January	KPPA MONTHLY PERFORMANCE UPDATE
2023	

What's going on in the marketplace?

During the month of January, growth assets performed well as the recovery in global risk appetite resumed. Global equity markets strengthened on the back of increased optimism that inflation may be moderating and signs that central banks are pivoting from draconian tightening. In response, the hopes of the global economy's ability to avoid a hard landing rose. NonUS markets also benefitted from a weakening US dollar that has been hovering around multi-decade highs. Fixed income markets also strengthened as yields fell and prices rose.

The KPPA Pension Trust portfolio gained 3.77% during the month of January, underperforming its blended benchmark return of 4.70%. The KRS Pension Composite produced a 3.04% return during the month. The KERS and SPRS Pension portfolios returned 2.88% and 3.03% respectively, while their benchmark gained 3.98%. The KERS-H Pension portfolio gained 3.69% versus its benchmark return of 4.66%. All three funds underperformed their respective benchmarks with similar drivers of attribution. Selection was weaker in the fixed income portfolio, most notably in the specialty credit allocation, though core investments also struggled. The overweight allocation to cash also weighed on the portfolio during a risk-on period. Offsetting a portion of the underperformance was the solid stock selection in the public equity allocation, combined with the underweight to both the real return and real estate portfolios, which were some of the weaker performing asset classes during the month.

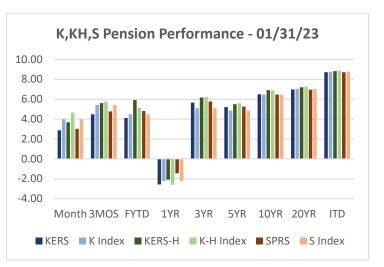
For the fiscal year, the KPPA Pension Trust portfolio gained 5.89%, outperforming the benchmark return 5.09%, while the KRS Pension Composite returned 4.52%. The KERS and SPRS Pension portfolios returned 4.11% and 4.81%, against a benchmark return of 4.48%. The KERS-H Pension portfolio gained 5.91% while its benchmark returned 5.11%.

Global equity markets were strong to start the year, as evidenced by the MSCI ACWI Index returning 7.17% during the month of January. Non-US markets outpaced their domestic market counterparts (MSCI ACWI Ex-US: 7.98% versus R3000: 6.89%). This brought the fiscal year return for global equity markets to 9.61% (KPPA global equity portfolio: 11.54%).

US equity markets gained 6.89% during the month (Russell 3000), while the KPPA portfolio fared slightly better, returning 6.99%. All market segments were stronger (LC: 6.28%, MC: 9.23%, SC: 9.75%); with growth outpacing value (R3000G: 8.44% versus R3000V: 5.43%). For the fiscal year, the KPPA US Equity portfolio has gained 10.16% compared with its benchmark return of 9.45%. Relative outperformance has been driven by the portfolio's slight overweight down market cap and to value.

NonUS equity markets returned 7.98% (MSCI ACWI Ex-US) during the month. Developed markets returned 8.20% (MSCI World Ex-US) during the period while emerging markets fell 7.90% (MSCI EM). The KPPA portfolio gained 8.37% during the month, outpacing its index by 39bps. Relative underperformance was driven by stock selection, specifically within the growth mandates. The fiscal year return now stands at 13.42% versus 11.32%.

The specialty credit portfolio underperformed its benchmark during the month, returning 1.30% versus 3.27%. The high yield market gained 3.81% as credit



spreads tightened and rates fell. Leveraged loans gained 2.73% during the period but failed to keep pace given their lower rate exposure. For the fiscal year, the portfolio has underperformed its benchmark, gaining 3.63% versus 7.26%. The reported relative underperformance is largely driven by the issues associated with timing differences between the private market mandates and the public market benchmarks which tend to be exacerbated during periods of larger moves in the public markets. Individual strategy relative performance has been mixed fiscal year to date, especially with private market pricing playing catch-up, but continues to produce strong relative performance over longer periods.

The core fixed income portfolio gained 166bps compared to the Bloomberg Aggregate Index return of 3.08% as nominal bond yields were pulled lower by declining real yield and breakeven inflation. Relative underperformance was attributable to positioning within the allocation. While staff has begun to normalize the duration profile, the portfolios remain underweight overall duration given expectations for a further increase in rates and continued volatility. For the fiscal year, the portfolio has returned 1.11% compared to the benchmark return of 0.02%.

