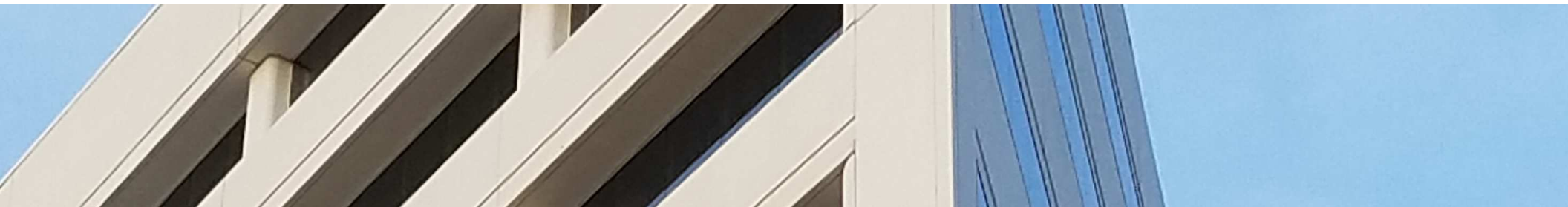




WILSHIRE ASSOCIATES

Wilshire Consulting



Kentucky Retirement Systems Pension

Executive Summary of Investment Performance

June 30, 2018



MARKET ENVIRONMENT

ASSET CLASS PERFORMANCE

ASSET CLASS RETURNS - BEST TO WORST						ANNUALIZED 5-YEAR AS OF 6/2018
2013	2014	2015	2016	2017	2018 YTD	
U.S. Equity 33.1%	REITs 31.8%	REITs 4.2%	MLPs 18.3%	Emrg Mrkts 37.7%	U.S. Equity 3.0%	U.S. Equity 13.4%
MLPs 27.6%	U.S. Equity 12.7%	U.S. Equity 0.7%	High Yield 17.1%	Developed 25.6%	REITs 1.5%	REITs 8.4%
Developed 23.3%	Core Bond 6.0%	Core Bond 0.6%	U.S. Equity 13.4%	U.S. Equity 21.0%	T-Bills 0.8%	Developed 6.9%
High Yield 7.4%	MLPs 4.8%	T-Bills 0.1%	Commodities 11.8%	High Yield 7.5%	High Yield 0.2%	High Yield 5.5%
REITs 1.9%	U.S. TIPS 3.6%	Developed -0.4%	Emrg Mrkts 11.6%	REITs 4.2%	Commodities 0.0%	Emrg Mrkts 5.4%
T-Bills 0.1%	High Yield 2.5%	U.S. TIPS -1.4%	REITs 7.2%	Core Bond 3.6%	U.S. TIPS 0.0%	Core Bond 2.3%
Core Bond -2.0%	T-Bills 0.0%	High Yield -4.5%	U.S. TIPS 4.7%	U.S. TIPS 3.0%	MLPs -0.6%	U.S. TIPS 1.7%
Emrg Mrkts -2.3%	Emrg Mrkts -1.8%	Emrg Mrkts -14.6%	Core Bond 2.6%	Commodities 1.7%	Core Bond -1.6%	T-Bills 0.4%
U.S. TIPS -8.6%	Developed -4.5%	Commodities -24.7%	Developed 1.5%	T-Bills 0.8%	Developed -2.4%	MLPs -4.1%
Commodities -9.5%	Commodities -17.0%	MLPs -32.6%	T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -6.5%	Commodities -6.4%

Data sources: Wilshire Compass

Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

MARKET COMMENTARY

U.S. Equity

The U.S. stock market was up 3.8% for the second quarter. Volatility has returned this year but is approximately in line with long-term historical figures. Although there have been more up days than down during 2018, the daily losses have been more substantial. Trade and tariffs continued to help drive markets this spring as did increased anti-euro sentiment in Italy.

A common measurement of the slope of the yield curve, the 10-year minus 2-year Treasuries spread, has been on the decline since late 2013 and is currently below the long-term average at 0.38%. It should be noted that the last three times that the spread went negative (1989, 2000 and 2007) the U.S. economy entered a recession not long afterwards. Continued economic growth without upward movement in long rates could be an indication that market participants are expecting a slowdown on the horizon.

Non-U.S. Equity

Equity markets outside of the U.S. produced mixed results while currency had a major effect on U.S.-based investors. As global growth slowed and the Federal Reserve adopted a more aggressive stance on interest rates, the U.S. dollar was up approximately 5% versus a basket of currencies. The European Union faces a fresh challenge with political developments in Italy, already being rattled by the Greek financial crisis and Brexit in past years.

Fixed Income

The U.S. Treasury yield curve rose but continued to flatten during the quarter. The Federal Open Market Committee decided to increase its overnight rate by 25 basis points in June to a range of 1.75% to 2.00%. Credit spreads widened during the quarter within investment grade credit but were little changed for the high yield market.

JUNE 2018 ASSET CLASS ASSUMPTIONS

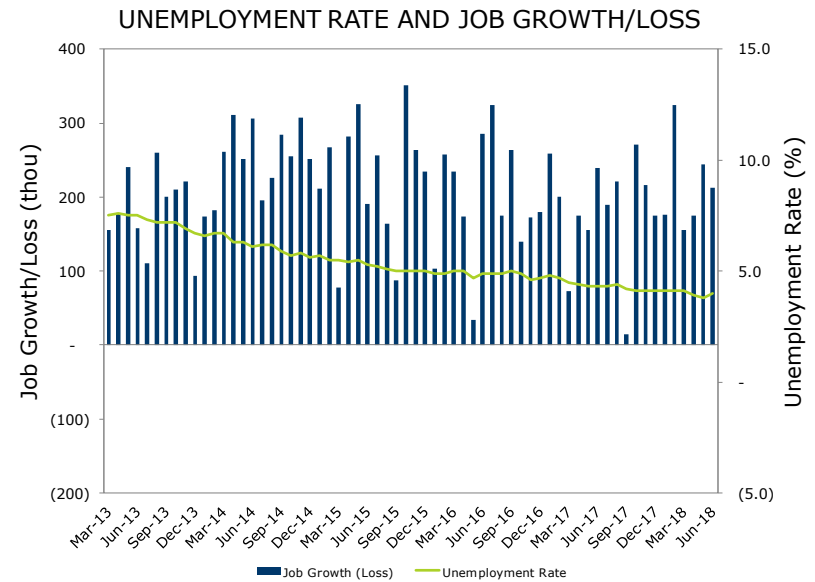
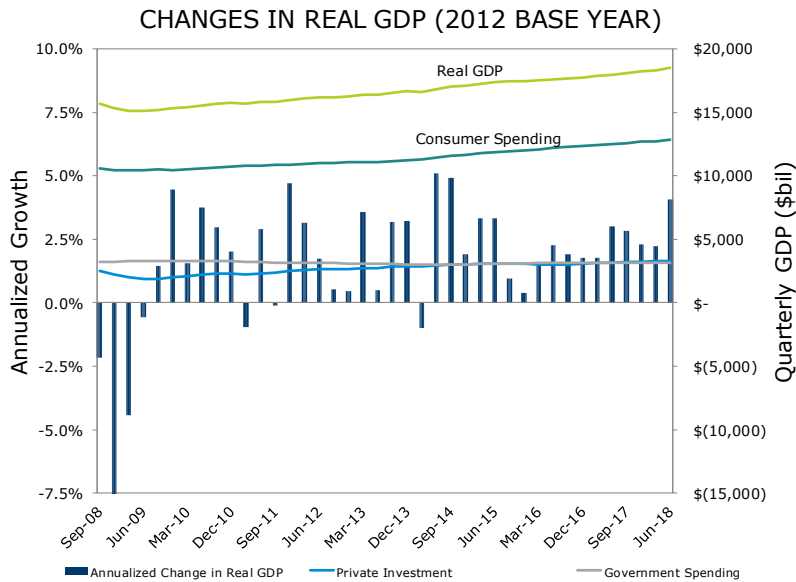
	EQUITY						FIXED INCOME						REAL ASSETS					
	US STOCK	DEV	EMG	GLOBAL		PRIVATE EQUITY	CASH	CORE BOND	LT	US TIPS	HIGH YIELD	NON-US BOND (HDG)	REAL ESTATE			CMDTY	REAL ASSETS	US CPI
		EX-US STOCK	MRKT STOCK	EX-US STOCK	GLOBAL STOCK				CORE BOND				US RES	GLOBAL RES	PRIVATE RE			
EXPECTED COMPOUND RETURN (%)	6.50	6.50	6.50	6.75	6.75	9.15	2.35	3.90	4.15	3.15	5.15	1.25	5.55	5.75	6.90	4.45	6.75	2.10
EXPECTED ARITHMETIC RETURN (%)	7.80	7.95	9.45	8.35	8.10	12.50	2.35	4.05	4.60	3.30	5.60	1.30	6.90	6.90	7.80	5.50	7.10	2.10
EXPECTED RISK (%)	17.00	18.00	26.00	18.75	17.15	28.00	1.25	5.15	9.85	6.00	10.00	3.50	17.00	15.80	14.00	15.00	8.50	1.75
CASH YIELD (%)	2.00	3.00	2.75	2.95	2.45	0.00	2.35	3.80	4.90	3.30	8.45	1.55	3.95	3.95	2.60	2.35	3.00	0.00
CORRELATIONS																		
US STOCK	1.00																	
DEV EX-US STOCK (USD)	0.81	1.00																
EMERGING MARKET STOCK	0.74	0.74	1.00															
GLOBAL EX-US STOCK	0.83	0.96	0.86	1.00														
GLOBAL STOCK	0.94	0.92	0.82	0.94	1.00													
PRIVATE EQUITY	0.74	0.64	0.62	0.67	0.74	1.00												
CASH EQUIVALENTS	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
CORE BOND	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT CORE BOND	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.93	1.00									
US TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.60	0.47	1.00								
HIGH YIELD BOND	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
NON-US BOND (HDG)	0.16	0.25	-0.01	0.18	0.18	0.26	0.10	0.67	0.64	0.39	0.26	1.00						
US RE SECURITIES	0.59	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
GLOBAL RE SECURITIES	0.65	0.59	0.56	0.62	0.66	0.58	-0.05	0.17	0.22	0.11	0.62	0.03	0.94	1.00				
PRIVATE REAL ESTATE	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.76	1.00			
COMMODITIES	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
REAL ASSET BASKET	0.42	0.43	0.50	0.48	0.47	0.43	0.01	0.24	0.25	0.41	0.53	0.06	0.65	0.69	0.69	0.59	1.00	
INFLATION (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

ECONOMIC REVIEW

AS OF JUNE 30, 2018 KEY ECONOMIC INDICATORS

CPI (ALL ITEMS)	MONTHLY CHANGE		CUMULATIVE CHANGE	
SEASONALLY ADJUSTED	Jun-18	0.1	3-Mo.	0.6
	May-18	0.2	12-Mo.	2.8
	Apr-18	0.2	10-Yr. (Annual)	1.4
	10-Yr.	2.1		
BREAKEVEN INFLATION				
CONSUMER SENTIMENT	Jun-18	98.2		
U. OF MICHIGAN SURVEY	May-18	98.0		
	1-Yr. Ago	95.0	10-Yr. Avg	80.7
MANUFACTURING	Jun-18	60.2	CHANGE IN SECTOR	
INST. FOR SUPPLY MGMT	May-18	58.7	>50	Expansion
PURCHASING MNGRS' IDX	1-Yr. Avg.	59.0	<50	Contraction

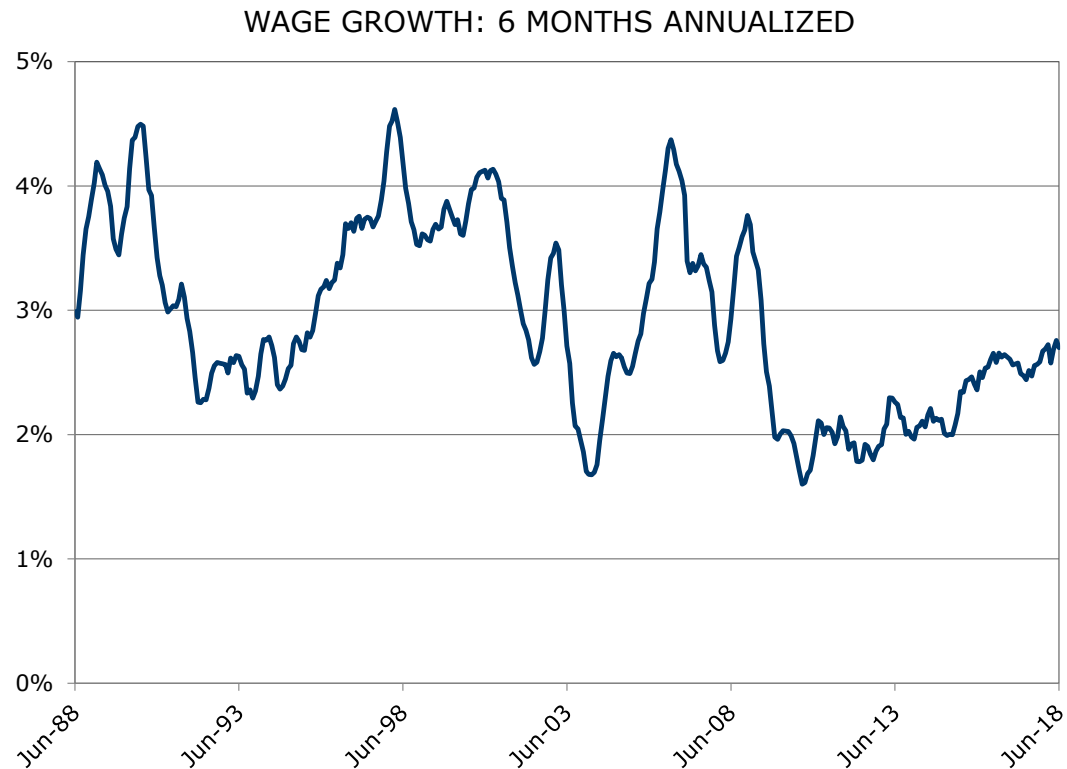
Note: Seasonally adjusted CPI data is utilized to better reflect short-term pricing activity.



Data sources: Bureau of Labor Statistics, U.S. Treasury, University of Michigan, Institute for Supply Management, Bureau of Economic Analysis

EMPLOYMENT CONDITIONS

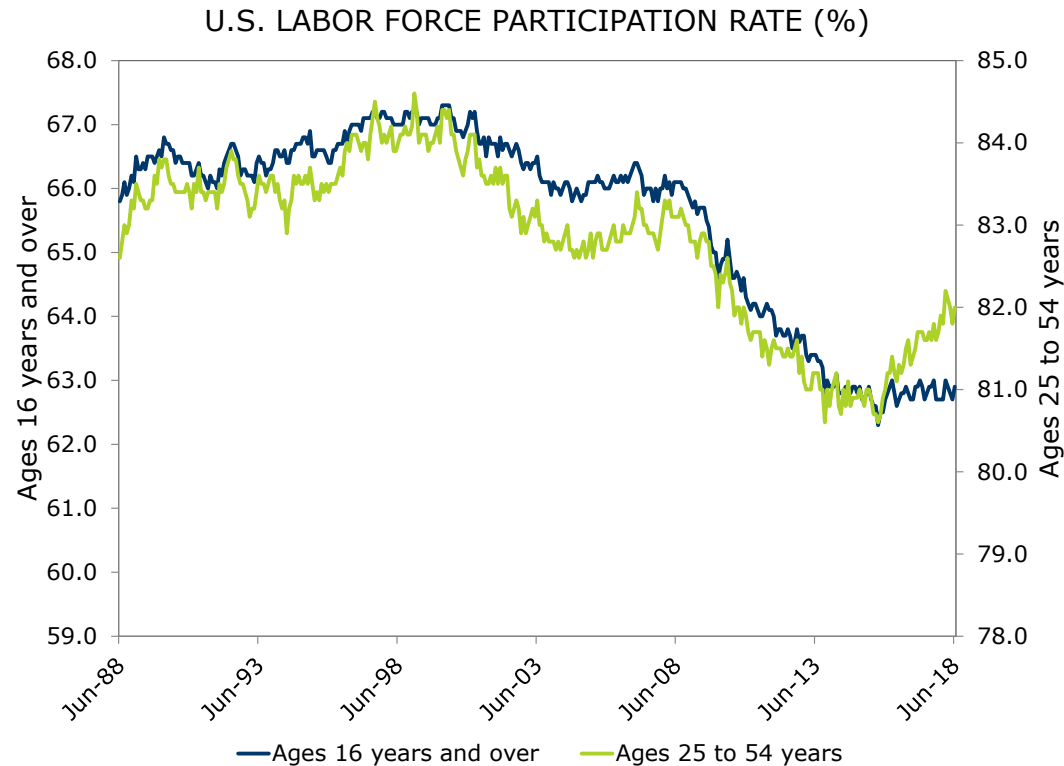
- While the U.S. has averaged 200,000 new jobs a month for the past year and the unemployment rate is at 4%, wage growth is climbing slowly
- One reason is the labor force participation rate, which has been slow to recover



Data sources: U.S. Bureau of Labor Statistics

EMPLOYMENT CONDITIONS

- Broad participation rate has stagnated; 25-54 years rate is recovering during the past 24 months
- Results, in total, suggest there may be more slack in the labor market than the unemployment rate indicates, which would decrease pressure on the Fed to raise rates much further



Data sources: U.S. Bureau of Labor Statistics

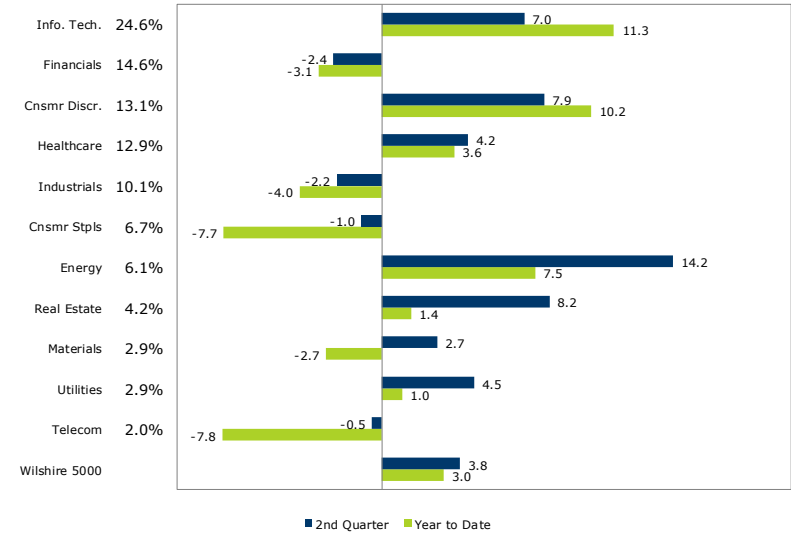
Wilshire Consulting

U.S. EQUITY MARKET

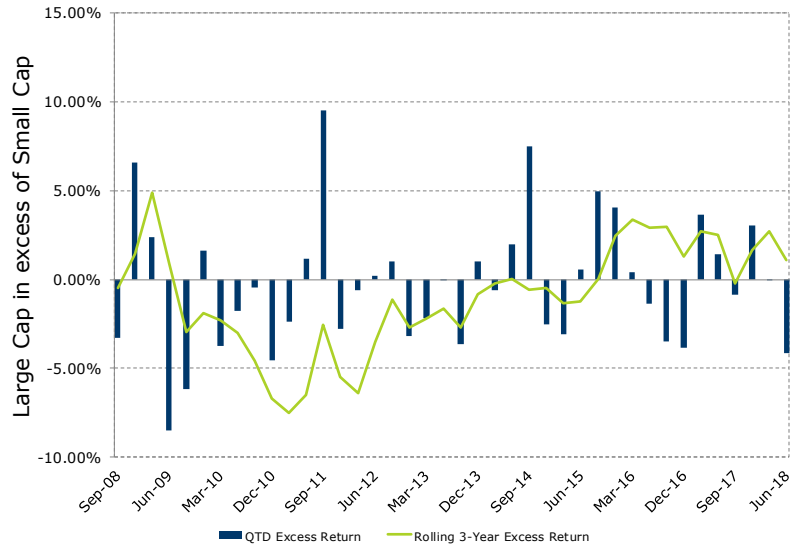


AS OF JUNE 30, 2018	QTR	YTD	1 YR	3 YR	5 YR	10 YR
WILSHIRE 5000 INDEX	3.8	3.0	14.7	11.8	13.4	10.2
WILSHIRE U.S. LARGE CAP	3.4	2.6	14.4	12.0	13.5	10.1
WILSHIRE U.S. SMALL CAP	7.9	7.1	16.9	10.8	12.6	11.7
WILSHIRE U.S. LARGE GROWTH	4.8	6.2	19.7	13.5	16.2	11.3
WILSHIRE U.S. LARGE VALUE	2.1	-0.9	9.4	10.2	10.9	8.9
WILSHIRE U.S. SMALL GROWTH	6.4	7.9	19.9	10.2	12.8	11.6
WILSHIRE U.S. SMALL VALUE	9.3	6.1	13.7	11.1	12.2	11.7
WILSHIRE REIT INDEX	9.7	1.5	3.9	7.8	8.4	7.8
MSCI USA MIN. VOL. INDEX	2.7	1.4	10.2	11.3	12.0	10.4
FTSE RAFI U.S. 1000 INDEX	2.9	0.4	11.6	10.2	11.9	11.3

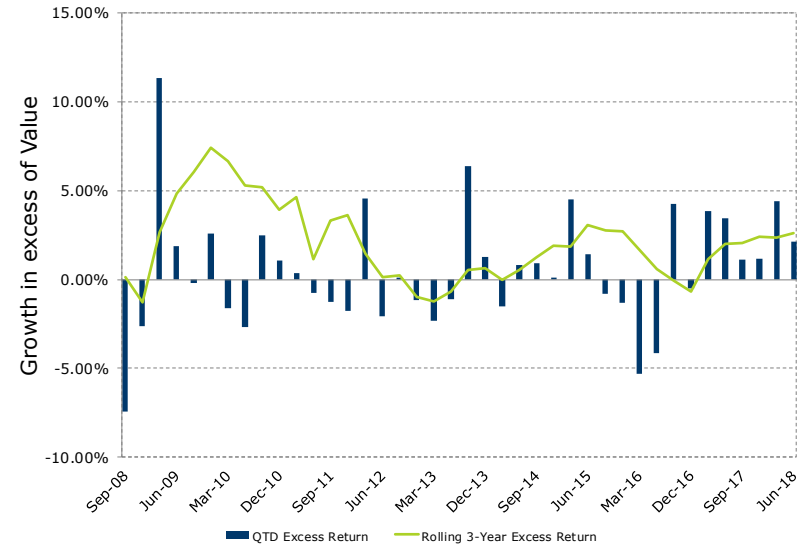
WILSHIRE 5000 SECTOR WEIGHT & RETURN (%)



LARGE CAP VS SMALL CAP



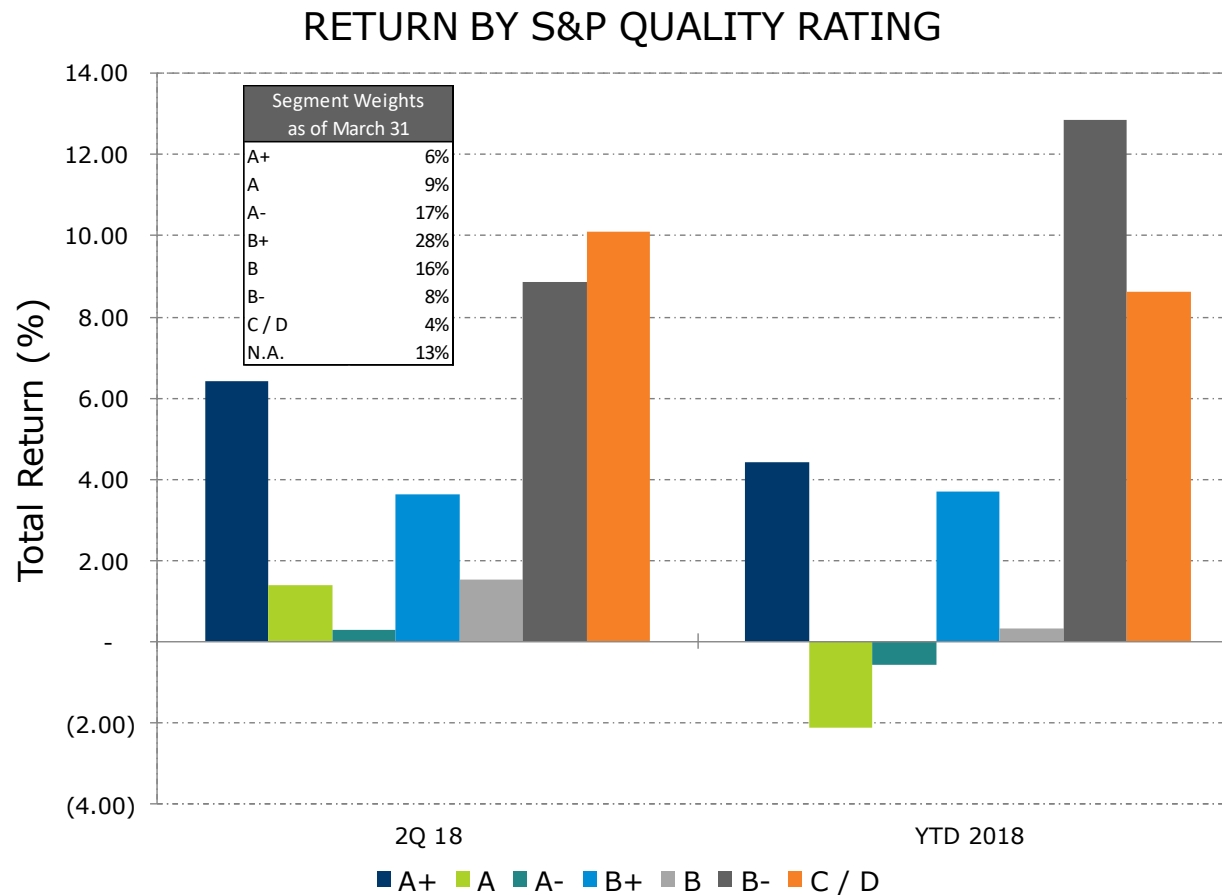
GROWTH VS VALUE



Data sources: Wilshire Compass, Wilshire Atlas

RETURNS BY QUALITY SEGMENT

Lower quality names are outperforming during 2018

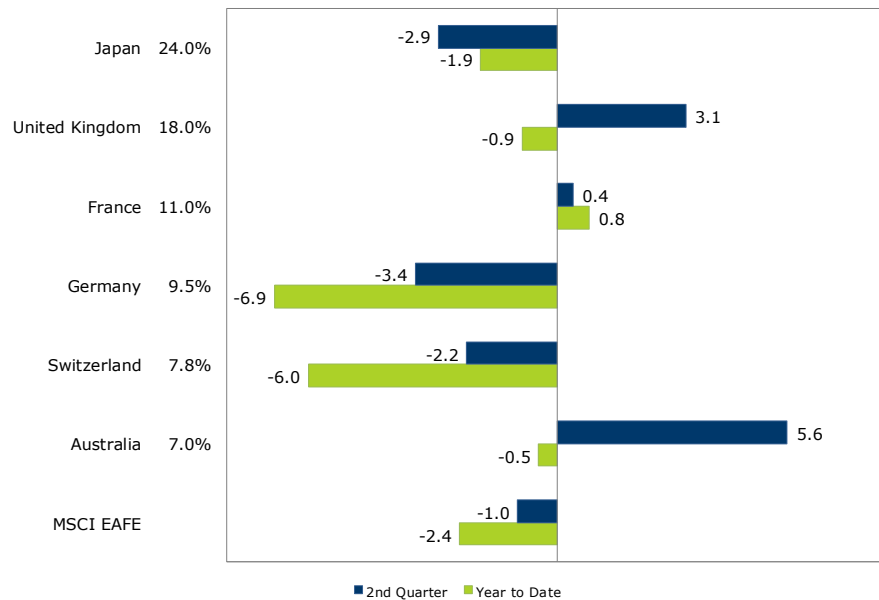


Data sources: Wilshire Atlas

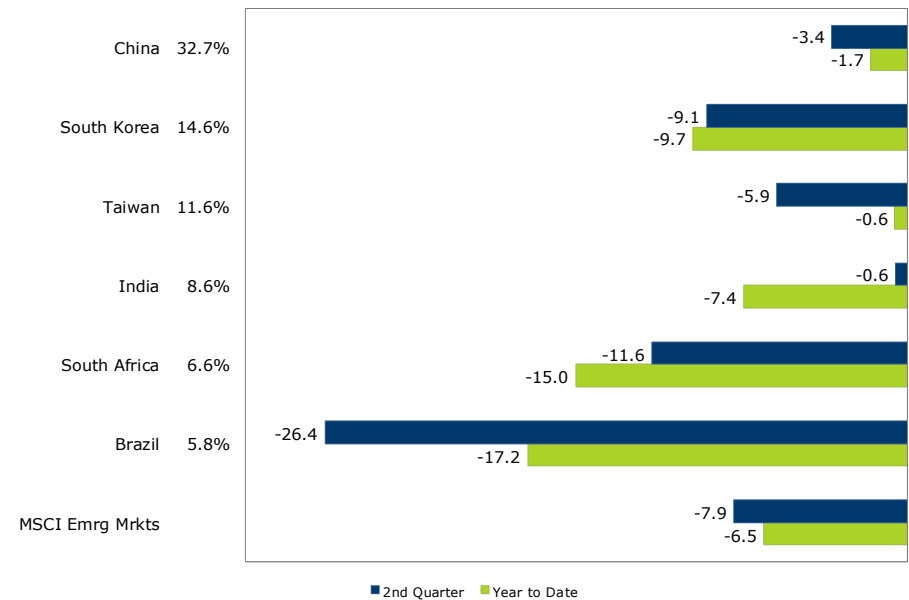
NON-U.S. EQUITY MARKET

AS OF JUNE 30, 2018	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI EX-US (\$G)	-2.4	-3.4	7.8	5.6	6.5	3.0
MSCI EAFE (\$G)	-1.0	-2.4	7.4	5.4	6.9	3.3
MSCI EMERGING MARKETS (\$G)	-7.9	-6.5	8.6	6.0	5.4	2.6
MSCI FRONTIER MARKETS (\$G)	-15.1	-10.7	2.0	2.5	4.9	-1.9
MSCI ACWI EX-US GROWTH (\$G)	-1.2	-2.0	10.3	6.9	7.6	3.4
MSCI ACWI EX-US VALUE (\$G)	-3.6	-4.9	5.3	4.1	5.3	2.6
MSCI ACWI EX-US SMALL (\$G)	-2.4	-2.7	11.0	8.5	9.5	6.2
MSCI ACWI MINIMUM VOLATILITY	0.6	0.0	8.0	9.0	9.7	8.3
MSCI EAFE MINIMUM VOLATILITY	-0.5	0.0	6.5	6.8	8.4	6.3
FTSE RAFI DEVELOPED EX-US	-1.6	-3.5	7.6	5.9	7.4	3.8
MSCI EAFE LC (G)	3.8	-0.6	6.6	5.7	9.4	5.5

MSCI EAFE: LARGEST COUNTRIES & RETURN (USD)



MSCI EM: LARGEST COUNTRIES & RETURN (USD)



