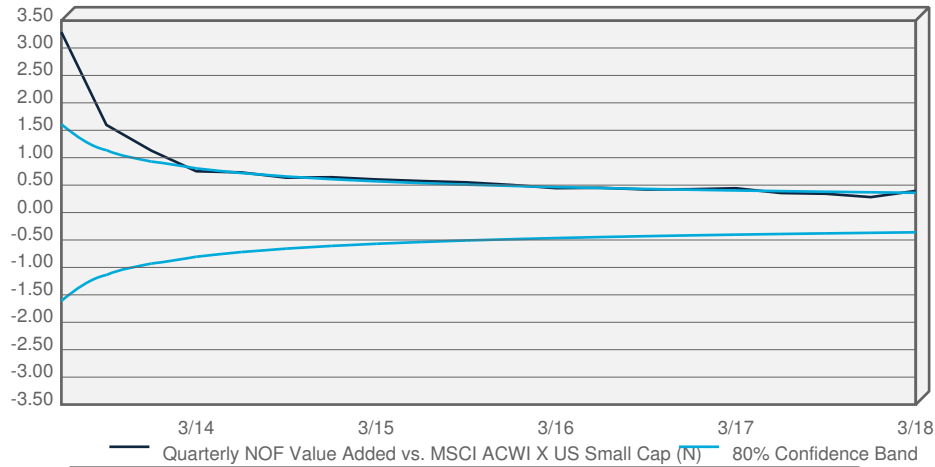
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

NTGI Int'l Small Cap

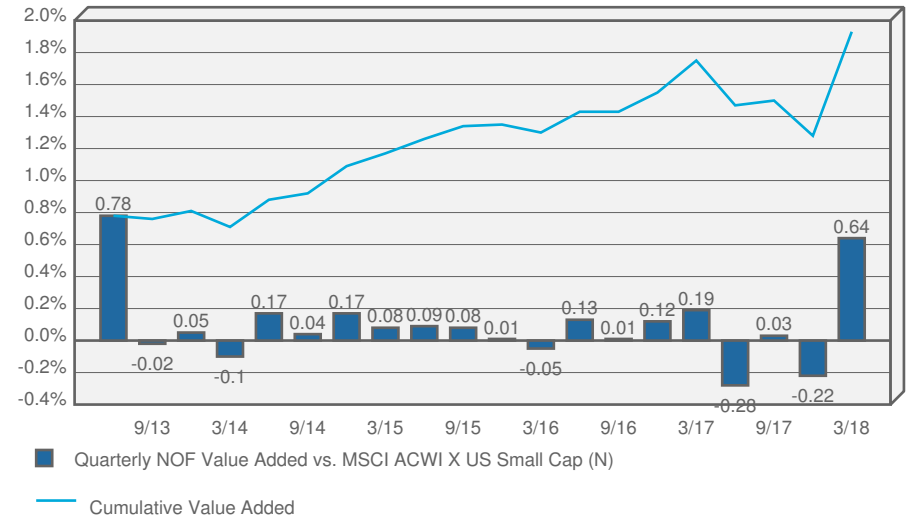
March 31, 2018

Cumulative Skill Analysis vs Benchmark

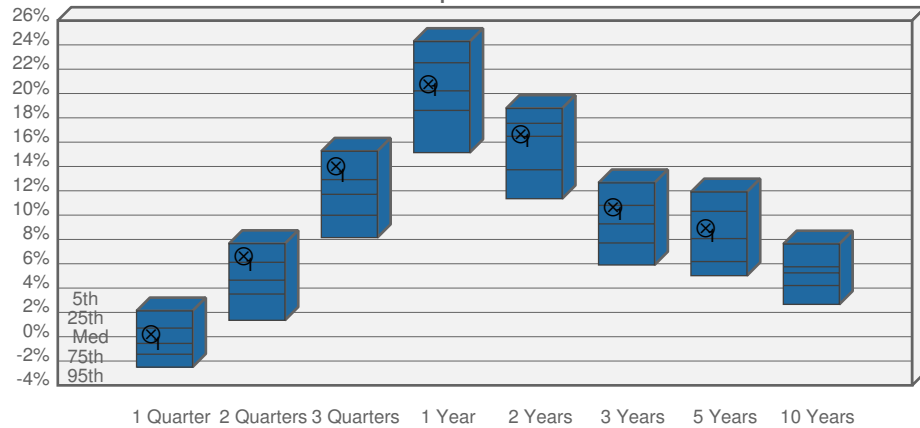


Excess Return:	0.40	Information Ratio:	0.81
Excess Risk:	0.49	T-Stat:	1.80

Value-Added Analysis vs Benchmark

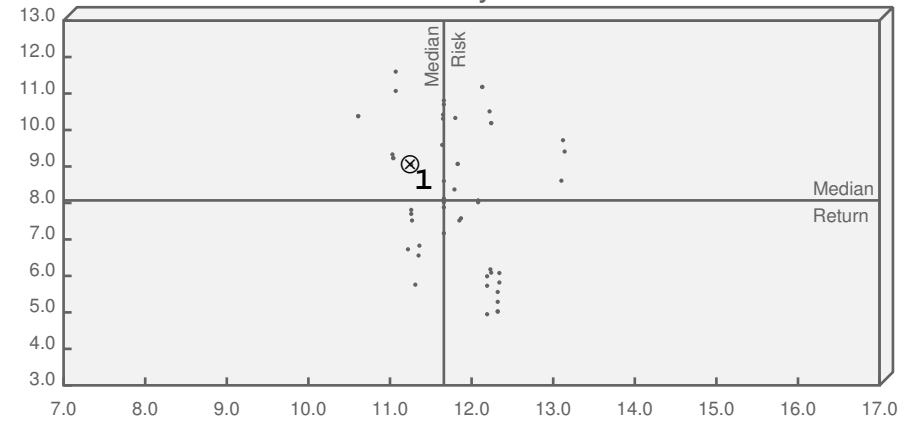


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ NTGI Int'l Sma	0.28 (30)	6.65 (17)	14.04 (14)	20.83 (40)	16.72 (45)	10.68 (30)	9.00 (40)	
1 MSCI ACWI X US	-0.35 (40)	6.19 (23)	13.51 (21)	20.59 (43)	16.35 (51)	10.40 (35)	8.57 (44)	
Median	-0.55	4.65	11.71	20.22	16.48	9.28	8.07	5.25
Number of Funds	80	78	77	77	68	61	52	33

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
NTGI Int'l Small Cap	⊗	9.00	40	11.30	63
MSCI ACWI X US Small Cap (N)	1	8.57	44	11.48	57
Median		8.07		11.66	

*Lipper Total Returns of Intl Equity Small/Mid Core Mutual Funds Universe - Net of Fees

CUSTOM BENCHMARK SPECIFICATION

Non-US Equity Composite

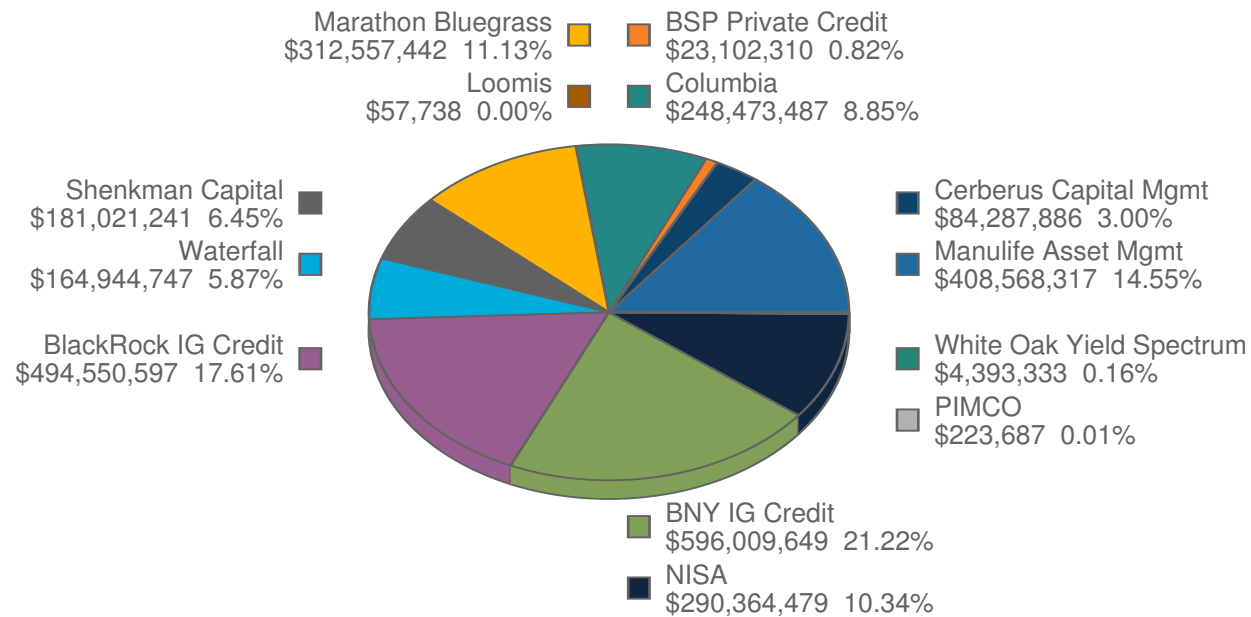
March 31, 2018

	Quarter Start	Quarter End	Percent	Description
Policy Index	9/00	6/17	100.00	Blended Non-US Benchmark
	9/17	9/17	100.00	MSCI ACWI Ex USA IMI Index (\$G)
	12/17	3/18	100.00	MSCI ACWI Ex USA IMI (\$N)



