



WILSHIRE ASSOCIATES

Wilshire Consulting



Kentucky Retirement Systems

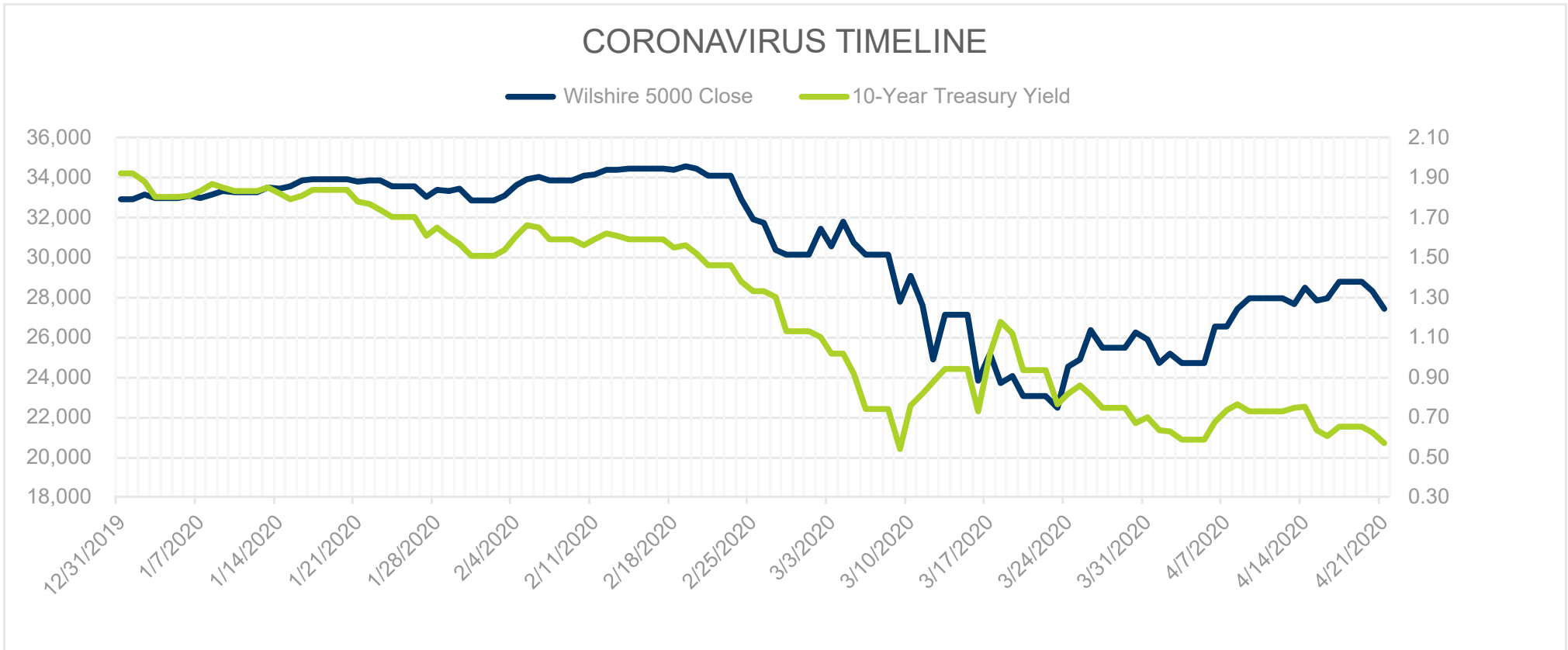
Quarterly Board Summary

March 31, 2020

CORONAVIRUS TIMELINE

AS OF APRIL 21

<https://wilshire.com/covid19-timeline>



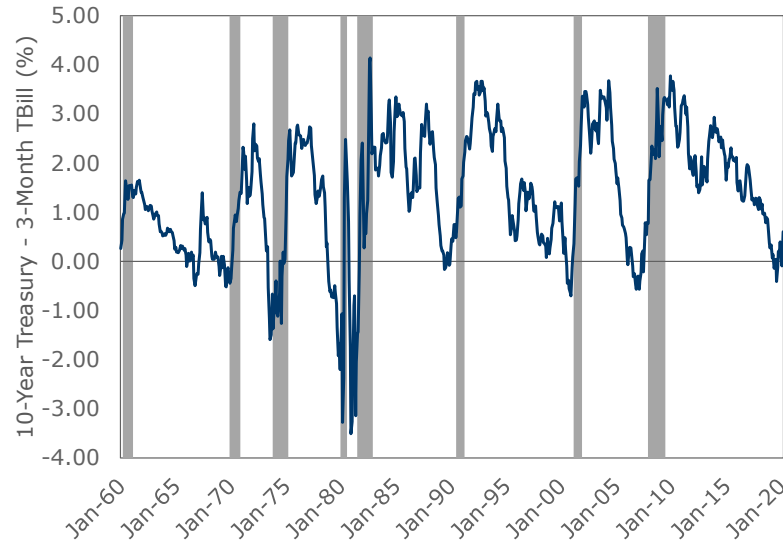
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MARCH 2020 ASSET CLASS ASSUMPTIONS

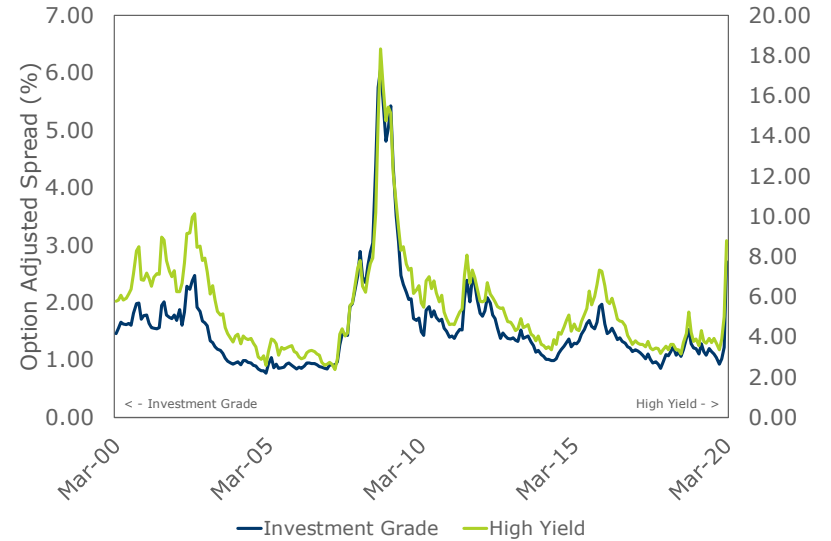
	EQUITY						FIXED INCOME						REAL ASSETS					
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	TIPS	High Yield	Dev ex-US Bond (Hdg)	Real Estate			Cmnty	Real Assets	US CPI
		US RES	Global RES	Private RE	US RES	Global RES			Private RE									
COMPOUND RETURN (%)	6.75	7.25	7.25	7.50	7.20	8.40	0.70	1.80	2.70	0.70	5.40	0.80	5.60	5.80	7.00	1.85	5.65	1.15
ARITHMETIC RETURN (%)	8.05	8.70	10.20	9.10	8.50	11.75	0.70	1.95	3.15	0.90	5.85	0.85	6.95	6.95	7.90	2.95	6.00	1.15
EXPECTED RISK (%)	17.00	18.00	26.00	18.95	17.10	28.00	1.25	5.15	9.85	6.00	10.00	3.50	17.00	15.80	14.00	15.00	8.75	1.75
CASH YIELD (%)	2.25	3.75	3.00	3.55	2.80	0.00	0.70	1.90	2.65	1.15	7.40	1.10	4.75	4.75	2.95	0.70	2.50	0.00
CORRELATIONS																		
US Stock	1.00																	
Dev ex-US Stock (USD)	0.81	1.00																
Emerging Mkt Stock	0.74	0.74	1.00															
Global ex-US Stock	0.83	0.96	0.87	1.00														
Global Stock	0.95	0.92	0.83	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									
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							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.18	0.18	0.26	0.10	0.67	0.66	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	0.78	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 Assets	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

RISK MONITOR

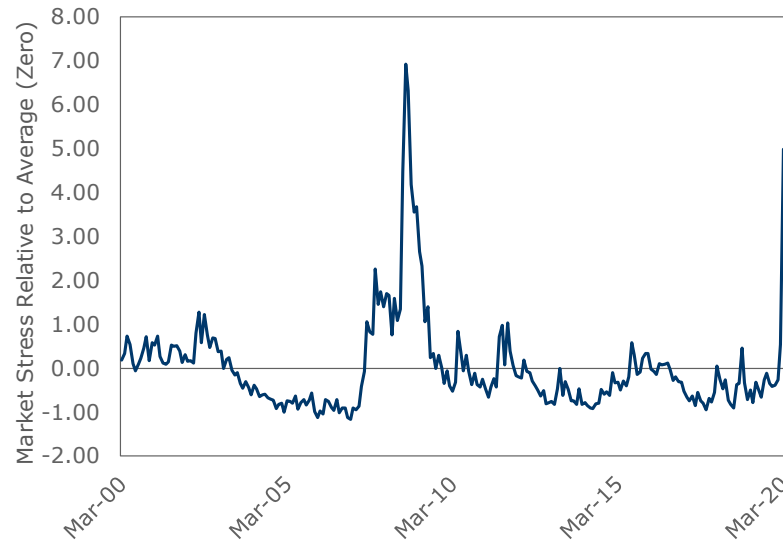
YIELD CURVE SLOPE VS RECESSIONS (IN GRAY)