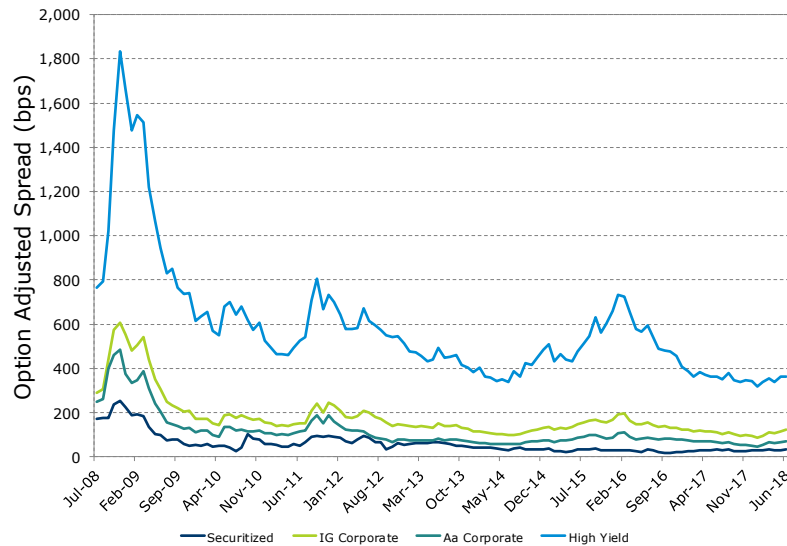
Data sources: Wilshire Compass

U.S. FIXED INCOME

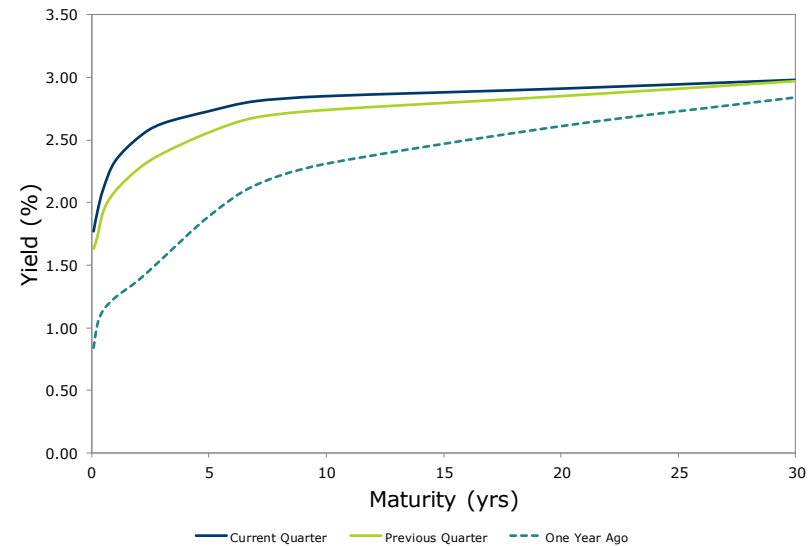
AS OF JUNE 30, 2018	YTM	DURATION	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS AGGREGATE	3.3	6.0	-0.2	-1.6	-0.4	1.7	2.3	3.7
BLOOMBERG BARCLAYS TREASURY	2.7	6.1	0.1	-1.1	-0.7	1.0	1.5	3.0
BLOOMBERG BARCLAYS GOV'T-REL.	3.3	5.3	-0.3	-1.3	0.1	1.7	2.3	3.4
BLOOMBERG BARCLAYS SECURITIZED	3.4	5.0	0.2	-1.0	0.1	1.5	2.2	3.6
BLOOMBERG BARCLAYS CORPORATE	4.0	7.3	-1.0	-3.3	-0.8	3.1	3.5	5.4
BLOOMBERG BARCLAYS LT G/C	4.0	14.9	-1.5	-5.0	-0.8	4.3	5.1	6.8
BLOOMBERG BARCLAYS LT TREASURY	3.0	17.2	0.3	-3.0	-0.1	3.4	4.5	6.1
BLOOMBERG BARCLAYS LT GOV'T-REL.	4.5	12.1	-1.4	-3.7	1.2	4.3	5.4	6.6
BLOOMBERG BARCLAYS LT CORP.	4.7	13.6	-2.8	-6.8	-1.8	5.1	5.5	7.4
BLOOMBERG BARCLAYS U.S. TIPS *	2.8	7.6	0.8	0.0	2.1	1.9	1.7	3.0
BLOOMBERG BARCLAYS HIGH YIELD	6.7	3.9	1.0	0.2	2.6	5.5	5.5	8.2
TREASURY BILLS	1.9	0.25	0.5	0.8	1.4	0.7	0.4	0.4

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index

BLOOMBERG BARCLAYS FIXED INCOME INDEXES



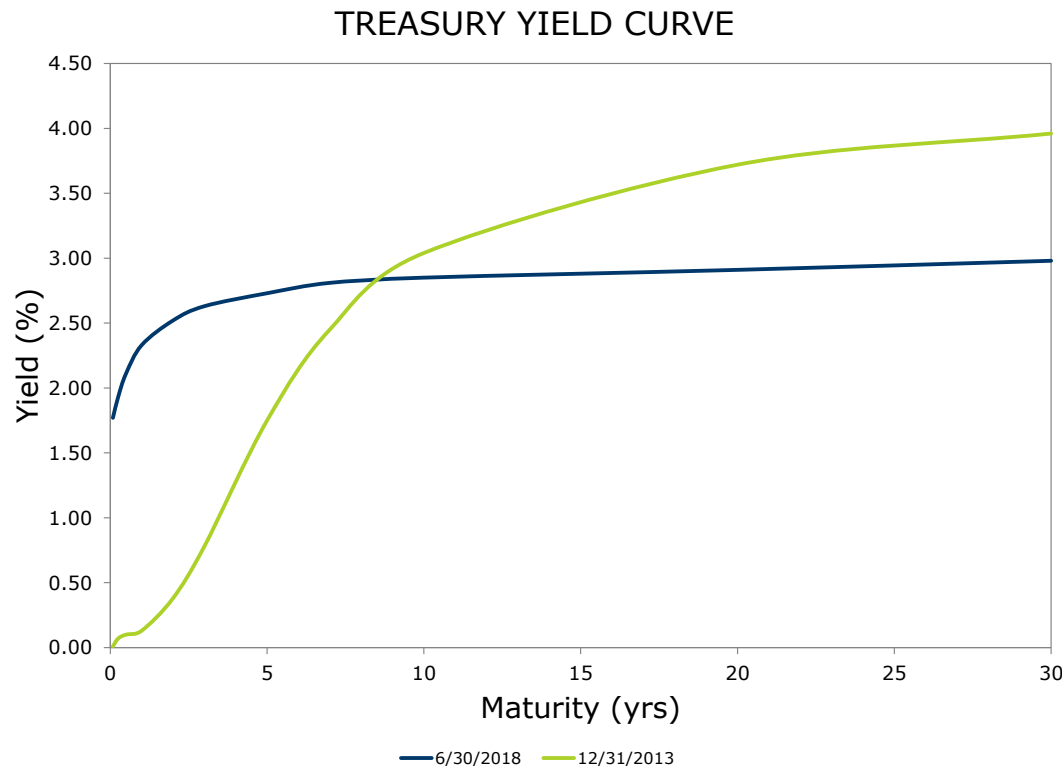
TREASURY YIELD CURVE



Data sources: Wilshire Compass, Bloomberg Barclays, U.S. Treasury

FLATTENING YIELD CURVE

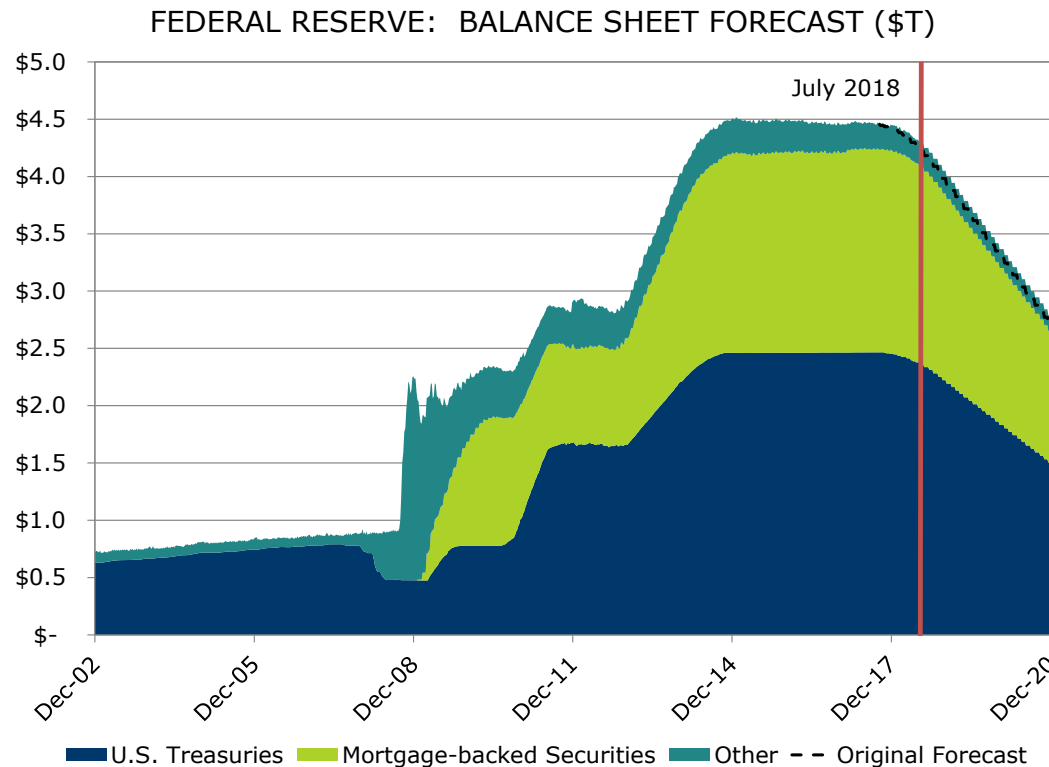
- U.S. yield curve has changed dramatically during the past 5 years
 - Last time the slope peaked was year-end 2013; 10 minus 2-Year Treasury = 2.6%
 - Currently flatter than any time in the previous decade; yield difference now at 0.4%
- Continued economic growth without upward movement in long rates could be an indication that market participants are expecting a slowdown on the horizon



Data source: Federal Reserve

FEDERAL RESERVE

- Federal Reserve began their balance sheet normalization program during October 2017; targeting \$10B in reductions per month while increasing to \$50B per month in Q4 2018
- European Central Bank has announced their intention to end their quantitative easing program this year; Bank of Japan reduced their bond purchases for the third time in June

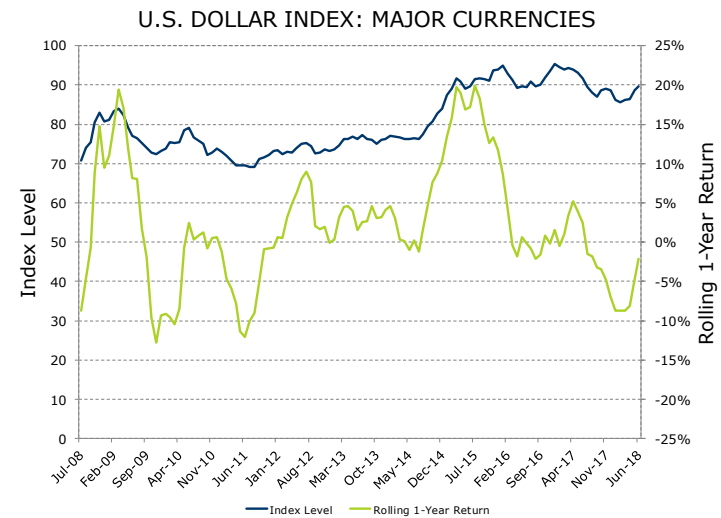
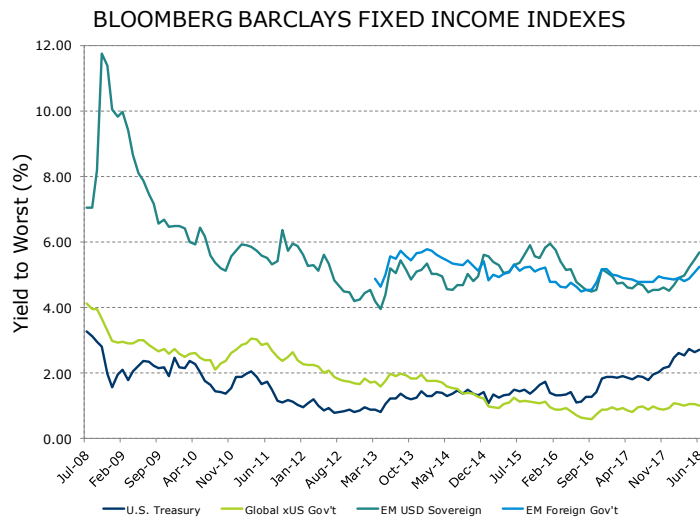


Data sources: Federal Reserve

NON-U.S. FIXED INCOME

AS OF JUNE 30, 2018	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
BLMBRG BRCLYS GBL AGGREGATE xUS	-4.8	-1.3	2.8	3.2	0.9	1.8
BLMBRG BRCLYS GBL AGGREGATE xUS *	0.5	1.4	3.3	3.6	4.0	4.4
BLMBRG BRCLYS GLOBAL INF LNKD xUS	-5.8	-2.8	4.2	2.5	3.0	2.2
BLMBRG BRCLYS GLOBAL INF LNKD xUS *	0.0	0.7	4.3	5.9	6.2	5.6
EMERGING MARKETS (HARD CURRENCY)						
BLMBRG BRCLYS EM USD AGGREGATE	-2.4	-3.8	-1.1	4.0	4.5	6.6
EMERGING MARKETS (FOREIGN CURRENCY)						
BLMBRG BRCLYS EM LOCAL CURR. GOVT	-8.2	-5.5	-0.8	1.9	0.5	2.6
BLMBRG BRCLYS EM LOCAL CURR. GOVT *	-1.4	-0.4	0.7	2.2	2.2	3.7
EURO vs. DOLLAR	-5.1	-2.8	2.4	1.6	-2.1	-3.0
YEN vs. DOLLAR	-4.0	1.7	1.4	3.4	-2.2	-0.4
POUND vs. DOLLAR	-5.9	-2.4	1.7	-5.7	-2.7	-4.0

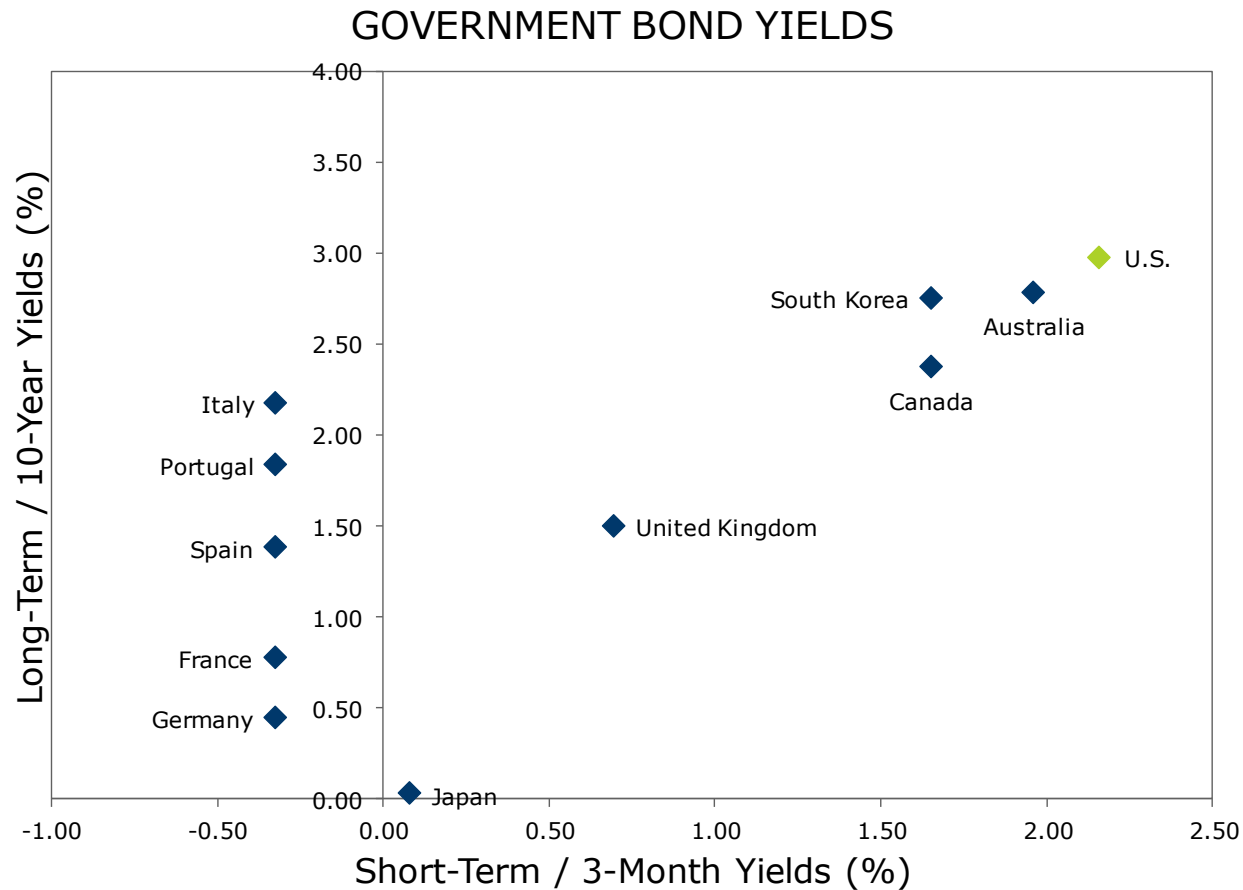
* Returns are reported in terms of local market investors, which removes currency effects.



Data sources: Wilshire Compass, Bloomberg Barclays, Federal Reserve Bank of St. Louis

GLOBAL INTEREST RATES

Negative short-term rates remain in Europe while the major economies of France and Germany also offer long-term rates below 1%

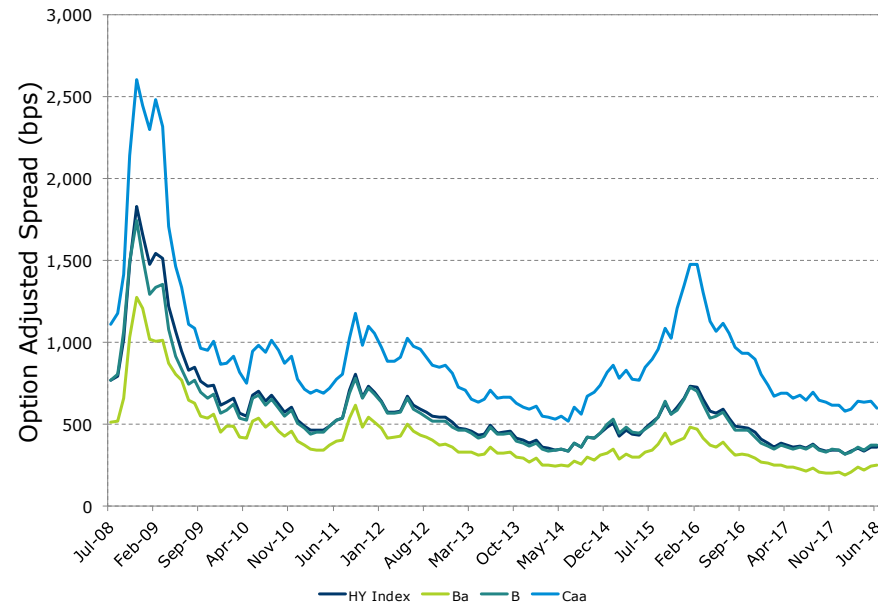


Data sources: Organization for Economic Co-operation and Development

HIGH YIELD BOND MARKET

AS OF JUNE 30, 2018		QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS HIGH YIELD		1.0	0.2	2.6	5.5	5.5	8.2
CREDIT SUISSE LEVERAGED LOAN		0.8	2.4	4.7	4.3	4.2	5.0
HIGH YIELD QUALITY DISTRIBUTION	WEIGHT						
Ba U.S. HIGH YIELD	43.2%	-0.2	-1.8	0.6	4.8	5.4	8.2
B U.S. HIGH YIELD	42.2%	1.4	0.9	3.0	4.8	5.0	6.8
Caa U.S. HIGH YIELD	13.5%	2.9	3.2	6.8	8.7	7.1	8.3
Ca to D U.S. HIGH YIELD	0.9%	18.9	21.6	24.1	12.1	-6.6	5.5
Non-Rated U.S. HIGH YIELD	0.2%	1.2	1.4	2.0	-1.3	0.8	2.0

BLOOMBERG BARCLAYS HIGH YIELD INDEXES



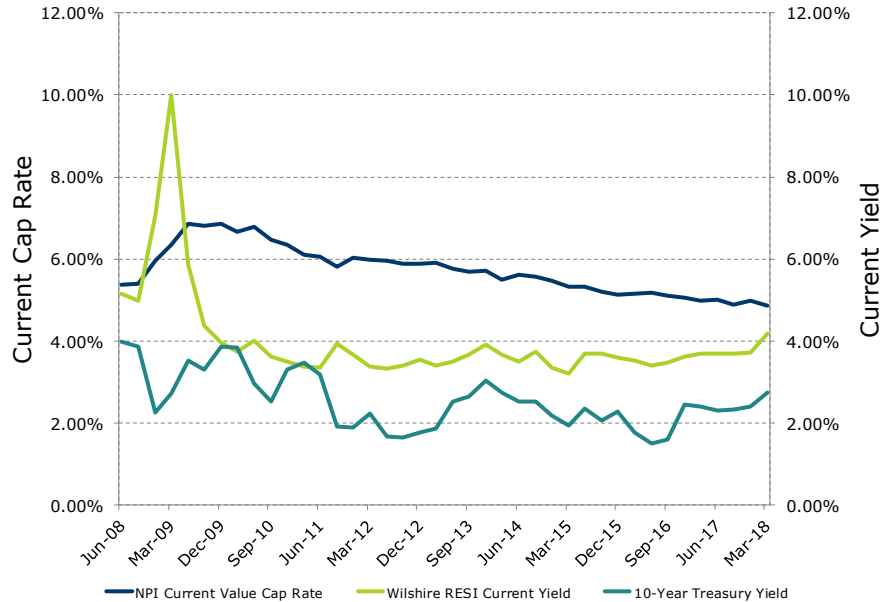
Data sources: Wilshire Compass, Bloomberg Barclays

Wilshire Consulting REAL ASSETS

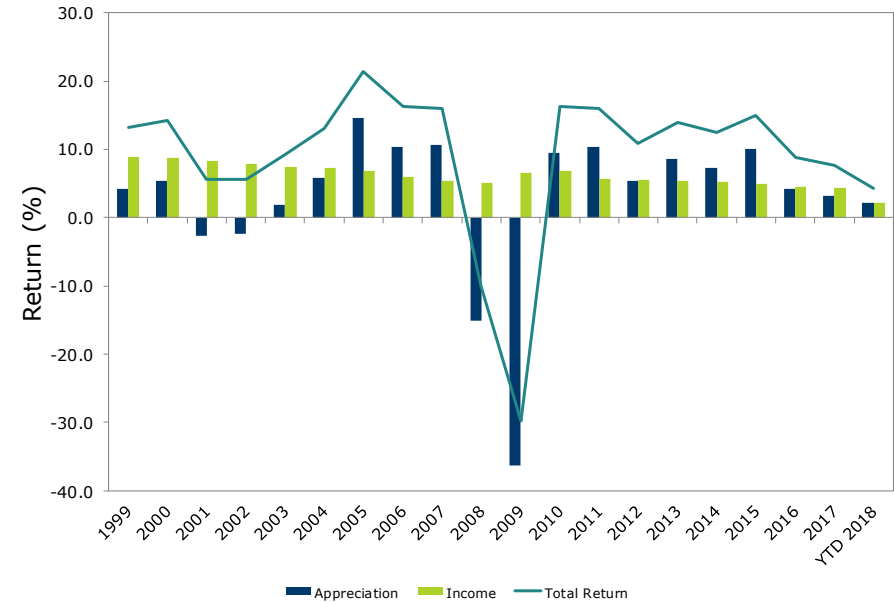


AS OF JUNE 30, 2018	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS U.S. TIPS	0.8	0.0	2.1	1.9	1.7	3.0
BLOOMBERG COMMODITY INDEX	0.4	0.0	7.3	-4.5	-6.4	-9.0
WILSHIRE GLOBAL RESI INDEX	6.0	0.5	5.1	6.8	7.5	6.6
NCREIF ODCE FUND INDEX	2.0	4.3	8.4	9.4	11.0	5.3
NCREIF TIMBERLAND INDEX	0.5	1.4	3.6	3.4	6.0	4.0
ALERIAN MLP INDEX (OIL & GAS)	11.8	-0.6	-4.6	-5.9	-4.1	6.5

REAL ESTATE VALUATION



NCREIF ODCE FUND INDEX RETURN



Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries



TOTAL FUND

ACTUAL ALLOCATION VS POLICY ALLOCATION

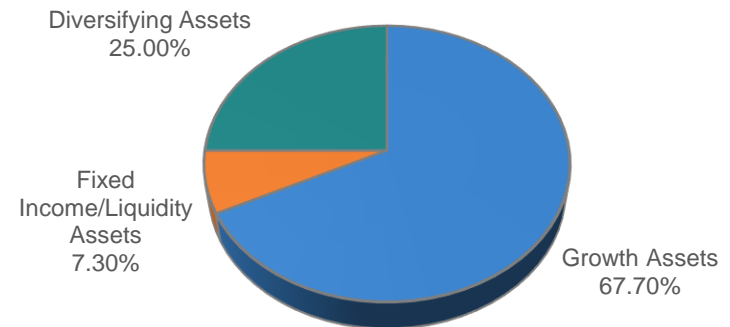
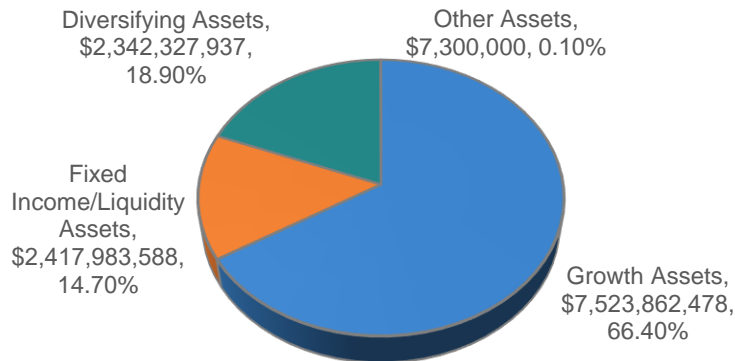
KRS Pension Plan Composite

Asset Class Bucketing

As of June 30, 2018

Total Fund

Policy Index



\$12,291,474,003

ACTUAL ALLOCATION VS POLICY ALLOCATION

KRS Pension Plan Composite

Asset Class Bucketing

As of June 30, 2018

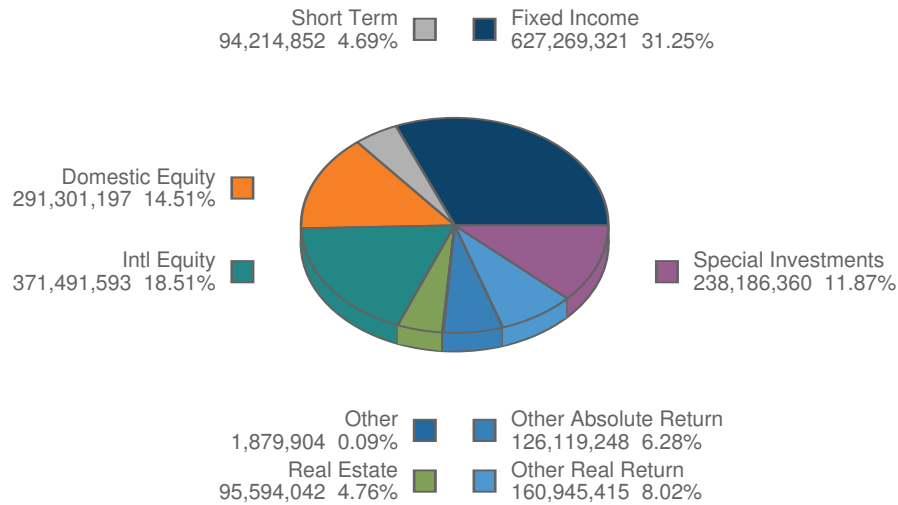
Asset Class / Bucket	Total Pension Allocation		Policy Index	Relative (+/-)
	(\$)	(%)		
U.S. Equity	\$2,123,122,229	20.2%	17.5%	2.7%
Non-U.S. Equity	\$2,591,188,531	24.7%	17.5%	7.2%
Private Equity	\$1,214,463,846	9.9%	10.0%	-0.1%
Credit / High Yield	\$1,595,087,872	11.6%	22.7%	-11.1%
Growth Assets	\$7,523,862,478	66.4%	67.7%	-1.3%
Core Fixed Income	\$1,964,464,091	11.2%	5.1%	6.1%
Cash	\$453,519,497	3.5%	2.2%	1.3%
Fixed Income/Liquidity Assets	\$2,417,983,588	14.7%	7.3%	7.4%
Real Estate	\$583,605,852	4.6%	5.0%	-0.4%
Real Return	\$1,057,017,333	8.0%	10.0%	-2.0%
Absolute Return	\$701,704,752	6.3%	10.0%	-3.7%
Diversifying Assets	\$2,342,327,937	18.9%	25.0%	-6.1%
Other Assets	\$7,300,000	0.1%	0.0%	0.1%
Total Fund	\$12,291,474,003	100.0%	100.0%	0.0%