FIXED INCOME

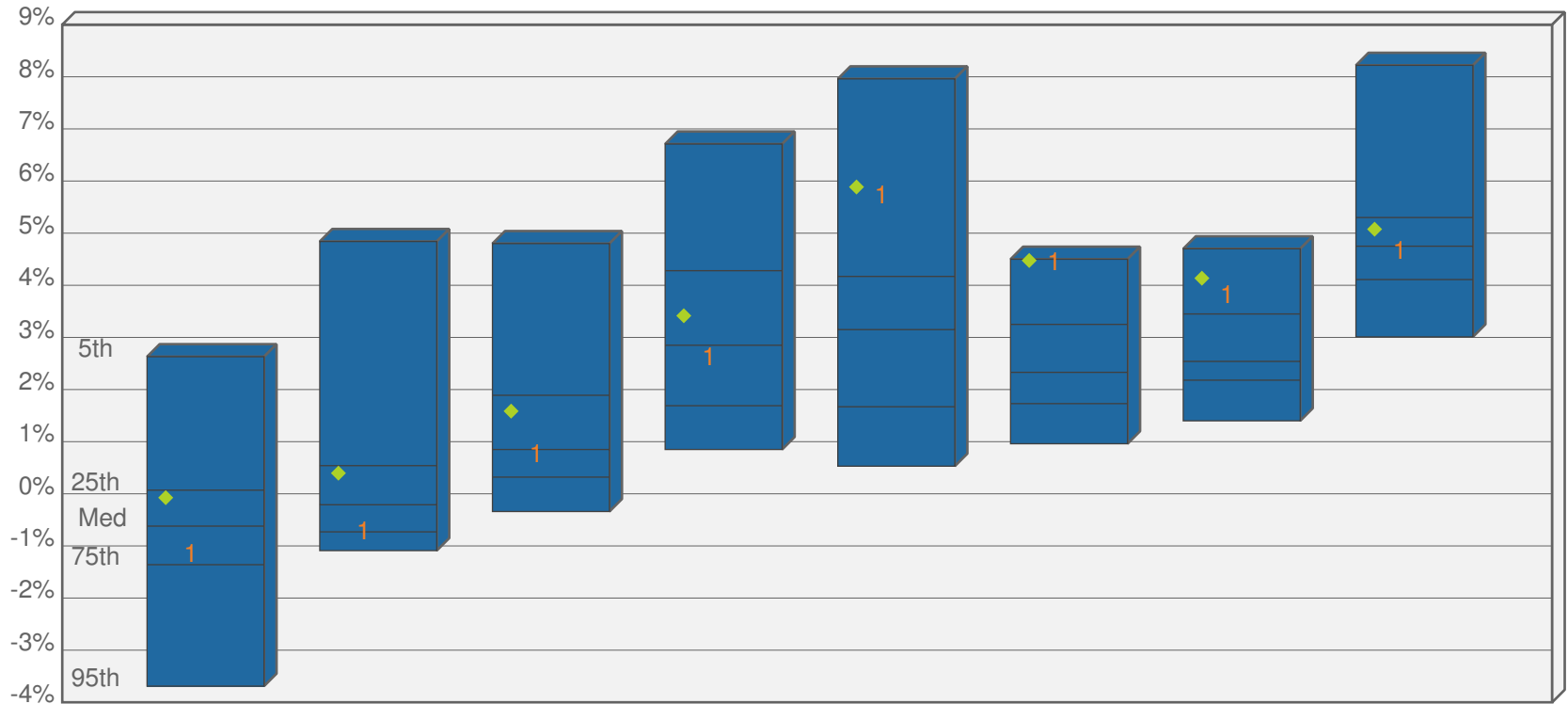
Wilshire Consulting
MANAGER ALLOCATION
 Fixed Income Composite
As of March 31, 2018



PERFORMANCE COMPARISON

Fixed Income Composite

Periods Ended March 31, 2018



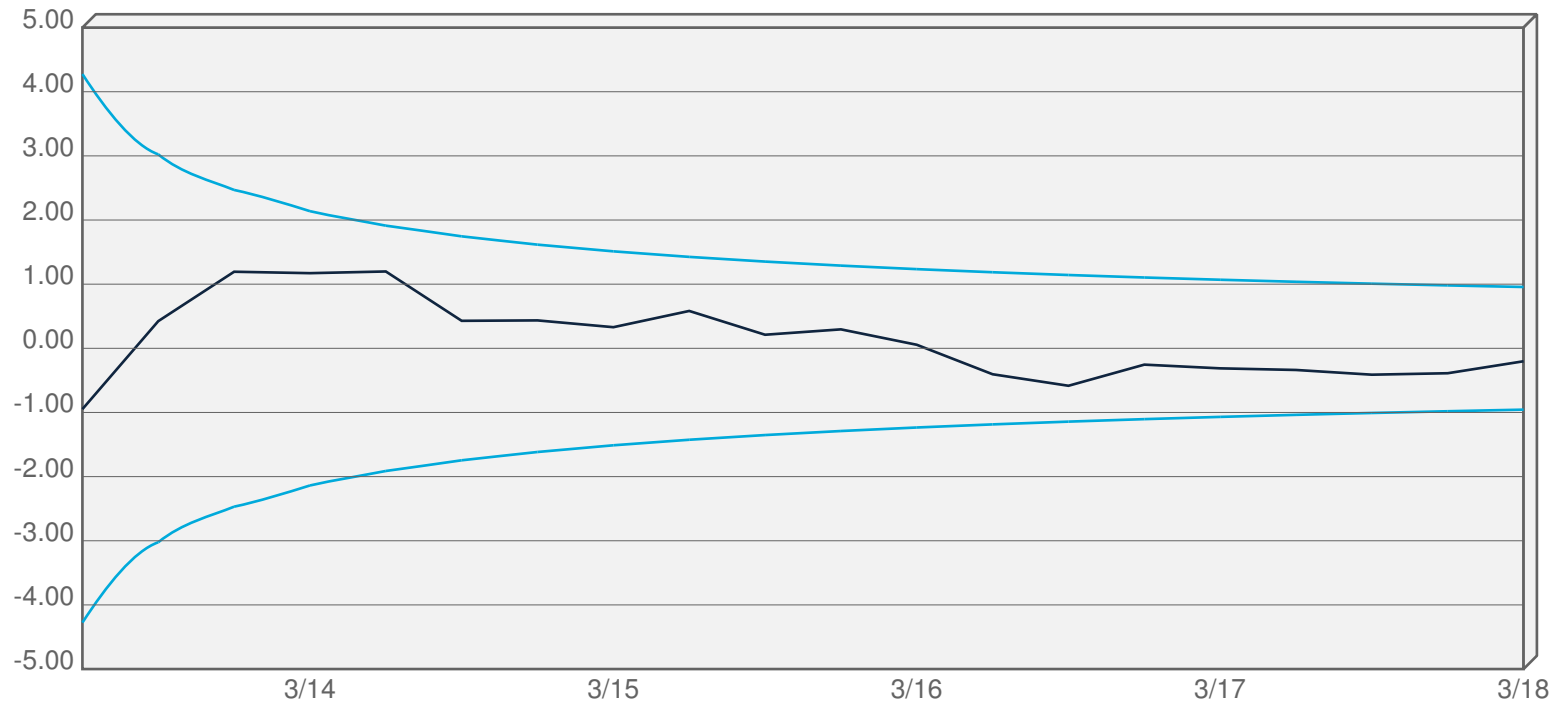
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◆ Fixed Income Composite	-0.05 (29)	0.42 (29)	1.61 (29)	3.44 (39)	5.91 (10)	4.50 (5)	4.16 (10)	5.10 (31)
┆ Policy Index	-1.13 (69)	-0.70 (72)	0.78 (51)	2.64 (50)	5.75 (13)	4.46 (5)	3.83 (13)	4.67 (52)
5th %tile	2.63	4.84	4.80	6.71	7.96	4.50	4.70	8.22
25th %tile	0.07	0.54	1.89	4.28	4.17	3.25	3.45	5.30
Median	-0.62	-0.21	0.85	2.85	3.15	2.33	2.54	4.75
75th %tile	-1.36	-0.73	0.32	1.69	1.67	1.73	2.18	4.11
95th %tile	-3.69	-1.09	-0.34	0.85	0.53	0.96	1.40	3.01
Number of Funds	109	104	95	94	82	78	69	48

*TUCS Total Ret of Fixed Income Investment Pools Universe - Gross of Fees

CUMULATIVE SKILL ANALYSIS

Fixed Income Composite

Five Years Ending March 31, 2018



— Quarterly NOF Value Added vs. Policy Index

— 80% Confidence Band

Excess Return:	-0.20	Information Ratio:	-0.16
Excess Risk:	1.30	T-Stat:	-0.35

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
NISA									
Net of Fee Return	-1.43	-0.97	-0.03	1.49	1.54	2.06		3/31/09	3.87
Bloomberg Aggregate	-1.46	-1.08	-0.24	1.20	1.20	1.82		3/31/09	3.69
Value Added	0.03	0.11	0.21	0.29	0.34	0.23		3/31/09	0.18
Manulife Asset Mgmt									
Net of Fee Return	-0.45	-0.21	0.81	2.45	2.38	2.51		12/31/11	4.15
Policy Index	-1.41	-1.00	-0.00	1.52	1.68	0.67		12/31/11	0.98
Value Added	0.96	0.80	0.81	0.93	0.71	1.84		12/31/11	3.17
BlackRock IG Credit									
Net of Fee Return	-1.37	-1.26	-0.26	0.90				3/31/17	0.90
Bloomberg Int Credit	-1.36	-1.26	-0.28	1.10				3/31/17	1.10
Value Added	-0.00	-0.00	0.02	-0.20				3/31/17	-0.20
BNY IG Credit									
Net of Fee Return	-1.41							12/31/17	-1.41
Bloomberg Int Credit	-1.36							12/31/17	-1.36
Value Added	-0.05							12/31/17	-0.05
Columbia									
Net of Fee Return	-1.60	-1.40	0.68	3.15	4.43	4.91		12/31/11	6.85
Bloomberg High Yield	-0.86	-0.39	1.57	3.78	5.17	4.99		12/31/11	6.93
Value Added	-0.74	-1.01	-0.89	-0.63	-0.74	-0.08		12/31/11	-0.09
Marathon Bluegrass									
Net of Fee Return	1.34	2.16	1.29	1.77				12/31/15	8.12
Bloomberg High Yield	-0.86	-0.39	1.57	3.78				12/31/15	10.36
Value Added	2.20	2.55	-0.29	-2.02				12/31/15	-2.25

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

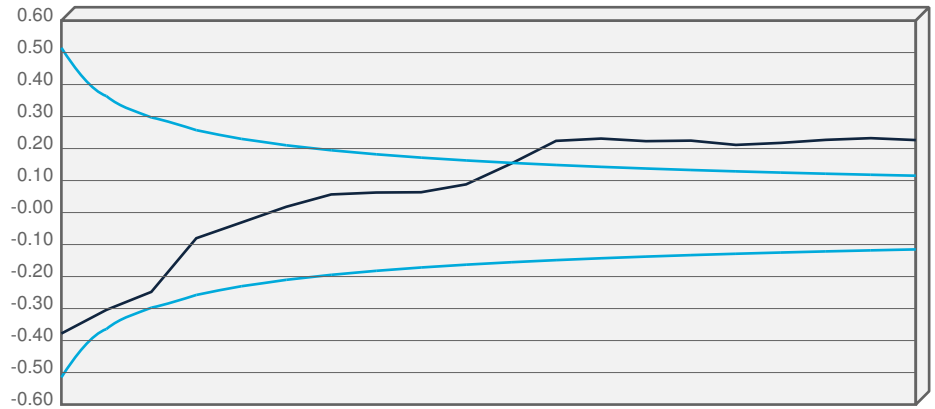
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Waterfall									
Net of Fee Return	2.89	4.66	8.72	12.88	9.56	10.41		3/31/10	11.95
Policy Index	-0.24	0.43	1.95	3.61	4.03	3.76		3/31/10	5.08
Value Added	3.12	4.23	6.77	9.28	5.53	6.65		3/31/10	6.86
Cerberus Capital Mgmt									
Net of Fee Return	2.39	3.48	4.77	7.42	8.53			9/30/14	8.28
S&P LSTA Leverage Loan	1.45	2.58	3.65	4.44	4.21			9/30/14	4.07
Value Added	0.94	0.89	1.12	2.99	4.32			9/30/14	4.22
Shenkman Capital									
Net of Fee Return	1.40	2.12	2.57	3.66	3.29	3.61		9/30/10	4.76
S&P LSTA Leverage Loan	1.45	2.58	3.65	4.44	4.21	4.31		9/30/10	5.77
Value Added	-0.05	-0.46	-1.07	-0.78	-0.91	-0.70		9/30/10	-1.01
Fixed Income Composite									
Net of Fee Return	-0.30	0.14	1.21	2.89	3.88	3.62	4.82	3/31/84	7.55
Policy Index	-1.13	-0.69	0.79	2.65	4.46	3.83	4.67	3/31/84	7.36
Value Added	0.83	0.84	0.42	0.24	-0.58	-0.21	0.15	3/31/84	0.18
Bloomberg Global Aggregate	1.36	2.45	4.26	6.97	3.14	1.49	2.57		