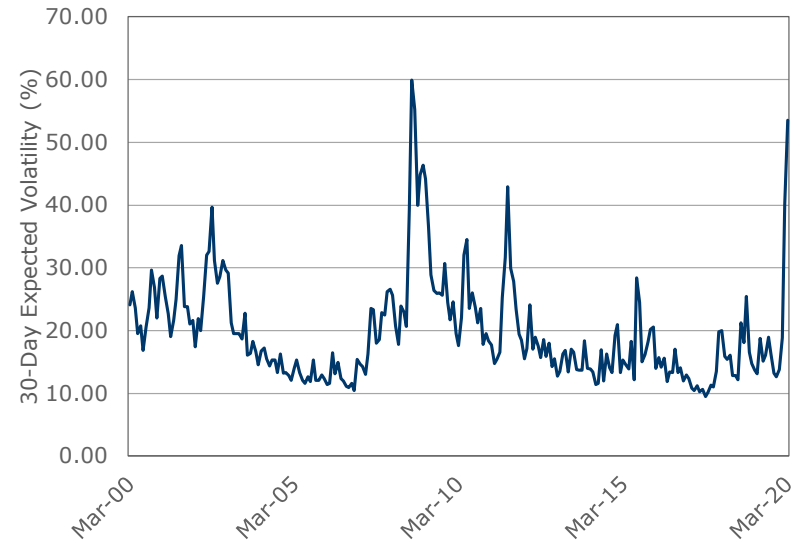
BLOOMBERG BARCLAYS CREDIT INDEXES



ST. LOUIS FED FINANCIAL STRESS INDEX



CBOE VOLATILITY INDEX



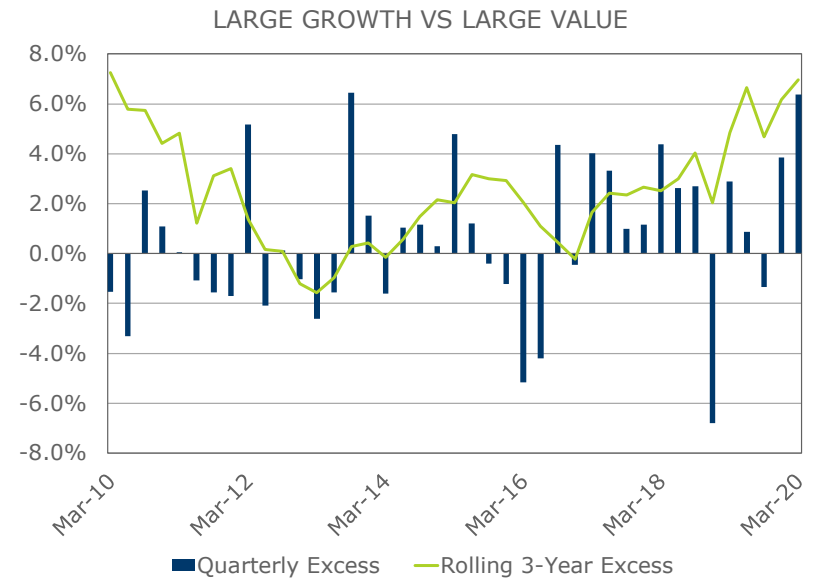
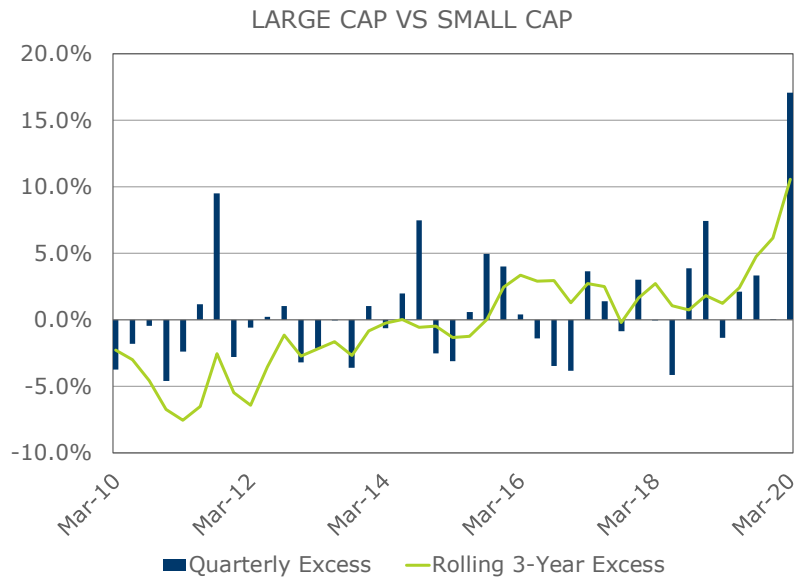
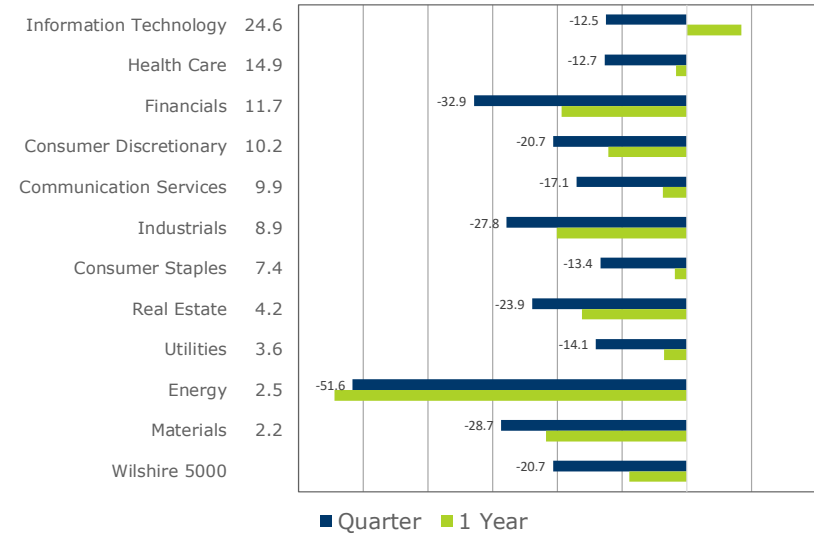
Data sources: Federal Reserve, Bloomberg Barclays

Wilshire Consulting

U.S. EQUITY MARKET

AS OF 3/31/2020	QTR	YTD	1 YR	3 YR	5 YR	10 YR
WILSHIRE 5000 INDEX	-20.7	-20.7	-8.9	4.1	6.0	10.2
WILSHIRE U.S. LARGE CAP	-19.7	-19.7	-7.3	5.0	6.7	10.5
WILSHIRE U.S. SMALL CAP	-31.4	-31.4	-25.0	-5.0	-0.5	7.4
WILSHIRE U.S. LARGE GROWTH	-17.1	-17.1	-2.7	8.6	8.5	11.9
WILSHIRE U.S. LARGE VALUE	-22.1	-22.1	-11.5	1.5	4.7	9.1
WILSHIRE U.S. SMALL GROWTH	-28.2	-28.2	-20.0	-1.1	1.0	8.8
WILSHIRE U.S. SMALL VALUE	-34.5	-34.5	-29.6	-8.9	-2.1	6.0
WILSHIRE REIT INDEX	-25.6	-25.6	-19.4	-2.5	-0.2	7.7
MSCI USA MIN. VOL. INDEX	-17.1	-17.1	-5.9	6.6	7.9	11.8
FTSE RAFI U.S. 1000 INDEX	-26.4	-26.4	-16.1	-0.9	2.8	8.6

U.S. SECTOR WEIGHT AND RETURN (%)

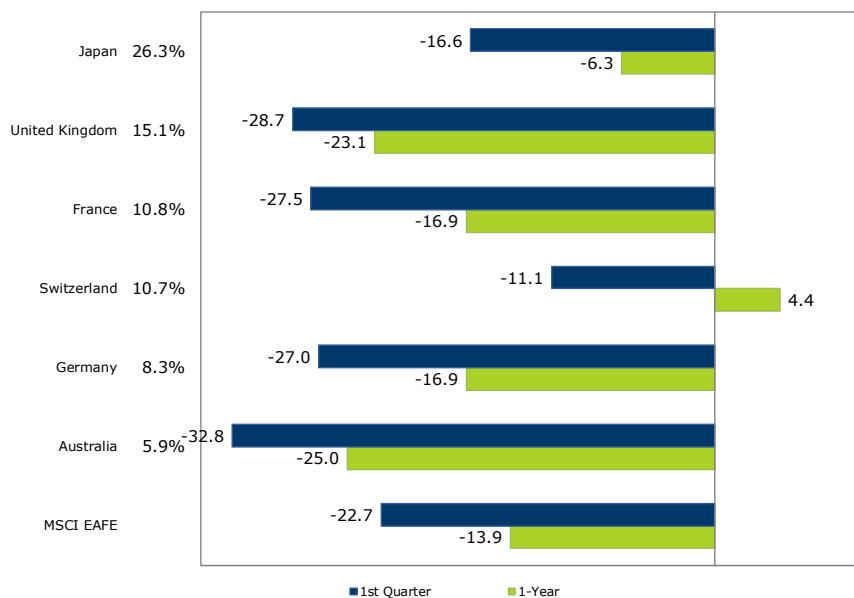


Data sources: Wilshire Compass, Wilshire Atlas

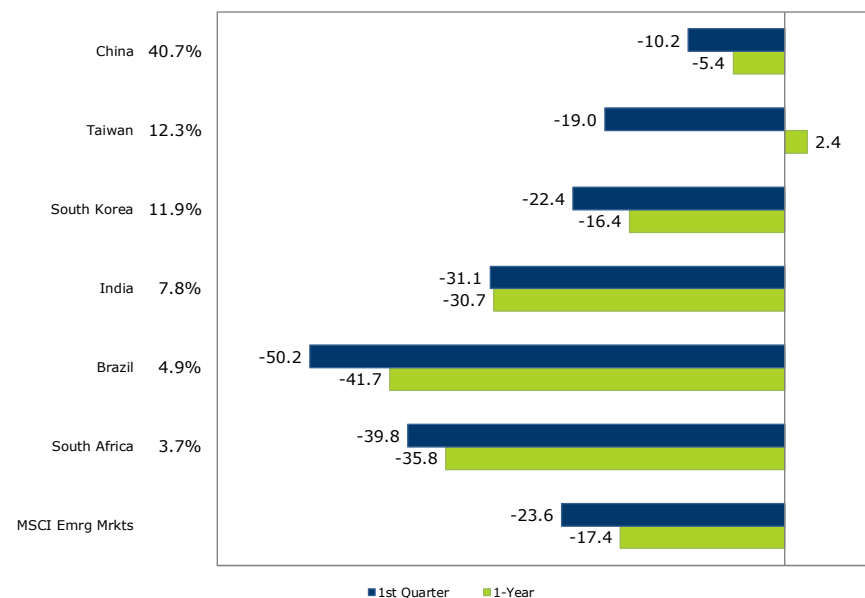
NON-U.S. EQUITY MARKET

AS OF 3/31/2020	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI EX-US (\$G)	-23.3	-23.3	-15.1	-1.5	-0.2	2.5
MSCI EAFE (\$G)	-22.7	-22.7	-13.9	-1.3	-0.1	3.2
MSCI EMERGING MARKETS (\$G)	-23.6	-23.6	-17.4	-1.3	0.0	1.0
MSCI FRONTIER MARKETS (\$G)	-26.6	-26.6	-18.7	-4.0	-2.5	1.4
MSCI ACWI EX-US GROWTH (\$G)	-18.2	-18.2	-6.9	2.9	2.5	4.3
MSCI ACWI EX-US VALUE (\$G)	-28.5	-28.5	-23.2	-5.9	-2.9	0.7
MSCI ACWI EX-US SMALL (\$G)	-28.9	-28.9	-20.8	-4.5	-0.3	3.2
MSCI ACWI MINIMUM VOLATILITY	-15.9	-15.9	-7.0	4.3	5.3	8.7
MSCI EAFE MINIMUM VOLATILITY	-16.3	-16.3	-9.0	2.1	2.7	6.1
FTSE RAFI DEVELOPED EX-US	-27.6	-27.6	-20.8	-4.7	-1.8	1.8
MSCI EAFE LC (G)	-20.4	-20.4	-12.1	-1.3	0.3	4.9

MSCI EAFE: LARGEST COUNTRIES & RETURN (USD)



MSCI EM: LARGEST COUNTRIES & RETURN (USD)