ACTUAL ALLOCATION VS POLICY ALLOCATION

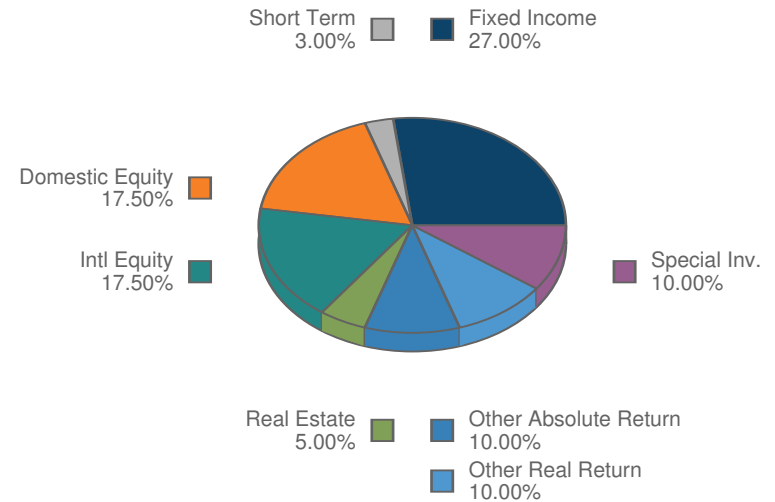
KERS Pension Plan Composite

As of June 30, 2018

Total Fund



Policy Index



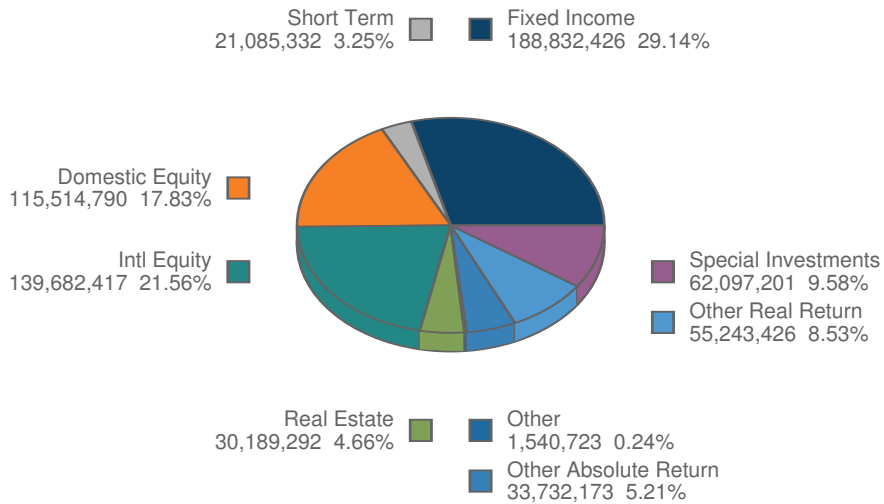
\$2,007,001,933

ACTUAL ALLOCATION VS POLICY ALLOCATION

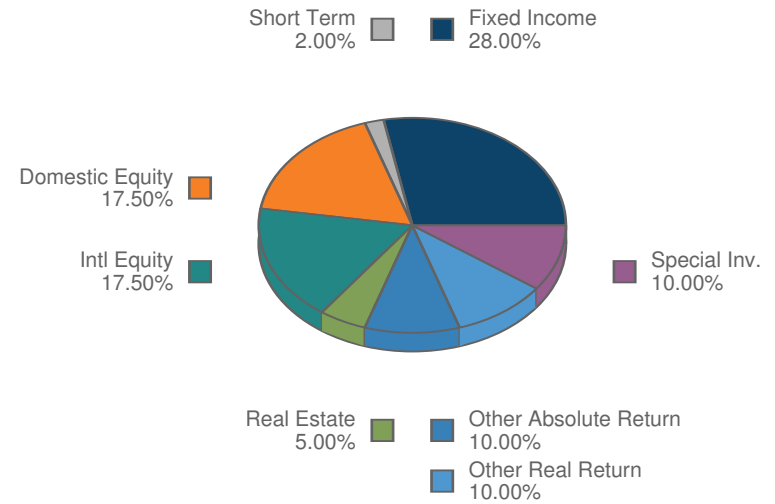
KERS (H) Pension Plan Composite

As of June 30, 2018

Total Fund



Policy Index



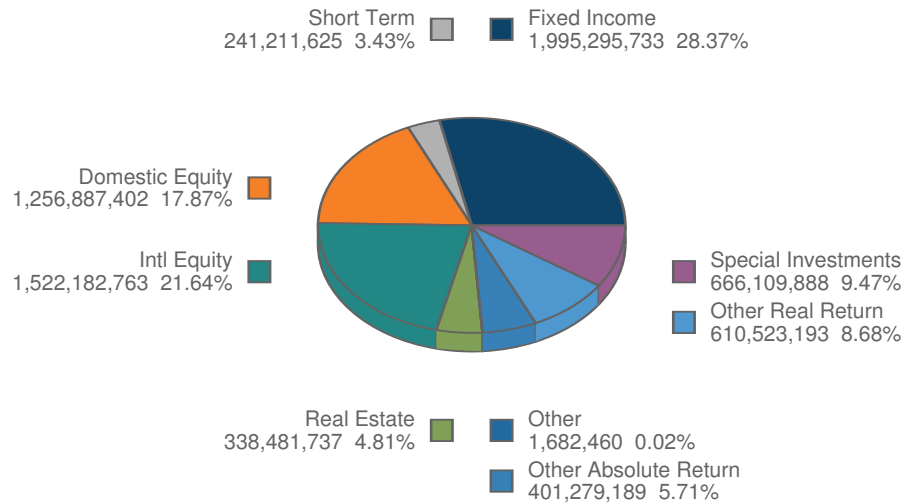
\$647,917,779

ACTUAL ALLOCATION VS POLICY ALLOCATION

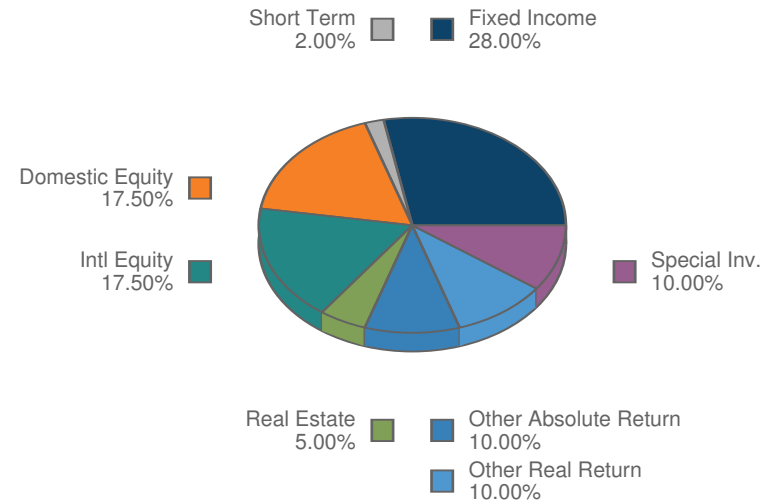
CERS Pension Plan Composite

As of June 30, 2018

Total Fund



Policy Index



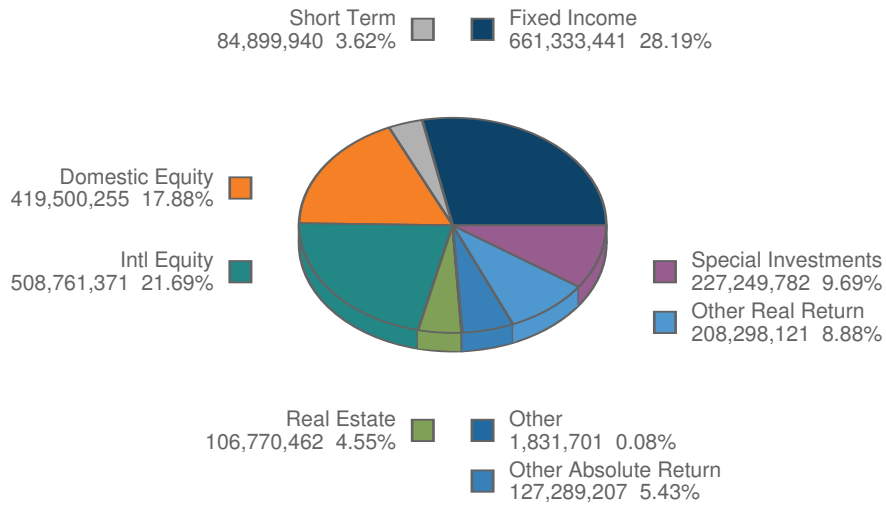
\$7,033,653,989

ACTUAL ALLOCATION VS POLICY ALLOCATION

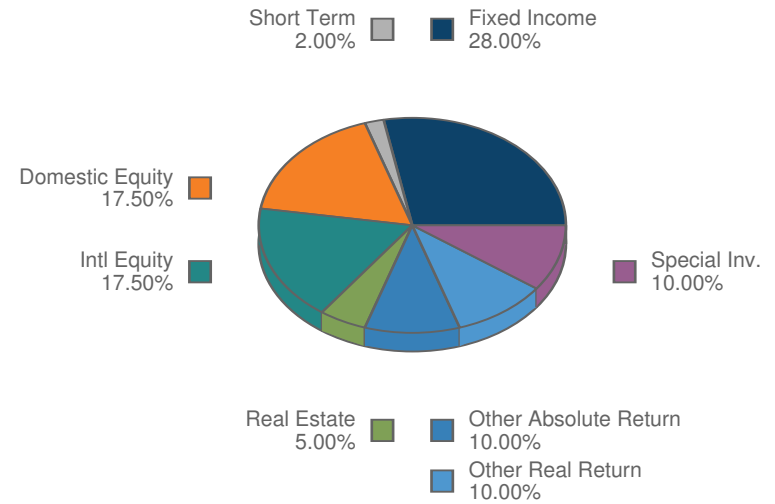
CERS (H) Pension Plan Composite

As of June 30, 2018

Total Fund



Policy Index



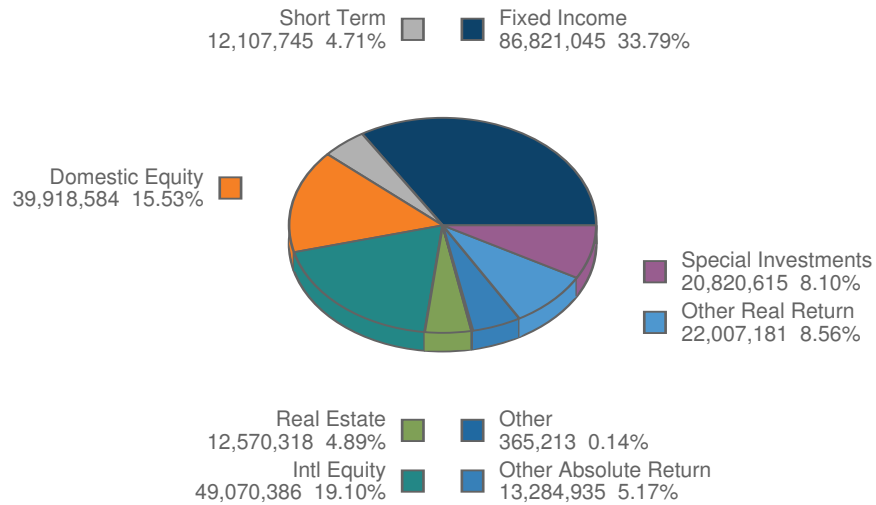
\$2,345,934,278

ACTUAL ALLOCATION VS POLICY ALLOCATION

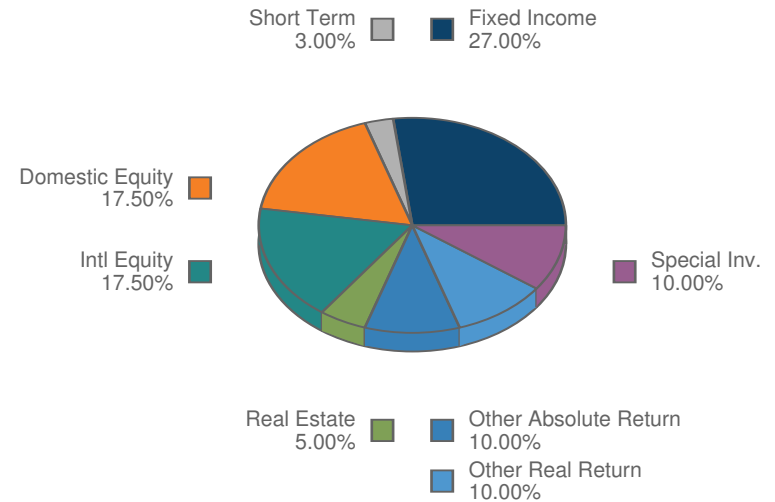
SPRS Pension Plan Composite

As of June 30, 2018

Total Fund



Policy Index

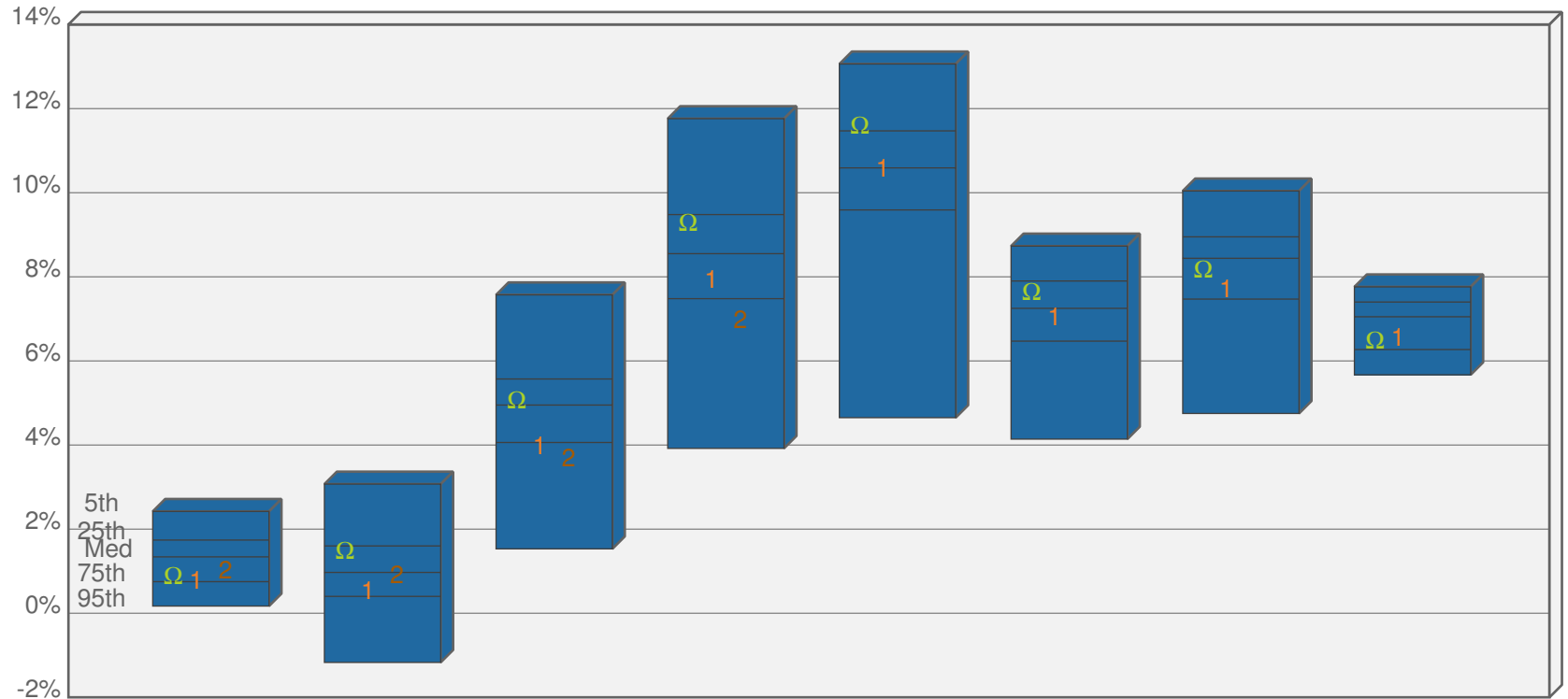


\$256,966,022

PERFORMANCE COMPARISON

KRS Pension Plan Composite

Periods Ended June 30, 2018



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
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Ω KRS Pension Plan
 1 KRS Allocation I
 2 KRS IPS Benchmark

Ω KRS Pension Plan	0.90 (67)	1.51 (26)	5.08 (43)	9.29 (26)	11.61 (21)	7.66 (33)	8.20 (58)	6.51 (69)
1 KRS Allocation I	0.79 (73)	0.54 (68)	3.98 (78)	7.94 (70)	10.60 (49)	7.06 (58)	7.73 (68)	6.56 (65)
2 KRS IPS Benchmark	1.03 (62)	0.92 (50)	3.71 (80)	6.99 (82)				

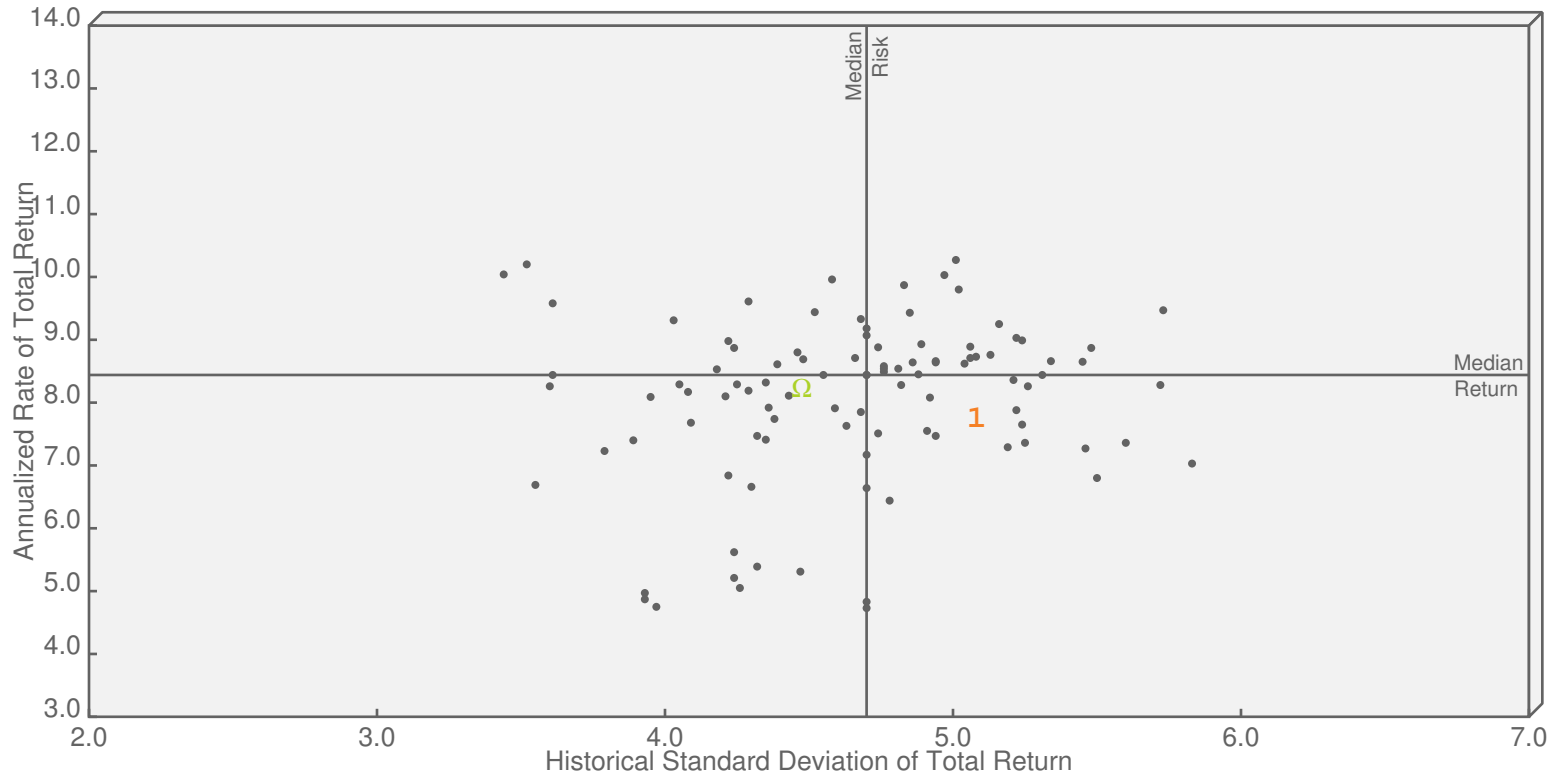
5th %tile	2.42	3.07	7.57	11.76	13.06	8.73	10.04	7.76
25th %tile	1.74	1.60	5.57	9.48	11.47	7.90	8.95	7.40
Median	1.34	0.97	4.95	8.55	10.59	7.25	8.44	7.05
75th %tile	0.75	0.40	4.06	7.48	9.59	6.47	7.47	6.27
95th %tile	0.17	-1.17	1.53	3.92	4.65	4.14	4.75	5.67
Number of Funds	127	127	127	125	125	125	124	107

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

RISK / RETURN ANALYSIS

KRS Pension Plan

Five Years Ending June 30, 2018



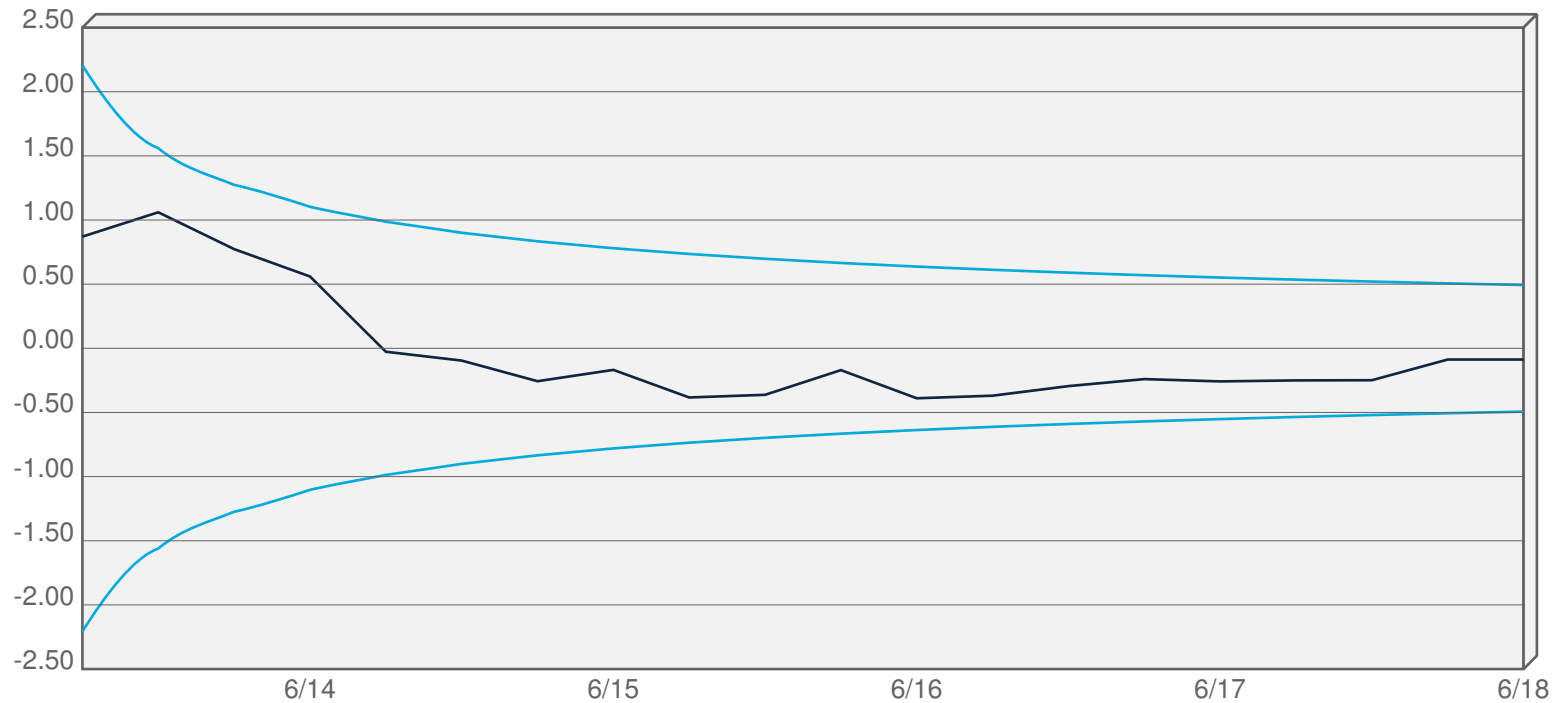
Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
KRS Pension Plan	Ω	8.20	58	4.49	59
KRS Allocation Index	1	7.73	68	5.10	28
Median		8.44		4.70	

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

CUMULATIVE SKILL ANALYSIS

KRS Pension Plan Composite

Five Years Ending June 30, 2018



— Quarterly NOF Value Added vs. KRS Allocation Index

— 80% Confidence Band

Excess Return:	-0.09	Information Ratio:	-0.13
Excess Risk:	0.67	T-Stat:	-0.29

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	0.78	1.19	4.61	8.56	7.01	7.63	6.18	3/31/84	9.14
KRS Allocation Index	0.79	0.54	3.98	7.94	7.06	7.73	6.56	3/31/84	9.27
Value Added	-0.02	0.65	0.63	0.62	-0.04	-0.10	-0.37	3/31/84	-0.13
KRS IPS Benchmark	1.03	0.92	3.71	6.99					
KERS Pension Plan									
Net of Fee Return	0.65	0.96	3.90	7.49	6.17	7.19	5.96	3/31/84	9.07
KERS Allocation Index	0.65	0.19	3.11	6.98	6.12	7.09	6.24	3/31/84	9.18
Value Added	0.01	0.77	0.79	0.51	0.05	0.10	-0.28	3/31/84	-0.10
KERS IPS Benchmark	0.80	0.47	3.19	6.81					
Assumed Rate 5.25%	1.29	2.59	3.91	5.25					
KERS (H) Pension Plan									
Net of Fee Return	0.77	1.17	4.64	8.64	7.13	7.69	6.21	3/31/84	9.15
KERS (H) Allocation Index	0.83	0.60	4.18	8.64	7.16	7.76	6.57	3/31/84	9.28
Value Added	-0.06	0.56	0.46	0.00	-0.03	-0.07	-0.36	3/31/84	-0.13
KERS (H) IPS Benchmark	1.06	0.98	3.77	7.48					
Assumed Rate 6.25%	1.53	3.08	4.65	6.25					
CERS Pension Plan									
Net of Fee Return	0.79	1.21	4.72	8.75	7.18	7.71	6.22	3/31/84	9.15
CERS Allocation Index	0.85	0.64	4.23	8.70	7.18	7.78	6.58	3/31/84	9.28
Value Added	-0.06	0.57	0.50	0.05	-0.00	-0.06	-0.36	3/31/84	-0.13
CERS IPS Benchmark	1.08	1.02	3.82	7.53					
Assumed Rate 6.25%	1.53	3.08	4.65	6.25					

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	0.83	1.25	4.75	8.75	7.21	7.73	6.23	3/31/84	9.15
CERS (H) Allocation Index	0.88	0.69	4.27	8.75	7.20	7.79	6.58	3/31/84	9.28
Value Added	-0.06	0.56	0.48	-0.00	0.01	-0.06	-0.35	3/31/84	-0.12
CERS (H) IPS Benchmark	1.11	1.06	3.87	7.59					
Assumed Rate 6.25%	1.53	3.08	4.65	6.25					
SPRS Pension Plan									
Net of Fee Return	0.65	0.89	3.98	7.64	6.06	7.04	5.89	3/31/84	9.05
SPRS Allocation Index	0.86	0.49	3.66	7.79	6.68	7.46	6.42	3/31/84	9.23
Value Added	-0.21	0.39	0.32	-0.15	-0.62	-0.42	-0.53	3/31/84	-0.18
SPRS IPS Benchmark	0.88	0.64	3.40	7.00					
Assumed Rate 5.25%	1.29	2.59	3.91	5.25					

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	4.19	3.47	9.67	14.52	11.08	12.66	9.97	3/31/84	11.36
Russell 3000	3.89	3.22	9.76	14.78	11.58	13.29	10.33	3/31/84	11.38
Value Added	0.30	0.25	-0.09	-0.25	-0.50	-0.63	-0.36	3/31/84	-0.02
Non-US Equity Composite									
Net of Fee Return	-1.83	-1.64	3.80	10.84	6.85	7.23	3.96	6/30/00	3.42
Policy Index	-2.61	-3.65	1.39	7.83	5.60	6.50	3.26	6/30/00	3.54
Value Added	0.78	2.01	2.41	3.01	1.25	0.73	0.69	6/30/00	-0.12
Fixed Income Composite									
Net of Fee Return	-0.11	-0.41	0.04	1.11	4.10	4.14	4.87	3/31/84	7.49
Policy Index	0.38	-0.75	-0.32	1.17	5.08	4.40	4.79	3/31/84	7.32
Value Added	-0.49	0.35	0.35	-0.07	-0.98	-0.26	0.07	3/31/84	0.17
Bloomberg Global Aggregate	-2.78	-1.46	-0.40	1.36	2.58	1.50	2.58		
Real Return Composite									
Net of Fee Return	0.22	-0.29	0.45	1.97	3.50	3.02		6/30/11	3.71
Real Return Index (P)	1.62	-0.25	0.29	0.75	2.05	1.73		6/30/11	2.52
Value Added	-1.40	-0.04	0.16	1.22	1.45	1.29		6/30/11	1.19
Real Estate Composite									
Net of Fee Return	2.04	4.40	6.81	9.56	9.54	8.91	8.18	6/30/84	6.06
NCREIF ODCE NOF 1 Quarter Lag	1.97	3.86	5.56	7.11	9.00	10.42	4.16		
Value Added	0.07	0.55	1.25	2.45	0.55	-1.51	4.02		
Absolute Return Composite									
Net of Fee Return	0.57	2.15	3.48	5.54	1.41	3.59		3/31/10	4.15
HFRI FOF Div (1 Month Lag)	0.57	2.03	3.74	5.40	1.53	3.12		3/31/10	3.07
Value Added	0.00	0.12	-0.26	0.14	-0.12	0.47		3/31/10	1.08

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	2.60	6.08	9.43	14.60	10.87	12.88	8.81	6/30/02	11.18
KRS Short Term PE Index	2.60	6.09	9.43	14.61	10.87	12.88	8.81	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	0.10	7.23	12.96	17.46	14.45	17.17	13.16	6/30/02	10.95
Cash Composite									
Net of Fee Return	0.45	1.02	1.68	1.98	1.14	0.84	0.77	12/31/87	3.60
91-Day Treasury Bill	0.46	0.81	1.09	1.36	0.68	0.42	0.35	12/31/87	3.29
Value Added	-0.00	0.21	0.59	0.62	0.46	0.41	0.42	12/31/87	0.31
Other Assets									
Net of Fee Return	0.00	0.00	0.00	0.00	0.00	0.32	0.18	3/31/99	3.16

CUSTOM BENCHMARK SPECIFICATION

KRS Pension Plan

June 30, 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
	12/17	3/18	2.20	91-Day Treasury Bill
			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	
6/18	6/18	8.00	Real Return Index (P)	
		10.00	KRS Short Term PE Benchmark	
		23.60	Russell 3000	
		17.00	Russell 3000	
		21.00	MSCI ACWI Ex USA IMI (\$N)	
		10.00	HFRI Diversified Index	
		10.00	Real Return Index (P)	
12.40	Bloomberg High Yield			
13.00	Bloomberg Universal			
5.00	NCREIF ODCE NOF 1 Quarter Lag			
9.40	KRS Short Term PE Benchmark			
2.20	91-Day Treasury Bill			
KRS IPS Benchmark	9/17	9/17	17.50	Russell 3000

CUSTOM BENCHMARK SPECIFICATION

KRS Pension Plan

June 30, 2018

	Quarter Start	Quarter End	Percent	Description	
KRS IPS Benchmark (cont.)			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	
		12/17	6/18	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

June 30, 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
	6/18	6/18	14.00	Bloomberg High Yield
			3.00	91-Day Treasury Bill
			10.00	KERS Short Term PE Benchmark
			5.00	NCREIF ODCE NOF 1 Quarter Lag
15.00			Bloomberg Universal	
15.00			Bloomberg High Yield	
11.50			Real Return Index (P)	
7.00	HFRI Diversified Index			
18.75	MSCI ACWI Ex USA IMI (\$N)			
14.75	Russell 3000			

CUSTOM BENCHMARK SPECIFICATION

KERS Pension Plan

June 30, 2018

	Quarter Start	Quarter End	Percent	Description
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
			3.00	91-Day Treasury Bill
	12/17	6/18	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	6/18	100.00
6/18				

CUSTOM BENCHMARK SPECIFICATION

KERS (H) Pension Plan

June 30, 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
	12/17	3/18	26.50	MSCI ACWI Ex USA IMI Index (\$G)
			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
	6/18	6/18	2.00	91-Day Treasury Bill
10.00			KERS (H) Short Term PE Benchmark	
5.00			NCREIF ODCE NOF 1 Quarter Lag	
12.00			Bloomberg Universal	
11.00			Bloomberg High Yield	
11.00			Real Return Index (P)	
10.00			HFRI Diversified Index	
21.50			MSCI ACWI Ex USA IMI (\$N)	
17.50	Russell 3000			
KERS (H) IPS Benchmark	9/17	9/17	17.50	Russell 3000

CUSTOM BENCHMARK SPECIFICATION

KERS (H) Pension Plan

June 30, 2018

	Quarter Start	Quarter End	Percent	Description	
KERS (H) IPS Benchmark (cont.)			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	
		12/17	6/18	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	6/18	100.00	Assumed Rate 6.25%	

CUSTOM BENCHMARK SPECIFICATION

CERS Pension Plan

June 30, 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
	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		
	6/18	6/18		
10.00			CERS Short Term PE Benchmark	
5.00			NCREIF ODCE NOF 1 Quarter Lag	
12.00			Bloomberg Universal	
11.00			Bloomberg High Yield	
11.00			Real Return Index (P)	
10.00			HFRI Diversified Index	
21.50			MSCI ACWI Ex USA IMI (\$N)	
17.50			Russell 3000	
CERS IPS Benchmark			9/17	9/17

CUSTOM BENCHMARK SPECIFICATION

CERS Pension Plan

June 30, 2018

	Quarter Start	Quarter End	Percent	Description	
CERS IPS Benchmark (cont.)			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	
		12/17	6/18	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	6/18	100.00	Assumed Rate 6.25%	

CUSTOM BENCHMARK SPECIFICATION

CERS (H) Pension Plan

June 30, 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			
6/18	6/18	2.00	91-Day Treasury Bill	
		10.00	CERS (H) Short Term PE Benchmark	
		5.00	NCREIF ODCE NOF 1 Quarter Lag	
		12.00	Bloomberg Universal	
		11.00	Bloomberg High Yield	
		11.00	Real Return Index (P)	
		10.00	HFRI Diversified Index	
		21.50	MSCI ACWI Ex USA IMI (\$N)	
17.50	Russell 3000			
CERS (H) IPS Benchmark	9/17	9/17	17.50	Russell 3000

CUSTOM BENCHMARK SPECIFICATION

CERS (H) Pension Plan

June 30, 2018

	Quarter Start	Quarter End	Percent	Description	
CERS (H) IPS Benchmark (cont.)			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	
		12/17	6/18	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	6/18	100.00	Assumed Rate 6.25%	

CUSTOM BENCHMARK SPECIFICATION

SPRS Pension Plan

June 30, 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			
6/18	6/18	3.00	91-Day Treasury Bill	
		15.00	SPRS Short Term PE Benchmark	
		5.00	NCREIF ODCE NOF 1 Quarter Lag	
		7.00	Bloomberg Universal	
		15.00	Bloomberg High Yield	
		11.50	Real Return Index (P)	
		10.00	HFRI Diversified Index	
		18.75	MSCI ACWI Ex USA IMI (\$N)	
14.75	Russell 3000			
SPRS IPS Benchmark	9/17	9/17	17.50	Russell 3000

CUSTOM BENCHMARK SPECIFICATION

SPRS Pension Plan

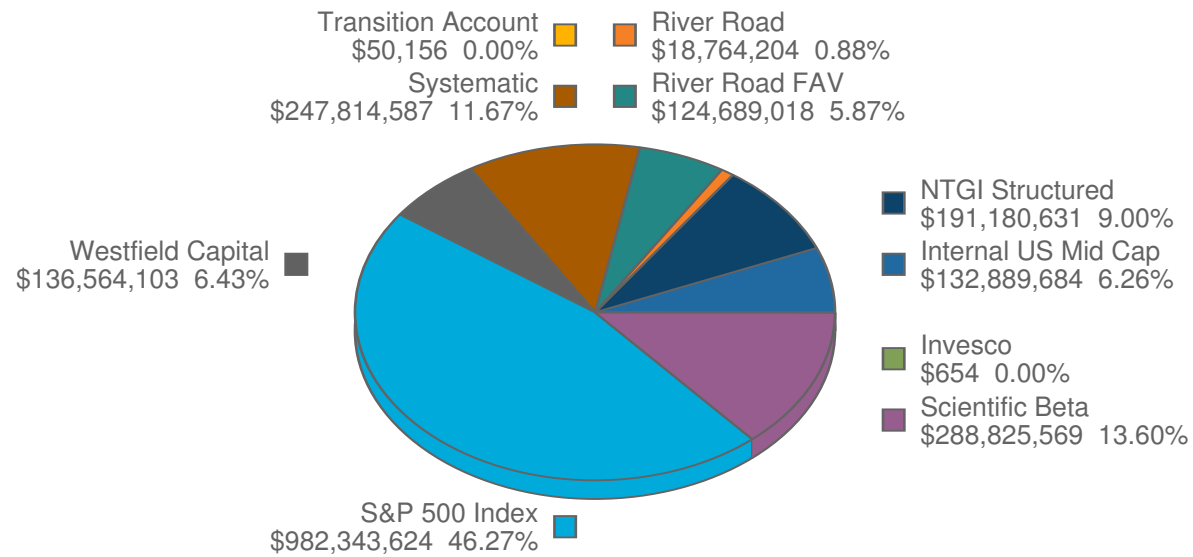
June 30, 2018

	Quarter Start	Quarter End	Percent	Description	
SPRS IPS Benchmark (cont.)			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	
		12/17	6/18	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	6/18	100.00	Assumed Rate 5.25%	