INVESTMENT MANAGER ANALYSIS

NISA

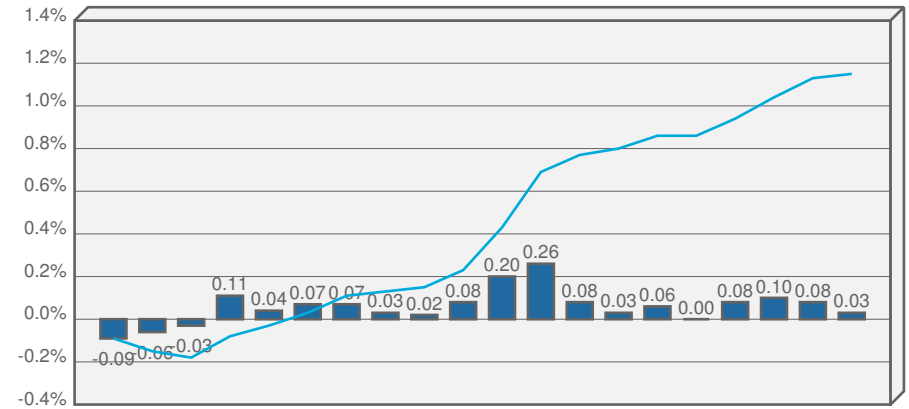
March 31, 2018

Cumulative Skill Analysis vs Benchmark



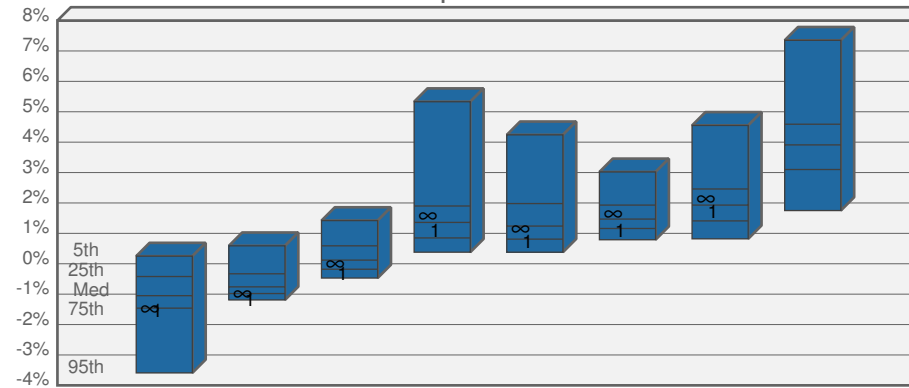
Excess Return:	0.23	Information Ratio:	1.45
Excess Risk:	0.16	T-Stat:	3.24

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg Aggregate
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ NISA	-1.40 (69)	-0.91 (66)	0.07 (54)	1.64 (36)	1.22 (51)	1.72 (34)	2.22 (35)	
1 Bloomberg Aggr	-1.46 (75)	-1.08 (84)	-0.24 (81)	1.20 (57)	0.82 (74)	1.20 (71)	1.82 (56)	
Median	-1.05	-0.76	0.12	1.36	1.24	1.47	1.93	3.91
Number of Funds	454	454	451	448	440	429	415	362

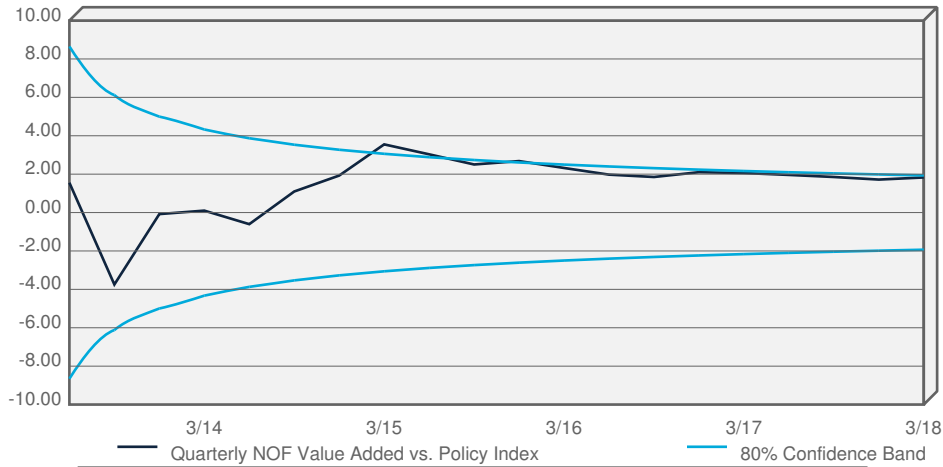
*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Manulife Asset Mgmt

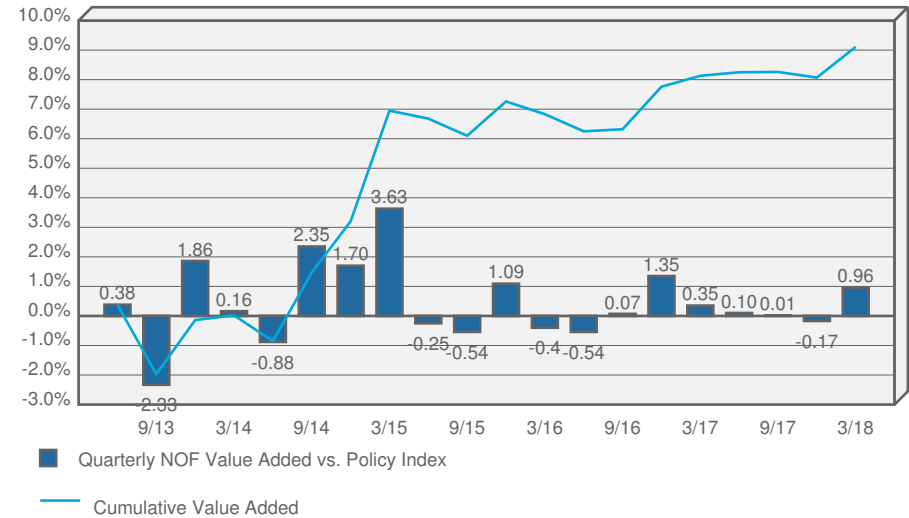
March 31, 2018

Cumulative Skill Analysis vs Benchmark

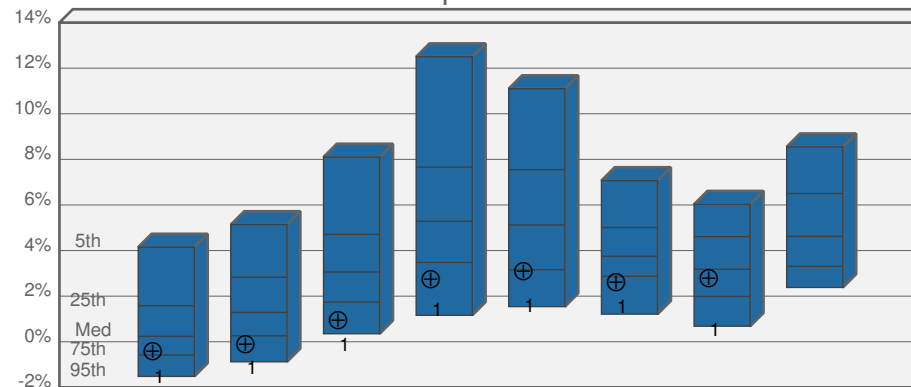


Excess Return:	1.83	Information Ratio:	0.70
Excess Risk:	2.63	T-Stat:	1.55

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊕ Manulife Asset	-0.40 (70)	-0.10 (83)	0.99 (87)	2.77 (84)	3.12 (76)	2.65 (79)	2.81 (59)	
1 Policy Index	-1.41 (92)	-1.00 (96)	-0.00 (97)	1.52 (93)	1.72 (93)	1.68 (91)	0.67 (95)	
Median	0.24	1.29	3.06	5.28	5.12	3.75	3.18	4.62
Number of Funds	277	276	275	275	268	263	223	126

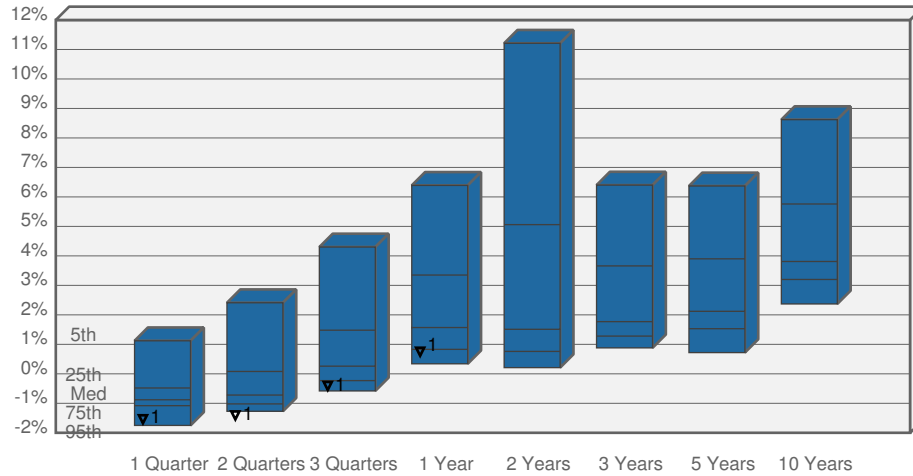
*Compass Total Returns of Active Global Intl Fixed Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