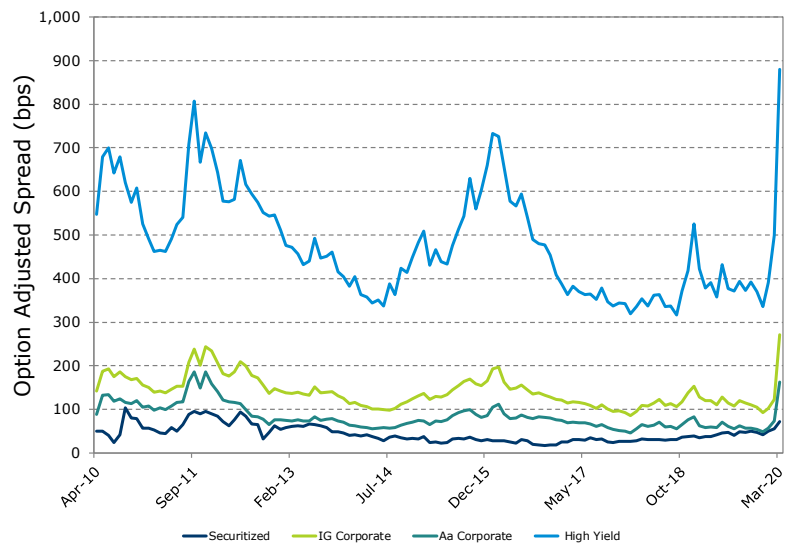
Data sources: Wilshire Compass

U.S. FIXED INCOME

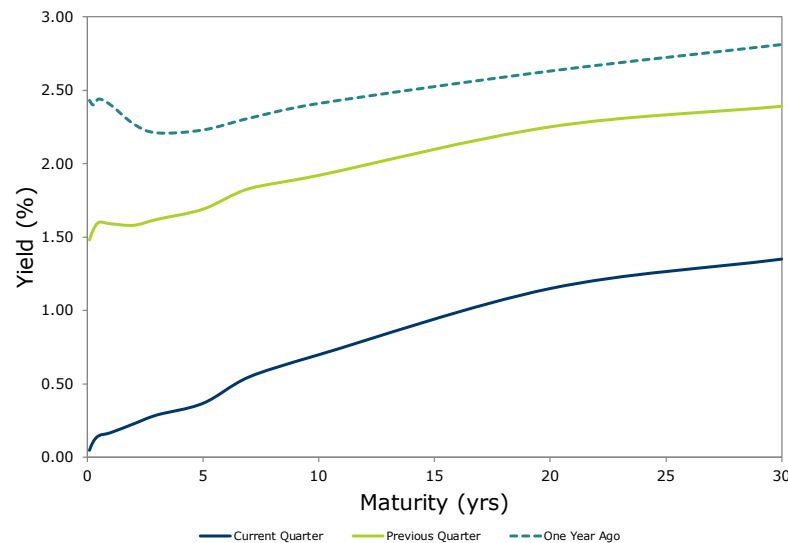
AS OF 3/31/2020	YTM	DURATION	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS AGGREGATE	1.6	5.7	3.2	3.2	8.9	4.8	3.4	3.9
BLOOMBERG BARCLAYS TREASURY	0.6	7.0	8.2	8.2	13.2	5.8	3.6	3.8
BLOOMBERG BARCLAYS GOV'T-REL.	2.0	5.6	0.5	0.5	6.2	4.1	2.9	3.4
BLOOMBERG BARCLAYS SECURITIZED	1.4	1.9	2.7	2.7	6.9	4.0	2.9	3.4
BLOOMBERG BARCLAYS CORPORATE	3.4	8.0	-3.6	-3.6	5.0	4.2	3.4	4.9
BLOOMBERG BARCLAYS LT G/C	2.7	16.4	6.2	6.2	19.3	9.7	6.0	8.1
BLOOMBERG BARCLAYS LT TREASURY	1.3	19.2	20.9	20.9	32.6	13.4	7.3	9.0
BLOOMBERG BARCLAYS LT GOV't-REL.	3.9	12.6	-3.6	-3.6	7.3	6.3	4.3	7.0
BLOOMBERG BARCLAYS LT CORP.	3.9	14.5	-4.5	-4.5	9.6	6.7	4.7	7.3
BLOOMBERG BARCLAYS U.S. TIPS *	0.7	7.8	1.7	1.7	6.8	3.5	2.7	3.5
BLOOMBERG BARCLAYS HIGH YIELD	9.5	4.1	-12.7	-12.7	-6.9	0.8	2.8	5.6
TREASURY BILLS	0.1	0.25	0.6	0.6	2.2	1.8	1.2	0.6

* 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



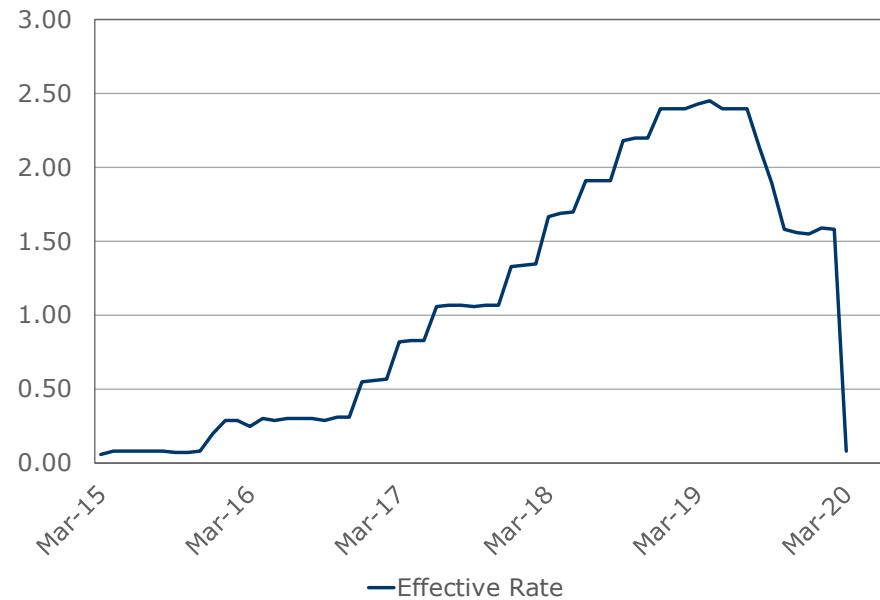
Data sources: Wilshire Compass, Bloomberg Barclays, U.S. Treasury

Wilshire Consulting

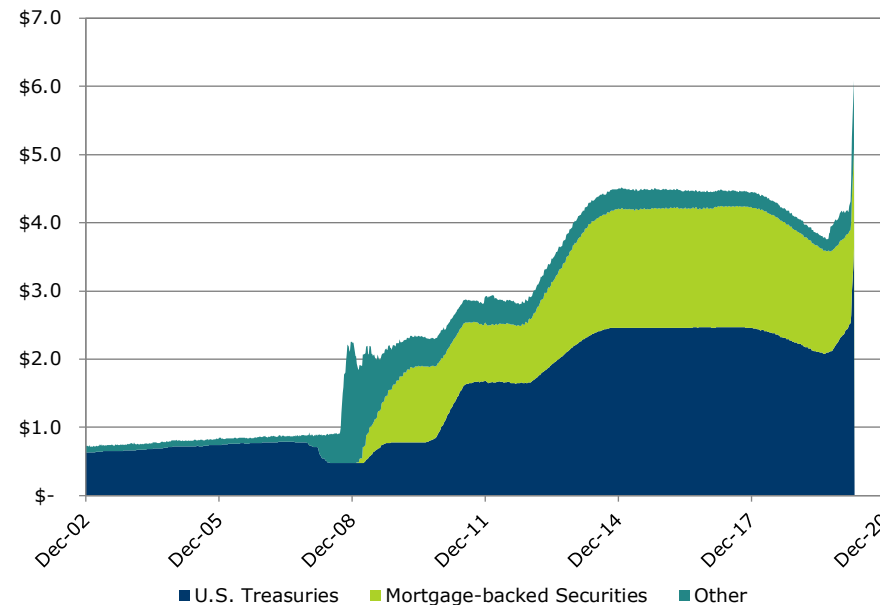
FEDERAL RESERVE

- Restarted unlimited asset purchase programs
- Reduced reserve requirements for the banking sector
- Restarted Term asset backed securities loan facility (TALF), expanding to include CMBS
- Launched a Primary (PMCCF) and Secondary Corporate Credit Facility (SMCCF)
- Allowed municipal debt to be eligible as collateral in Money Market Fund Liquidity Facility (MMLF) and Commercial Paper Funding Facility (CPFF)
- Total stimulus – FOMC plus U.S. government – in excess of \$3.75 T as of first week of April

FEDERAL FUNDS RATE (%)



FEDERAL RESERVE: BALANCE SHEET FORECAST (\$T)



ASSET CLASS PERFORMANCE

ASSET CLASS RETURNS - BEST TO WORST					
2015	2016	2017	2018	2019	2020 YTD
REITs 4.2%	MLPs 18.3%	Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	Core Bond 3.2%
U.S. Equity 0.7%	High Yield 17.1%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%	U.S. TIPS 1.7%
Core Bond 0.6%	U.S. Equity 13.4%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	T-Bills 0.6%
T-Bills 0.1%	Commodities 11.8%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	High Yield -12.7%
Developed -0.4%	Emrg Mrkts 11.6%	REITs 4.2%	REITs -4.8%	High Yield 14.3%	U.S. Equity -20.7%
U.S. TIPS -1.4%	REITs 7.2%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	Developed -22.7%
High Yield -4.5%	U.S. TIPS 4.7%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	Commodities -23.3%
Emrg Mrkts -14.6%	Core Bond 2.6%	Commodities 1.7%	MLPs -12.4%	Commodities 7.7%	Emrg Mrkts -23.6%
Commodities -24.7%	Developed 1.5%	T-Bills 0.8%	Developed -13.4%	MLPs 6.6%	REITs -25.6%
MLPs -32.6%	T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -14.2%	T-Bills 2.3%	MLPs -57.2%

ANNUALIZED 5-YEAR AS OF 3/2020
U.S. Equity 6.0%
Core Bond 3.4%
High Yield 2.8%
U.S. TIPS 2.7%
T-Bills 1.2%
Emrg Mrkts 0.0%
Developed -0.1%
REITs -0.2%
Commodities -7.8%
MLPs -20.7%