US EQUITY

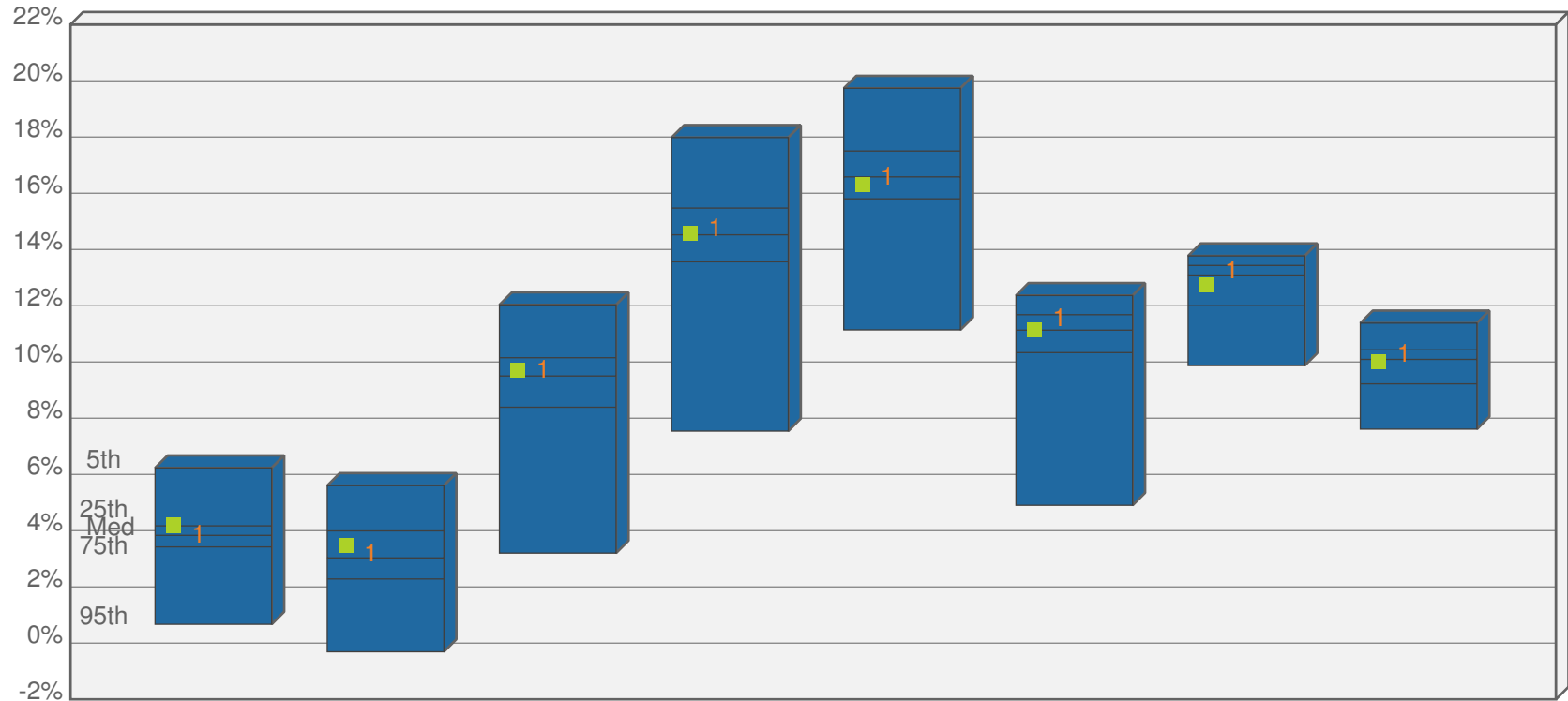
Wilshire Consulting
MANAGER ALLOCATION
 US Equity Composite
As of June 30, 2018



PERFORMANCE COMPARISON

US Equity Composite

Periods Ended June 30, 2018



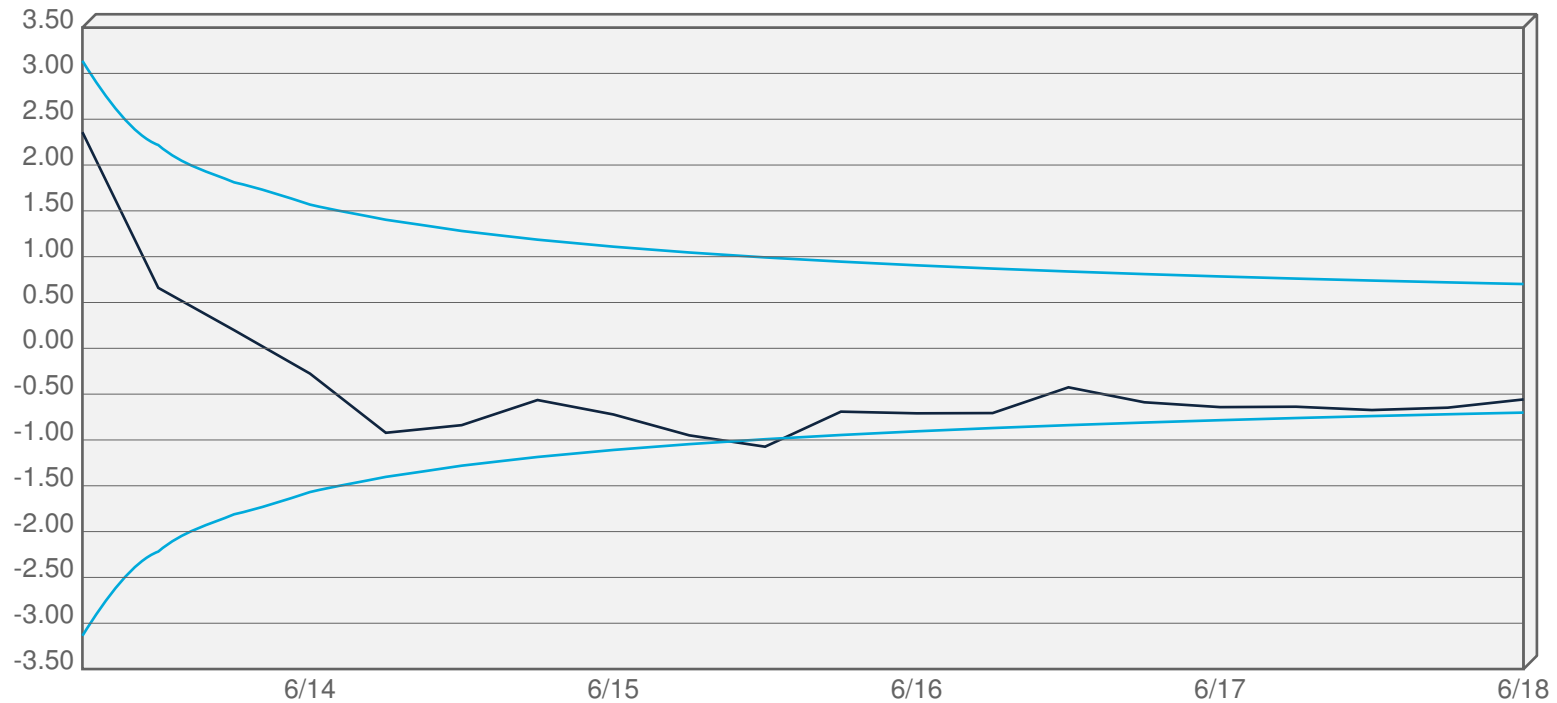
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ US Equity Composite	4.22 (19)	3.53 (32)	9.75 (43)	14.63 (46)	16.36 (57)	11.20 (46)	12.79 (62)	10.06 (53)
┆ Russell 3000	3.89 (44)	3.22 (43)	9.76 (43)	14.78 (42)	16.63 (48)	11.58 (31)	13.29 (38)	10.33 (34)
5th %tile	6.23	5.60	12.03	17.98	19.73	12.36	13.77	11.38
25th %tile	4.17	3.99	10.15	15.47	17.50	11.68	13.43	10.43
Median	3.83	3.03	9.50	14.52	16.58	11.13	13.09	10.09
75th %tile	3.42	2.28	8.39	13.56	15.80	10.33	12.00	9.22
95th %tile	0.67	-0.31	3.20	7.54	11.14	4.90	9.87	7.61
Number of Funds	95	93	90	87	84	78	74	63

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

CUMULATIVE SKILL ANALYSIS

US Equity Composite

Five Years Ending June 30, 2018



— Quarterly NOF Value Added vs. Russell 3000

— 80% Confidence Band

Excess Return:	-0.56	Information Ratio:	-0.58
Excess Risk:	0.95	T-Stat:	-1.31

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	3.71	2.97	9.84	14.76	11.98	13.43	10.41	6/30/01	7.34
Standard & Poor's 500	3.44	2.65	9.47	14.38	11.93	13.42	10.17	6/30/01	6.92
Value Added	0.27	0.32	0.37	0.38	0.05	0.00	0.24	6/30/01	0.42
Scientific Beta									
Net of Fee Return	2.19	2.49	8.77	12.07				6/30/16	13.45
Standard & Poor's 500	3.44	2.65	9.47	14.38				6/30/16	16.12
Value Added	-1.24	-0.16	-0.71	-2.31				6/30/16	-2.67
River Road									
Net of Fee Return								6/30/11	
Russell 3000 Value								6/30/11	
Value Added								6/30/11	
River Road FAV									
Net of Fee Return	4.29	4.42	5.63	9.35				6/30/16	17.45
Russell 3000 Value	1.71	-1.16	3.86	7.25				6/30/16	11.64
Value Added	2.58	5.57	1.77	2.10				6/30/16	5.81
Westfield Capital									
Net of Fee Return	4.48	7.43	12.91	19.23	10.54	13.89		6/30/11	13.02
Russell 3000 Growth	5.87	7.44	15.62	22.47	14.63	16.14		6/30/11	14.69
Value Added	-1.40	-0.01	-2.70	-3.24	-4.09	-2.26		6/30/11	-1.67
Systematic									
Net of Fee Return	3.27	-0.08	8.04	14.33	9.18	10.49		6/30/12	12.56
Russell Mid Cap Value	2.41	-0.16	5.34	7.60	8.80	11.27		6/30/12	13.84
Value Added	0.87	0.08	2.70	6.74	0.38	-0.78		6/30/12	-1.29

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

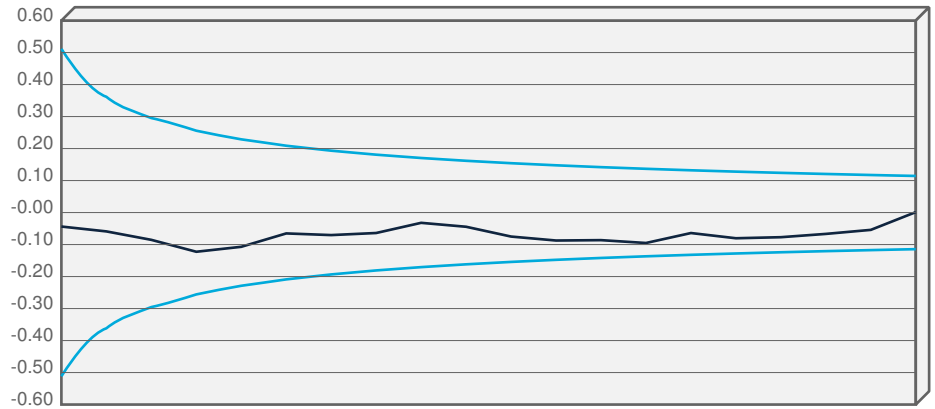
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Internal US Mid Cap									
Net of Fee Return	5.08	4.45	11.12	14.72	11.18			9/30/14	11.84
S&P 400 Mid Cap	4.29	3.49	9.96	13.50	10.89			9/30/14	11.64
Value Added	0.79	0.96	1.16	1.22	0.29			9/30/14	0.20
NTGI Structured									
Net of Fee Return	8.07	8.03	11.62	18.01	11.51	13.32	11.92	9/30/99	10.58
Russell 2000	7.75	7.66	11.26	17.57	10.96	12.46	10.60	9/30/99	8.88
Value Added	0.31	0.36	0.36	0.45	0.55	0.86	1.32	9/30/99	1.69
Transition Account									
Net of Fee Return								6/30/11	
US Equity Composite									
Net of Fee Return	4.19	3.47	9.67	14.52	11.08	12.66	9.97	3/31/84	11.36
Russell 3000	3.89	3.22	9.76	14.78	11.58	13.29	10.33	3/31/84	11.38
Value Added	0.30	0.25	-0.09	-0.25	-0.50	-0.63	-0.36	3/31/84	-0.02

INVESTMENT MANAGER ANALYSIS

S&P 500 Index

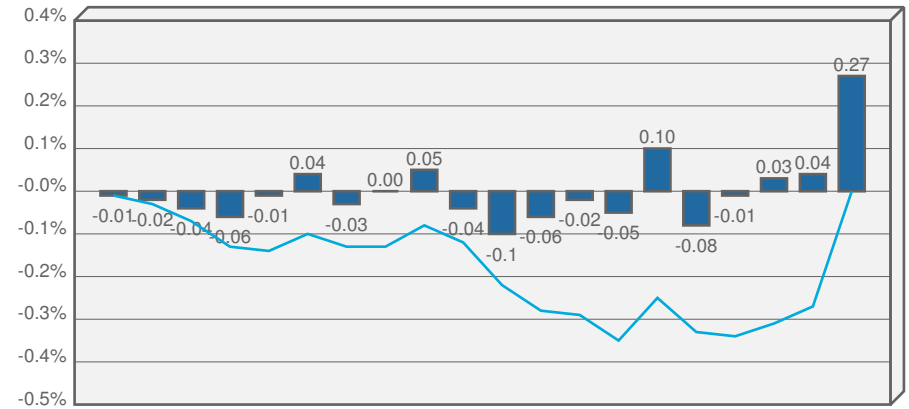
June 30, 2018

Cumulative Skill Analysis vs Benchmark



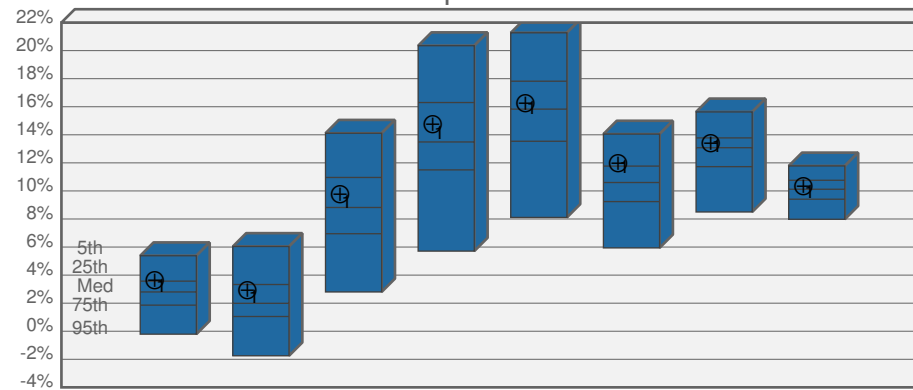
Quarterly NOF Value Added vs. Standard & Poor's 500			80% Confidence Band
Excess Return:	0.00	Information Ratio:	0.01
Excess Risk:	0.16	T-Stat:	0.02

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Standard & Poor's 500			Cumulative Value Added
12/13	-0.01	6/14	-0.06
6/14	-0.02	12/14	0.04
12/14	-0.03	6/15	0.00
6/15	-0.04	12/15	0.05
12/15	-0.06	6/16	-0.10
6/16	-0.05	12/16	-0.08
12/16	-0.01	6/17	0.10
6/17	0.03	12/17	0.04
12/17	0.04	6/18	0.27

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	3.71 (22)	2.97 (32)	9.84 (34)	14.76 (34)	16.28 (43)	11.98 (20)	13.43 (40)	10.41 (38)
⊠ Standard & Poo	3.44 (27)	2.65 (36)	9.47 (39)	14.38 (38)	16.12 (46)	11.93 (21)	13.42 (40)	10.17 (44)
Median	2.80	1.99	8.82	13.49	15.83	10.60	13.08	10.12
Number of Funds	173	172	171	171	169	167	161	134

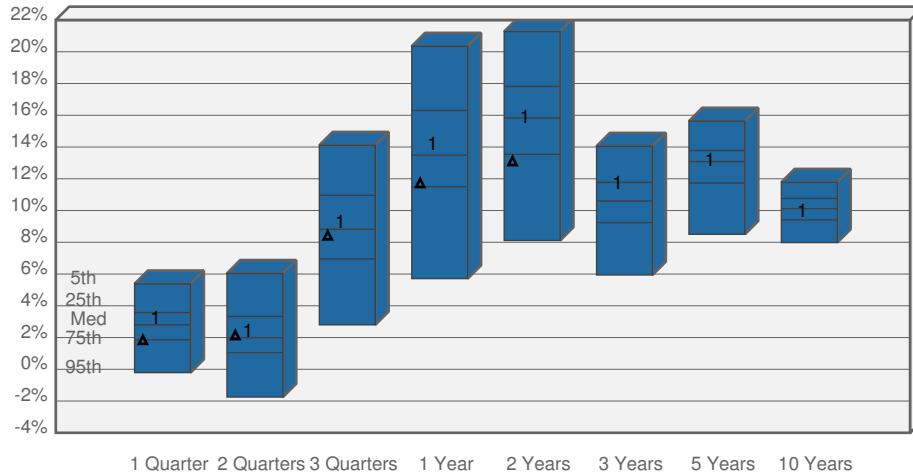
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Scientific Beta

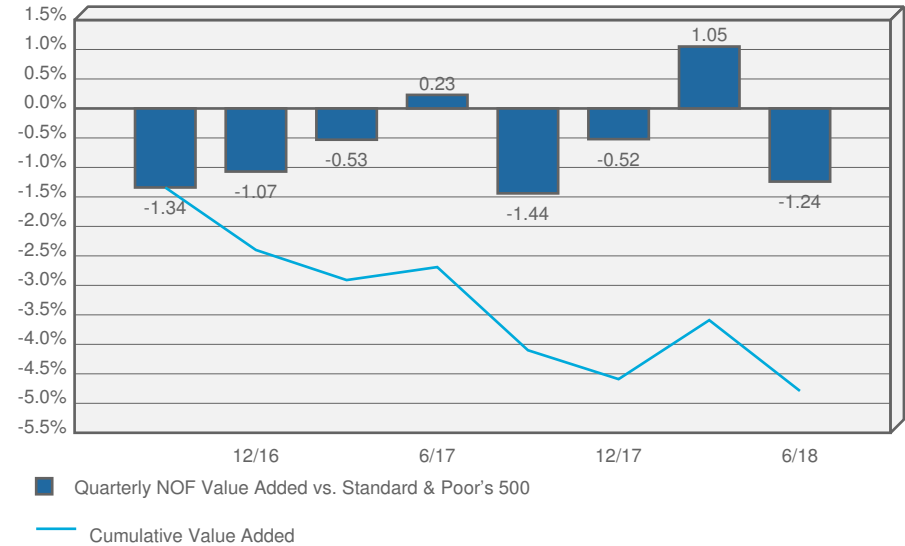
June 30, 2018

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ Scientific Beta	2.19 (65)	2.49 (40)	8.77 (50)	12.07 (67)	13.45 (75)	11.93 (21)	10.60	10.17 (44)
1 Standard & Poo	3.44 (27)	2.65 (36)	9.47 (39)	14.38 (38)	16.12 (46)	13.42 (40)	13.08	10.12
Median	2.80	1.99	8.82	13.49	15.83	10.60	13.08	10.12
Number of Funds	173	172	171	171	169	167	161	134

Value-Added Analysis vs Benchmark



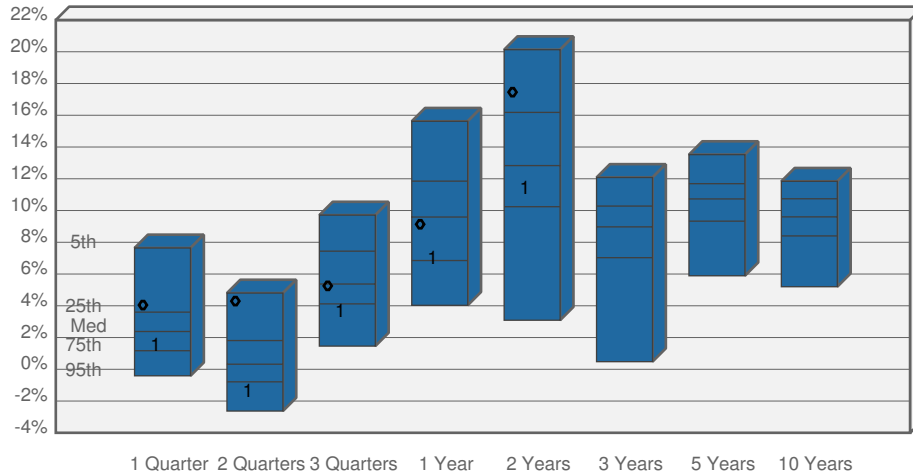
*Compass Total Returns of Active Large Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

River Road FAV

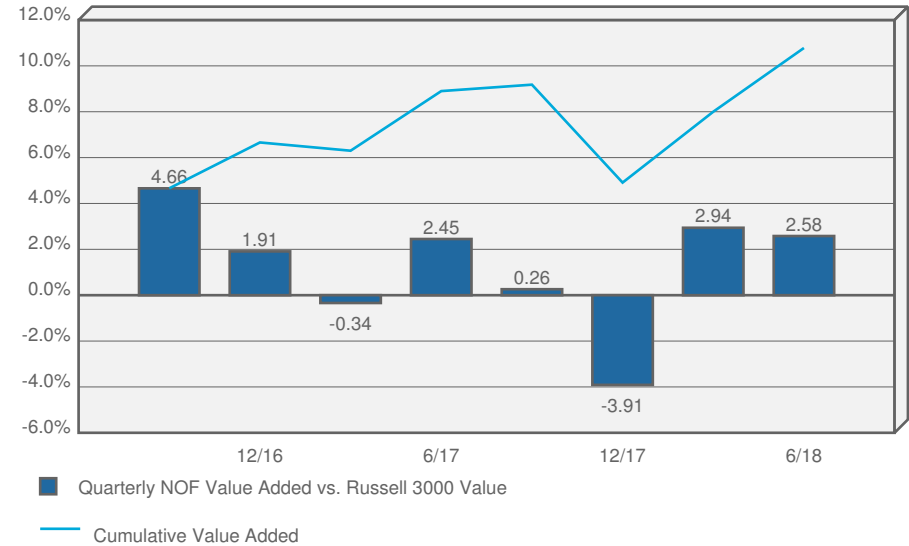
June 30, 2018

Performance Comparison vs Peer Universe*



○ River Road FAV	4.38 (15)	4.63 (5)	5.59 (48)	9.47 (53)	17.79 (11)			
1 Russell 3000 V	1.71 (64)	-1.16 (79)	3.86 (77)	7.25 (72)	11.64 (58)			
Median	2.38	0.32	5.37	9.59	12.83	8.97	10.73	9.60
Number of Funds	84	84	84	84	84	83	77	62

Value-Added Analysis vs Benchmark



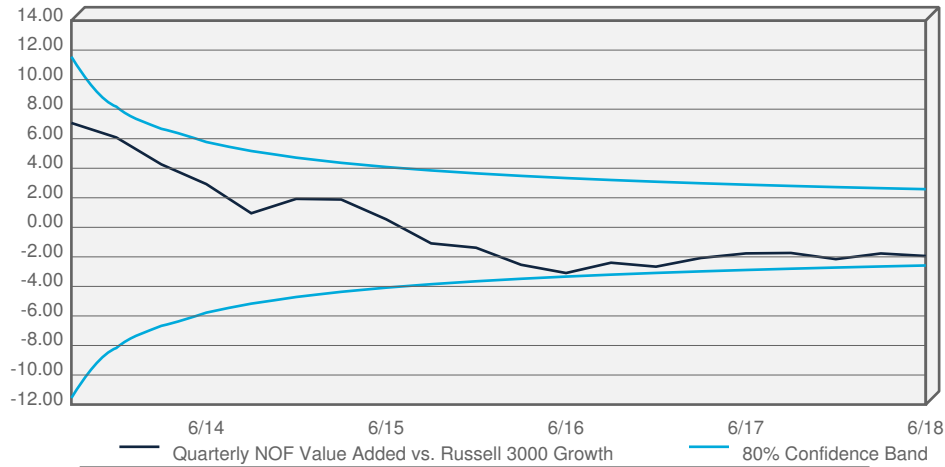
*Compass Total Returns of Active Combination Value Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Westfield Capital

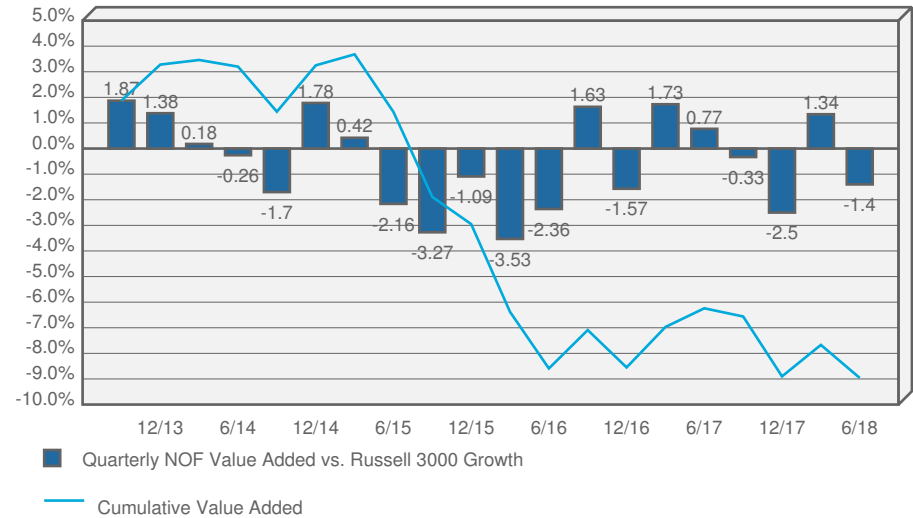
June 30, 2018

Cumulative Skill Analysis vs Benchmark

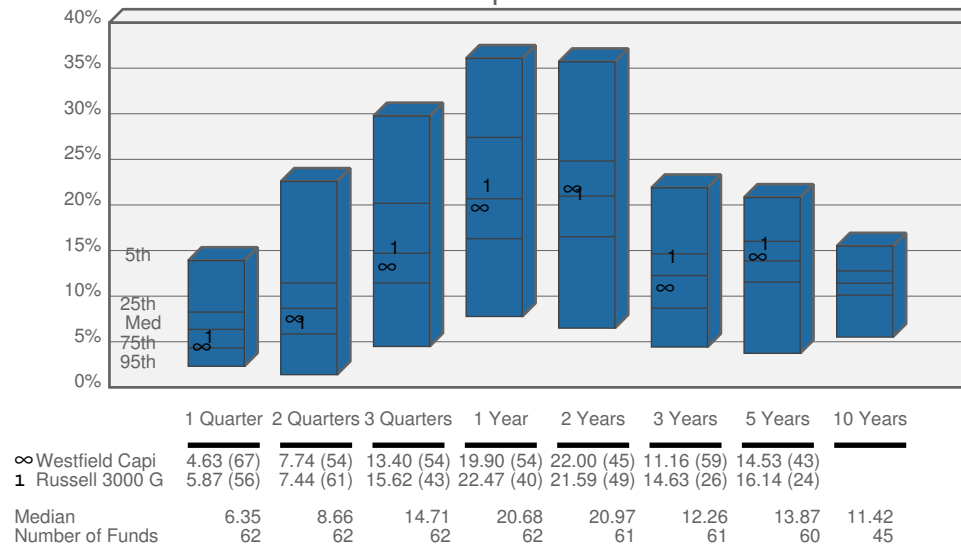


Excess Return:	-1.94	Information Ratio:	-0.55
Excess Risk:	3.51	T-Stat:	-1.24

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



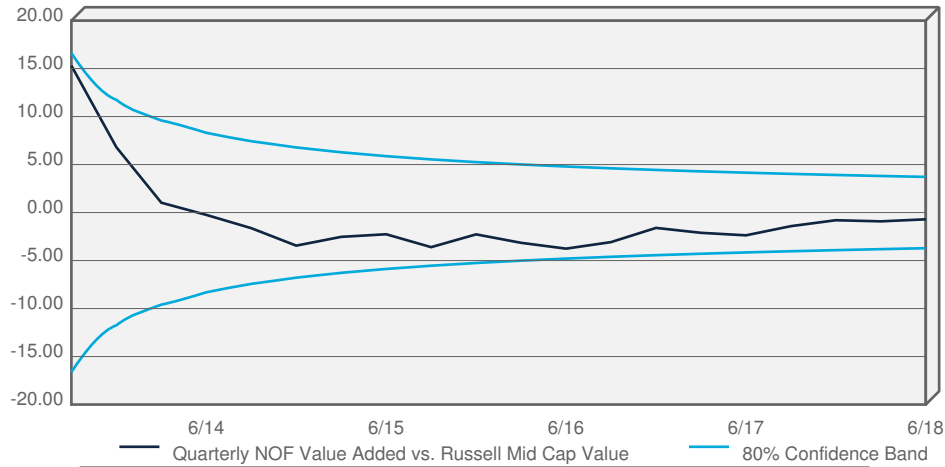
*Compass Total Returns of Active Combination Growth Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Systematic

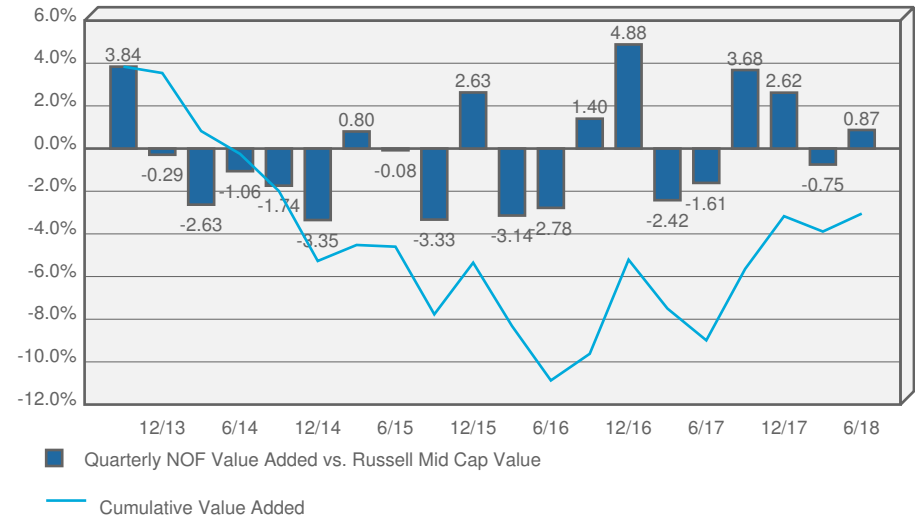
June 30, 2018

Cumulative Skill Analysis vs Benchmark

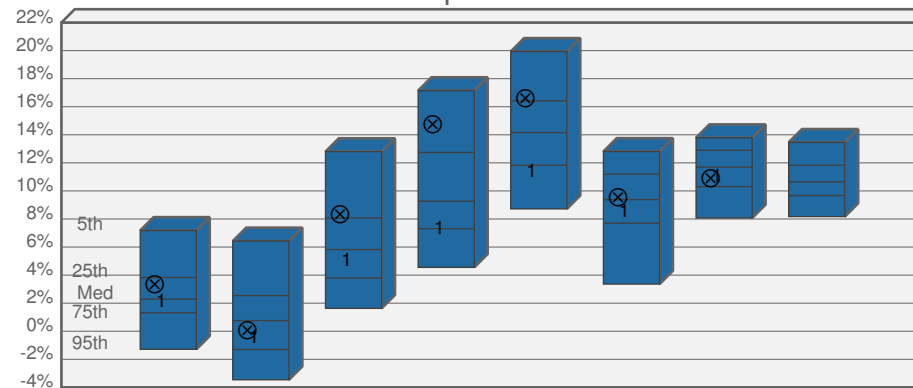


Excess Return:	-0.70	Information Ratio:	-0.14
Excess Risk:	5.05	T-Stat:	-0.31

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	3.38 (27)	0.13 (57)	8.36 (22)	14.78 (12)	16.64 (22)	9.59 (47)	10.91 (67)	
1 Russell Mid Ca	2.41 (43)	-0.16 (62)	5.34 (54)	7.60 (72)	11.68 (75)	8.80 (60)	11.27 (61)	
Median	2.29	0.76	5.82	9.27	14.16	9.38	11.70	10.65
Number of Funds	87	87	87	87	87	87	86	77