The private equity allocation was fairly flat during the month, gaining 9bps, and bringing the fiscal year return to -5.90%. Trailing public marks have significantly affected the overall performance of the portfolio, and the portfolio's 1-year return crossed into negative territory to -0.52% as of 01/31/23.

The real return portfolio gained 2.19% during the month, compared to its benchmark return of -0.06%. As with several of the previous months, performance was driven by the MLP portion of the portfolio (approximately 40% of the allocation); which gained 5.40%. Additionally, the investment in infrastructure debt performed well during the period. For the fiscal year, the portfolio has returned 10.06% versus 3.26% (benchmark).

The real estate portfolio fell -2.46% during the month of January. The 1-year return now stands at 10.33% versus the 20.96% return of its benchmark. This benchmark will fall to 6.5% next quarter as the negative impact of higher interest rates on 4Q 2022 valuations show up in the quarterly lagged returns. However, for calendar year 2022, all three of KPPA's open-end real estate funds (approximately 75% of the allocation) outperformed the benchmark by at least 250bps.

The cash portfolio returned 0.28% during the month compared with the 3-month T-bill's 0.37%. This brought the fiscal year return to 1.70%, in line with the benchmark.

	KERS	5, KERS-HAZ	, & SPRS - PI	ENSION FUN	D - PLAN NE	T RETURNS	- 01/31/23					
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD	
KERS	3,341,727,956.54	2.88	4.48	4.11	-2.57	5.66	5.21	6.49	6.98	7.52	8.7	
KY Ret. KERS Plan IPS Index		3.98	5.42	4.48	-2.21	5.09	4.85	6.47	7.05	7.52	8.77	
KERS- H 866,457,451.26		3.69	5.62	5.91	-2.09	6.18	5.50	6.92	7.20	7.66	8.83	
KY Ret. KERS Haz Plan IPS Index		4.66	5.75	5.11	-2.60	6.22	5.60	6.90	7.27	7.66	8.88	
SPRS	573,188,052.21	3.03	4.77	4.81	-1.44	5.77	5.26	6.46	6.97	7.51	8.7	
KY Ret. SPRS Plan IPS Inde	x	3.98	5.42	4.48	-2.21	5.09	4.85	6.44	7.03	7.50	8.76	
	KPPA PENSIC	N FUND UN	IT - NET RE	TURNS - 01/3	1/23 - PRO)	KY PLAN ASS	ET PERFORM	ANCE				
Structure		Month	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD	
PUBLIC EQUITY		7.57	7.57	11.54	-6.94	6.74	5.42	8.18	8.35	8.53	10.1	
MSCI ACWI		7.17	7.17	9.61	-7.99	6.36	5.06	7.94	8.27	8.33	9.9	
PRIVATE EQUITY		0.09	0.09	-5.90	-0.52	16.24	14.16	13.49	12.85		11.8	
Russell 3000 + 3%(Qtr Lag		7.44	7.44	-12.43	-13.52	12.86	12.91	15.67	12.33		11.6	
SPECIALTY CREDIT		1.30	1.30	3.63	1.74	4.82	5.18				5.5	
50% BB US HY / 50% SP LSTA Leveraged Loan		3.27	3.27	7.26	-1.69	2.33	3.35				3.50	
CORE FIXED INCOME		1.66	1.66	1.11	-3.41	0.27	2.12				2.4	
Bloomberg Barclays US Ag	gregate	3.08	3.08	0.02	-8.36	-2.35	0.86			-	1.68	
CASH		0.28	0.28	1.70	1.90	0.82	1.42	1.05	1.64	2.70	3.3	
Citigroup Treasury Bill-3 N	Ionth	0.37	0.37	1.70	1.87	0.79	1.30	0.78	1.23	2.30	2.8	
REAL ESTATE		-2.46	-2.46	1.34	10.33	13.15	12.38	10.97	8.37	6.66	6.8	
NCREIF NFI-ODCE Net 1 Qt	in Arroars IndoxA	0.00	0.00	4.87	20.96	11.38	9.26	9.91	7.78	7.85	6.78	
REAL RETURN	III Allears Huex	2.19	2.19	10.06	9.93	7.64	5.48	3.91	7.78	7.85	4.7	
US CPI +3%		-0.06	-0.06	3.26	8.75	7.25	5.25	3.91		-	3.9	
		0.00	0.00	5.20	0.75	7.25	5.25	5.55			5.50	
KERS 32.4		4	.9	17.8		19	9.6		17.6	5.6	5 2.1	
KERS-H	44.2			7.1		20.3		12.6	6	.7 6.2	2.8	
SPRS 33.3		2	9	16.2		20.2			21.7	4	.0 1.8	
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KERS PEN Relativ	Í	KERS-HAZ PEN Relative Weights					SPRS PEN Relative Weights					
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Real Return			Return				Real Re	eturn				