BlackRock IG Credit

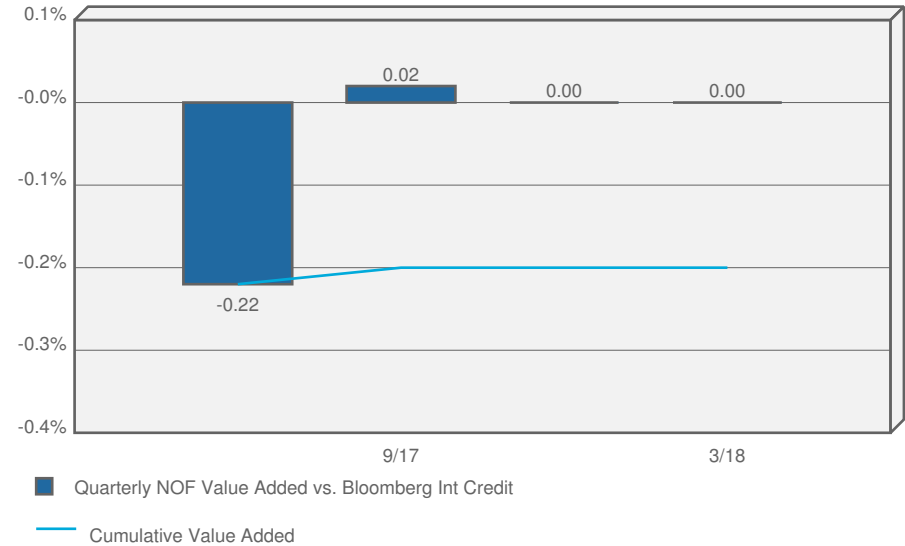
March 31, 2018

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▼ BlackRock IG C	-1.36 (88)	-1.23 (92)	-0.23 (75)	0.93 (70)	1.51	1.77	2.12	3.81
1 Bloomberg Int	-1.36 (88)	-1.26 (94)	-0.28 (78)	1.10 (62)	1.51	1.77	2.12	3.81
Median	-0.88	-0.72	0.26	1.57	1.51	1.77	2.12	3.81
Number of Funds	465	465	461	460	458	443	419	356

Value-Added Analysis vs Benchmark



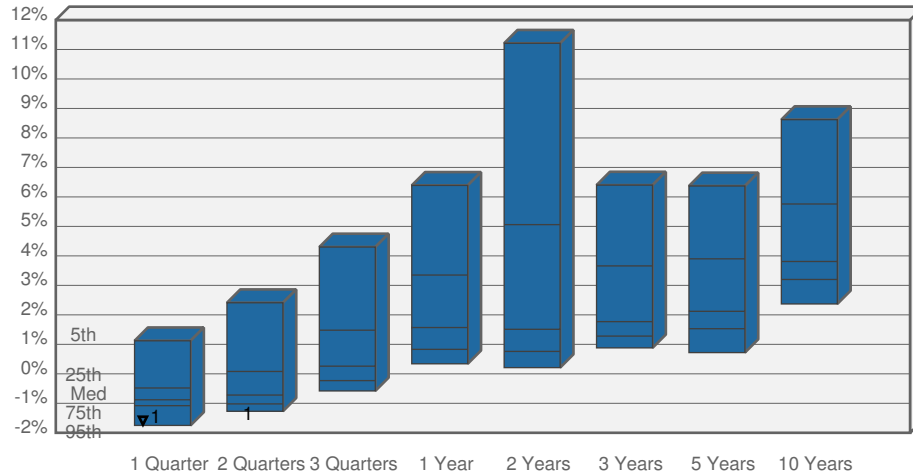
*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

BNY IG Credit

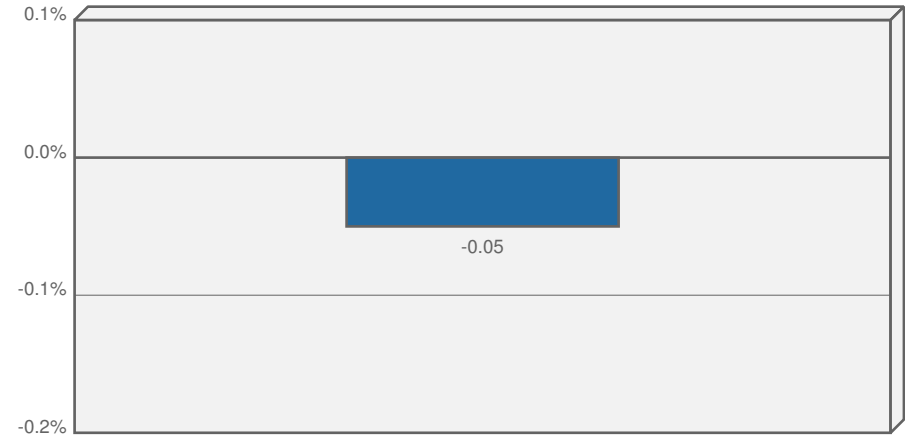
March 31, 2018

Performance Comparison vs Peer Universe*



▼ BNY IG Credit	-1.41 (89)							
▬ Bloomberg Int	-1.36 (88)	-1.26 (94)						
Median	-0.88	-0.72	0.26	1.57	1.51	1.77	2.12	3.81
Number of Funds	465	465	461	460	458	443	419	356

Value-Added Analysis vs Benchmark



3/18
 ■ Quarterly NOF Value Added vs. Bloomberg Int Credit
 — Cumulative Value Added

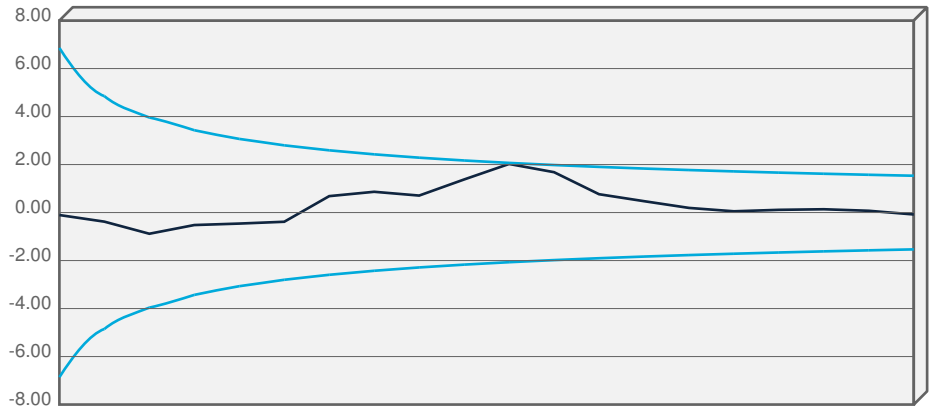
*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Columbia

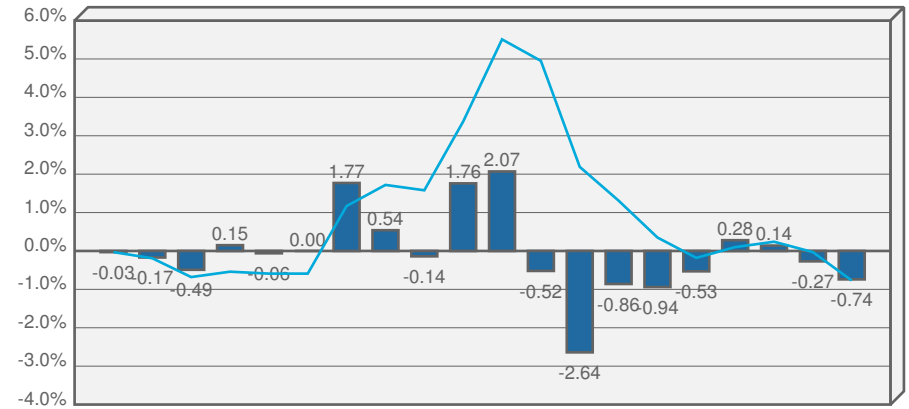
March 31, 2018

Cumulative Skill Analysis vs Benchmark



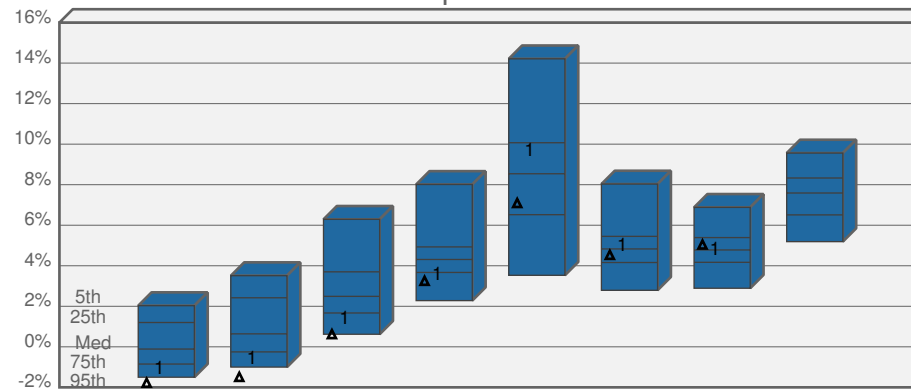
Excess Return:	-0.08	Information Ratio:	-0.04
Excess Risk:	2.09	T-Stat:	-0.09

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg High Yield	-0.03	0.15	0.00	1.77	0.54	-0.14	1.76	2.07	-0.52	-0.86	0.94	-0.53	0.28	0.14	-0.27	-0.74
Cumulative Value Added	[Line chart data]															

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ Columbia	-1.51 (95)	-1.22 (96)	0.89 (90)	3.52 (79)	7.36 (64)	4.80 (50)	5.31 (27)	
1 Bloomberg High	-0.86 (75)	-0.39 (82)	1.57 (78)	3.78 (70)	9.90 (28)	5.17 (36)	4.99 (42)	
Median	-0.11	0.64	2.49	4.31	8.54	4.83	4.78	7.59
Number of Funds	228	228	228	226	222	219	196	129

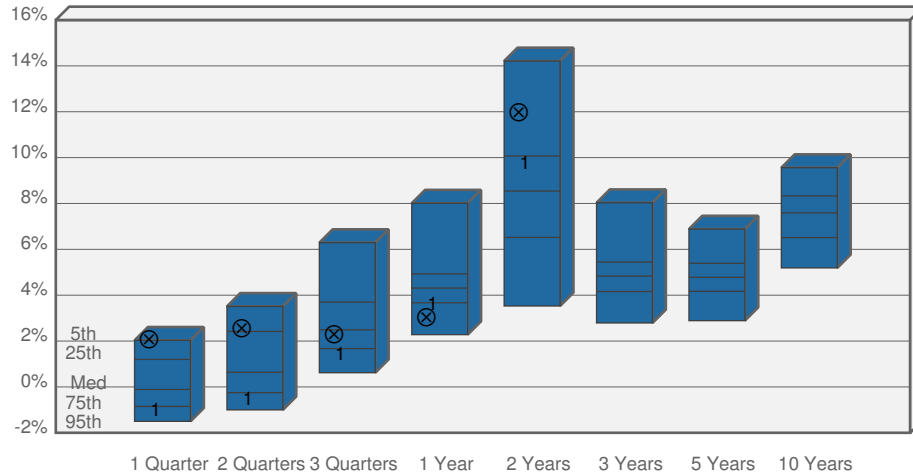
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Marathon Bluegrass