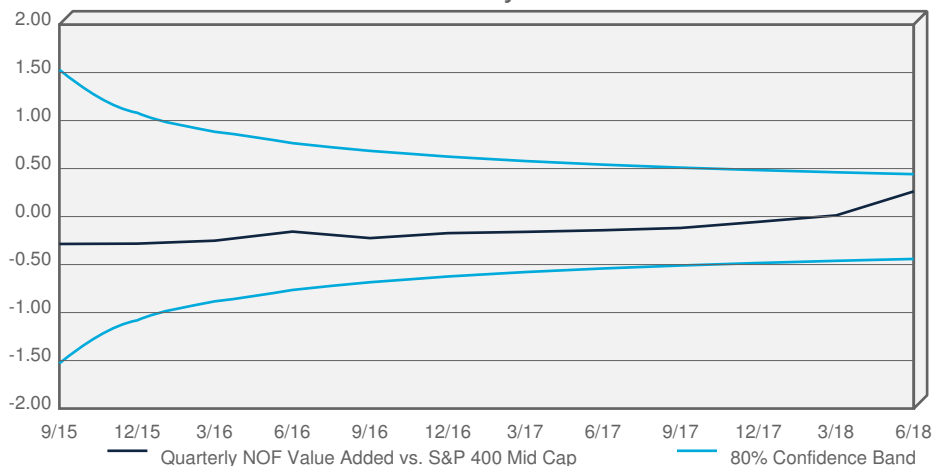
*Compass Total Returns of Active Midcap Value Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Internal US Mid Cap

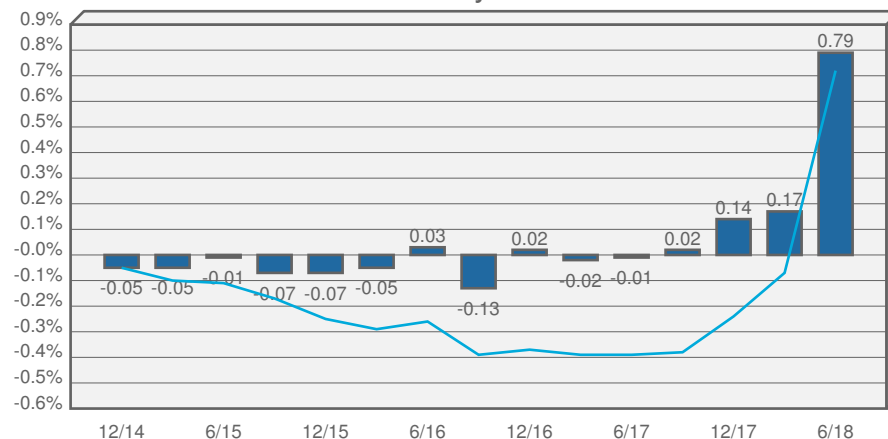
June 30, 2018

Cumulative Skill Analysis vs Benchmark



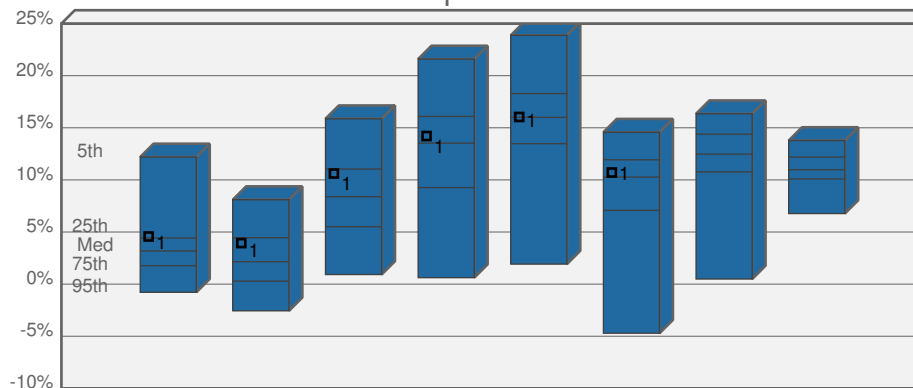
Excess Return:	0.26	Information Ratio:	0.56
Excess Risk:	0.46	T-Stat:	0.98

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. S&P 400 Mid Cap
— 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 US Mi	5.08 (18)	4.45 (26)	11.12 (24)	14.72 (34)	16.55 (41)	11.22 (33)		
■ S&P 400 Mid Ca	4.29 (28)	3.49 (39)	9.96 (34)	13.50 (51)	16.01 (49)	10.89 (43)		
Median	3.18	2.15	8.39	13.53	16.00	10.27	12.47	10.97
Number of Funds	60	60	60	60	60	60	58	48

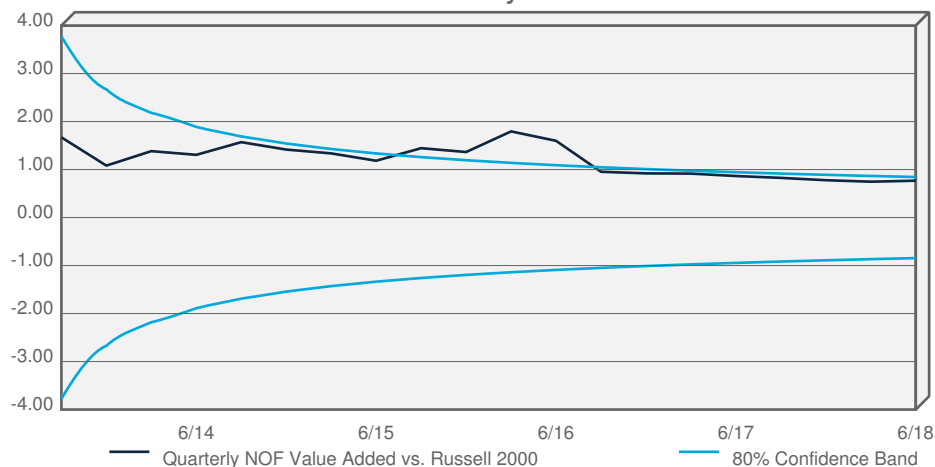
*Compass Total Returns of Active Midcap Core Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

NTGI Structured

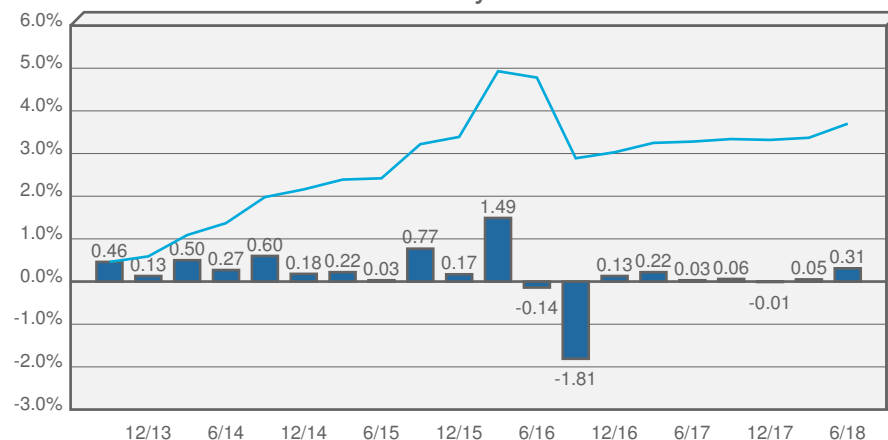
June 30, 2018

Cumulative Skill Analysis vs Benchmark



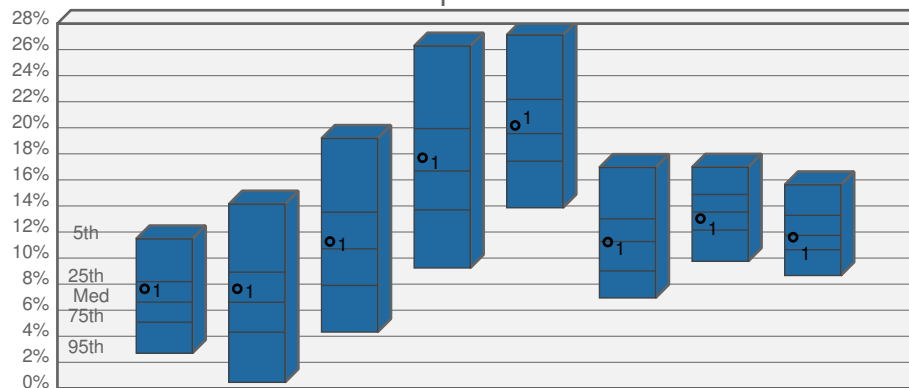
Excess Return:	0.77	Information Ratio:	0.67
Excess Risk:	1.15	T-Stat:	1.50

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	8.05 (28)	8.05 (34)	11.68 (41)	18.11 (39)	20.59 (40)	11.64 (43)	13.44 (51)	12.01 (45)
■ Russell 2000	7.75 (32)	7.66 (36)	11.26 (46)	17.57 (41)	21.03 (36)	10.96 (57)	12.46 (69)	10.60 (75)
Median	6.62	6.61	10.71	16.68	19.55	11.27	13.53	11.74
Number of Funds	132	132	132	131	130	128	125	106

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

CUSTOM BENCHMARK SPECIFICATION

US Equity Composite

June 30, 2018

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

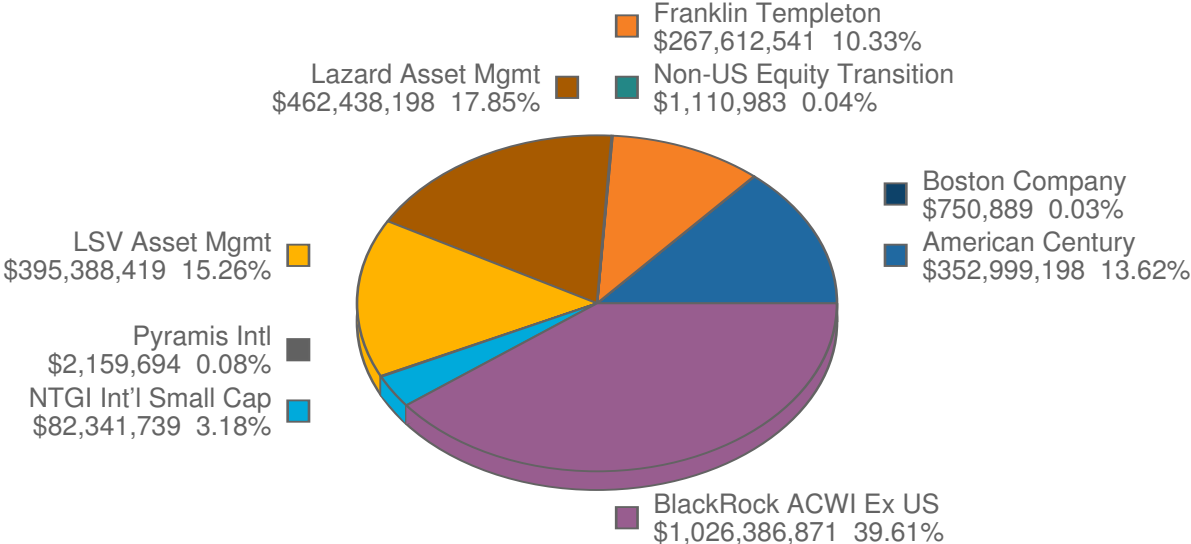


NON-US EQUITY

MANAGER ALLOCATION

Non-US Equity Composite

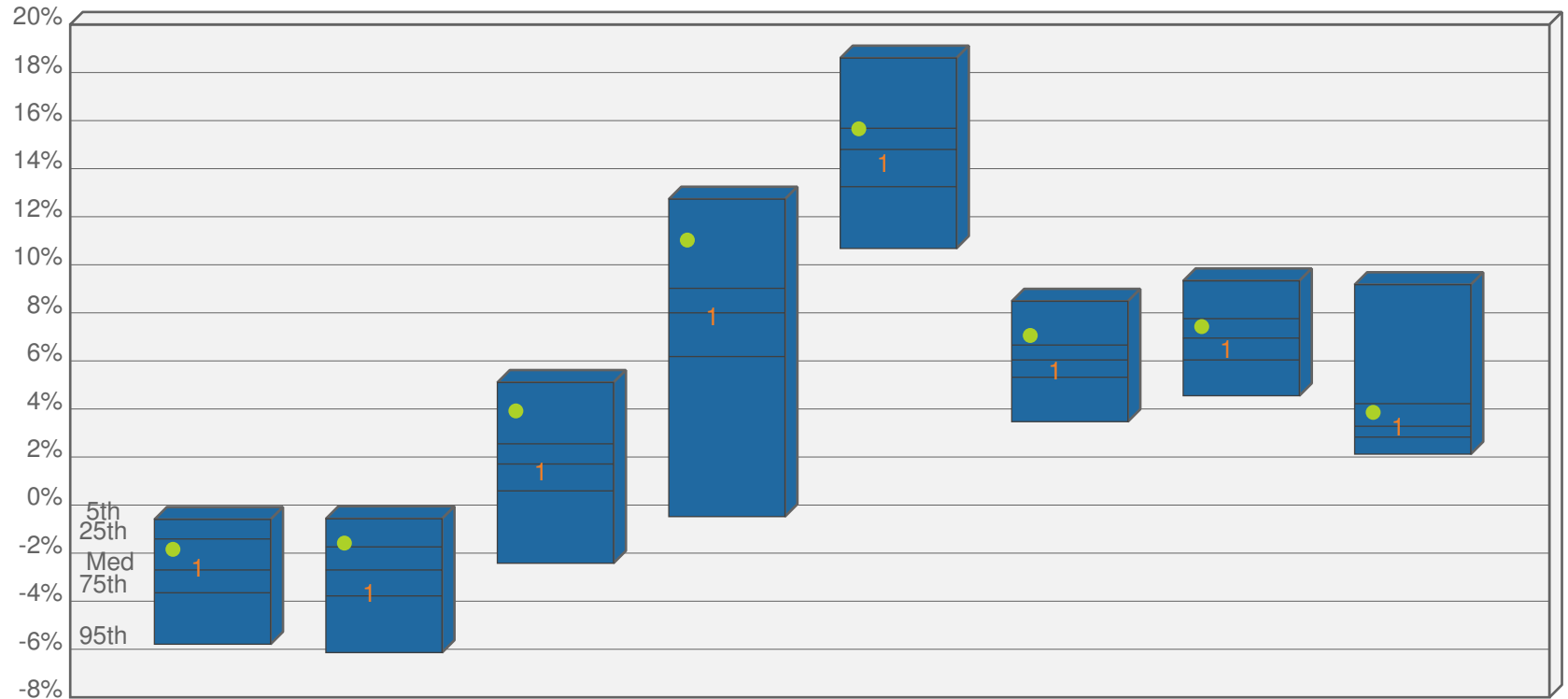
As of June 30, 2018



PERFORMANCE COMPARISON

Non-US Equity Composite

Periods Ended June 30, 2018

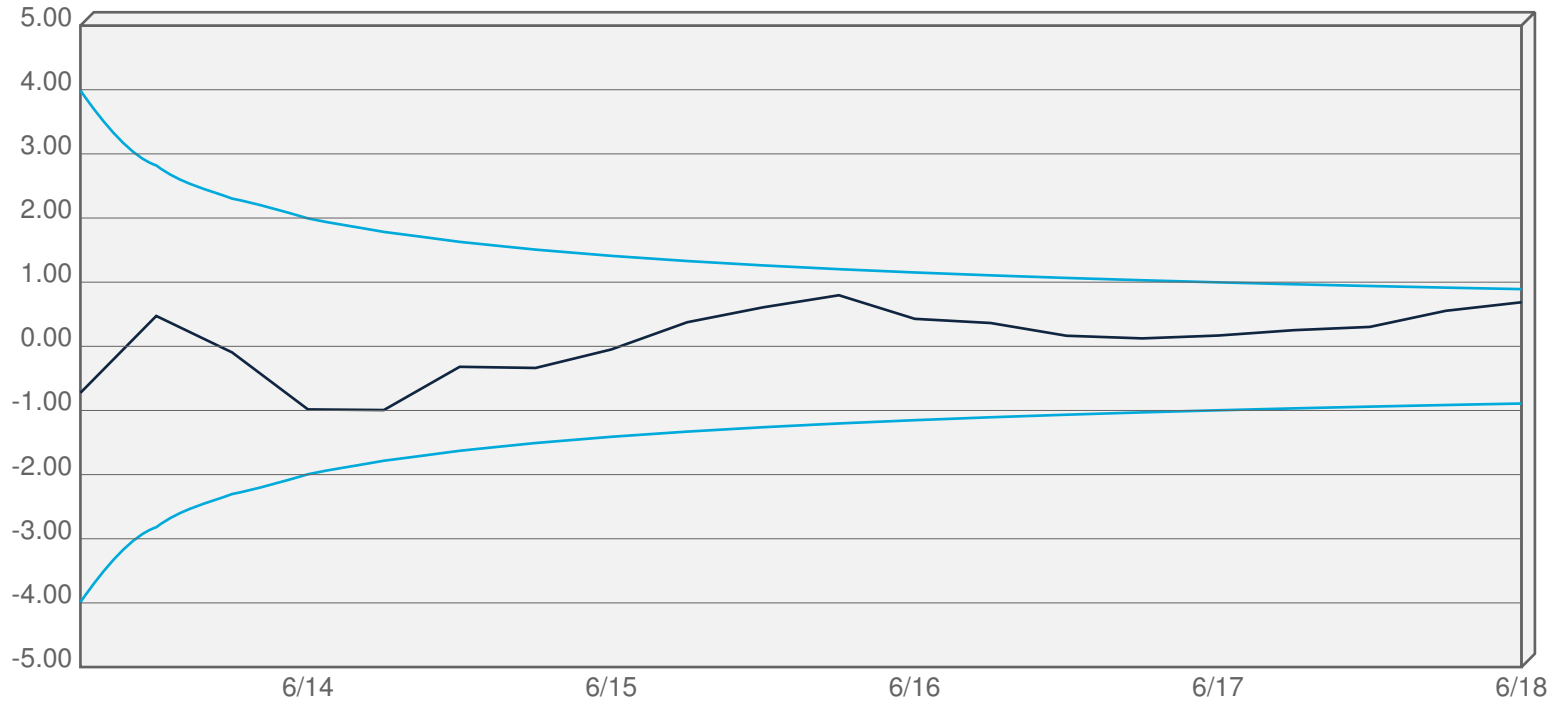


	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
● Non-US Equity Composite	-1.79 (34)	-1.53 (20)	3.97 (13)	11.08 (10)	15.71 (23)	7.11 (14)	7.48 (26)	3.91 (30)
┆ Policy Index	-2.61 (48)	-3.65 (71)	1.39 (61)	7.83 (55)	14.21 (56)	5.60 (66)	6.50 (66)	3.26 (52)
5th %tile	-0.60	-0.57	5.10	12.73	18.60	8.48	9.33	9.17
25th %tile	-1.41	-1.74	2.55	9.02	15.68	6.66	7.76	4.22
Median	-2.70	-2.70	1.71	8.00	14.80	6.04	6.95	3.28
75th %tile	-3.65	-3.78	0.59	6.18	13.25	5.32	6.04	2.83
95th %tile	-5.79	-6.14	-2.42	-0.48	10.68	3.47	4.55	2.12
Number of Funds	66	64	63	62	61	60	56	41

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

CUMULATIVE SKILL ANALYSIS

Non-US Equity Composite
 Five Years Ending June 30, 2018



— Quarterly NOF Value Added vs. Policy Index

— 80% Confidence Band

Excess Return:	0.69	Information Ratio:	0.57
Excess Risk:	1.21	T-Stat:	1.27

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	-2.30	-3.56	1.29	7.57	5.40	6.24		6/30/09	7.38
MSCI ACWI X US (N)	-2.61	-3.77	1.05	7.28	5.07	5.99		6/30/09	7.14
Value Added	0.31	0.20	0.25	0.30	0.33	0.24		6/30/09	0.23
American Century									
Net of Fee Return	0.84	3.97	9.51	21.37	8.78			6/30/14	5.70
Policy Index	-2.61	-3.65	1.39	7.73	5.54			6/30/14	2.84
Value Added	3.45	7.62	8.13	13.64	3.24			6/30/14	2.86
Franklin Templeton									
Net of Fee Return	3.94	6.30	12.53	24.13	12.44			6/30/14	8.67
Policy Index	-2.61	-3.65	1.39	7.73	5.54			6/30/14	2.84
Value Added	6.56	9.95	11.14	16.40	6.90			6/30/14	5.82
Lazard Asset Mgmt									
Net of Fee Return	-3.54	-1.98	4.51	10.36	5.47			6/30/14	4.04
Policy Index	-2.61	-3.65	1.39	7.73	5.54			6/30/14	2.84
Value Added	-0.93	1.67	3.12	2.63	-0.07			6/30/14	1.20
LSV Asset Mgmt									
Net of Fee Return	-4.47	-5.54	-0.38	4.02	4.45			6/30/14	2.42
Policy Index	-2.61	-3.65	1.39	7.73	5.54			6/30/14	2.84
Value Added	-1.86	-1.89	-1.77	-3.70	-1.09			6/30/14	-0.42
NTGI Int'l Small Cap									
Net of Fee Return	-2.68	-2.40	3.79	10.98	8.16	9.21		12/31/08	12.36
MSCI ACWI X US Small Cap (N)	-2.60	-2.94	3.43	10.57	7.94	8.98		12/31/08	12.58
Value Added	-0.08	0.54	0.36	0.42	0.22	0.24		12/31/08	-0.22

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

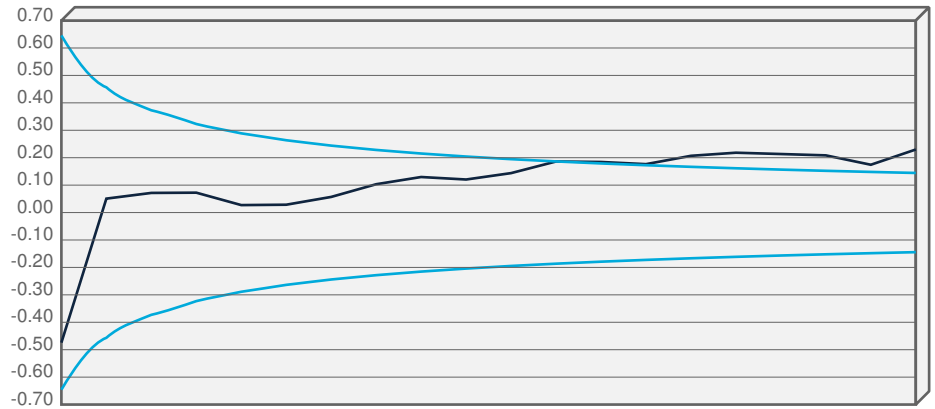
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Non-US Equity Transition Net of Fee Return								6/30/14	
Non-US Equity Composite Net of Fee Return	-1.83	-1.64	3.80	10.84	6.85	7.23	3.96	6/30/00	3.42
Policy Index	-2.61	-3.65	1.39	7.83	5.60	6.50	3.26	6/30/00	3.54
Value Added	0.78	2.01	2.41	3.01	1.25	0.73	0.69	6/30/00	-0.12

INVESTMENT MANAGER ANALYSIS

BlackRock ACWI Ex US

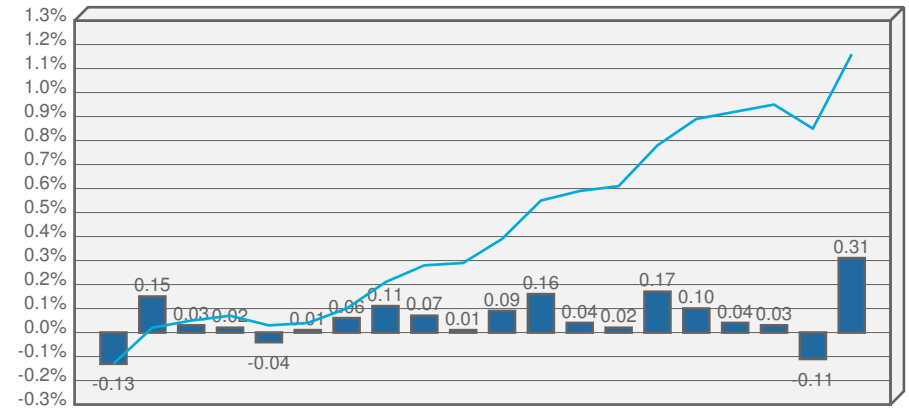
June 30, 2018

Cumulative Skill Analysis vs Benchmark



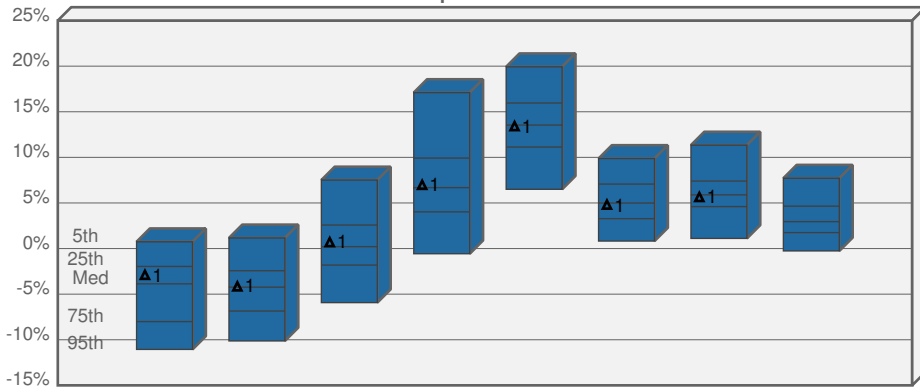
Excess Return:	0.23	Information Ratio:	1.17
Excess Risk:	0.20	T-Stat:	2.62

Value-Added Analysis vs Benchmark



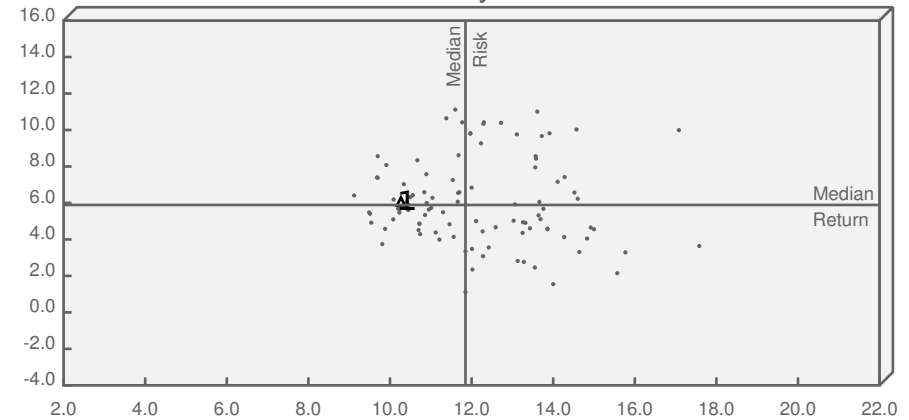
Quarterly NOF Value Added vs. MSCI ACWI X US (N)	-0.13	0.15	0.03	0.02	-0.04	0.01	0.06	0.11	0.07	0.01	0.09	0.16	0.04	0.02	0.17	0.10	0.04	0.03	-0.11	0.31	
Cumulative Value Added																					

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ BlackRock ACWI	-2.30 (29)	-3.56 (42)	1.29 (37)	7.57 (41)	14.01 (45)	5.40 (44)	6.24 (43)	
■ MSCI ACWI X US	-2.61 (34)	-3.77 (45)	1.05 (39)	7.28 (44)	13.67 (48)	5.07 (48)	5.99 (48)	
Median	-3.87	-4.23	0.21	6.68	13.54	4.99	5.89	2.95
Number of Funds	2545	2507	2424	2384	2183	1950	1542	897

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
BlackRock ACWI Ex US	▲	6.24	43	10.53	77
MSCI ACWI X US (N)	■	5.99	48	10.55	77
Median		5.89		11.85	

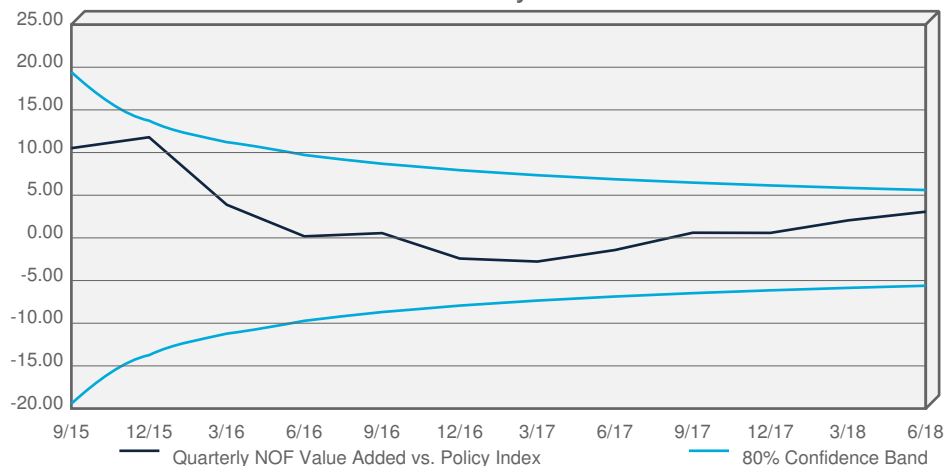
*Lipper Total Returns of International Equity Mutual Funds Universe - Net of Fees

INVESTMENT MANAGER ANALYSIS

American Century

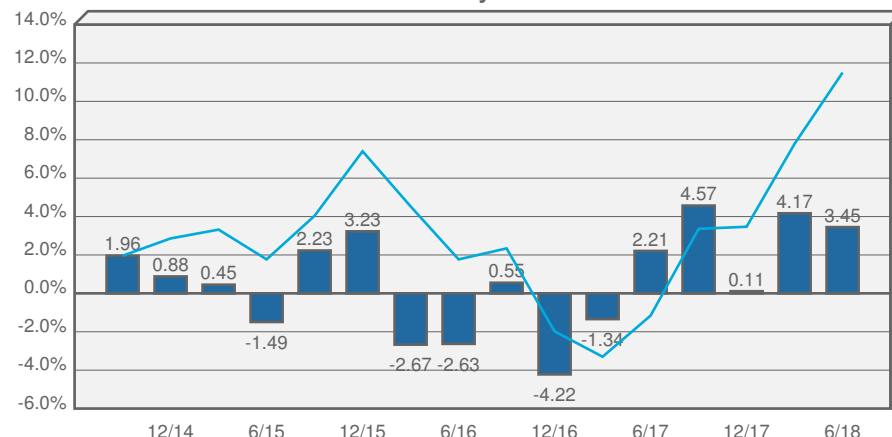
June 30, 2018

Cumulative Skill Analysis vs Benchmark



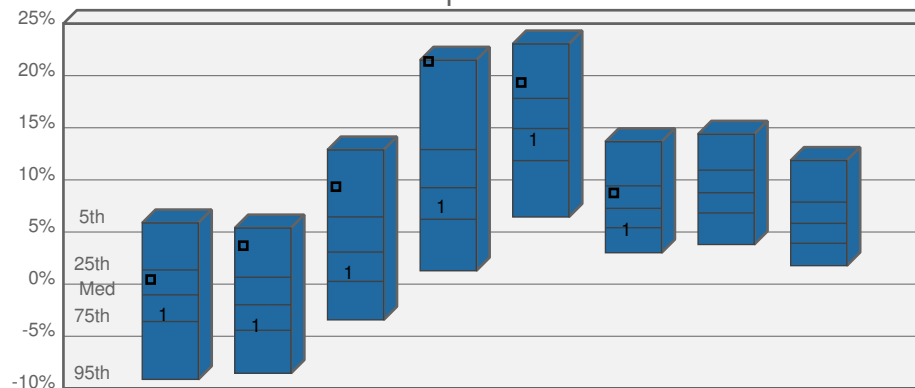
Excess Return:	3.07	Information Ratio:	0.52
Excess Risk:	5.91	T-Stat:	0.90

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	0.95 (28)	4.20 (7)	9.86 (9)	21.88 (4)	19.86 (13)	9.26 (26)		
1 Policy Index	-2.61 (67)	-3.65 (68)	1.39 (65)	7.73 (62)	14.17 (56)	5.54 (73)		
Median	-1.03	-1.98	3.08	9.25	14.93	7.27	8.77	5.83
Number of Funds	1664	1657	1654	1640	1610	1545	1385	919

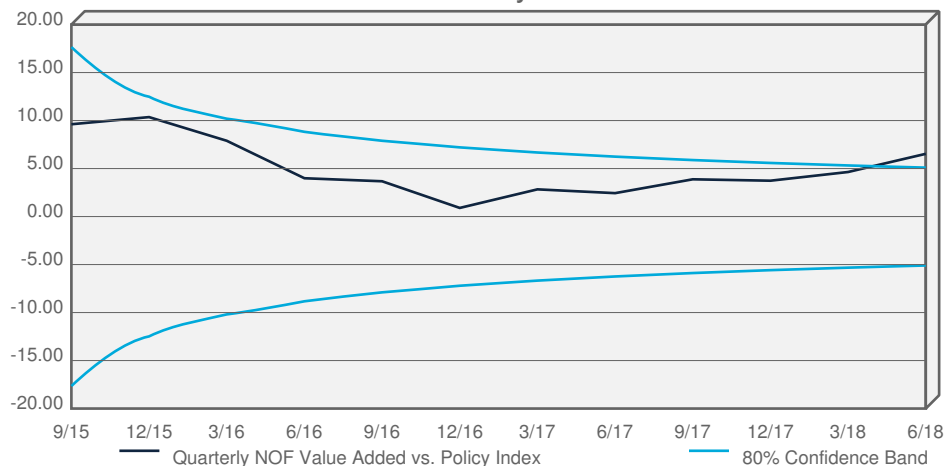
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Franklin Templeton