Data sources: Wilshire Compass

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



KRS Pension Plan

Asset Allocation Bucketing

KRS Pension Plan

Periods Ended As of March 31, 2020

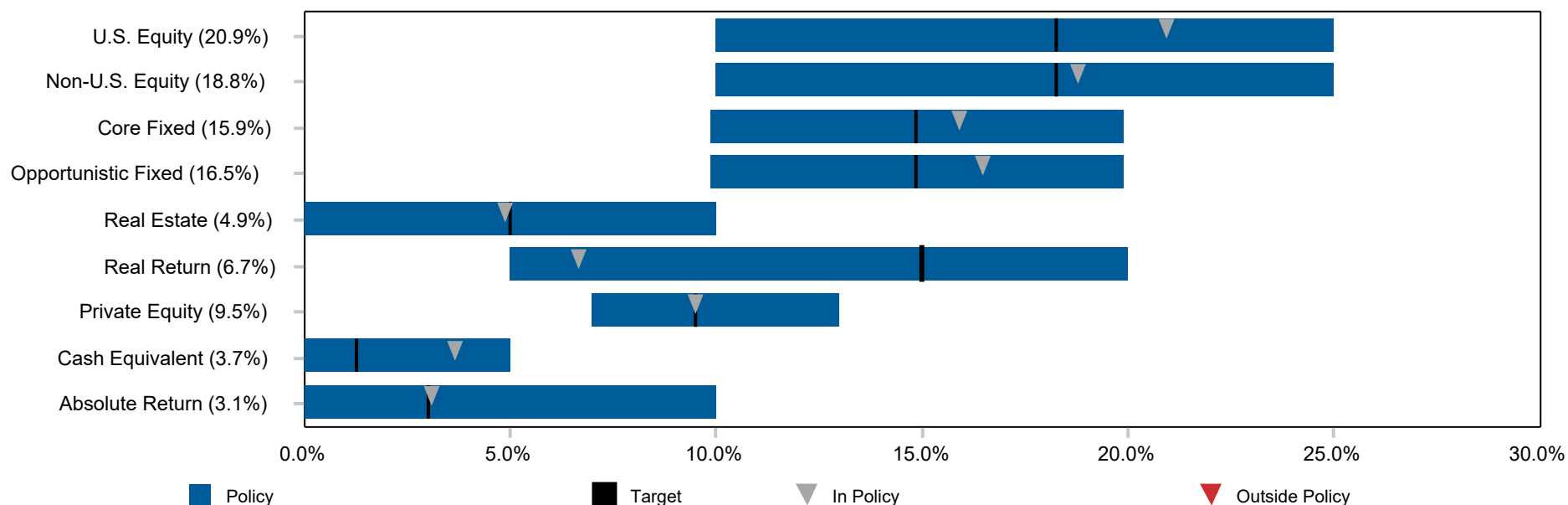
	Actual		Target	Difference	
	\$	%		\$	%
Growth	\$7,719,719,291	65.8%	60.7%	\$594,198,707	5.1%
U.S. Equity	\$2,457,550,532	20.9%	18.2%	\$321,068,248	2.7%
Non-U.S. Equity	\$2,208,663,049	18.8%	18.2%	\$72,180,765	0.6%
Private Equity	\$1,117,077,718	9.5%	9.4%	\$13,619,835	0.1%
High Yield/Specialty Credit	\$1,936,427,992	16.5%	15.0%	\$175,590,945	1.5%
Liquidity	\$2,299,100,980	19.6%	16.3%	\$385,658,056	3.3%
Core Fixed Income	\$1,868,303,146	15.9%	15.9%	\$1,815,876	0.0%
Cash	\$430,797,834	3.7%	1.4%	\$266,453,043	2.3%
Diversifying	\$1,720,093,376	14.7%	23.0%	-\$979,856,763	-8.3%
Real Estate	\$574,129,606	4.9%	5.0%	-\$12,816,076	-0.1%
Real Return	\$783,577,440	6.7%	15.0%	-\$977,259,607	-8.3%
Absolute Return	\$362,386,330	3.1%	3.0%	\$10,218,921	0.1%

Asset Allocation Compliance

KRS Pension Plan

Periods Ended As of March 31, 2020

Executive Summary

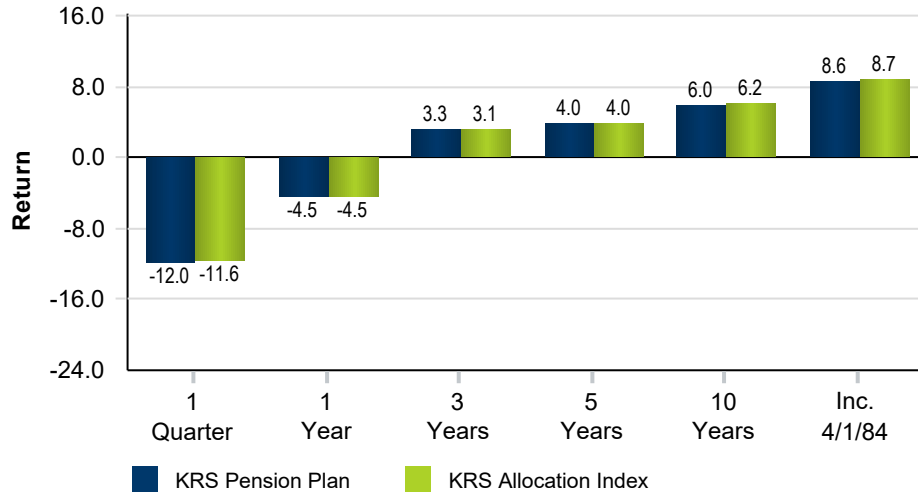


	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	2,457,550,532	20.9	10.0	25.0	18.3	-315,198,791
Non-U.S. Equity	2,208,663,049	18.8	10.0	25.0	18.3	-66,311,309
Core Fixed	1,868,303,146	15.9	9.9	19.9	14.9	-122,139,741
Opportunistic Fixed	1,936,427,992	16.5	9.9	19.9	14.9	-190,264,587
Real Estate	574,129,606	4.9	0.0	10.0	5.0	12,816,076
Real Return	783,577,440	6.7	5.0	20.0	15.0	977,259,607
Private Equity	1,117,077,718	9.5	7.0	13.0	9.5	-1,880,921
Cash Equivalent	430,797,834	3.7	0.0	5.0	1.3	-284,061,413
Absolute Return	362,386,330	3.1	0.0	10.0	3.0	-10,218,920
Total Fund	11,738,913,646	100.0			100.0	

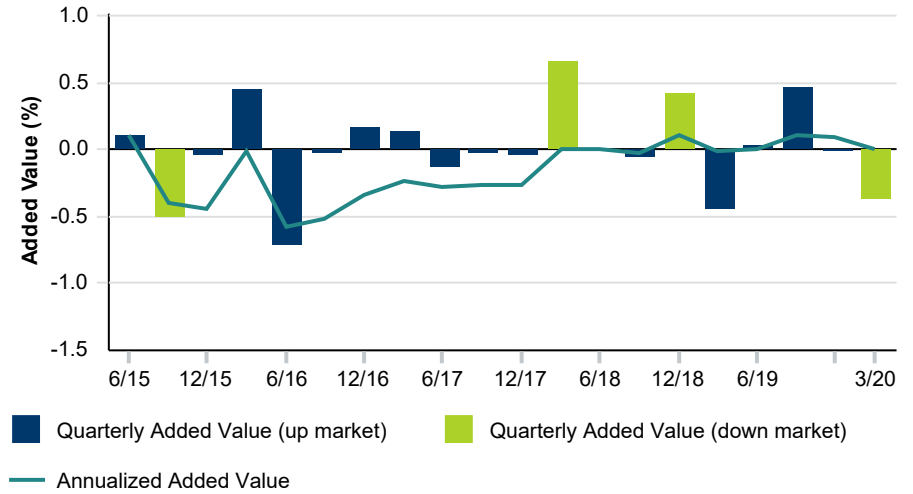
Total Fund Summary

KRS Pension Plan
Periods Ended March 31, 2020

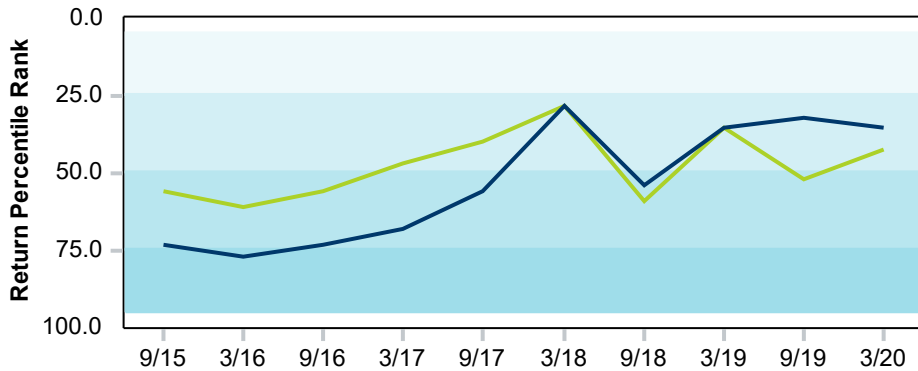
Comparative Performance



Added Value History

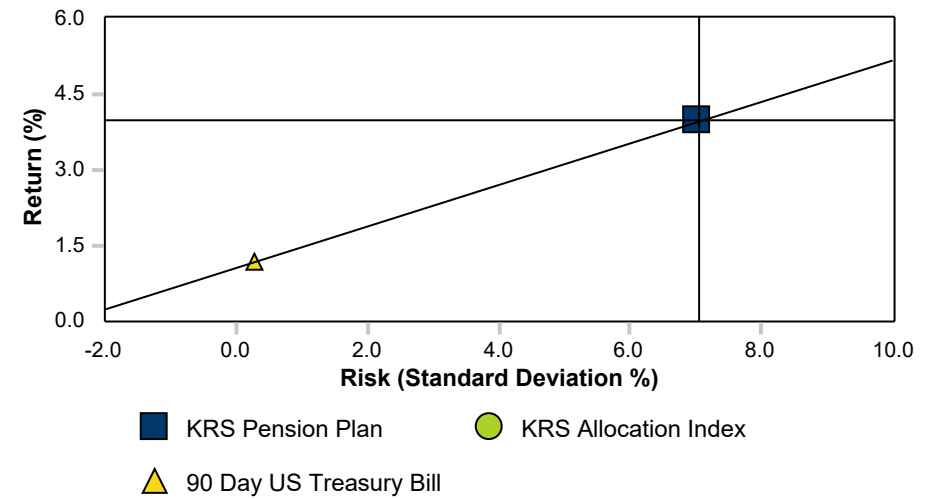


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
— KRS Pension Plan	10	0 (0%)	4 (40%)	5 (50%)	1 (10%)
— Benchmark	10	0 (0%)	5 (50%)	5 (50%)	0 (0%)

Risk and Return 04/1/15 - 03/31/20



Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
KRS Pension Plan	11,738,913,646	100.00	-8.65	-11.98	-7.08	-4.45	3.29	3.97	8.63	4/1/1984
KRS Allocation Index			-8.17	-11.60	-7.10	-4.51	3.13	3.97	8.75	
Value Added			-0.48	-0.38	0.02	0.06	0.16	0.00	-0.12	
KRS IPS Index			-8.19	-11.46	-6.97	-4.30				
Value Added			-0.46	-0.52	-0.11	-0.15				
KERS Pension Plan	2,129,622,388	18.14	-7.75	-10.26	-5.78	-3.35	3.34	3.80	8.60	4/1/1984
KERS Allocation Index			-7.76	-10.64	-6.21	-3.69	3.08	3.64	8.69	
Value Added			0.01	0.38	0.43	0.34	0.26	0.16	-0.09	
KERS IPS Index			-7.88	-10.52	-6.28	-3.73				
Value Added			0.13	0.26	0.50	0.38				
Assumed Rate 5.25%			0.43	1.29	3.91	5.25				
Value Added			-8.18	-11.55	-9.69	-8.60				
KERS (H) Pension Plan	633,301,939	5.39	-9.02	-12.53	-7.69	-5.09	3.06	3.88	8.61	4/1/1984
KERS (H) Allocation Index			-8.23	-11.80	-7.25	-4.65	3.32	4.01	8.75	
Value Added			-0.79	-0.73	-0.44	-0.44	-0.26	-0.13	-0.14	
KERS (H) IPS Index			-8.24	-11.62	-7.07	-4.38				
Value Added			-0.78	-0.91	-0.62	-0.71				
Assumed Rate 6.25%			0.51	1.53	4.65	6.25				
Value Added			-9.53	-14.06	-12.34	-11.34				
CERS Pension Plan	6,515,091,118	55.50	-8.88	-12.41	-7.47	-4.83	3.19	3.95	8.62	4/1/1984
CERS Allocation Index			-8.23	-11.82	-7.28	-4.67	3.32	4.02	8.75	
Value Added			-0.65	-0.59	-0.19	-0.16	-0.13	-0.07	-0.13	
CERS IPS Index			-8.25	-11.64	-7.10	-4.40				
Value Added			-0.63	-0.77	-0.37	-0.43				
Assumed Rate 6.25%			0.51	1.53	4.65	6.25				
Value Added			-9.39	-13.94	-12.12	-11.08				