	KERS INS, K	ERS-HAZ IN	S, SPRS INS	- INSURANCE	FUND - PL	AN NET RETU	JRNS - 01/31	L/23				
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD	
KERS INS	1,386,221,200.28	3.70	5.61	6.29	-1.51	6.24	5.30	6.57	6.94	6.75	7.25	
KY Ins. KERS Plan IPS Index		4.66	5.75	5.11	-2.56	6.07	5.50	6.89	7.44	7.11	7.57	
KERS - H INS	602,812,788.10	3.58	5.43	5.84	-1.32	6.43	5.62	6.91	7.11	6.86	7.34	
KY Ins. KERS Haz Plan IPS Ind	ex	4.66	5.75	5.11	-2.56	6.01	5.44	6.87	7.43	7.10	7.57	
SPRS INS	239,819,501.75	3.63	5.55	5.87	-1.41	6.71	5.87	7.07	7.19	6.92	7.39	
KY Ins. SPRS Plan IPS Index		4.66	5.75	5.11	-2.56	6.01	5.44	6.89	7.44	7.11	7.57	
	KPPA INSURAN	CE FUND U	NIT - NET RE	TURNS - 01/	31/23 - PRO	XY PLAN AS	SET PERFOR	MANCE				
Structure		Month	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD	
PUBLIC EQUITY		7.59	7.59	11.54	-6.90	6.76	5.40	8.23	8.26		8.50	
MSCI ACWI		7.17	7.17	9.61	-8.00	6.33	5.03	7.91	7.94		8.27	
PRIVATE EQUITY		0.09	0.09	-2.46	5.58	16.45	14.18	14.65	12.18		10.96	
Russell 3000 + 3%(Qtr Lag)		7.44	7.44	-12.43	-13.52	12.86	12.91	15.67	12.10		11.22	
SPECIALTY CREDIT		1.31	1.31	3.79	2.15		5.12				5.35	
50% BB US HY / 50% SP LSTA L	3.27	3.27	7.26	-1.69		3.35				3.56		
CORE FIXED INCOME		1.68	1.68	1.05	-3.62		1.96				2.19	
Bloomberg Barclays US Aggre	3.08	3.08	0.02	-8.36		0.86			_	1.68		
CASH	0.28	0.28	1.68	1.88		1.29	0.88		_	2.43		
Citigroup Treasury Bill-3 Mor	0.37	0.37	1.70	1.87	0.79	1.30	0.78		_	2.32		
REAL ESTATE	-2.43	-2.43	1.29	10.22		12.35	10.86			10.26		
NCREIF NFI-ODCE Net 1 Qtr in	0.00	0.00	4.87	20.96		9.26	9.91			7.05		
REAL RETURN		1.28	1.28	7.77	7.78		5.25	3.63			4.49	
US CPI +3%		-0.06	-0.06	3.26	8.06	7.15	5.31	4.01			4.01	
KERS INS	44.3			6.3	2	19.6		11.8	1	1.2 4.	7 2.2	
KERS-H INS	45.0			8.7			21.0		11.9 2.5 8.0 2 .9			
SPRS INS	44.9				9.7		21.1		11.7	2.2 7.7	2.7	
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											100/0	
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	Core Fixed Cash Real Estate		Core Fixed Cash Real Estate					Core Fixed Cash Real Estate				
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	■ Real Estate	Core		Cash	■ Re	eal Estate	Core Fi		Cash	■ Real E	Estate	