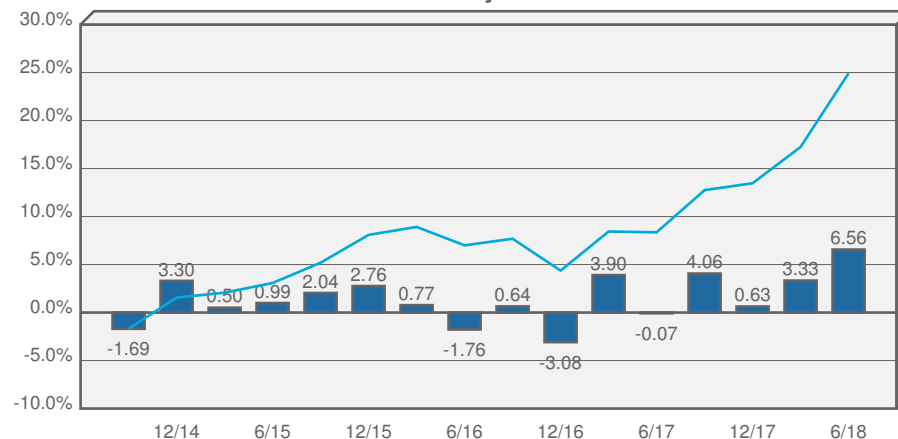
June 30, 2018

Cumulative Skill Analysis vs Benchmark



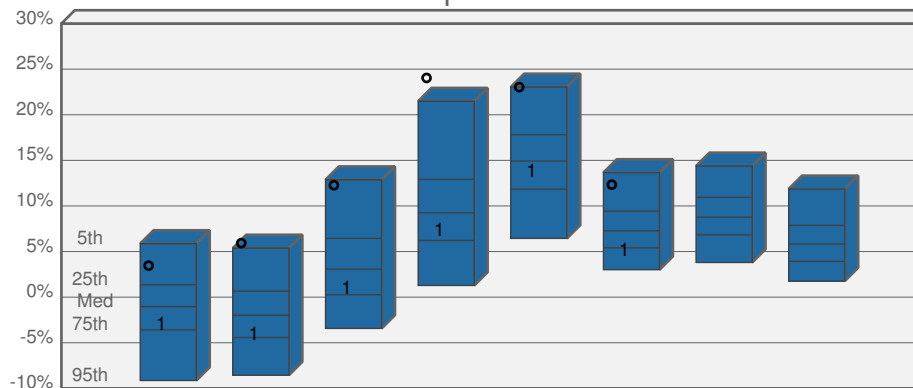
Excess Return:	6.54	Information Ratio:	1.22
Excess Risk:	5.37	T-Stat:	2.11

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
○ Franklin Templ	4.04 (10)	6.51 (3)	12.86 (5)	24.62 (2)	23.61 (4)	12.92 (6)		
1 Policy Index	-2.61 (67)	-3.65 (68)	1.39 (65)	7.73 (62)	14.17 (56)	5.54 (73)		
Median	-1.03	-1.98	3.08	9.25	14.93	7.27	8.77	5.83
Number of Funds	1664	1657	1654	1640	1610	1545	1385	919

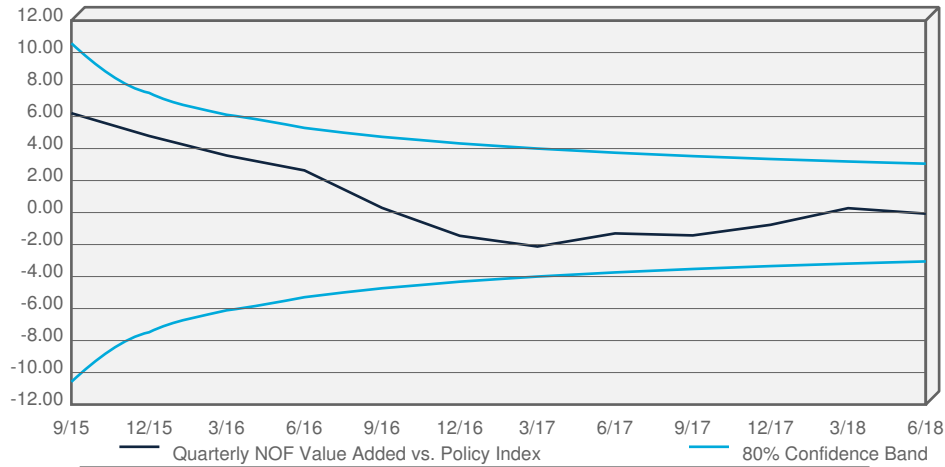
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Lazard Asset Mgmt

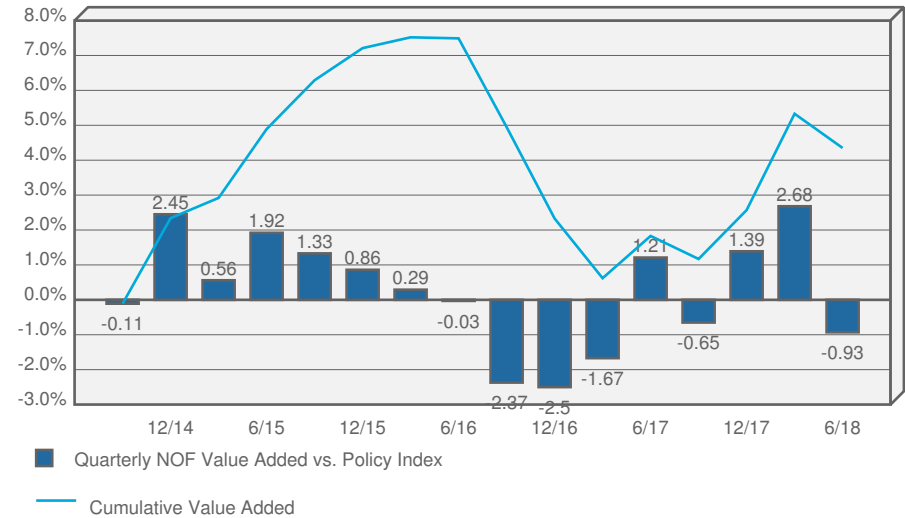
June 30, 2018

Cumulative Skill Analysis vs Benchmark

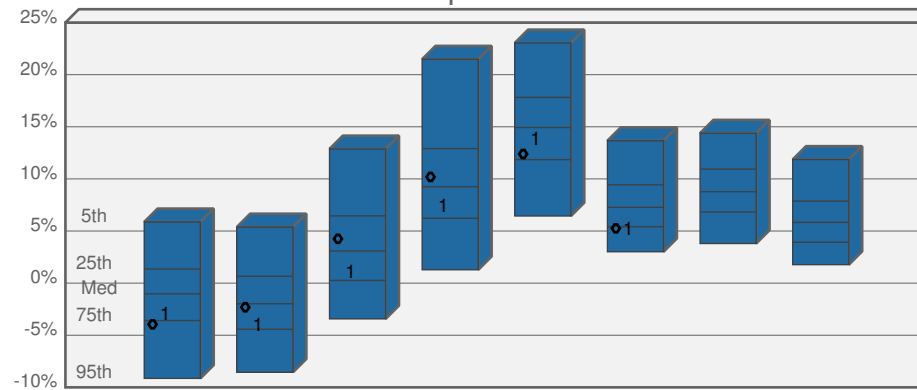


Excess Return:	-0.07	Information Ratio:	-0.02
Excess Risk:	3.22	T-Stat:	-0.04

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 Mgmt	-3.44 (73)	-1.80 (48)	4.76 (37)	10.70 (39)	12.90 (67)	5.77 (70)		
■ Policy Index	-2.61 (67)	-3.65 (68)	1.39 (65)	7.73 (62)	14.17 (56)	5.54 (73)		
Median	-1.03	-1.98	3.08	9.25	14.93	7.27	8.77	5.83
Number of Funds	1664	1657	1654	1640	1610	1545	1385	919

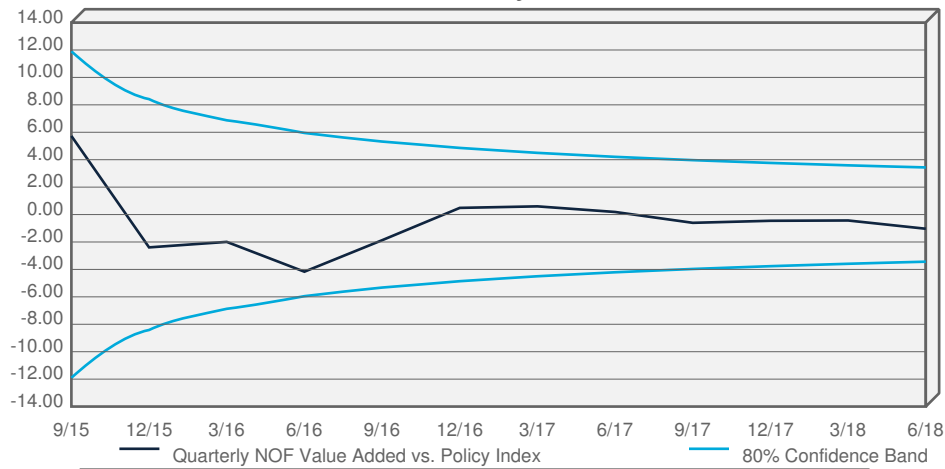
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

LSV Asset Mgmt

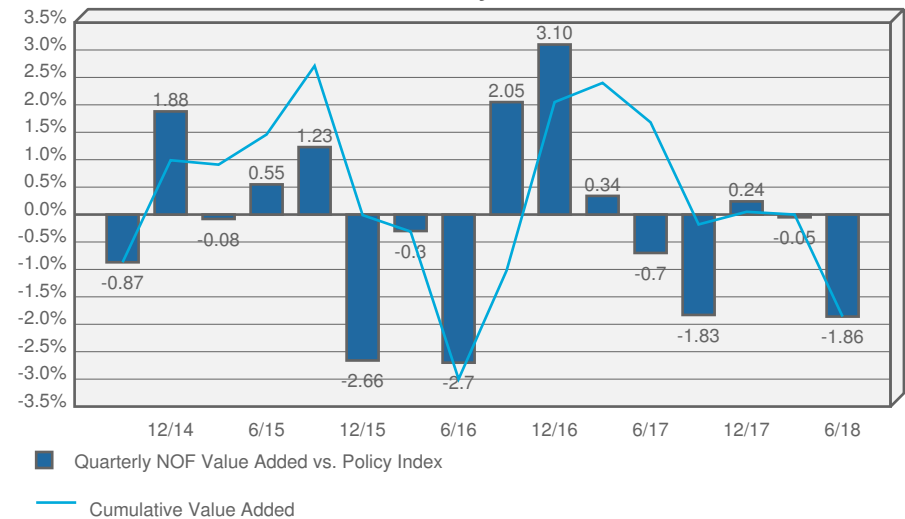
June 30, 2018

Cumulative Skill Analysis vs Benchmark

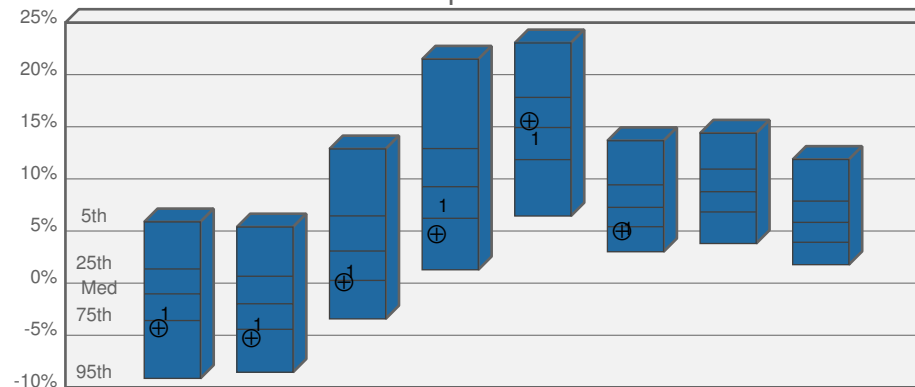


Excess Return:	-1.03	Information Ratio:	-0.29
Excess Risk:	3.62	T-Stat:	-0.50

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
⊕ LSV Asset Mgmt	-4.30 (78)	-5.21 (80)	0.11 (76)	4.71 (83)	15.54 (44)	5.06 (80)		
⊖ Policy Index	-2.61 (67)	-3.65 (68)	1.39 (65)	7.73 (62)	14.17 (56)	5.54 (73)		
Median	-1.03	-1.98	3.08	9.25	14.93	7.27	8.77	5.83
Number of Funds	1664	1657	1654	1640	1610	1545	1385	919

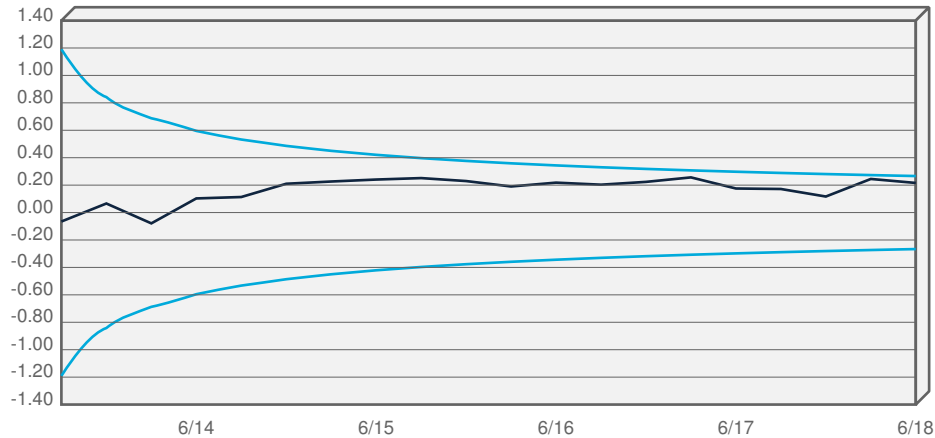
*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

NTGI Int'l Small Cap

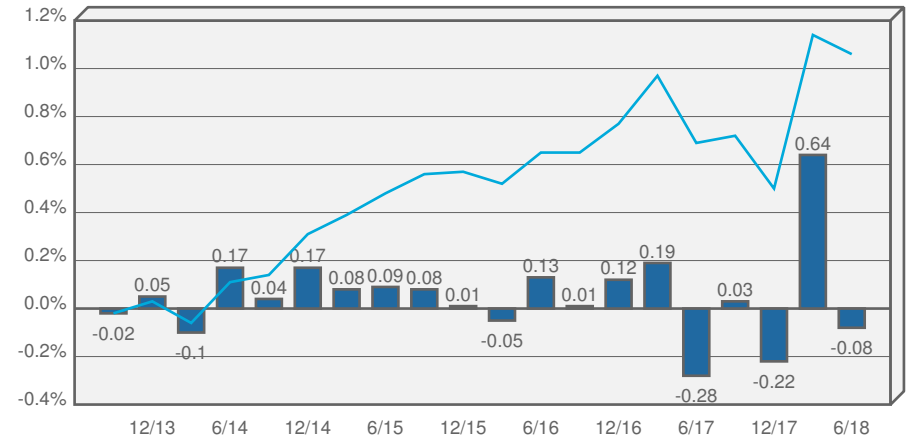
June 30, 2018

Cumulative Skill Analysis vs Benchmark



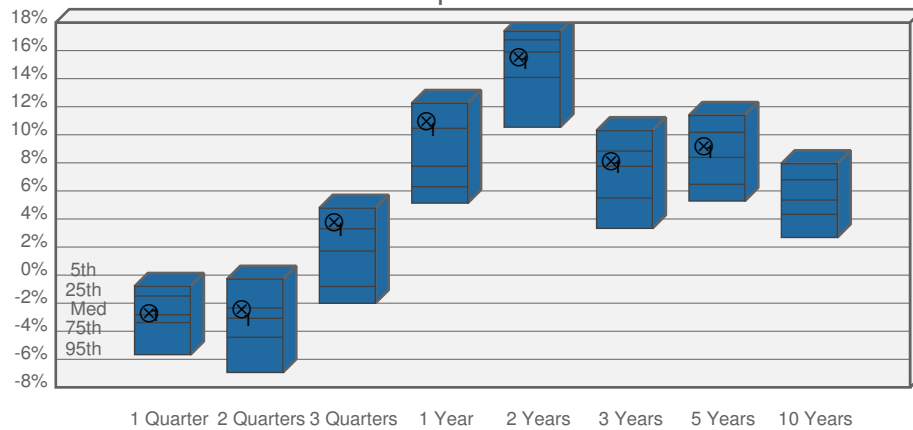
Excess Return:	0.22	Information Ratio:	0.60
Excess Risk:	0.36	T-Stat:	1.33

Value-Added Analysis vs Benchmark



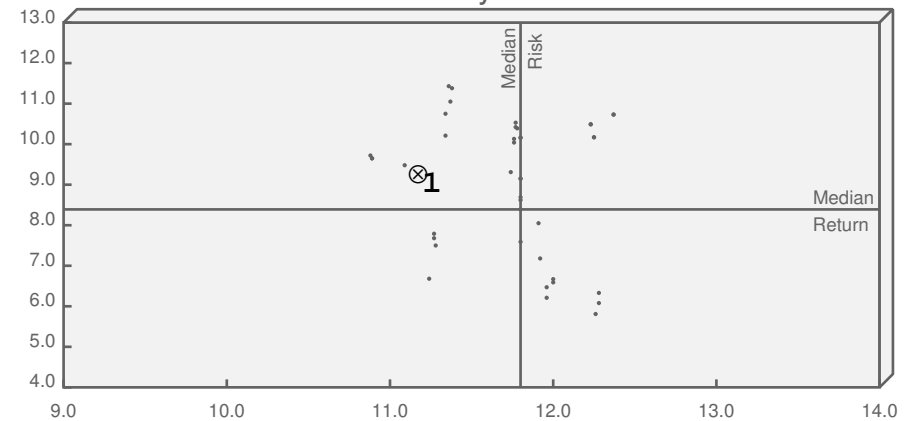
■ Quarterly NOF Value Added vs. MSCI ACWI X US Small Cap (N)
 — Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ NTGI Int'l Sma	-2.68 (42)	-2.40 (25)	3.79 (15)	10.98 (23)	15.58 (57)	8.16 (36)	9.21 (40)	
1 MSCI ACWI X US-2.60 (42)	-2.60 (42)	-2.94 (45)	3.43 (20)	10.57 (23)	15.34 (63)	7.94 (42)	8.98 (43)	
Median	-2.82	-3.08	1.72	7.76	15.90	7.75	8.39	5.35
Number of Funds	63	63	62	61	55	52	43	27

Five Year Risk/Return Analysis vs Peer Universe*



Description	Legend	Net Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
NTGI Int'l Small Cap	⊗	9.21	40	11.20	87
MSCI ACWI X US Small Cap (N)	1	8.98	43	11.29	77
Median		8.39		11.80	

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

CUSTOM BENCHMARK SPECIFICATION

Non-US Equity Composite

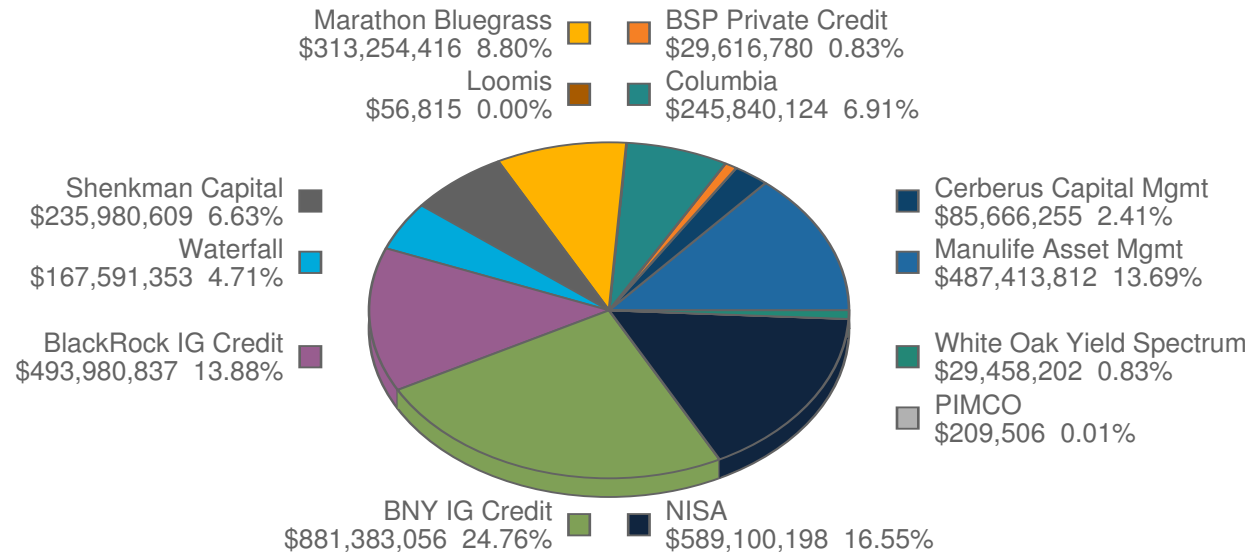
June 30, 2018

	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	6/18	100.00	MSCI ACWI Ex USA IMI (\$N)



FIXED INCOME

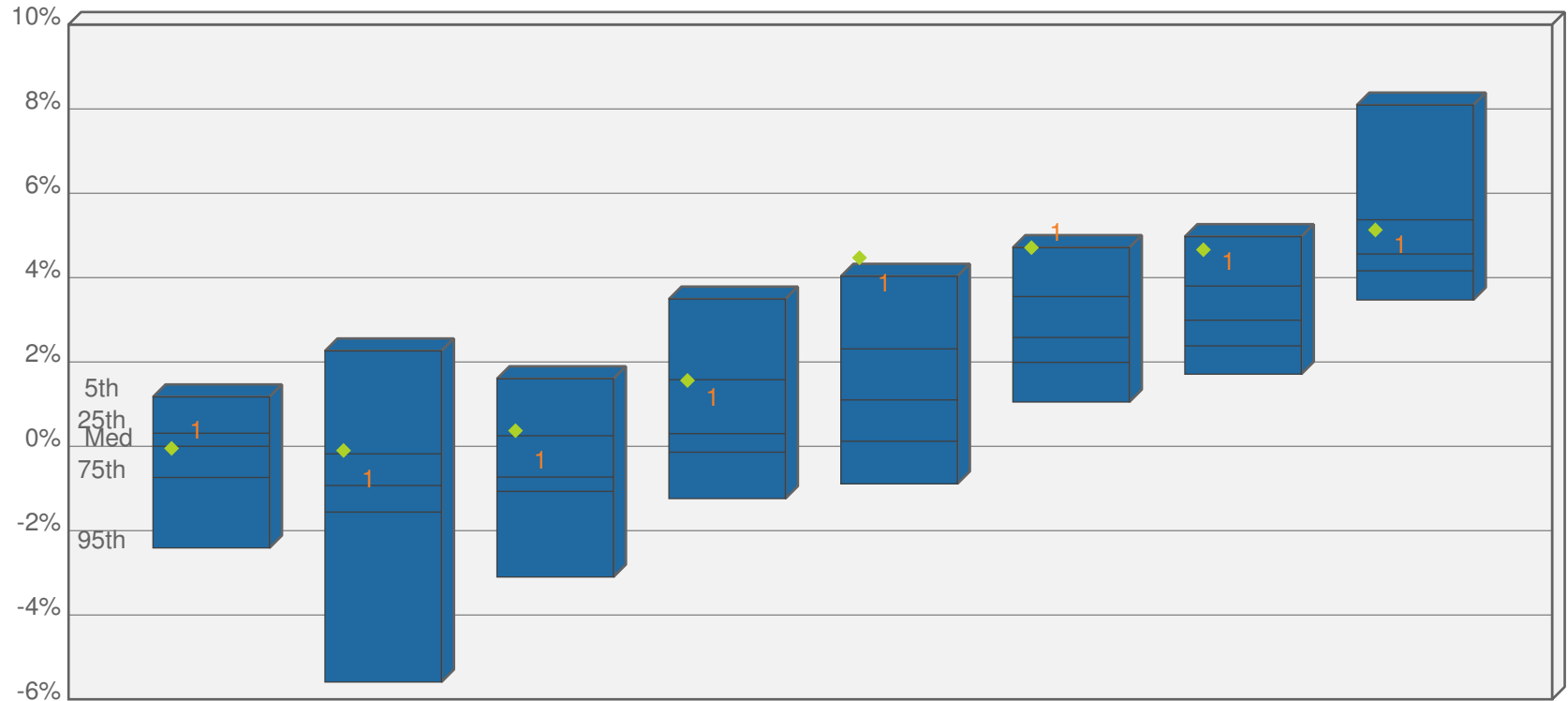
Wilshire Consulting
MANAGER ALLOCATION
 Fixed Income Composite
As of June 30, 2018



PERFORMANCE COMPARISON

Fixed Income Composite

Periods Ended June 30, 2018

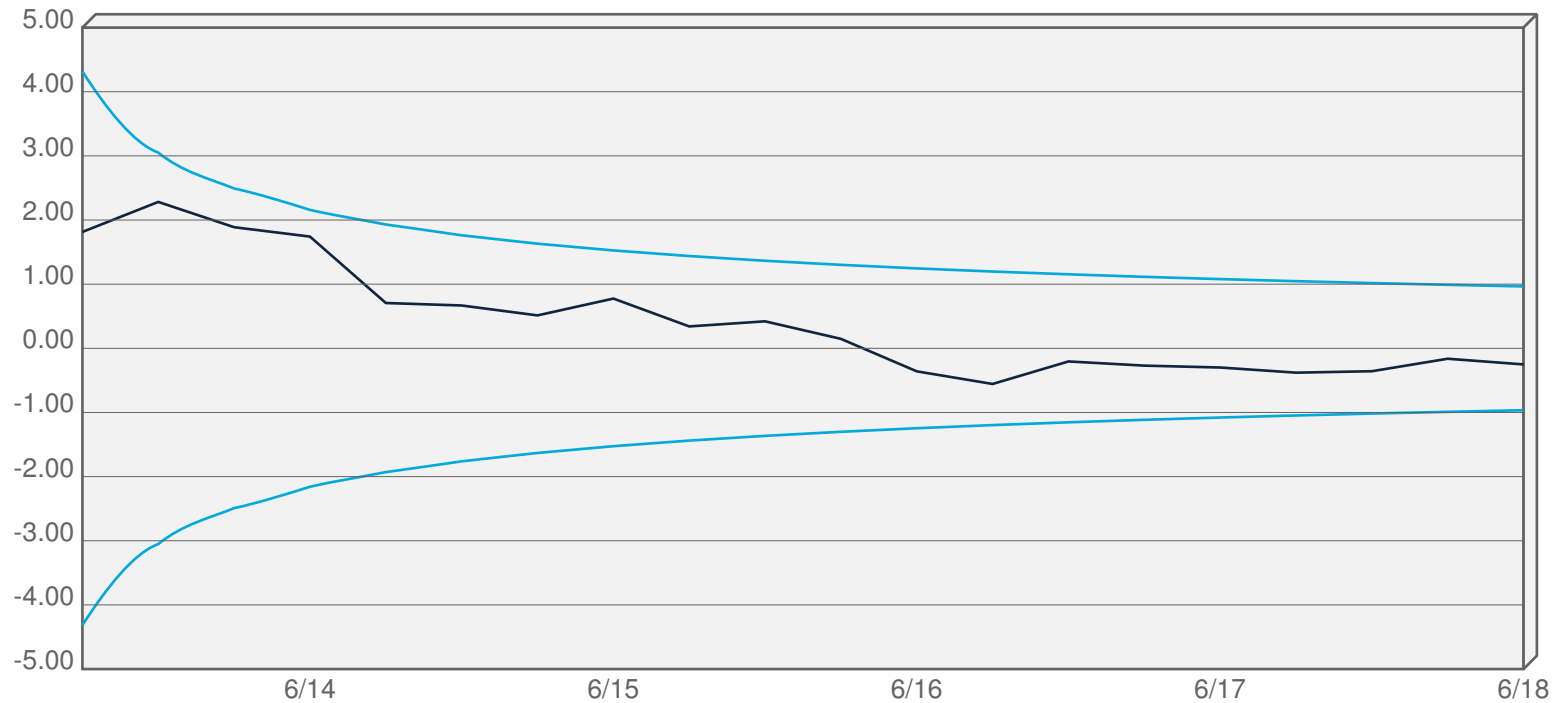


	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◆ Fixed Income Composite	-0.02 (51)	-0.07 (19)	0.40 (21)	1.59 (23)	4.50 (4)	4.74 (3)	4.69 (8)	5.16 (25)
1 Policy Index	0.38 (21)	-0.76 (42)	-0.32 (38)	1.16 (34)	3.88 (7)	5.08 (2)	4.40 (8)	4.79 (39)
5th %tile	1.17	2.26	1.60	3.49	4.03	4.71	4.97	8.09
25th %tile	0.31	-0.18	0.25	1.58	2.31	3.55	3.80	5.37
Median	-0.00	-0.93	-0.73	0.30	1.10	2.58	2.99	4.56
75th %tile	-0.74	-1.56	-1.07	-0.14	0.12	1.99	2.38	4.16
95th %tile	-2.41	-5.59	-3.10	-1.24	-0.89	1.05	1.71	3.47
Number of Funds	100	95	90	89	81	78	69	50

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

CUMULATIVE SKILL ANALYSIS

Fixed Income Composite
Five Years Ending June 30, 2018



— Quarterly NOF Value Added vs. Policy Index

— 80% Confidence Band

Excess Return:	-0.25	Information Ratio:	-0.19
Excess Risk:	1.31	T-Stat:	-0.43

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
NISA									
Net of Fee Return	-0.15	-1.58	-1.11	-0.18	2.06	2.53		3/31/09	3.74
Bloomberg Aggregate	-0.16	-1.62	-1.23	-0.40	1.72	2.27		3/31/09	3.57
Value Added	0.01	0.04	0.12	0.22	0.34	0.25		3/31/09	0.18
BlackRock IG Credit									
Net of Fee Return	-0.12	-1.49	-1.38	-0.38				3/31/17	0.62
Bloomberg Int Credit	-0.08	-1.45	-1.34	-0.36				3/31/17	0.81
Value Added	-0.04	-0.04	-0.04	-0.02				3/31/17	-0.19
BNY IG Credit									
Net of Fee Return	-0.02	-1.44						12/31/17	-1.44
Bloomberg Int Credit	-0.08	-1.45						12/31/17	-1.45
Value Added	0.06	0.01						12/31/17	0.01
Manulife Asset Mgmt									
Net of Fee Return	-1.67	-2.10	-1.87	-0.87	2.25	2.65		12/31/11	3.72
Policy Index	-0.27	-1.67	-1.27	-0.28	1.94	1.17		12/31/11	0.90
Value Added	-1.40	-0.43	-0.60	-0.60	0.32	1.48		12/31/11	2.82
Columbia									
Net of Fee Return	0.36	-1.25	-1.05	1.04	4.60	5.30		12/31/11	6.63
Bloomberg High Yield	1.03	0.16	0.63	2.62	5.53	5.51		12/31/11	6.83
Value Added	-0.67	-1.41	-1.68	-1.57	-0.93	-0.22		12/31/11	-0.19
Marathon Bluegrass									
Net of Fee Return	0.22	1.57	2.38	1.51				12/31/15	7.37
Bloomberg High Yield	1.03	0.16	0.63	2.62				12/31/15	9.73
Value Added	-0.81	1.41	1.75	-1.11				12/31/15	-2.36

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

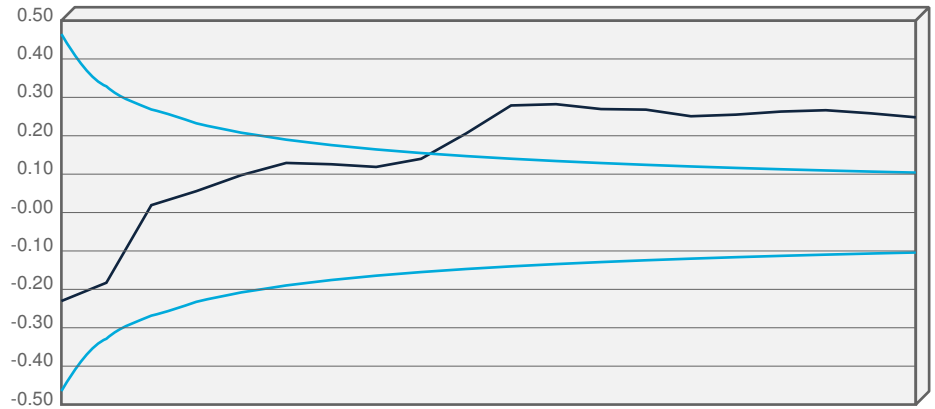
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Waterfall									
Net of Fee Return	1.61	4.54	6.34	10.47	9.66	10.13		3/31/10	11.78
Policy Index	0.91	0.67	1.35	2.88	4.30	4.10		3/31/10	5.04
Value Added	0.70	3.87	5.00	7.59	5.36	6.03		3/31/10	6.74
Cerberus Capital Mgmt									
Net of Fee Return	1.64	4.06	5.17	6.49	8.08			9/30/14	8.18
S&P LSTA Leverage Loan	0.70	2.16	3.30	4.37	4.21			9/30/14	3.98
Value Added	0.94	1.91	1.87	2.11	3.87			9/30/14	4.19
Shenkman Capital									
Net of Fee Return	0.65	2.06	2.79	3.24	3.21	3.83		9/30/10	4.69
S&P LSTA Leverage Loan	0.70	2.16	3.30	4.37	4.21	4.59		9/30/10	5.67
Value Added	-0.05	-0.10	-0.51	-1.13	-1.00	-0.75		9/30/10	-0.98
BSP Private Credit									
Net of Fee Return	-0.29							3/31/18	-0.29
S&P LSTA Leverage Loan Index	0.70							3/31/18	0.70
Value Added	-0.99							3/31/18	-0.99
White Oak Yield Spectrum									
Net of Fee Return	0.34							3/31/18	0.34
S&P LSTA Leverage Loan Index	0.70							3/31/18	0.70
Value Added	-0.36							3/31/18	-0.36
Fixed Income Composite									
Net of Fee Return	-0.11	-0.41	0.04	1.11	4.10	4.14	4.87	3/31/84	7.49
Policy Index	0.38	-0.75	-0.32	1.17	5.08	4.40	4.79	3/31/84	7.32
Value Added	-0.49	0.35	0.35	-0.07	-0.98	-0.26	0.07	3/31/84	0.17
Bloomberg Global Aggregate	-2.78	-1.46	-0.40	1.36	2.58	1.50	2.58		