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

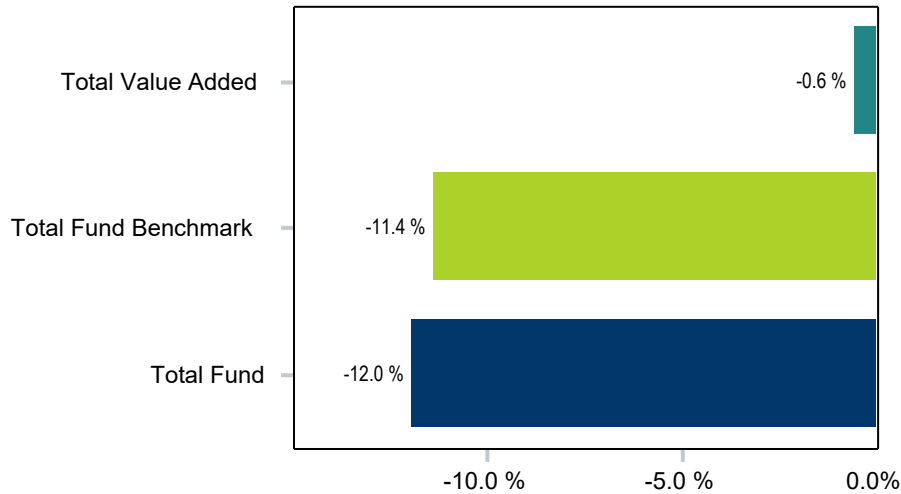
	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
CERS (H) Pension Plan	2,196,814,128	18.71	-8.85	-12.44	-7.57	-4.92	3.17	3.96	8.62	4/1/1984
CERS (H) Allocation Index			-8.23	-11.88	-7.38	-4.76	3.32	4.02	8.75	
Value Added			-0.62	-0.56	-0.19	-0.16	-0.15	-0.06	-0.13	
CERS (H) IPS Index			-8.24	-11.70	-7.20	-4.49				
Value Added			-0.61	-0.74	-0.37	-0.43				
Assumed Rate 6.25%			0.51	1.53	4.65	6.25				
Value Added			-9.36	-13.97	-12.22	-11.17				
SPRS Pension Plan	264,084,115	2.25	-8.22	-10.77	-6.24	-3.74	3.20	3.58	8.57	4/1/1984
SPRS Allocation Index			-7.33	-10.32	-5.50	-2.95	3.72	4.19	8.77	
Value Added			-0.89	-0.45	-0.74	-0.79	-0.52	-0.61	-0.20	
SPRS IPS Index			-7.87	-10.50	-6.17	-3.61				
Value Added			-0.35	-0.27	-0.07	-0.13				
Assumed Rate 5.25%			0.43	1.29	3.91	5.25				
Value Added			-8.65	-12.06	-10.15	-8.99				

Total Fund Attribution

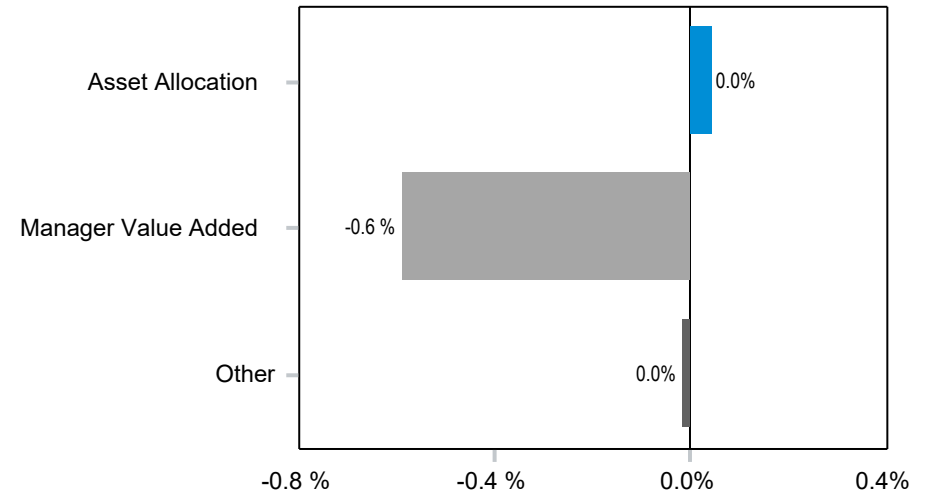
KRS Pension Plan

Periods Ended 1 Quarter Ending March 31, 2020

Total Fund Performance



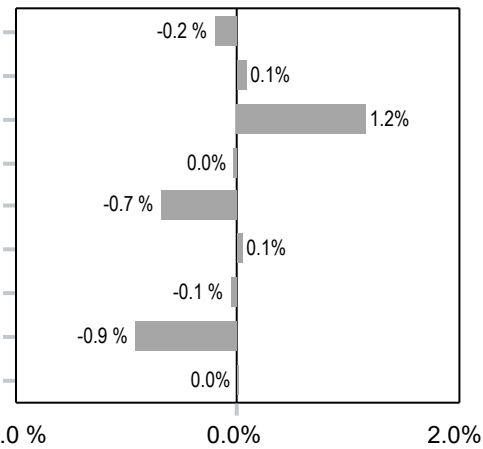
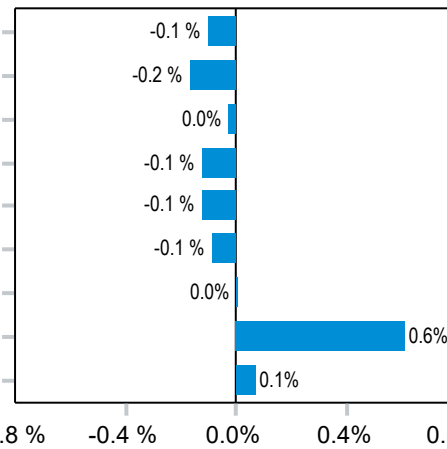
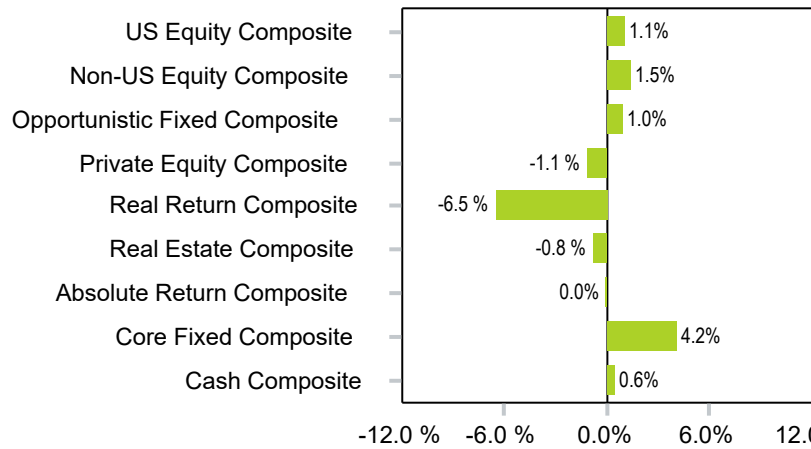
Total Value Added:-0.6 %