March 31, 2018

Performance Comparison vs Peer Universe*

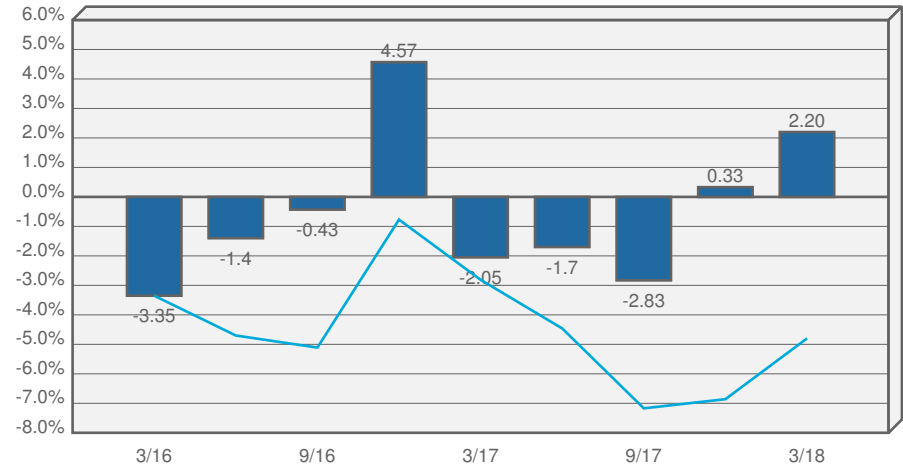


⊗ Marathon Blueg
1 Bloomberg High

	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Marathon Blueg	2.11 (4)	2.57 (19)	2.31 (55)	3.05 (87)	12.01 (10)			
Bloomberg High	-0.86 (75)	-0.39 (82)	1.57 (78)	3.78 (70)	9.90 (28)			

	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Median	-0.11	0.64	2.49	4.31	8.54	4.83	4.78	7.59
Number of Funds	228	228	228	226	222	219	196	129

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. Bloomberg High Yield
— Cumulative Value Added

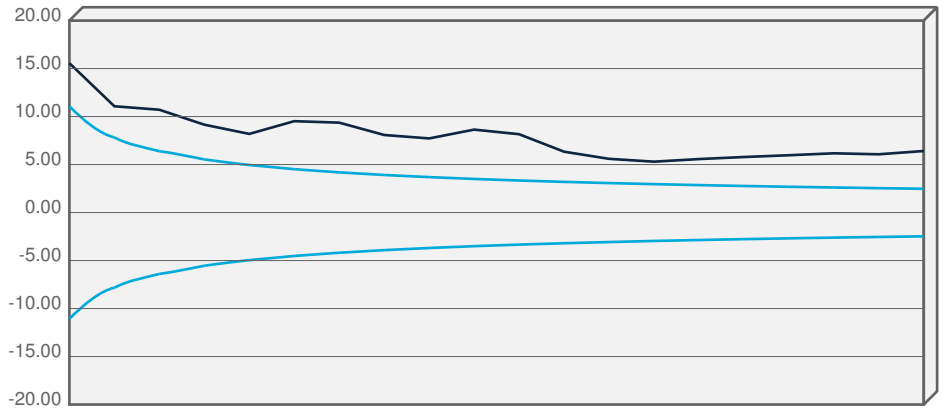
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Waterfall

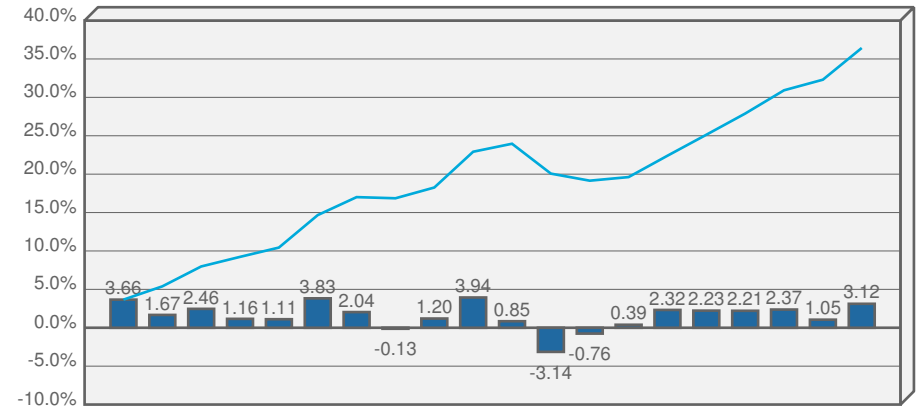
March 31, 2018

Cumulative Skill Analysis vs Benchmark



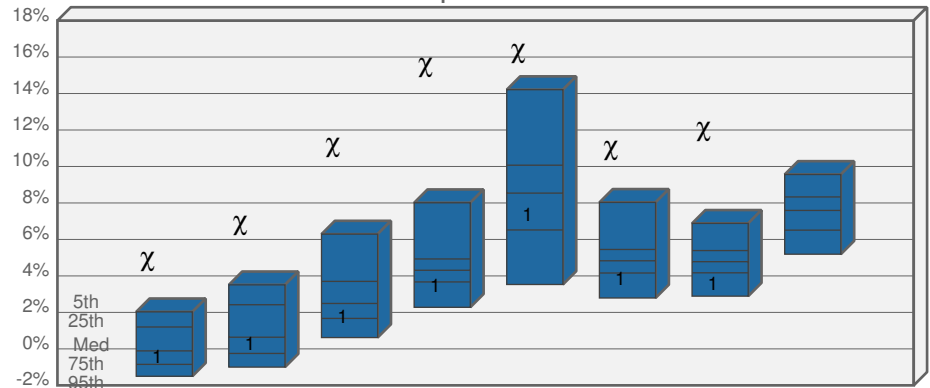
Excess Return:	6.41	Information Ratio:	1.90
Excess Risk:	3.37	T-Stat:	4.26

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. Policy Index
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
X Waterfall	4.68 (1)	6.63 (1)	10.90 (1)	15.29 (1)	16.09 (2)	10.74 (1)	11.80 (1)	
1 Policy Index	-0.24 (54)	0.43 (54)	1.95 (63)	3.61 (77)	7.55 (62)	4.03 (79)	3.76 (84)	
Median	-0.11	0.64	2.49	4.31	8.54	4.83	4.78	7.59
Number of Funds	228	228	228	226	222	219	196	129

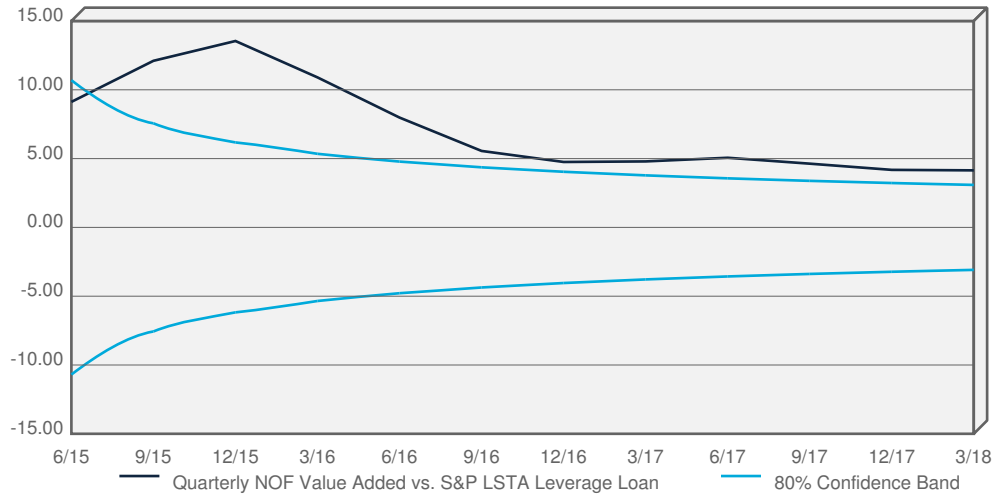
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Cerberus Capital Mgmt