INVESTMENT MANAGER ANALYSIS

NISA

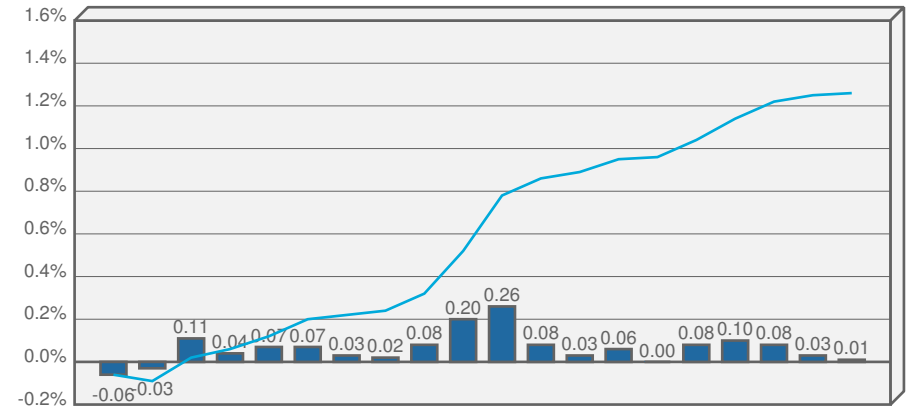
June 30, 2018

Cumulative Skill Analysis vs Benchmark



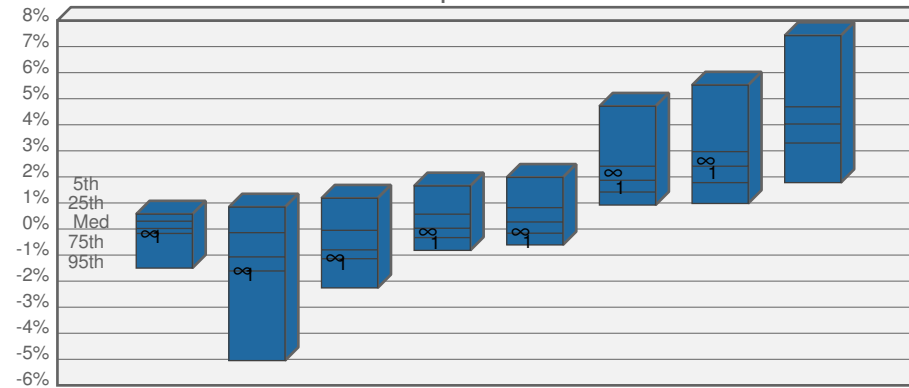
Excess Return:	0.25	Information Ratio:	1.76
Excess Risk:	0.14	T-Stat:	3.92

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	-0.12 (69)	-1.52 (71)	-1.02 (64)	-0.04 (55)	-0.01 (67)	2.24 (30)	2.69 (36)	
1 Bloomberg Aggr	-0.16 (74)	-1.62 (76)	-1.23 (79)	-0.40 (81)	-0.36 (87)	1.72 (57)	2.27 (55)	
Median	0.02	-1.07	-0.80	0.03	0.27	1.87	2.41	4.03
Number of Funds	448	447	447	446	438	425	411	358

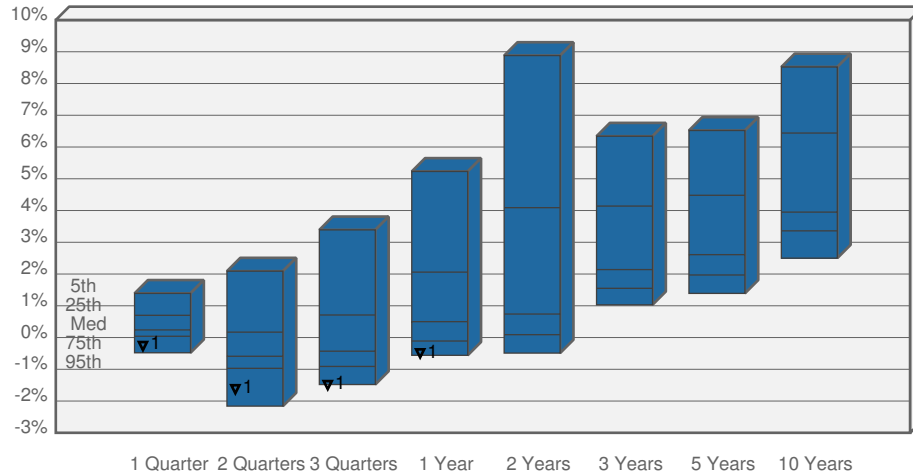
*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

BlackRock IG Credit

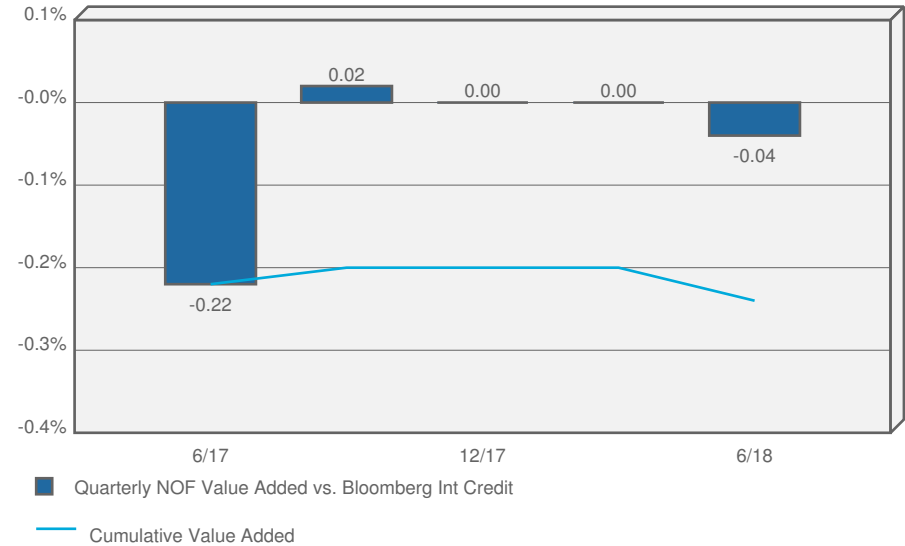
June 30, 2018

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▼ BlackRock IG C	-0.10 (87)	-1.46 (89)	-1.33 (92)	-0.33 (85)	0.74	2.14	2.61	3.95
1 Bloomberg Int	-0.08 (87)	-1.45 (89)	-1.34 (92)	-0.36 (86)				
Median	0.24	-0.59	-0.43	0.50	0.74	2.14	2.61	3.95
Number of Funds	486	484	484	481	480	464	442	379

Value-Added Analysis vs Benchmark



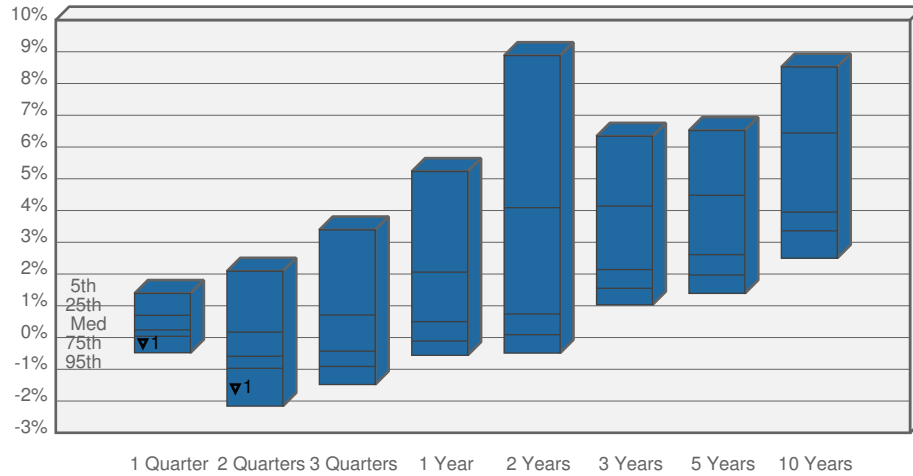
*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

BNY IG Credit

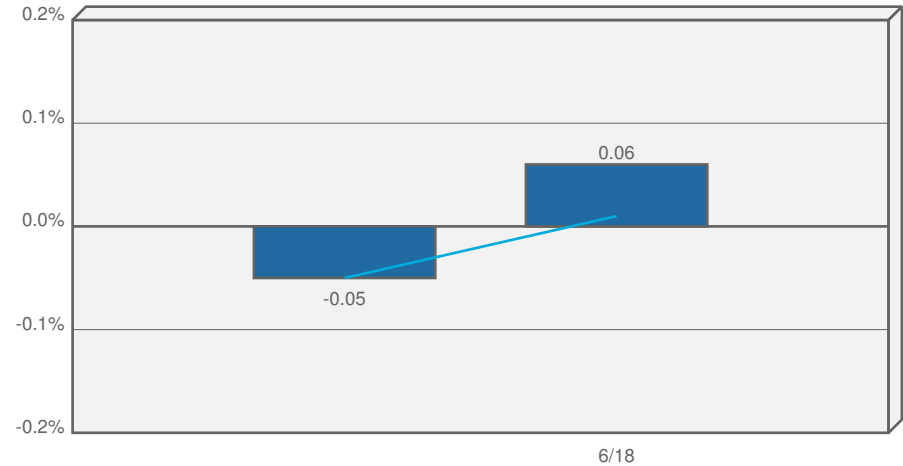
June 30, 2018

Performance Comparison vs Peer Universe*



▼ BNY IG Credit	-0.02 (81)	-1.44 (88)						
▬ Bloomberg Int	-0.08 (87)	-1.45 (89)						
Median	0.24	-0.59	-0.43	0.50	0.74	2.14	2.61	3.95
Number of Funds	486	484	484	481	480	464	442	379

Value-Added Analysis vs Benchmark



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

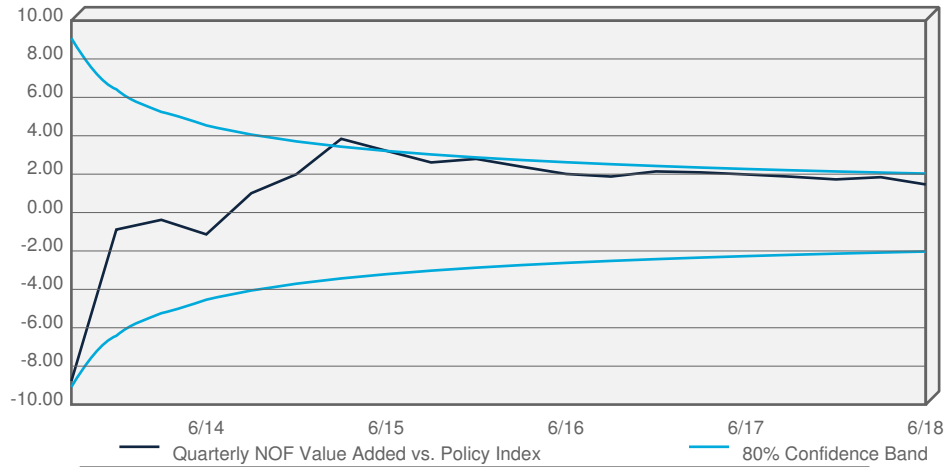
*Compass Total Returns of Active Intermediate Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Manulife Asset Mgmt

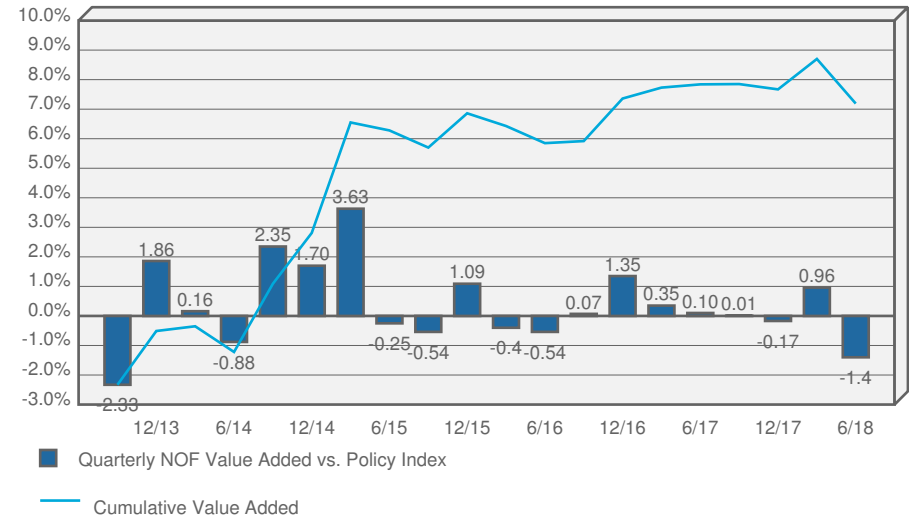
June 30, 2018

Cumulative Skill Analysis vs Benchmark

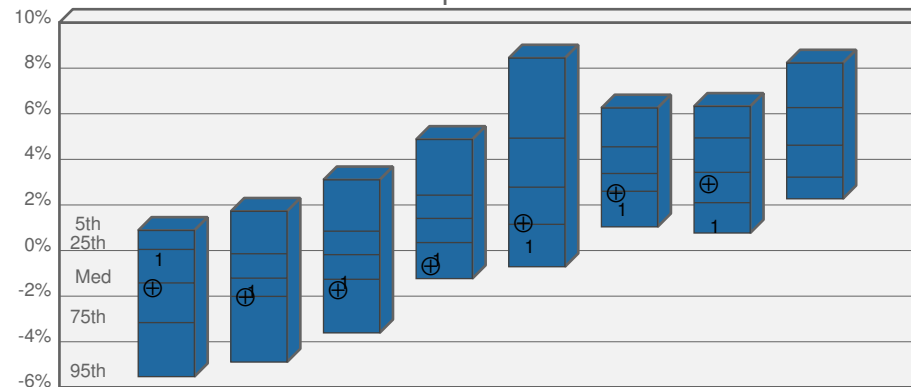


Excess Return:	1.46	Information Ratio:	0.53
Excess Risk:	2.76	T-Stat:	1.19

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	-1.62 (54)	-2.01 (75)	-1.72 (80)	-0.65 (90)	1.24 (73)	2.52 (77)	2.94 (59)	
1 Policy Index	-0.27 (33)	-1.67 (64)	-1.27 (75)	-0.28 (86)	0.32 (87)	1.94 (88)	1.17 (90)	
Median	-1.42	-1.21	-0.18	1.41	2.78	3.38	3.43	4.62
Number of Funds	286	285	284	282	277	270	237	129

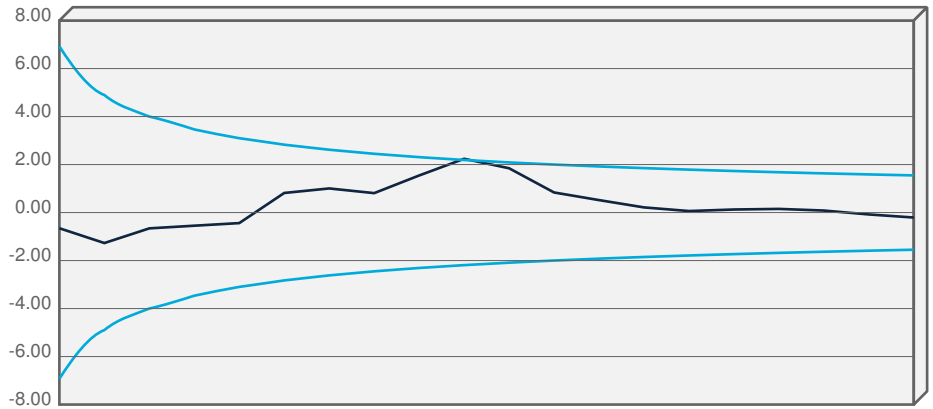
*Compass Total Returns of Active Global Intl Fixed Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Columbia

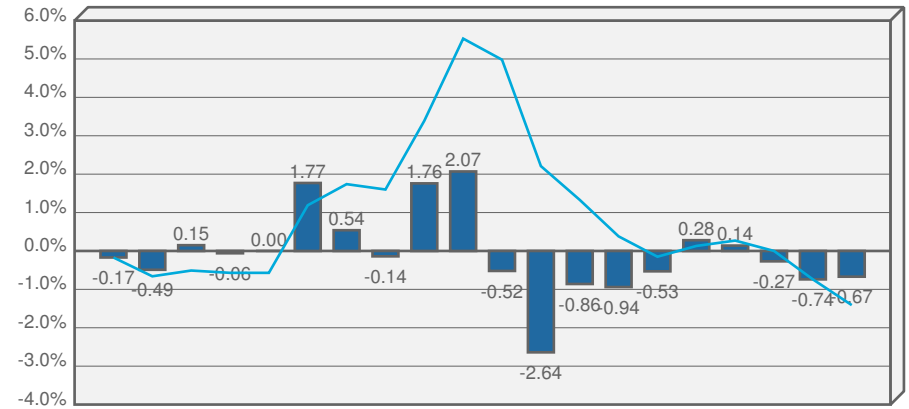
June 30, 2018

Cumulative Skill Analysis vs Benchmark



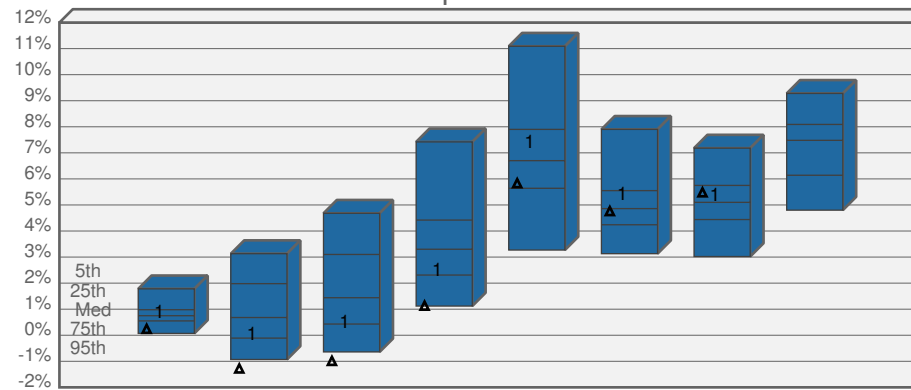
Quarterly NOF Value Added vs. Bloomberg High Yield	80% Confidence Band
Excess Return: -0.21	Information Ratio: -0.10
Excess Risk: 2.11	T-Stat: -0.22

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg High Yield	Cumulative Value Added
-0.17, -0.49, 0.15, 0.00, 1.77, 0.54, -0.14, 1.76, 2.07, -0.52, -2.64, -0.86, -0.94, -0.53, 0.28, 0.14, -0.27, -0.74, -0.67	

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
▲ Columbia	0.45 (83)	-1.07 (96)	-0.78 (97)	1.34 (91)	6.04 (66)	4.97 (46)	5.69 (26)	
1 Bloomberg High	1.03 (23)	0.16 (65)	0.63 (71)	2.62 (67)	7.54 (33)	5.53 (26)	5.51 (32)	
Median	0.75	0.68	1.44	3.30	6.70	4.86	5.10	7.48
Number of Funds	245	245	245	245	237	234	219	145

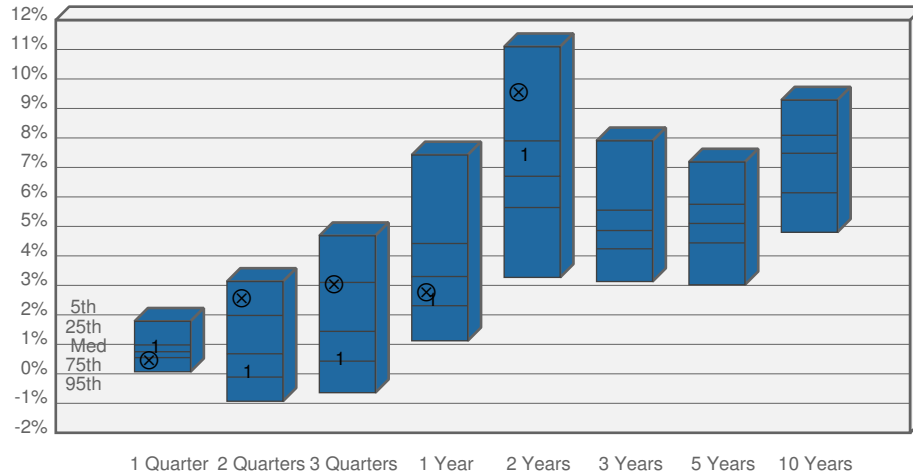
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Marathon Bluegrass

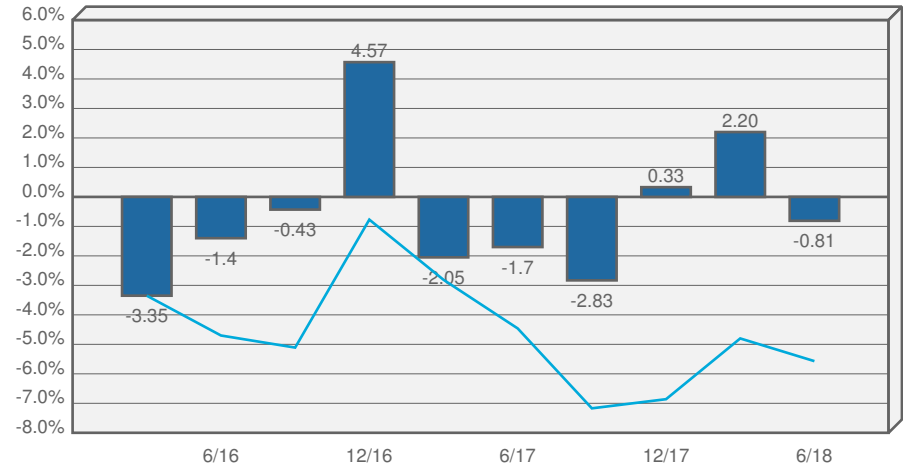
June 30, 2018

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ Marathon Blueg	0.47 (82)	2.59 (8)	3.06 (26)	2.79 (63)	9.56 (10)			
1 Bloomberg High	1.03 (23)	0.16 (65)	0.63 (71)	2.62 (67)	7.54 (33)			
Median	0.75	0.68	1.44	3.30	6.70	4.86	5.10	7.48
Number of Funds	245	245	245	245	237	234	219	145

Value-Added Analysis vs Benchmark



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

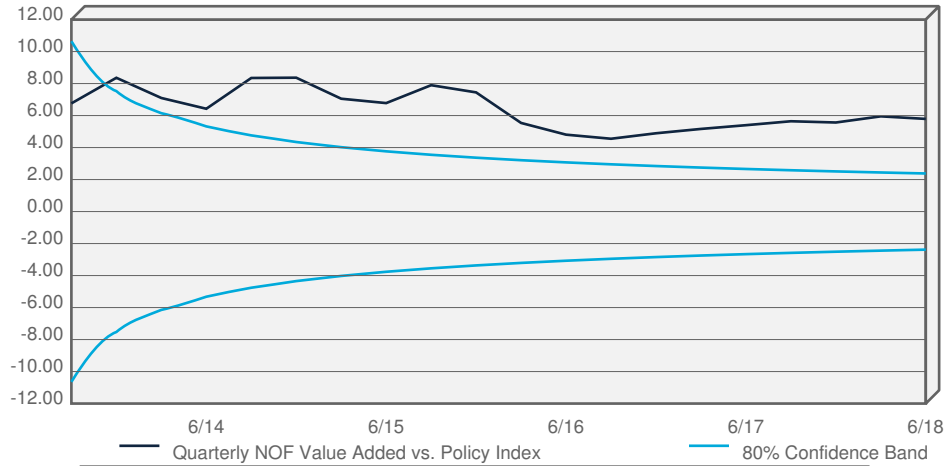
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Waterfall

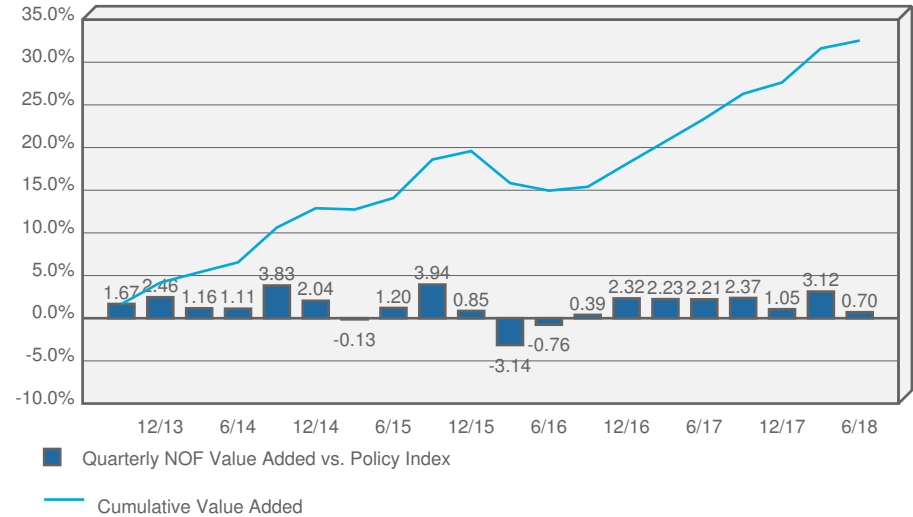
June 30, 2018

Cumulative Skill Analysis vs Benchmark

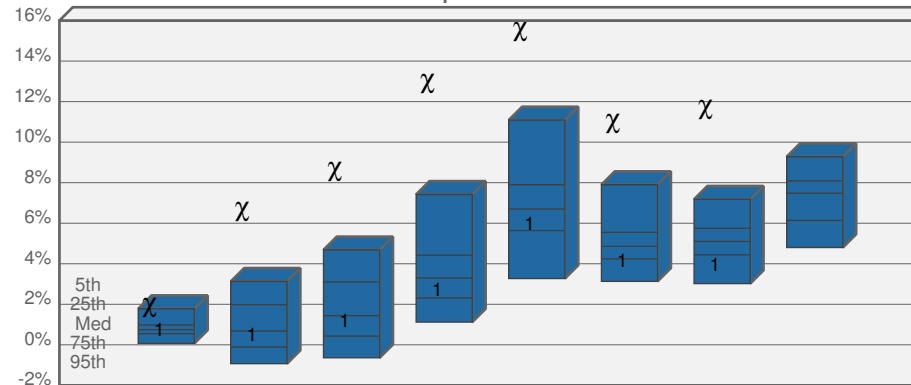


Excess Return:	5.79	Information Ratio:	1.79
Excess Risk:	3.24	T-Stat:	4.00

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
χ Waterfall	1.72 (5)	6.48 (1)	8.46 (1)	12.81 (1)	15.36 (1)	10.83 (1)	11.50 (1)	
1 Policy Index	0.91 (31)	0.67 (50)	1.35 (52)	2.88 (61)	6.12 (64)	4.30 (73)	4.10 (83)	
Median	0.75	0.68	1.44	3.30	6.70	4.86	5.10	7.48
Number of Funds	245	245	245	245	237	234	219	145

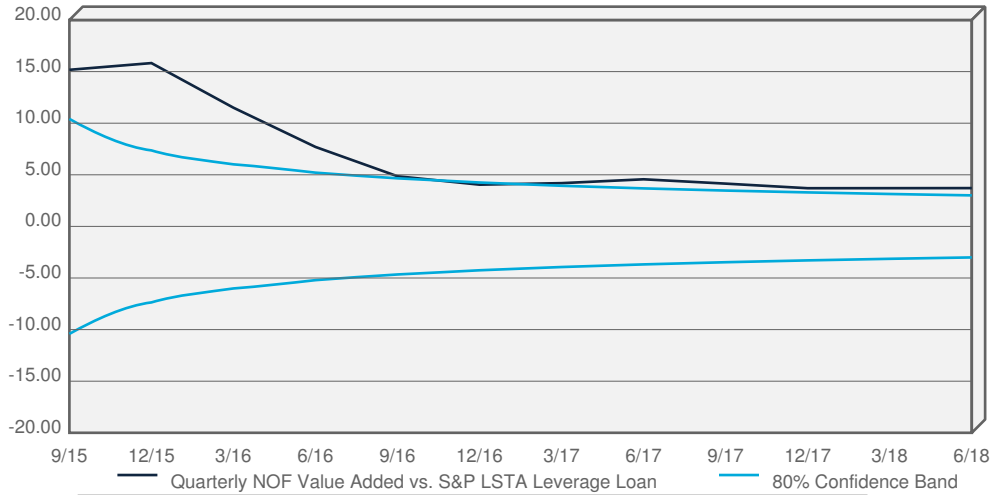
*Compass Total Returns of Active High Yield Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Cerberus Capital Mgmt