Total Asset Allocation:0.0%

Asset Allocation Value Added:0.0%

Total Manager Value Added:-0.6 %



■ Average Active Weight

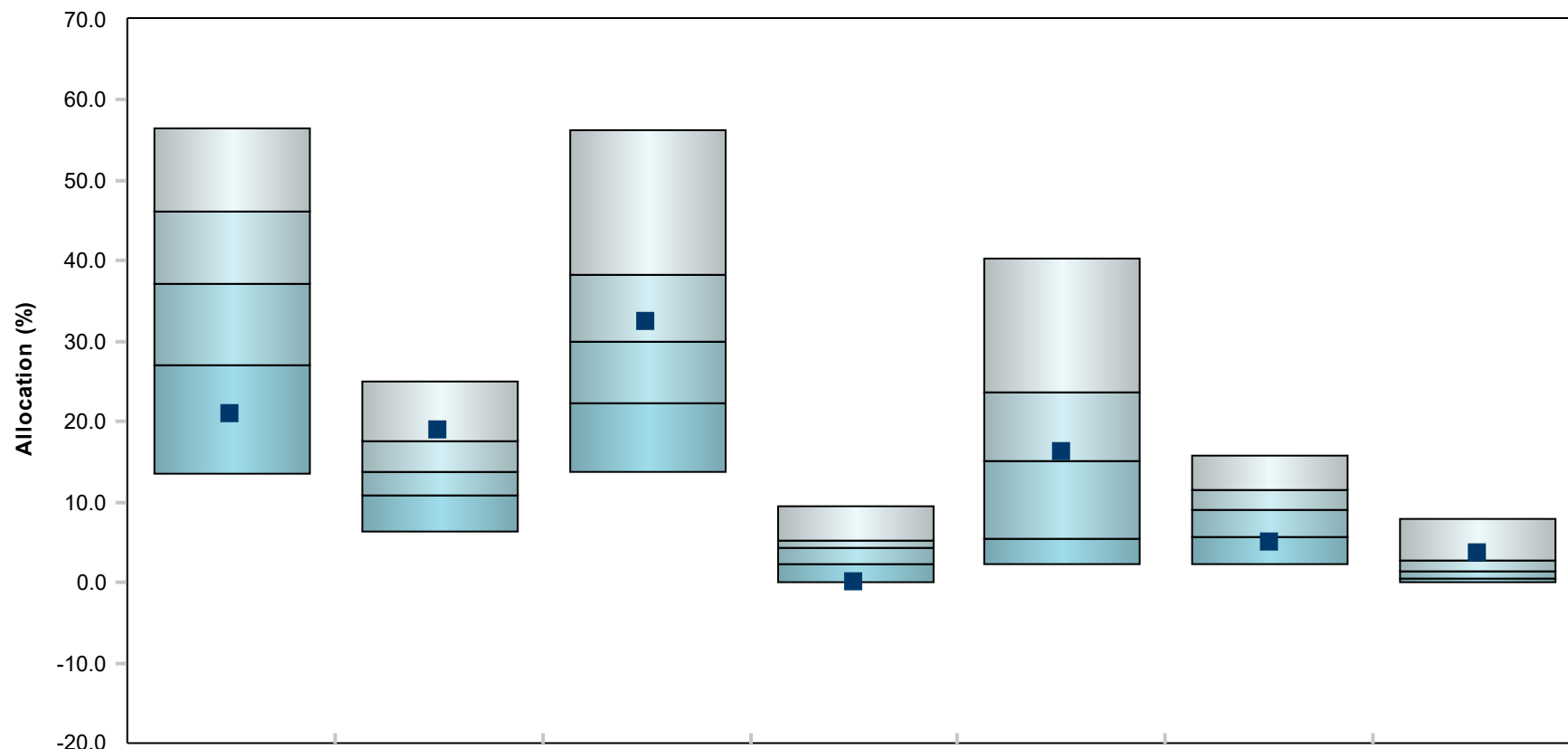
■ Asset Allocation Value Added

■ Manager Value Added

Plan Sponsor TF Asset Allocation

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2020

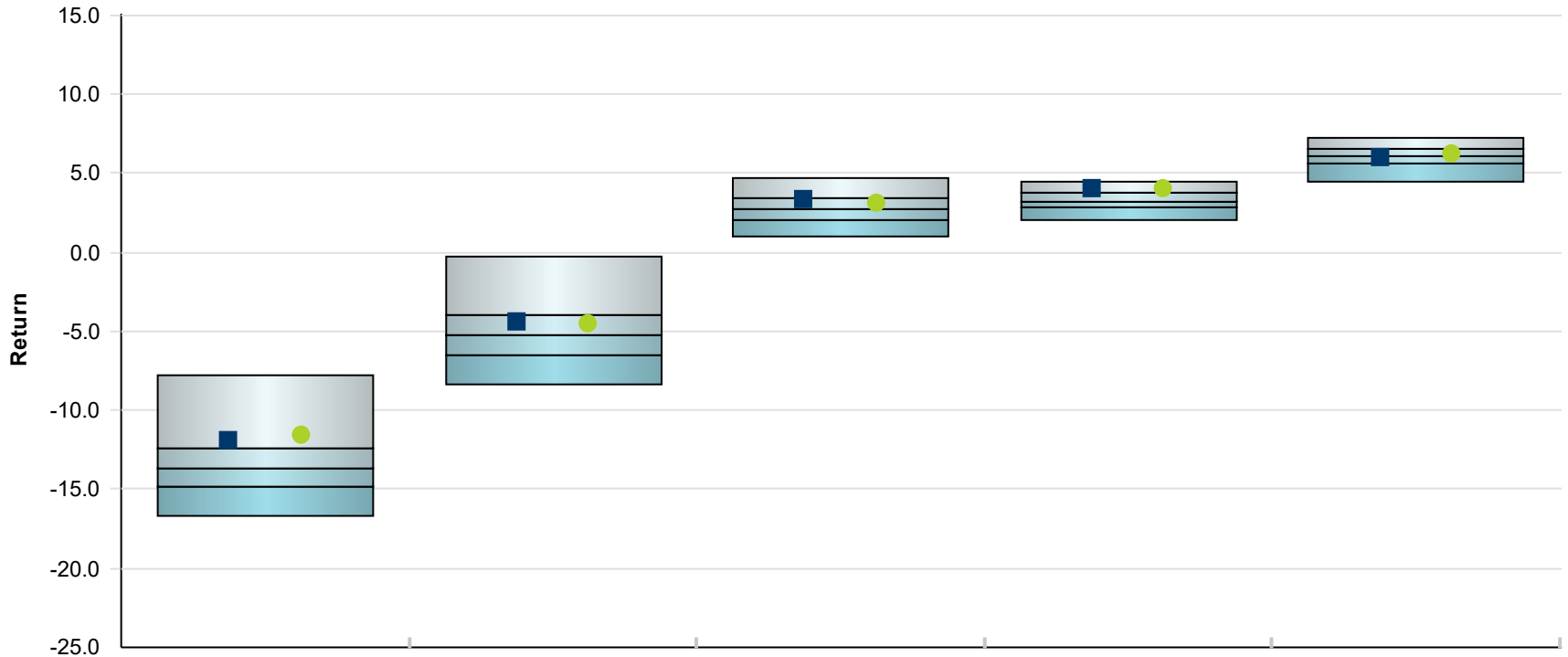


	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
■ KRS Pension Plan	20.94	18.81	32.41	0.00	16.19	4.89	3.67
5th Percentile	56.60	24.91	56.21	9.41	40.41	15.74	7.93
1st Quartile	46.23	17.67	38.17	5.17	23.66	11.51	2.76
Median	37.12	13.72	29.88	4.34	15.06	9.08	1.31
3rd Quartile	26.98	10.84	22.33	2.28	5.47	5.62	0.53
95th Percentile	13.45	6.34	13.72	0.07	2.29	2.19	0.06

Plan Sponsor Peer Group Analysis

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2020

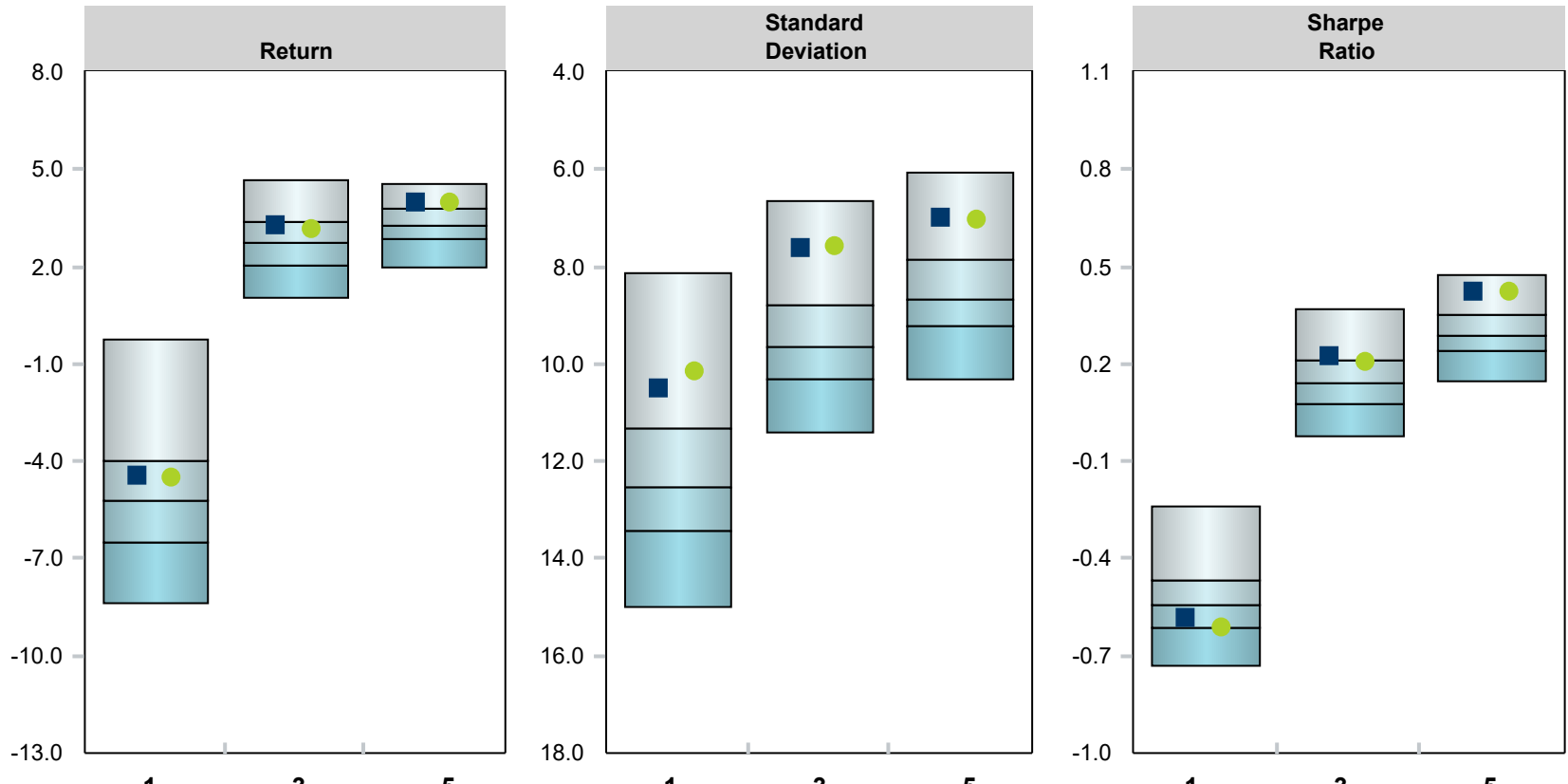


	QTD	1 Year	3 Years	5 Years	10 Years
■ KRS Pension Plan	-11.98 (19)	-4.45 (34)	3.29 (29)	3.97 (18)	5.99 (54)
● KRS Allocation Index	-11.60 (16)	-4.51 (35)	3.13 (34)	3.97 (18)	6.18 (44)
5th Percentile	-7.76	-0.24	4.66	4.52	7.27
1st Quartile	-12.43	-3.98	3.40	3.79	6.52
Median	-13.69	-5.22	2.76	3.26	6.06
3rd Quartile	-14.86	-6.53	2.06	2.84	5.63
95th Percentile	-16.68	-8.35	1.07	2.00	4.48
Population	437	436	405	376	304