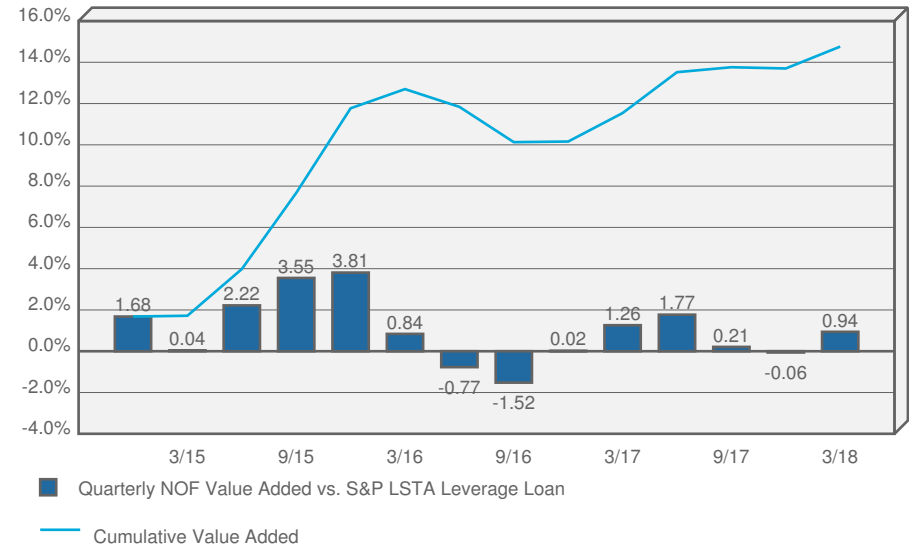
March 31, 2018

Cumulative Skill Analysis vs Benchmark



Excess Return:	4.15	Information Ratio:	1.28
Excess Risk:	3.25	T-Stat:	2.21

Value-Added Analysis vs Benchmark

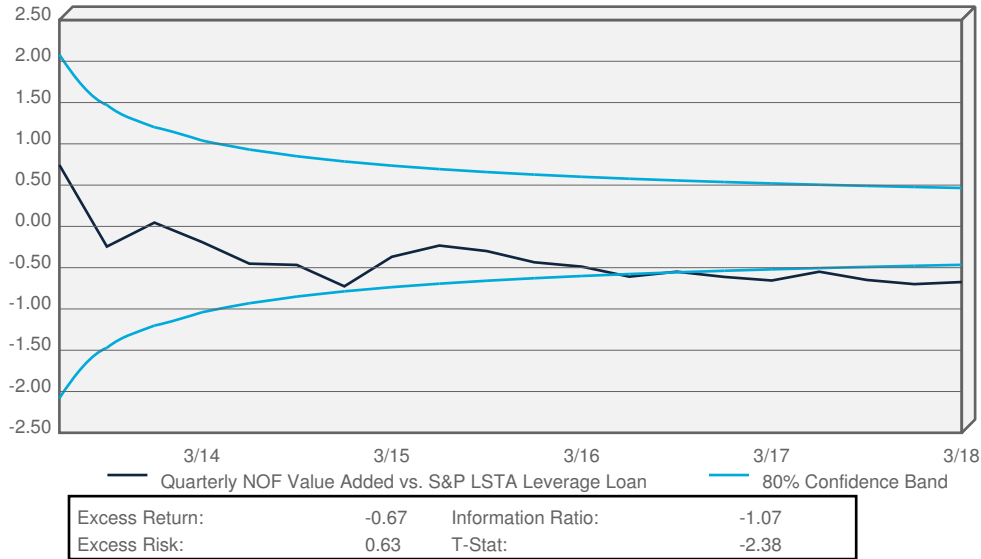


INVESTMENT MANAGER ANALYSIS

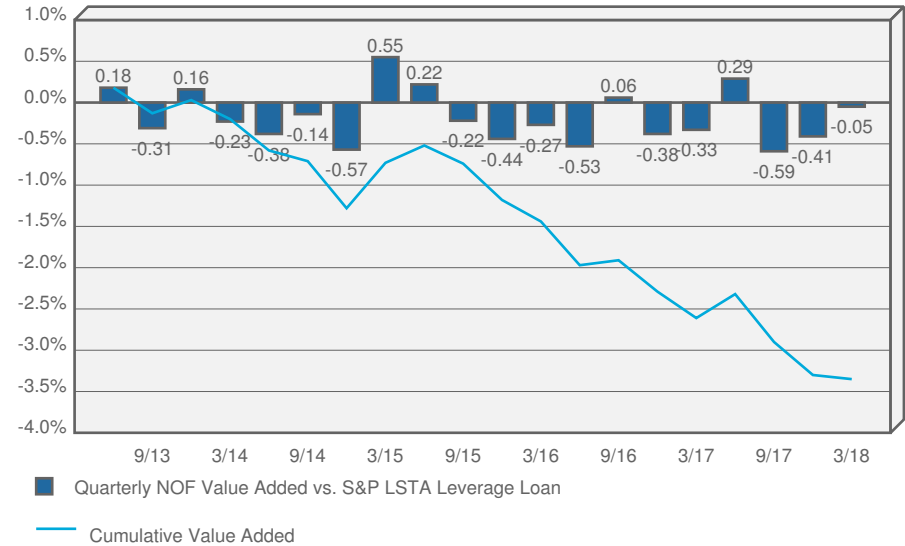
Shenkman Capital

March 31, 2018

Cumulative Skill Analysis vs Benchmark



Value-Added Analysis vs Benchmark



CUSTOM BENCHMARK SPECIFICATION

Fixed Income Composite

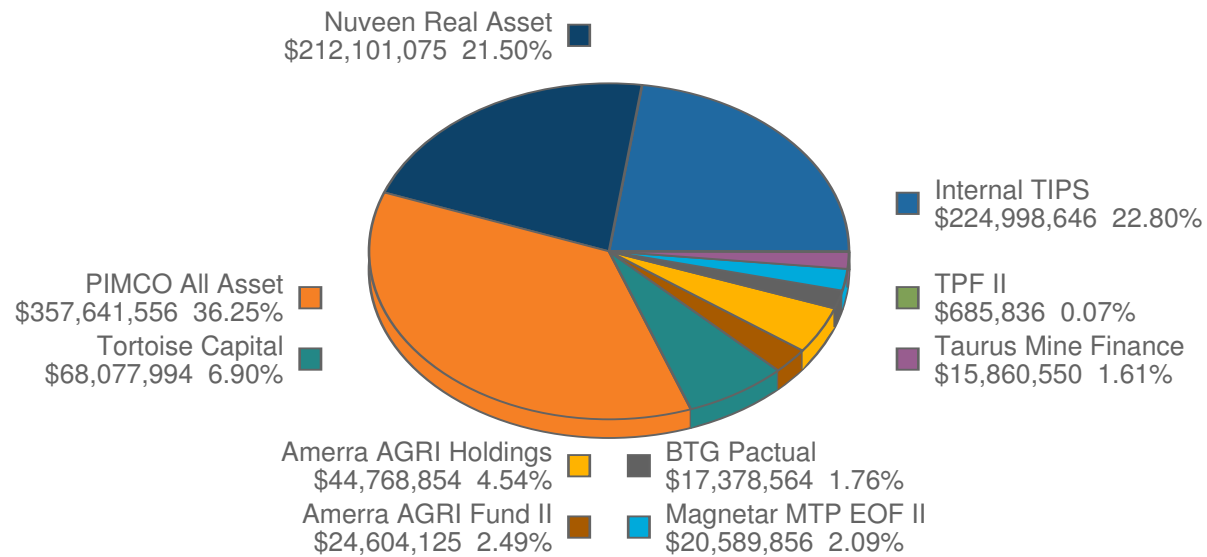
March 31, 2018

	Quarter Start	Quarter End	Percent	Description
Policy Index	6/84	6/17	100.00	Blended Fixed Benchmark
	9/17	3/18	50.00 50.00	Bloomberg Universal Bloomberg High Yield
Bloomberg Global Aggregate	6/84	3/18	100.00	Bloomberg Global Aggregate



REAL RETURN

Wilshire Consulting
MANAGER ALLOCATION
 Real Return Composite
As of March 31, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Internal TIPS									
Net of Fee Return	-0.36	-0.04	0.68	0.29	1.54	0.12	2.94	6/30/02	4.74
Bloomberg 1-10 Yrs TIPS	-0.40	0.13	0.83	0.43	1.24	-0.23	2.78	6/30/02	4.62
Value Added	0.03	-0.17	-0.15	-0.14	0.30	0.35	0.16	6/30/02	0.12
PIMCO All Asset									
Net of Fee Return	2.43	3.45	6.81	8.80	5.71	3.58		12/31/11	6.03
Bloomberg 1-10 Yrs TIPS	-0.40	0.13	0.83	0.43	1.24	-0.06		12/31/11	0.80
Value Added	2.82	3.32	5.97	8.36	4.47	3.63		12/31/11	5.23
Tortoise Capital									
Net of Fee Return	-9.78	-10.38	-12.12	-16.97	-8.92	-0.64		9/30/09	10.53
Alerian MLP	-11.12	-11.96	-14.65	-20.07	-11.24	-5.85		9/30/09	6.26
Value Added	1.34	1.59	2.53	3.10	2.33	5.21		9/30/09	4.27
Nuveen Real Asset									
Net of Fee Return	-2.84	-1.51	0.97	4.13	4.64			3/31/15	4.64
Policy Index	-3.82	-2.78	-0.87	2.88	4.30			3/31/15	4.30
Value Added	0.97	1.27	1.84	1.24	0.34			3/31/15	0.34
Amerra AGRI Fund II									
Net of Fee Return	-0.79	-2.79	-2.44	-1.39	4.66	6.06		12/31/12	4.91
Amerra AGRI Holdings									
Net of Fee Return	-1.15	-2.37	-3.85	-5.58				9/30/15	-1.14
BTG Pactual									
Net of Fee Return	-4.21	-1.39	-3.85	0.20	-7.78			12/31/14	-10.39

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

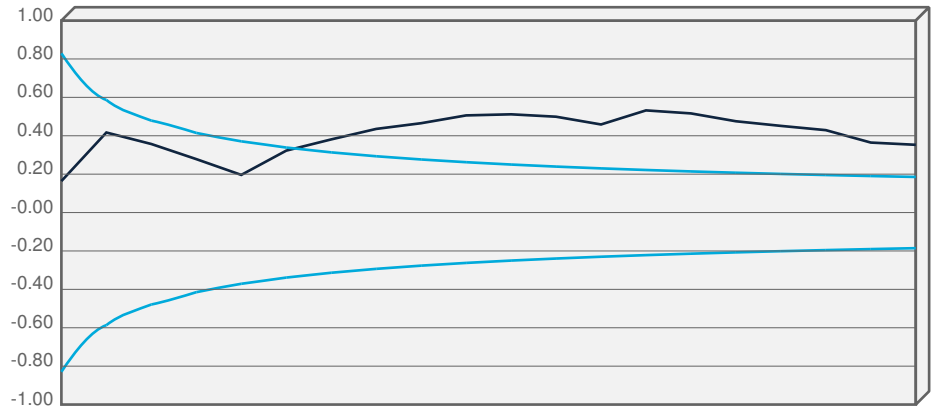
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Magnetar MTP EOF II Net of Fee Return	3.45	8.65	4.34	8.29				9/30/15	1.97
Taurus Mine Finance Net of Fee Return	3.99	2.40	4.24	6.64	14.28			3/31/15	14.28
TPF II Net of Fee Return	-0.29	-0.51	-0.10	3.00	-4.41	-5.17		9/30/08	-3.67
Real Return Composite Net of Fee Return	-0.50	0.26	1.77	2.42	3.28	1.80		6/30/11	3.82
Real Return Index (P)	-1.84	-1.30	-0.85	-0.97	1.25	1.62		6/30/11	2.37
Value Added	1.33	1.57	2.63	3.38	2.03	0.19		6/30/11	1.45

INVESTMENT MANAGER ANALYSIS

Internal TIPS

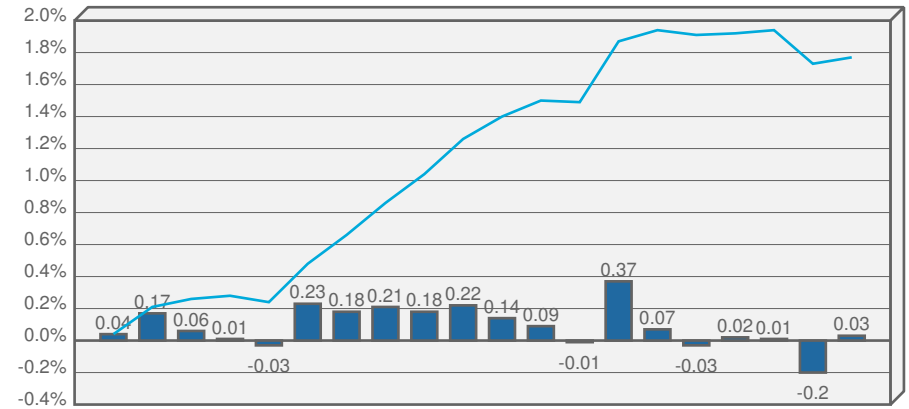
March 31, 2018

Cumulative Skill Analysis vs Benchmark



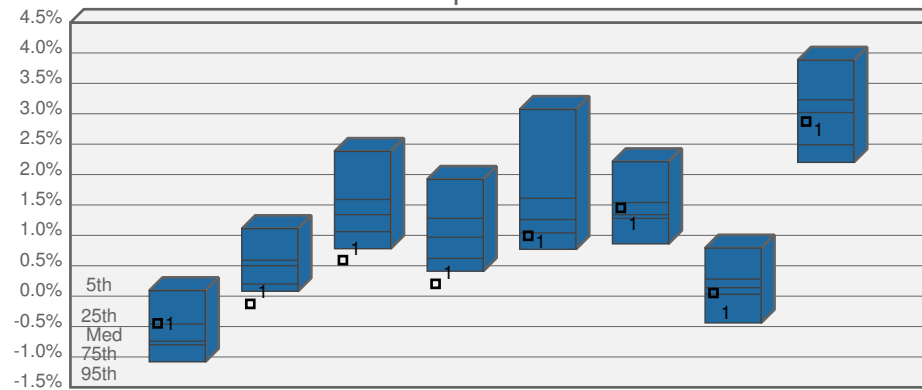
Excess Return:	0.35	Information Ratio:	1.40
Excess Risk:	0.25	T-Stat:	3.13