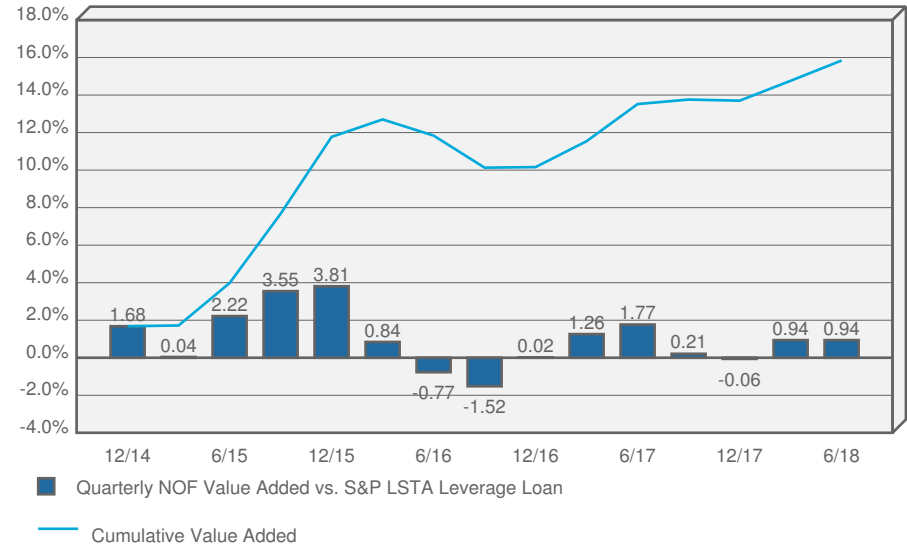
June 30, 2018

Cumulative Skill Analysis vs Benchmark



Excess Return:	3.71	Information Ratio:	1.17
Excess Risk:	3.17	T-Stat:	2.03

Value-Added Analysis vs Benchmark

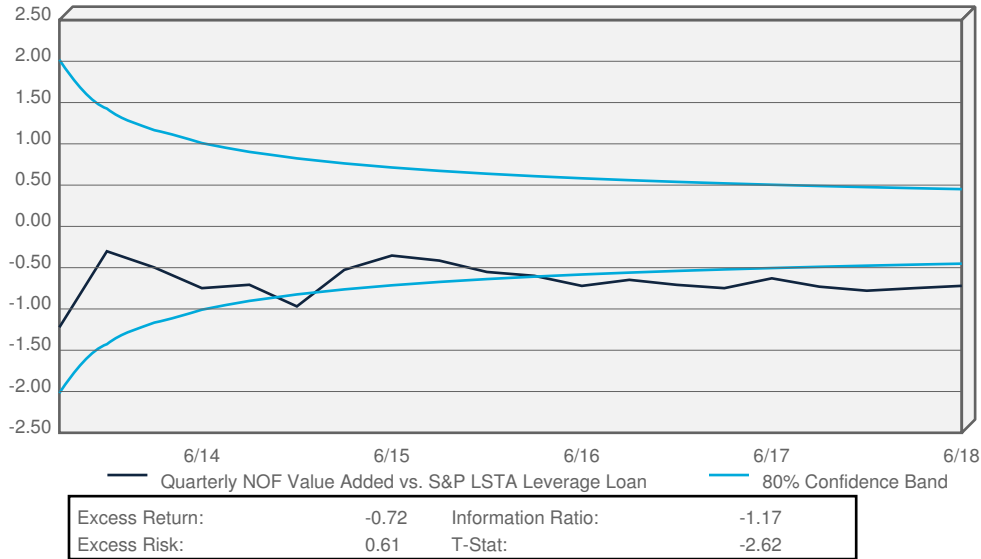


INVESTMENT MANAGER ANALYSIS

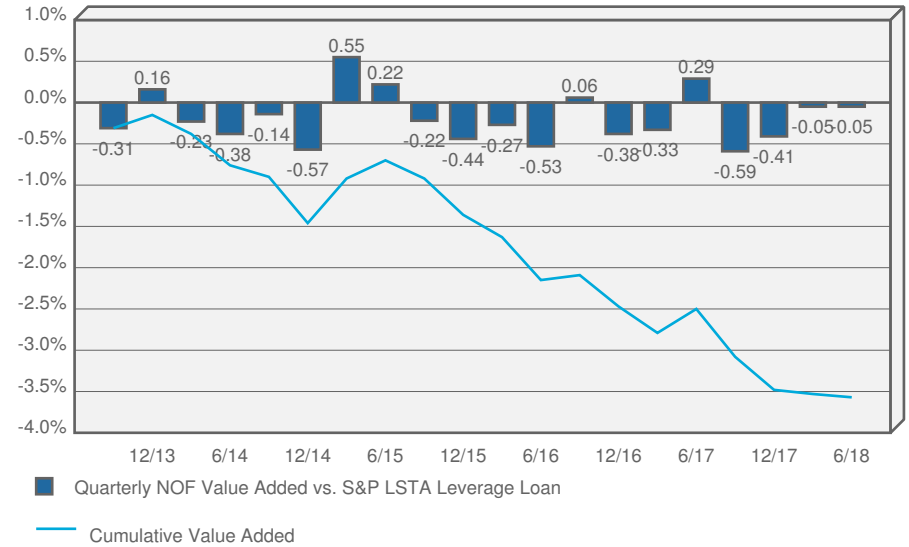
Shenkman Capital

June 30, 2018

Cumulative Skill Analysis vs Benchmark



Value-Added Analysis vs Benchmark



CUSTOM BENCHMARK SPECIFICATION

Fixed Income Composite

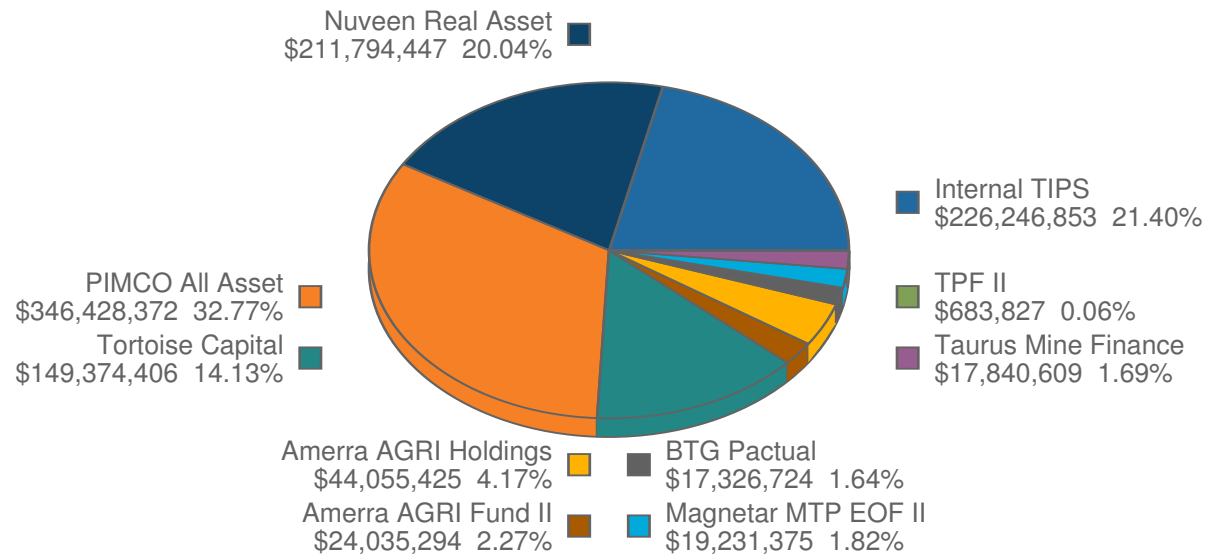
June 30, 2018

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



REAL RETURN

Wilshire Consulting
MANAGER ALLOCATION
 Real Return Composite
As of June 30, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Internal TIPS									
Net of Fee Return	0.56	0.19	0.52	1.24	1.72	1.70	3.02	6/30/02	4.70
Bloomberg 1-10 Yrs TIPS	0.61	0.21	0.75	1.45	1.50	1.36	2.87	6/30/02	4.59
Value Added	-0.05	-0.02	-0.22	-0.21	0.22	0.34	0.15	6/30/02	0.11
PIMCO All Asset									
Net of Fee Return	-2.37	0.00	1.00	4.28	4.95	3.97		12/31/11	5.40
Bloomberg 1-10 Yrs TIPS	0.61	0.21	0.75	1.45	1.50	1.21		12/31/11	0.86
Value Added	-2.98	-0.21	0.26	2.82	3.46	2.76		12/31/11	4.54
Tortoise Capital									
Net of Fee Return	10.92	0.08	-0.59	-2.52	-4.66	0.69		9/30/09	11.52
Alerian MLP	11.80	-0.63	-1.58	-4.58	-5.93	-4.09		9/30/09	7.43
Value Added	-0.88	0.71	0.99	2.06	1.27	4.78		9/30/09	4.09
Nuveen Real Asset									
Net of Fee Return	1.65	-1.24	0.11	2.63	5.99			3/31/15	4.80
Policy Index	3.14	-0.80	0.27	2.25	6.33			3/31/15	4.96
Value Added	-1.49	-0.44	-0.15	0.39	-0.34			3/31/15	-0.16
Amerra AGRI Fund II									
Net of Fee Return	-2.31	-3.08	-5.04	-4.70	3.24	5.24		12/31/12	4.24
Amerra AGRI Holdings									
Net of Fee Return	-0.54	-1.68	-2.89	-4.37				9/30/15	-1.24
BTG Pactual									
Net of Fee Return	-0.30	-4.50	-1.69	-4.14	-7.87			12/31/14	-9.76

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

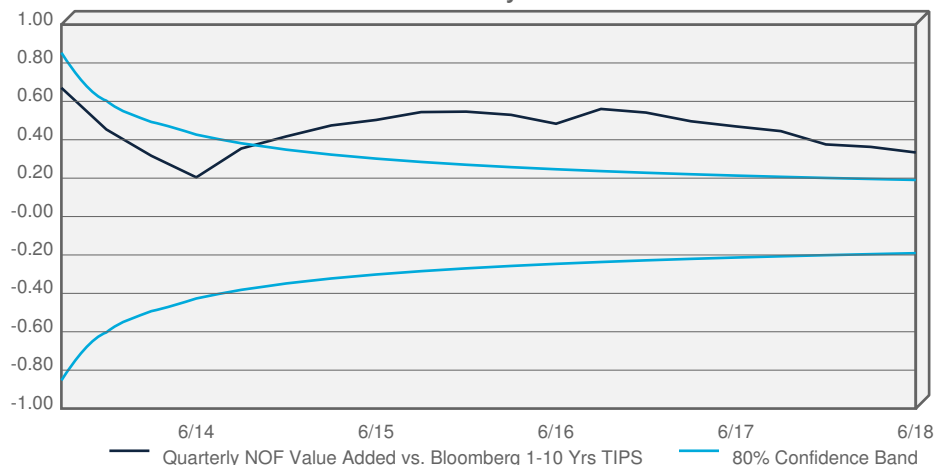
	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Magnetar MTP EOF II Net of Fee Return	-0.32	3.12	8.31	4.01				9/30/15	1.67
Taurus Mine Finance Net of Fee Return	0.32	4.32	2.73	4.58	14.85			3/31/15	13.22
TPF II Net of Fee Return								9/30/08	
Real Return Composite Net of Fee Return	0.22	-0.29	0.45	1.97	3.50	3.02		6/30/11	3.71
Real Return Index (P)	1.62	-0.25	0.29	0.75	2.05	1.73		6/30/11	2.52
Value Added	-1.40	-0.04	0.16	1.22	1.45	1.29		6/30/11	1.19

INVESTMENT MANAGER ANALYSIS

Internal TIPS

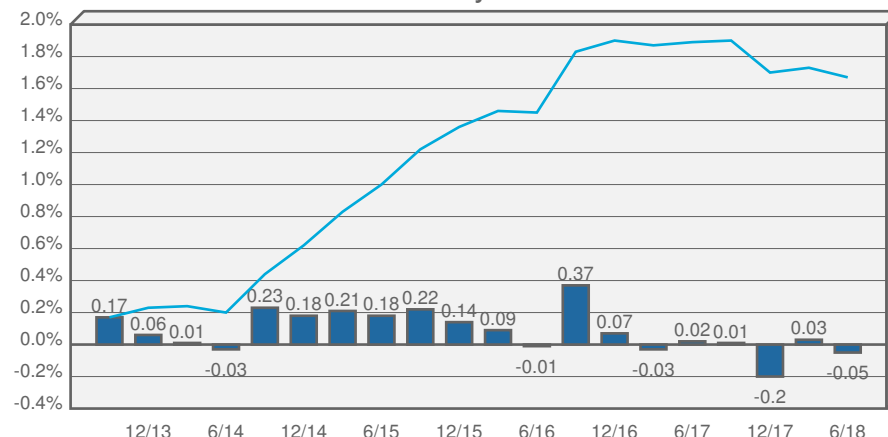
June 30, 2018

Cumulative Skill Analysis vs Benchmark



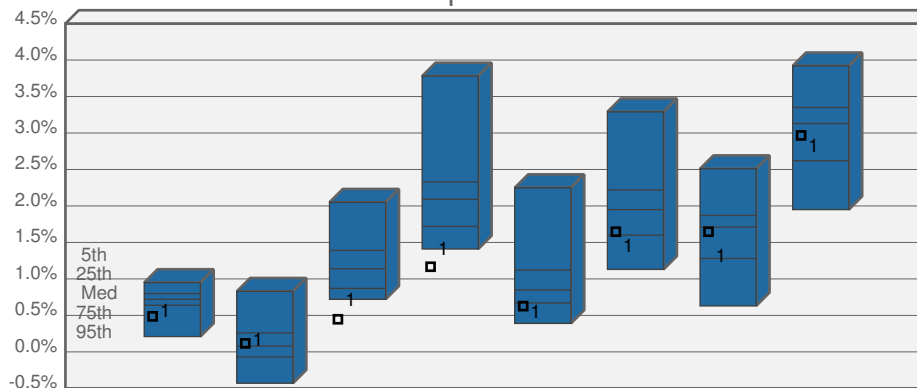
Excess Return:	0.33	Information Ratio:	1.29
Excess Risk:	0.26	T-Stat:	2.88

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	0.56 (84)	0.19 (39)	0.52 (97)	1.24 (97)	0.70 (72)	1.72 (66)	1.72 (48)	3.04 (60)
1 Bloomberg 1-10	0.61 (84)	0.21 (39)	0.75 (89)	1.45 (89)	0.59 (84)	1.50 (92)	1.36 (69)	2.87 (66)
Median	0.72	0.08	1.14	2.09	0.85	1.95	1.71	3.13
Number of Funds	40	40	40	40	40	39	39	33

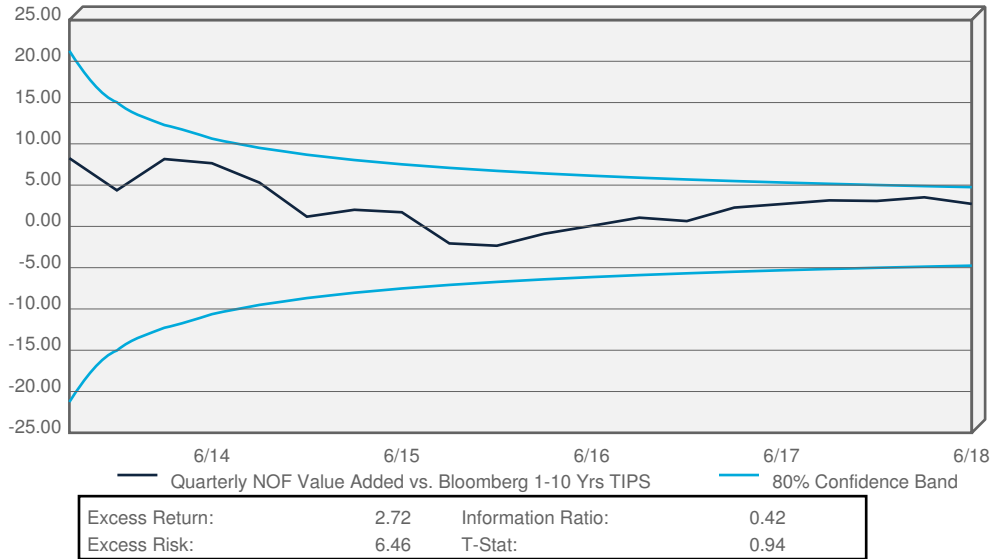
*Compass Total Returns of Active TIPS Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

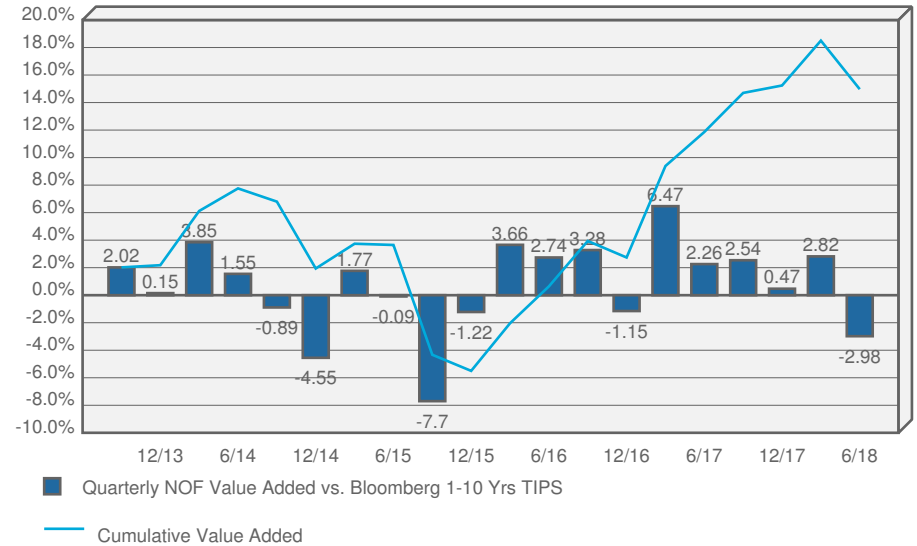
PIMCO All Asset

June 30, 2018

Cumulative Skill Analysis vs Benchmark



Value-Added Analysis vs Benchmark

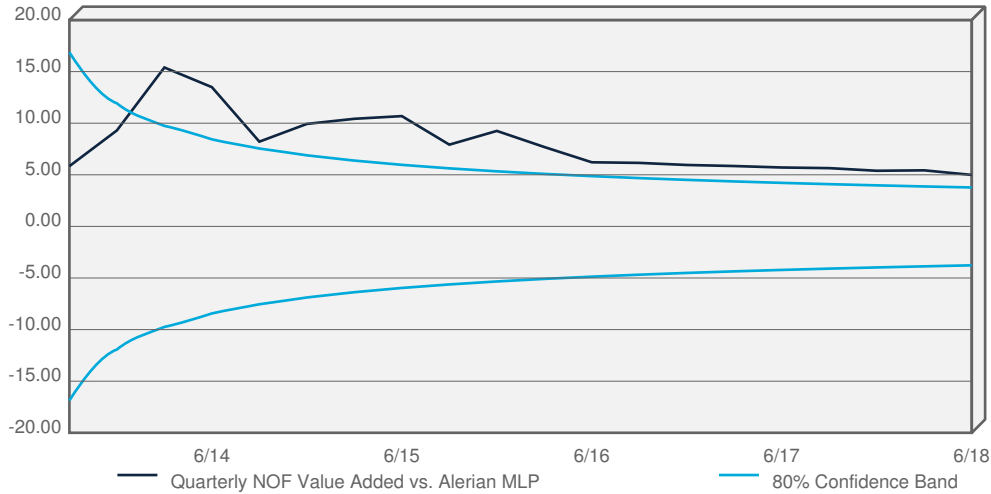


INVESTMENT MANAGER ANALYSIS

Tortoise Capital

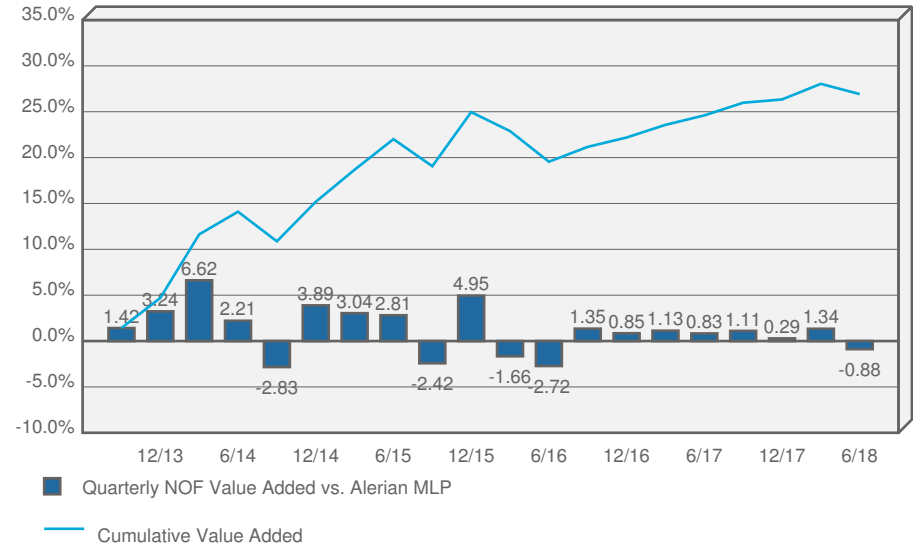
June 30, 2018

Cumulative Skill Analysis vs Benchmark



Excess Return:	4.99	Information Ratio:	0.97
Excess Risk:	5.13	T-Stat:	2.17

Value-Added Analysis vs Benchmark

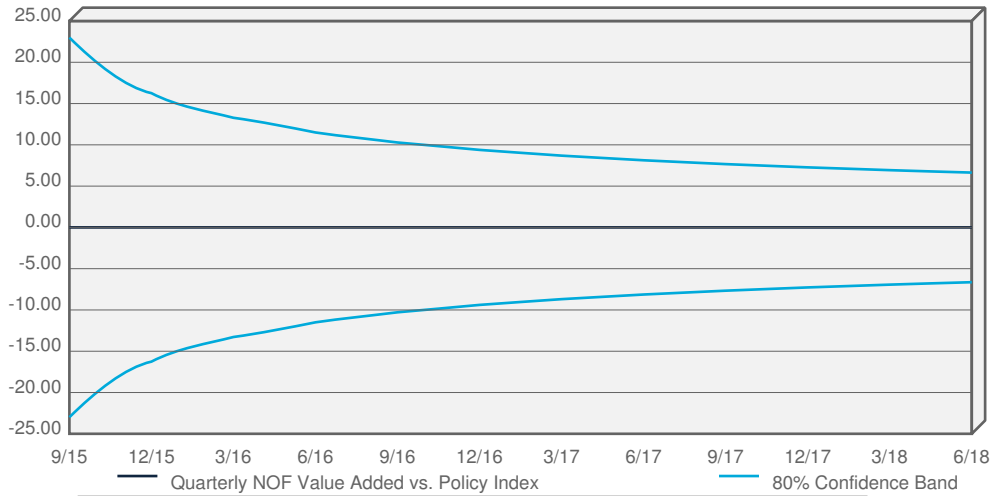


INVESTMENT MANAGER ANALYSIS

Nuveen Real Asset

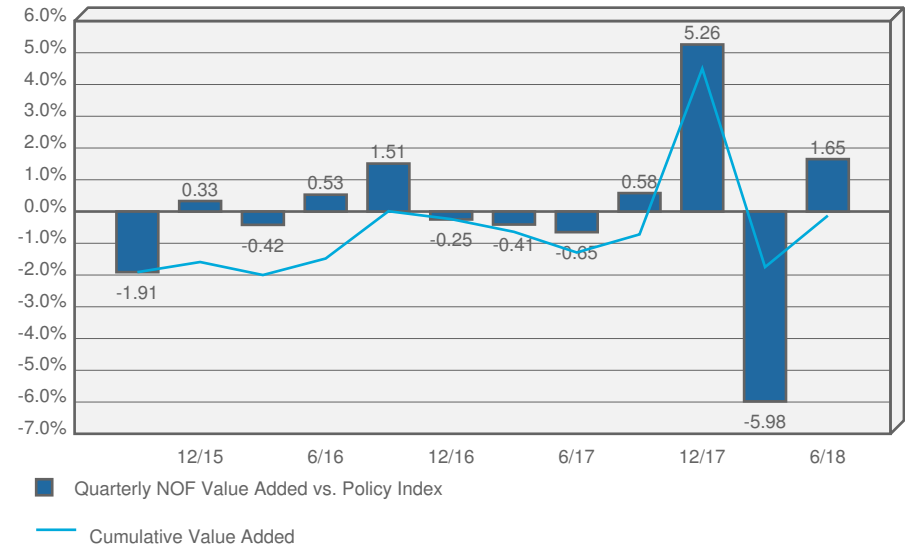
June 30, 2018

Cumulative Skill Analysis vs Benchmark



Excess Return:	1.50	Information Ratio:	0.21
Excess Risk:	6.99	T-Stat:	0.37

Value-Added Analysis vs Benchmark



CUSTOM BENCHMARK SPECIFICATION

Real Return Composite

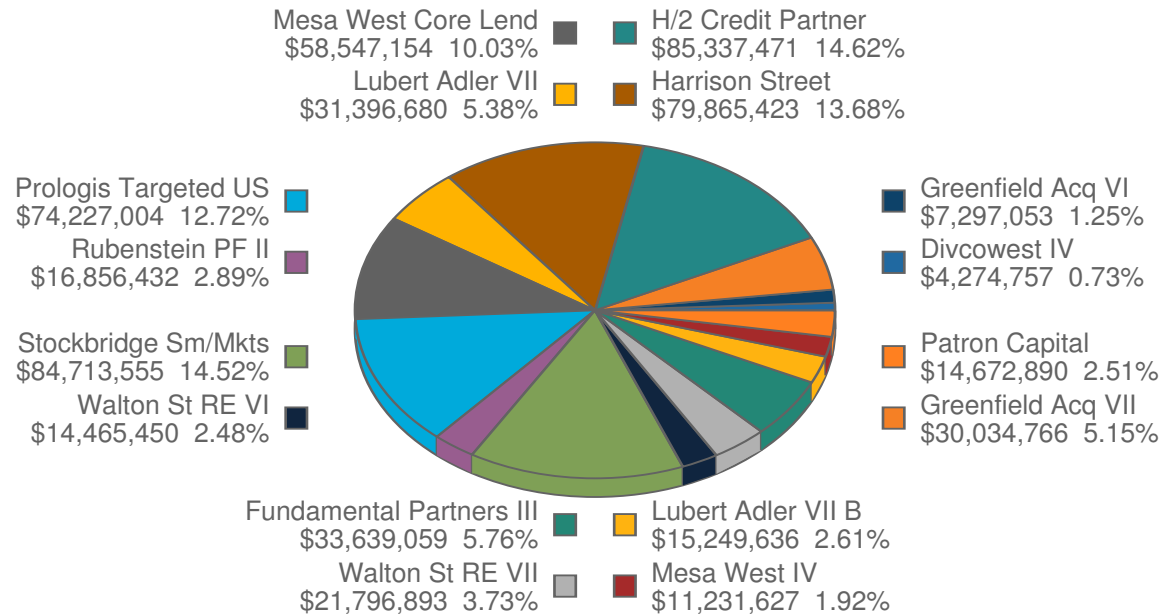
June 30, 2018

	Quarter Start	Quarter End	Percent	Description
Real Return Index (P)	9/11	6/18	100.00	Real Return Index (P)



REAL ESTATE

Wilshire Consulting
MANAGER ALLOCATION
 Real Estate Composite
As of June 30, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Divcowest IV									
Net of Fee Return	4.90	16.86	17.09	16.13	30.79			3/31/14	24.37
Greenfield Acq VI									
Net of Fee Return	3.41	-9.46	-8.32	-4.35	3.87	7.92		12/31/12	8.42
Greenfield Acq VII									
Net of Fee Return	0.68	6.86	7.73	15.90	15.05			6/30/14	11.79
H/2 Credit Partner									
Net of Fee Return	0.90	0.96	1.10	3.73	5.15	5.33		6/30/11	6.15
Harrison Street									
Net of Fee Return	1.94	4.36	7.29	9.83	10.29	10.22		6/30/12	9.09
Lubert Adler VII									
Net of Fee Return	3.42	4.94	9.46	11.31	5.79			6/30/14	-2.29
Mesa West Core Lend									
Net of Fee Return	1.69	3.50	5.19	6.94	7.67	6.84		6/30/13	6.84
Prologis Targeted US									
Net of Fee Return	5.03	9.03	15.82	19.77	16.64			9/30/14	15.40
Rubenstein PF II									
Net of Fee Return	3.35	6.56	12.36	15.45	8.17	13.72		6/30/13	13.72
Stockbridge Sm/Mkts									
Net of Fee Return	1.72	3.65	5.38	7.61	9.50			6/30/14	9.65

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 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	2.32	4.71	7.41	9.55	4.62	8.51		6/30/09	-18.51
Walton St RE VII									
Net of Fee Return	1.79	4.33	6.55	10.74	12.88	13.19		6/30/13	13.19
Fundamental Partners III									
Net of Fee Return	0.01	1.57	3.51	3.46				6/30/17	3.46
Lubert Adler VII B									
Net of Fee Return	1.57	1.02	-3.13	-3.13				6/30/17	-3.13
Mesa West IV									
Net of Fee Return	1.54	3.79	5.11	7.01				3/31/17	3.41
Patron Capital									
Net of Fee Return	-0.63	19.74	18.67	28.15				9/30/16	-1.76
Real Estate Composite									
Net of Fee Return	2.04	4.40	6.81	9.56	9.54	8.91	8.18	6/30/84	6.06
NCREIF ODCE NOF 1 Quarter Lag	1.97	3.86	5.56	7.11	9.00	10.42	4.16		
Value Added	0.07	0.55	1.25	2.45	0.55	-1.51	4.02		

CUSTOM BENCHMARK SPECIFICATION

Real Estate Composite

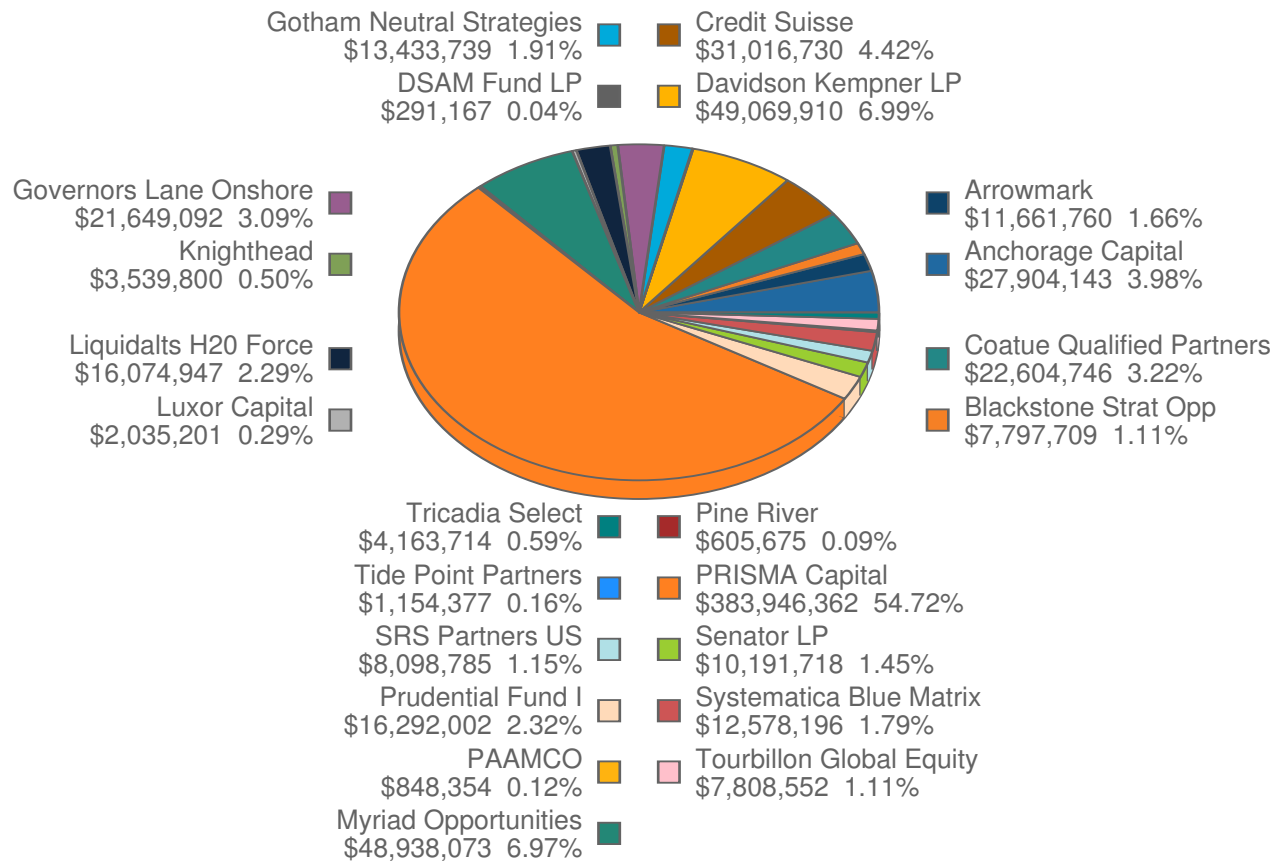
June 30, 2018

	Quarter Start	Quarter End	Percent	Description
NCREIF ODCE NOF 1 Quarter Lag	9/84	6/18	100.00	NCREIF ODCE NOF 1 Quarter Lag



ABSOLUTE RETURN

Wilshire Consulting
MANAGER ALLOCATION
 Absolute Return Composite
 As of June 30, 2018



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Anchorage Capital Net of Fee Return	0.64	1.27	4.46	6.09				9/30/16	5.90
Blackstone Strat Opp Net of Fee Return	1.77	3.07	4.42					9/30/17	4.42
Coatue Qualified Partners Net of Fee Return	2.63	8.58	9.26	16.26	14.64			6/30/15	14.64
Credit Suisse Net of Fee Return	1.88	3.44	5.03	7.09				6/30/17	7.09
Davidson Kempner LP Net of Fee Return	-0.48	1.56	2.36	3.84				3/31/16	6.78
DSAM Fund LP Net of Fee Return								6/30/16	
Gotham Neutral Strategies Net of Fee Return	-0.30	2.33	2.22	1.73				3/31/17	-1.92
Governors Lane Onshore Net of Fee Return	-1.45	-1.58	-3.25	-1.86				3/31/17	0.66
Knighthead Net of Fee Return	0.25	1.71	2.79	4.20	2.60			12/31/13	2.28
Liquidalts H20 Force Net of Fee Return	-3.04	0.09	-1.71	0.59				9/30/16	5.49

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Luxor Capital									
Net of Fee Return	0.86	7.75	13.56	18.72	4.79			3/31/14	1.58
Myriad Opportunities									
Net of Fee Return	-0.53	0.78	4.33	9.49				6/30/16	9.49
PAAMCO									
Net of Fee Return								9/30/11	
Pine River									
Net of Fee Return								6/30/14	
PRISMA Capital									
Net of Fee Return	0.79	3.18	4.42	6.22	0.79	3.04		9/30/11	3.94
Prudential Fund I									
Net of Fee Return	1.24	1.95	1.92	2.96				3/31/17	5.01
SRS Partners US									
Net of Fee Return	3.06	3.48	6.58					9/30/17	6.58
Senator LP									
Net of Fee Return	1.69	-0.75	1.85	5.60				9/30/16	7.03
Systematica Blue Matrix									
Net of Fee Return	2.08	1.06	1.83	7.60				3/31/17	5.09
Tide Point Partners									
Net of Fee Return	0.00	-4.89	2.40	4.75				3/31/17	-3.05

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended June 30, 2018

	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Incept Date	Incept Ret
Tourbillon Global Equity Net of Fee Return	5.56	-0.43	-9.50	-10.59				12/31/15	-9.19
Tricadia Select Net of Fee Return	-14.18	-13.40	-16.87					9/30/17	-16.87
Absolute Return Composite Net of Fee Return	0.57	2.15	3.48	5.54	1.41	3.59		3/31/10	4.15
HFRI FOF Div (1 Month Lag)	0.57	2.03	3.74	5.40	1.53	3.12		3/31/10	3.07
Value Added	0.00	0.12	-0.26	0.14	-0.12	0.47		3/31/10	1.08

CUSTOM BENCHMARK SPECIFICATION

Absolute Return Composite

June 30, 2018

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