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis-Multi Statistics

KRS Pension Plan
 Periods Ended March 31, 2020



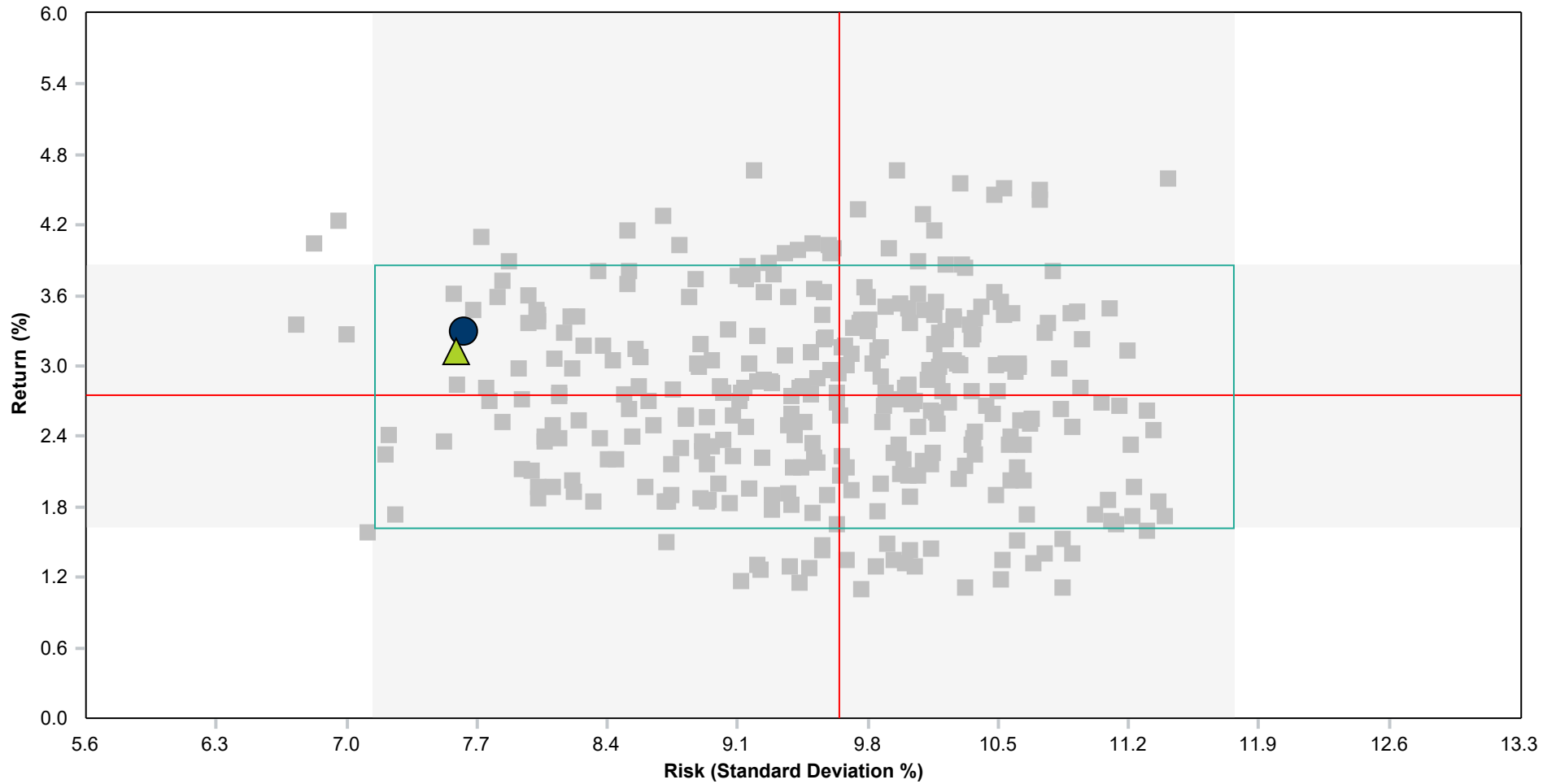
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KRS Pension Plan	-4.45 (34)	3.29 (29)	3.97 (18)	10.52 (13)	7.63 (8)	7.02 (9)	-0.58 (66)	0.22 (23)	0.42 (10)
● KRS Allocation Index	-4.51 (35)	3.13 (34)	3.97 (18)	10.18 (10)	7.59 (8)	7.05 (9)	-0.61 (76)	0.20 (26)	0.42 (11)
5th Percentile	-0.24	4.66	4.52	8.13	6.67	6.06	-0.24	0.37	0.48
1st Quartile	-3.98	3.40	3.79	11.32	8.80	7.88	-0.47	0.21	0.35
Median	-5.22	2.76	3.26	12.56	9.65	8.67	-0.54	0.14	0.29
3rd Quartile	-6.53	2.06	2.84	13.44	10.33	9.22	-0.61	0.07	0.24
95th Percentile	-8.35	1.07	2.00	14.98	11.42	10.32	-0.73	-0.02	0.14

Parenteses contain percentile rankings.
 Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended April 1, 2017 To March 31, 2020



	Return	Standard Deviation
● KRS Pension Plan	3.29	7.63
▲ KRS Allocation Index	3.13	7.59
— Median	2.76	9.65

Calculation based on monthly periodicity.

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
KRS Pension Plan	11,738,913,646	100.00	-8.65	-11.98	-7.08	-4.45	3.29	3.97	8.63	4/1/1984
KRS Allocation Index			-8.17	-11.60	-7.10	-4.51	3.13	3.97	8.75	
Value Added			-0.48	-0.38	0.02	0.06	0.16	0.00	-0.12	
KRS IPS Index			-8.19	-11.46	-6.97	-4.30				
Value Added			-0.46	-0.52	-0.11	-0.15				
GROWTH										
US Equity Composite	2,457,550,532	20.94	-14.29	-21.86	-13.93	-10.28	2.92	4.85	10.55	4/1/1984
Russell 3000 Index			-13.75	-20.90	-12.70	-9.13	4.00	5.77	10.47	
Value Added			-0.54	-0.96	-1.23	-1.15	-1.08	-0.92	0.08	
S&P 500 Index	1,466,292,916	12.49	-11.62	-18.93	-10.09	-6.20	5.49	6.93	6.60	7/1/2001
S&P 500 Index			-12.35	-19.60	-10.82	-6.98	5.10	6.73	6.17	
Value Added			0.73	0.67	0.73	0.78	0.39	0.20	0.43	
Scientific Beta	363,430,944	3.10	-16.27	-23.89	-17.79	-14.03	1.35		3.98	7/1/2016
S&P 500 Index			-12.35	-19.60	-10.82	-6.98	5.10		7.86	
Value Added			-3.92	-4.29	-6.97	-7.05	-3.75		-3.88	
River Road FAV	159,466,821	1.36	-19.03	-29.93	-21.24	-17.33	0.34		5.64	7/1/2016
Russell 3000 Value Index			-17.58	-27.32	-20.93	-18.02	-2.67		1.51	
Value Added			-1.45	-2.61	-0.31	0.69	3.01		4.13	
Westfield Capital	159,978,051	1.36	-11.89	-15.48	-3.44	1.84	11.05	7.62	11.38	7/1/2011
Russell 3000 Growth Index			-10.41	-14.85	-4.73	-0.44	10.54	9.74	12.26	
Value Added			-1.48	-0.63	1.29	2.28	0.51	-2.12	-0.88	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Internal US Mid Cap	116,274,095	0.99	-19.58	-29.14	-24.13	-21.78	-3.30	1.00	2.96	8/1/2014
S&P MidCap 400 Index			-20.25	-29.70	-24.80	-22.51	-4.09	0.56	2.58	
Value Added			0.67	0.56	0.67	0.73	0.79	0.44	0.38	
NTGI Structured	145,307,503	1.24	-20.85	-29.99	-24.61	-22.44	-3.27	0.83	8.09	10/1/1999
Russell 2000 Index			-21.73	-30.61	-25.55	-23.99	-4.64	-0.25	6.38	
Value Added			0.88	0.62	0.94	1.55	1.37	1.08	1.71	
Next Century Growth	46,720,711	0.40	-19.09	-21.00					-14.70	11/1/2019
Russell Microcap Growth Index			-20.94	-26.59					-15.66	
Value Added			1.85	5.59					0.96	
Invesco	40,938	0.00								
Transition Account	38,551	0.00								
Non-US Equity Composite	2,208,663,049	18.81	-15.58	-23.80	-17.69	-14.98	-0.65	0.55	2.16	7/1/2000
Policy Index			-15.11	-24.11	-18.55	-16.32	-2.25	-0.63	2.17	
Value Added			-0.47	0.31	0.86	1.34	1.60	1.18	-0.01	
BlackRock World Ex US	602,535,562	5.13	-14.08	-23.23	-18.50	-15.94	-1.95	-0.51	4.29	7/1/2009
Policy Index			-14.12	-23.26	-18.52	-16.09	-2.16	-0.77	4.07	
Value Added			0.04	0.03	0.02	0.15	0.21	0.26	0.22	
American Century	338,313,502	2.88	-11.89	-17.73	-8.44	-3.44	6.74	3.42	2.56	7/1/2014
Policy Index			-15.11	-24.11	-18.55	-16.32	-2.30	-0.67	-1.56	
Value Added			3.22	6.38	10.11	12.88	9.04	4.09	4.12	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Franklin Templeton	235,272,234	2.00	-16.41	-22.75	-13.55	-10.21	3.31	3.93	2.76	7/1/2014
Policy Index			-15.11	-24.11	-18.55	-16.32	-2.30	-0.67	-1.56	
Value Added			-1.30	1.36	5.00	6.11	5.61	4.60	4.32	
Lazard Asset Mgmt	416,630,628	3.55	-16.09	-24.10	-19.24	-16.47	-0.47	0.07	-0.41	7/1/2014
Policy Index			-15.11	-24.11	-18.55	-16.32	-2.30	-0.67	-1.56	
Value Added			-0.98	0.01	-0.69	-0.15	1.83	0.74	1.15	
LSV Asset Mgmt	336,317,526	2.86	-17.40	-27.07	-20.63	-19.34	-4.07	-1.44	-2.06	7/1/2014
Policy Index			-15.11	-24.11	-18.55	-16.32	-2.30	-0.67	-1.56	
Value Added			-2.29	-2.96	-2.08	-3.02	-1.77	-0.77	-0.50	
NTGI Int'l Small Cap	60,847,952	0.52	-19.55	-28.77	-21.77	-20.71	-4.57	-0.50	8.00	12/1/2008
MSCI AC World ex USA Small Cap (Net)			-19.30	-29.01	-22.12	-21.18	-4.89	-0.81	8.17	
Value Added			-0.25	0.24	0.35	0.47	0.32	0.31	-0.17	
JP Morgan Emerging Markets	108,018,284	0.92	-19.04	-24.74					-20.40	11/1/2019
MSCI Emerging Markets IMI			-16.16	-24.37					-18.94	
Value Added			-2.88	-0.37					-1.46	
Pzena Emerging Markets	109,566,953	0.93	-20.28	-31.44					-26.95	11/1/2019
MSCI Emerging Markets (Net)			-15.40	-23.60					-18.01	
Value Added			-4.88	-7.84					-8.94	
Pyramis Intl	3,461	0.00								
Non-US Equity Transition	1,156,948	0.01								