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg 1-10 Yrs TIPS
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
Internal TIPS	-0.36 (14)	-0.04 (97)	0.68 (97)	0.29 (97)	1.08 (69)	1.54 (27)	0.14 (52)	2.96 (58)
Bloomberg 1-10	-0.40 (19)	0.13 (85)	0.83 (92)	0.43 (92)	0.94 (92)	1.24 (84)	-0.23 (92)	2.78 (67)
Median	-0.74	0.50	1.34	0.97	1.26	1.34	0.14	3.02
Number of Funds	41	41	41	41	40	40	40	31

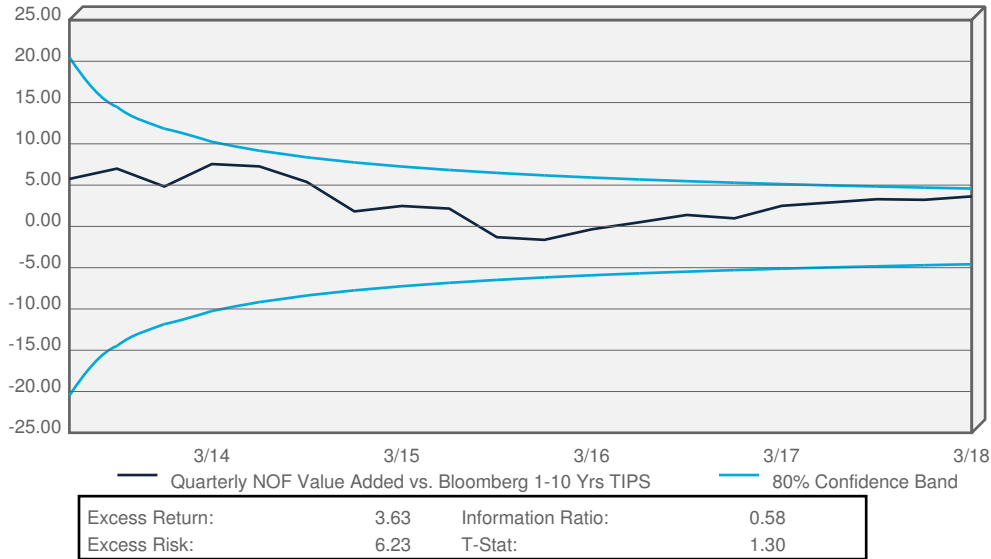
*Compass Total Returns of Active TIPS Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

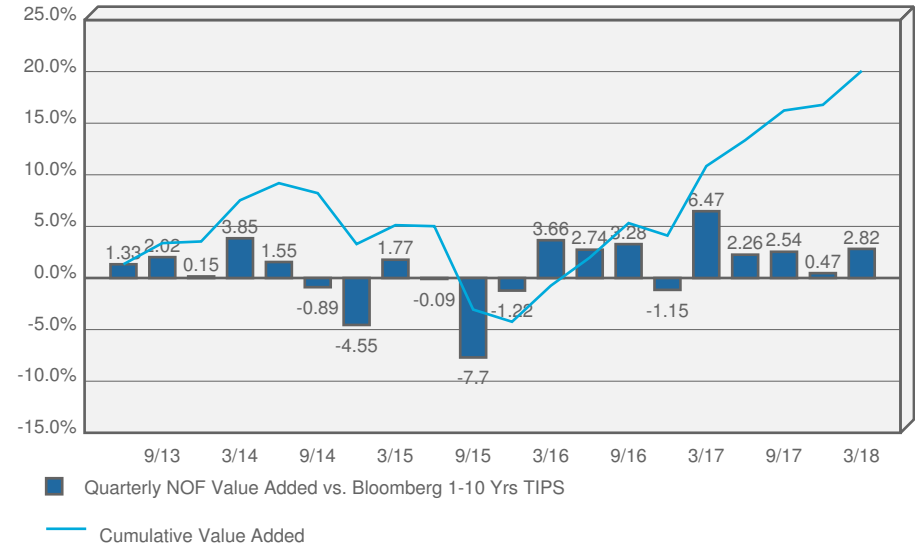
PIMCO All Asset

March 31, 2018

Cumulative Skill Analysis vs Benchmark



Value-Added Analysis vs Benchmark

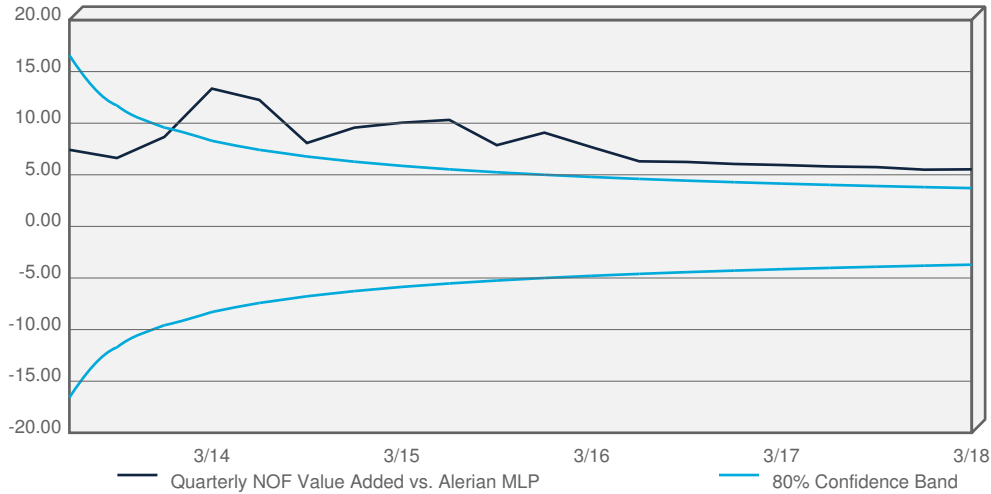


INVESTMENT MANAGER ANALYSIS

Tortoise Capital

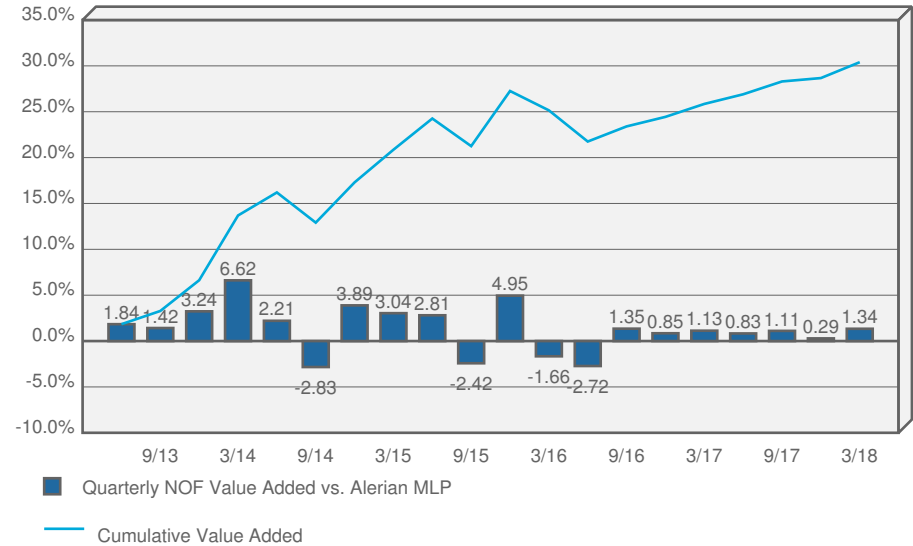
March 31, 2018

Cumulative Skill Analysis vs Benchmark



Excess Return:	5.53	Information Ratio:	1.10
Excess Risk:	5.04	T-Stat:	2.45

Value-Added Analysis vs Benchmark



CUSTOM BENCHMARK SPECIFICATION

Real Return Composite

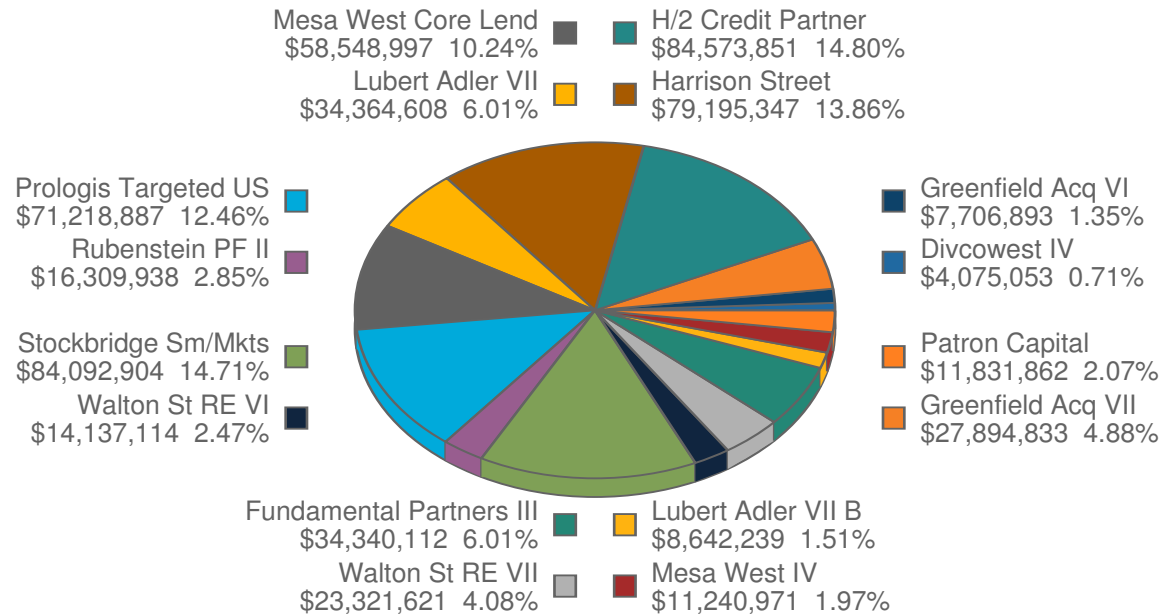
March 31, 2018

	Quarter Start	Quarter End	Percent	Description
Real Return Index (P)	9/11	3/18	100.00	Real Return Index (P)