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Opportunistic Fixed Composite	1,936,427,992	16.50	-5.67	-5.48	-2.52	-0.13			1.68	10/1/2018
Policy Index			-11.91	-12.86	-9.93	-8.05			-4.56	
Value Added			6.24	7.38	7.41	7.92			6.24	
BSP Private Credit	97,520,423	0.83	2.51	2.51	4.67	8.02			4.05	2/1/2018
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-10.66	-9.16			-2.82	
Value Added			14.88	15.56	15.33	17.18			6.87	
BSP Coinvestment	11,451,163	0.10	1.78	1.78					1.78	10/1/2019
S&P/LSTA Leverage Loan Index			-12.37	-13.05					-11.54	
Value Added			14.15	14.83					13.32	
Capital Springs	40,169,500	0.34	0.00						0.00	2/1/2020
S&P/LSTA Leverage Loan Index			-12.37						-13.53	
Value Added			12.37						13.53	
Cerberus Capital Mgmt	121,853,924	1.04	0.00	1.86	6.29	8.70	8.55	8.76	8.45	9/1/2014
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-10.66	-9.16	-0.78	1.14	1.20	
Value Added			12.37	14.91	16.95	17.86	9.33	7.62	7.25	
Columbia	316,485,843	2.70	-10.62	-12.10	-7.45	-4.45	1.68	3.03	5.39	11/1/2011
Blmbg. Barc. U.S. Corp: High Yield			-11.46	-12.68	-9.21	-6.94	0.77	2.78	4.98	
Value Added			0.84	0.58	1.76	2.49	0.91	0.25	0.41	
Manulife Asset Mgmt	314,007,934	2.67	-5.14	-4.56	-1.32	1.61	2.04	2.16	3.58	12/1/2011
Policy Index			-1.95	1.30	3.92	7.15	4.37	3.32	2.20	
Value Added			-3.19	-5.86	-5.24	-5.54	-2.33	-1.16	1.38	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Marathon Bluegrass	357,123,278	3.04	0.76	2.75	2.45	3.94	3.95		6.67	1/1/2016
Blmbg. Barc. U.S. Corp: High Yield			-11.46	-12.68	-9.21	-6.94	0.77		5.01	
Value Added			12.22	15.43	11.66	10.88	3.18		1.66	
Shenkman Capital	173,557,130	1.48	-12.24	-13.27	-10.50	-9.13	-0.79	0.75	3.09	10/1/2010
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-10.66	-9.16	-0.78	1.14	3.03	
Value Added			0.13	-0.22	0.16	0.03	-0.01	-0.39	0.06	
Waterfall	210,900,396	1.80	-17.47	-17.25	-14.02	-11.50	2.05	4.36	9.05	2/1/2010
Policy Index			-8.69	-9.20	-6.75	-5.09	0.95	2.25	4.12	
Value Added			-8.78	-8.05	-7.27	-6.41	1.10	2.11	4.93	
White Oak Yield Spectrum	129,560,911	1.10	2.23	2.23	5.34	7.29			5.10	3/1/2018
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-10.66	-9.16			-3.03	
Value Added			14.60	15.28	16.00	16.45			8.13	
H/2 Credit Partner	82,356,356	0.70	-3.30	-3.24	-1.80	-3.66	0.71	3.08	4.46	7/1/2011
Mesa West Core Lend	59,717,361	0.51	1.43	1.43	6.64	8.62	7.61	7.73	6.96	5/1/2013
Mesa West IV	21,687,291	0.18	1.62	1.62	6.42	6.42	5.74		5.58	3/1/2017
Loomis	36,482	0.00								
Private Equity Composite	1,117,077,718	9.52	1.66	0.15	6.65	10.27	12.89	11.14	11.10	7/1/2002
KRS Short-Term PE Index			1.66	0.15	6.65	10.27	12.89	11.14	11.10	
Value Added			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Russell 3000 +3% 1 Quarter Lag			3.14	9.91	17.46	34.95	18.01	14.58	11.63	
Value Added			-1.48	-9.76	-10.81	-24.68	-5.12	-3.44	-0.53	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
DIVERSIFYING STRATEGIES										
Real Return Composite	783,577,440	6.68	-14.04	-17.50	-15.44	-13.70	-3.03	-0.39	1.57	7/1/2011
Real Return Index (P)			-7.47	-9.47	-8.33	-6.33	-0.95	0.36	1.60	
Value Added			-6.57	-8.03	-7.11	-7.37	-2.08	-0.75	-0.03	
Internal TIPS	38,092,446	0.32	-2.01	-0.81	0.65	2.60	1.78	1.93	4.62	5/1/2002
Blmbg. Barc. U.S. TIPS 1-10 Year			-1.83	0.31	1.92	4.50	2.54	2.18	4.10	
Value Added			-0.18	-1.12	-1.27	-1.90	-0.76	-0.25	0.52	
PIMCO All Asset	293,313,289	2.50	-11.75	-16.12	-12.93	-10.60	-0.98	1.06	2.66	12/1/2011
Blmbg. Barc. U.S. TIPS 1-10 Year			-1.83	0.31	1.92	4.50	2.54	2.18	1.43	
Value Added			-9.92	-16.43	-14.85	-15.10	-3.52	-1.12	1.23	
Tortoise Capital	71,101,127	0.61	-39.61	-49.08	-52.86	-53.15	-23.90	-16.70	2.16	8/1/2009
Alerian MLP Index			-47.23	-57.19	-61.00	-60.95	-28.91	-20.66	-2.50	
Value Added			7.62	8.11	8.14	7.80	5.01	3.96	4.66	
Nuveen Real Asset	168,039,295	1.43	-22.36	-25.50	-19.98	-17.31	-2.26	0.54	0.55	2/1/2015
Policy Index			-15.32	-19.16	-14.99	-12.42	-0.53	1.66	1.61	
Value Added			-7.04	-6.34	-4.99	-4.89	-1.73	-1.12	-1.06	
Amerra AGRI Fund II	24,456,817	0.21	3.80	3.80	15.42	16.55	4.15	5.60	5.43	12/1/2012
Amerra AGRI Holdings	49,138,784	0.42	-0.30	-0.30	0.99	1.71	-2.60		-1.07	8/1/2015
BTG Pactual	26,810,942	0.23	2.48	2.48	1.22	1.23	0.76	-4.34	-6.10	12/1/2014
IFM Infrastructure	43,954,110	0.37	0.00	0.00	2.86				2.86	7/1/2019
Magnetar MTP EOF II	33,791,199	0.29	2.32	2.32	5.83	8.53	7.24		3.91	8/1/2015

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date	
Oberland Capital	6,577,893	0.06	0.00	0.00	19.36	19.36			10.04	8/1/2018	
Taurus Mine Finance	27,525,705	0.23	0.00	0.00	4.49	8.81	10.09	13.30	13.30	4/1/2015	
TPF II	775,832	0.01	0.00	0.00	-0.17	14.16	5.23	-0.24	-2.00	10/1/2008	
Real Estate Composite	574,129,606	4.89	1.67	2.85	8.80	10.09	9.34	9.38	6.21	7/1/1984	
NCREIF ODCE NOF 1 Quarter Lag			1.27	1.27	3.15	4.39	6.13	7.98			
Value Added			0.40	1.58	5.65	5.70	3.21	1.40			
Baring	42,241,755	0.36	9.33	6.67	40.75	42.74			31.04	1/1/2019	
Divcowest IV	3,067,533	0.03	1.74	1.74	15.32	15.32	17.46	24.25	20.86	3/1/2014	
Fundamental Partners III	62,268,093	0.53	2.92	2.92	13.76	16.00			9.91	5/1/2017	
Greenfield Acq VI	798,274	0.01	-36.85	-36.85	-54.14	-54.32	-31.57	-17.82	-8.46	12/1/2012	
Greenfield Acq VII	19,827,234	0.17	7.12	7.12	19.36	19.69	15.56	15.26	13.47	7/1/2014	
Harrison Street	83,484,880	0.71	0.00	2.36	5.66	7.08	8.28	8.99	8.46	5/1/2012	
Lubert Adler VII	28,914,592	0.25	0.89	0.89	0.90	2.02	8.78	6.07	0.71	7/1/2014	
Lubert Adler VII B	31,312,374	0.27	4.87	4.87	9.82	12.46			6.17	7/1/2017	
Patron Capital	18,566,252	0.16	3.77	1.48	5.06	7.05	16.50		3.58	8/1/2016	
Prologis Targeted US	147,280,226	1.25	0.00	4.26	12.27	15.53	17.38	15.84	15.61	10/1/2014	
Rubenstein PF II	16,367,756	0.14	0.00	0.00	0.65	0.65	10.38	7.12	11.91	7/1/2013	
Stockbridge Sm/Mkts	89,851,248	0.77	1.01	1.01	4.08	6.24	7.62	9.00	8.79	5/1/2014	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Walton St RE VI	12,658,279	0.11	0.19	0.19	-0.32	1.03	4.21	3.78	-15.38	5/1/2009
Walton St RE VII	10,191,111	0.09	0.32	0.32	-2.38	-2.38	2.98	6.90	9.01	7/1/2013
Perimeter Park	7,300,000	0.06								
Absolute Return Composite	362,386,330	3.09	-8.55	-7.97	-7.14	-7.60	-0.70	-0.22	2.59	4/1/2010
HFRI FOF Div 1 Month Lag			-1.26	0.92	2.85	3.81	3.02	1.78	2.81	
Value Added			-7.29	-8.89	-9.99	-11.41	-3.72	-2.00	-0.22	
Arrowmark	173,646,207	1.48	-14.63	-13.12	-8.73	-6.73			0.52	6/1/2018
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-10.66	-9.16			-3.89	
Value Added			-2.26	-0.07	1.93	2.43			4.41	
Blackstone Strat Opp	2,427,931	0.02	0.72	-0.55	-1.93	-4.81			-0.14	8/1/2017
Credit Suisse	415,818	0.00	0.00	0.00	0.67	2.43			5.49	6/1/2017
Gotham Neutral Strategies	12,429,685	0.11	-2.13	-6.14	-3.73	-6.83	-3.34		-3.34	4/1/2017
Governors Lane Onshore	5,576,338	0.05	-0.19	1.20	4.18	5.41	1.35		1.35	4/1/2017
Liquidalts H20 Force	11,702,174	0.10	-26.77	-35.04	-30.71	-30.63	-8.97		-5.38	8/1/2016
Luxor Capital	1,234,091	0.01	-10.82	-10.86	-25.91	-18.99	2.75	1.40	-0.85	4/1/2014
Myriad Opportunities	44,895,782	0.38	0.07	1.61	1.80	-1.90	1.70		2.85	5/1/2016
PAAMCO	7,095	0.00	0.00	0.00	0.05	0.05	-29.23	-19.59	-9.40	9/1/2011
Pine River	136,488	0.00	0.05	4.45	22.89	35.58	10.02	5.34	5.09	5/1/2014
PRISMA Capital	97,019,183	0.83	0.00	0.67	0.19	0.19	2.53	1.44	3.24	9/1/2011

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2020

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
SRS Partners US	9,330,748	0.08	1.90	4.58	10.89	17.18			12.11	8/1/2017
Tricadia Select	3,564,792	0.03	0.00	0.00	1.05	1.82			-9.43	9/1/2017
LIQUIDITY										
Core Fixed Composite	1,868,303,146	15.92	-3.99	-1.94	0.06	2.69			4.30	10/1/2018
Blmbg. Barc. U.S. Aggregate			-0.59	3.15	5.68	8.93			9.11	
Value Added			-3.40	-5.09	-5.62	-6.24			-4.81	
Loomis Sayles Intmd	518,519,356	4.42	-0.64	1.90	3.81	6.36			6.82	2/1/2019
Blmbg. Barc. U.S. Intermediate Aggregate			-0.04	2.49	4.38	6.88			7.16	
Value Added			-0.60	-0.59	-0.57	-0.52			-0.34	
Lord Abbett	964,590,428	8.22	-7.03	-6.03	-4.28	-2.49			0.06	10/1/2018
ICE BofAML 1-3 Year U.S. Corporate			-2.79	-1.68	0.18	1.79			2.98	
Value Added			-4.24	-4.35	-4.46	-4.28			-2.92	
NISA	385,193,362	3.28	-0.84	2.84	5.40	8.74	4.84	3.52	4.41	2/1/2009
Blmbg. Barc. U.S. Aggregate			-0.59	3.15	5.68	8.93	4.82	3.36	4.25	
Value Added			-0.25	-0.31	-0.28	-0.19	0.02	0.16	0.16	
Cash Composite	430,797,834	3.67	0.08	0.43	1.84	2.58	2.19	1.57	3.54	1/1/1988
90 Day US Treasury Bill			0.29	0.58	1.61	2.25	1.83	1.17	3.16	
Value Added			-0.21	-0.15	0.23	0.33	0.36	0.40	0.38	