REAL ESTATE

Wilshire Consulting
MANAGER ALLOCATION
 Real Estate Composite
As of March 31, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Divcowest IV									
Net of Fee Return	11.40	11.62	10.71	21.83	30.58			3/31/14	24.58
Greenfield Acq VI									
Net of Fee Return	-12.45	-11.35	-7.51	-7.56	2.65	9.25		12/31/12	8.15
Greenfield Acq VII									
Net of Fee Return	6.14	7.00	15.12	15.75	15.12			6/30/14	12.42
H/2 Credit Partner									
Net of Fee Return	0.06	0.20	2.81	4.88	6.12	5.41		6/30/11	6.24
Harrison Street									
Net of Fee Return	2.37	5.25	7.74	10.39	10.17	10.04		6/30/12	9.14
Lubert Adler VII									
Net of Fee Return	1.47	5.84	7.63	8.96	4.35			6/30/14	-3.31
Mesa West Core Lend									
Net of Fee Return	1.78	3.44	5.17	7.10	7.63			6/30/13	6.84
Prologis Targeted US									
Net of Fee Return	3.81	10.28	14.04	18.63	15.22			9/30/14	14.96
Rubenstein PF II									
Net of Fee Return	3.11	8.72	11.71	15.82	6.69			6/30/13	13.70
Stockbridge Sm/Mkts									
Net of Fee Return	1.90	3.60	5.79	7.63	9.93			6/30/14	9.83

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Walton St RE VI									
Net of Fee Return	2.34	4.97	7.07	8.59	4.93	8.65		6/30/09	-19.20
Walton St RE VII									
Net of Fee Return	2.50	4.67	8.80	11.37	12.49			6/30/13	13.51
Fundamental Partners III									
Net of Fee Return	1.56	3.50	3.45					6/30/17	3.45
Lubert Adler VII B									
Net of Fee Return	-0.54	-4.63	-4.63					6/30/17	-4.63
Mesa West IV									
Net of Fee Return	2.22	3.52	5.39	2.70				3/31/17	2.70
Patron Capital									
Net of Fee Return	20.51	19.42	28.97	35.09				9/30/16	-1.64
Real Estate Composite									
Net of Fee Return	2.31	4.67	7.37	9.77	9.55	8.97	7.97	6/30/84	6.04
NCREIF ODCE NOF 1 Quarter Lag	1.85	3.52	5.04	6.66	9.42	10.52	4.07		
Value Added	0.46	1.15	2.32	3.11	0.13	-1.55	3.89		

CUSTOM BENCHMARK SPECIFICATION

Real Estate Composite

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
NCREIF ODCE NOF 1 Quarter Lag	9/84	3/18	100.00	NCREIF ODCE NOF 1 Quarter Lag

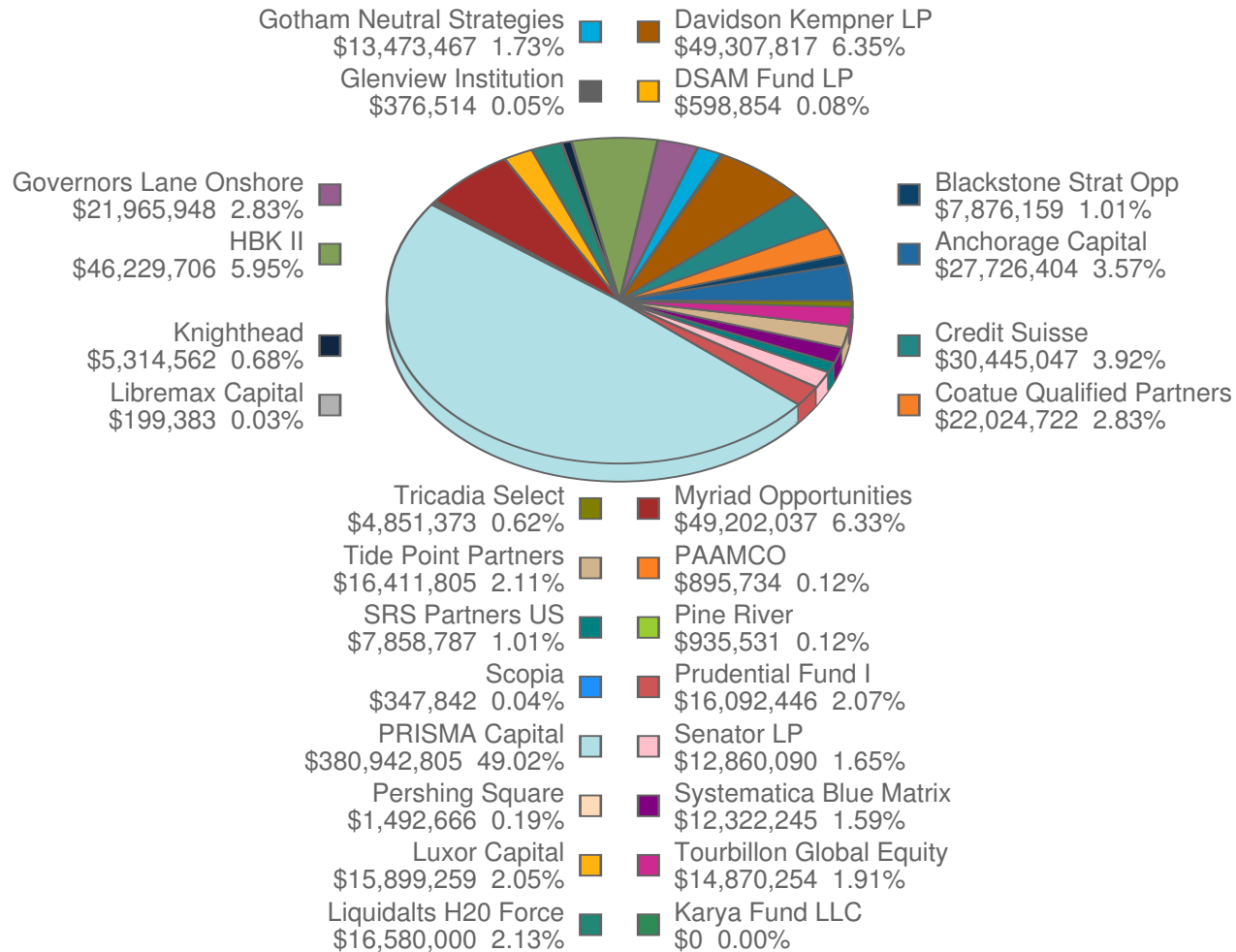


ABSOLUTE RETURN

MANAGER ALLOCATION

Absolute Return Composite

As of March 31, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Anchorage Capital Net of Fee Return	0.63	3.80	5.41	4.65				9/30/16	6.46
Blackstone Strat Opp Net of Fee Return	1.27	2.60						9/30/17	2.60
Coatue Qualified Partners Net of Fee Return	5.79	6.46	13.28	21.79				6/30/15	14.99
Credit Suisse Net of Fee Return	1.53	3.09	5.12					6/30/17	5.12
Davidson Kempner LP Net of Fee Return	2.05	2.85	4.34	6.44				3/31/16	7.92
DSAM Fund LP Net of Fee Return	0.00	0.00	0.00	0.45				6/30/16	1.51
Glenview Institution Net of Fee Return	0.00	0.00	0.00	-0.06				12/31/15	2.67
Gotham Neutral Strategies Net of Fee Return	2.63	2.53	2.04	-2.10				3/31/17	-2.10
Governors Lane Onshore Net of Fee Return	-0.13	-1.83	-0.42	2.30				3/31/17	2.30
HBK II Net of Fee Return	0.77	2.87	3.33	4.44	3.20			12/31/13	3.24

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Knighthead									
Net of Fee Return	1.46	2.54	3.95	4.73	1.94			12/31/13	2.35
Libremax Capital									
Net of Fee Return	0.00	0.00	0.00	-0.04	0.80			9/30/14	1.31
Liquidalts H20 Force									
Net of Fee Return	3.23	1.38	3.75	6.87				9/30/16	8.65
Luxor Capital									
Net of Fee Return	6.84	12.59	17.70	21.02	6.15			3/31/14	1.47
Myriad Opportunities									
Net of Fee Return	1.32	4.89	10.08	15.23				6/30/16	11.26
PAAMCO									
Net of Fee Return	2.85	-13.55	-13.55	-13.55	-6.39	-1.05		9/30/11	0.69
Pershing Square									
Net of Fee Return	-5.47	-4.17						9/30/17	-4.17
Pine River									
Net of Fee Return	0.12	-0.39	0.96	0.23	-0.79			6/30/14	0.57
PRISMA Capital									
Net of Fee Return	2.37	3.60	5.39	5.59	1.71	3.43		9/30/11	3.97
Prudential Fund I									
Net of Fee Return	0.70	0.67	1.69	4.99				3/31/17	4.99

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Scopia									
Net of Fee Return	0.00	0.02	5.80	3.90	-0.32			12/31/14	-0.21
SRS Partners US									
Net of Fee Return	0.41	3.42						9/30/17	3.42
Senator LP									
Net of Fee Return	-2.40	0.16	3.84	7.29				9/30/16	7.05
Systematica Blue Matrix									
Net of Fee Return	-1.00	-0.25	5.40	4.23				3/31/17	4.23
Tide Point Partners									
Net of Fee Return	-4.89	2.40	4.75	-3.80				3/31/17	-3.80
Tourbillon Global Equity									
Net of Fee Return	-5.67	-14.26	-15.30	-16.73				12/31/15	-12.29
Tricadia Select									
Net of Fee Return	0.90	-3.13						9/30/17	-3.13
Absolute Return Composite									
Net of Fee Return	1.61	2.94	4.99	5.46	2.13	4.14		3/31/10	4.22
HFRI FOF Div (1 Month Lag)	1.43	3.13	4.78	5.73	1.84	3.50		3/31/10	3.09
Value Added	0.18	-0.19	0.21	-0.27	0.29	0.65		3/31/10	1.12

CUSTOM BENCHMARK SPECIFICATION

Absolute Return Composite

March 31, 2018

	Quarter Start	Quarter End	Percent	Description
HFRI FOF Div (1 Month Lag)	6/10	3/18	100.00	HFRI FOF Div (1 Month Lag)