

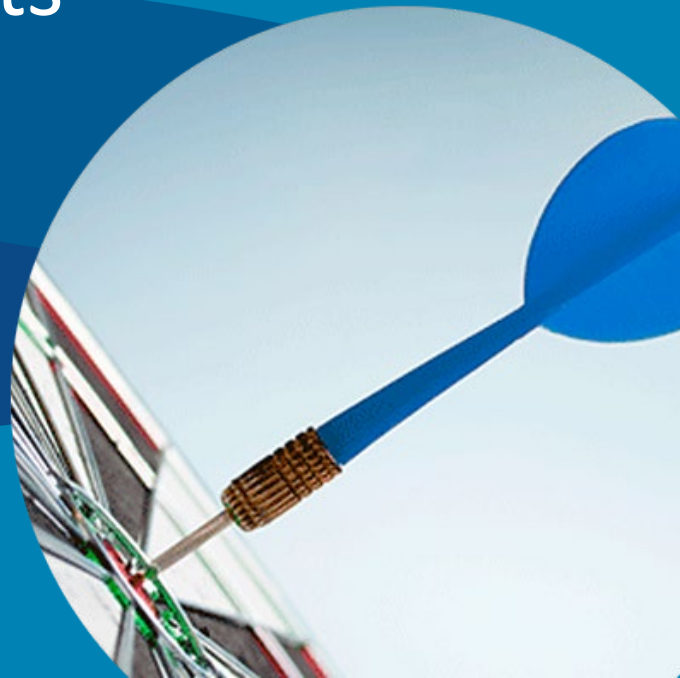


Kentucky Public Pensions Authority

2022 Actuarial Valuation Results
November 15, 2022

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Comments on Valuation Results

- Overview of legislation passed in 2022
 - **SB 209:** increased health insurance benefits to members hired after July 1, 2003
 - **HB 259:** conversion of unused sick leave to employer pay credits to SPRS members earning benefits in the cash balance plan
 - **HB 1 and HB 604:** provides \$240 million in additional appropriations to the non-hazardous retirement fund each year for two years (FY 2023 and FY 2024)
 - **HB 1:** also provided \$215 million in additional appropriations to the SPRS retirement fund in FY 2022

Comments on Valuation Results

- FYE 2022 Investment Experience
 - -5% to -6% return on market value (varies by fund)
 - Assumed rate of return: 5.25% for KERS Non-Hazardous and SPRS retirement funds
 - Assumed rate of return: 6.25% for CERS and KERS Hazardous retirement funds and Insurance funds
 - Fund assets are \$2,686M less than expected for all funds (\$1,853M pension and \$833M insurance)

Comments on Valuation Results

- Retirement Fund Liability Experience
 - \$880M loss for all retirement funds combined
 - Liability is approximately 2% higher than expected
- Insurance Fund Liability Experience
 - \$2,636M gain for all insurance funds combined
 - Medicare premiums decreased significantly from 2022 to 2023

Comments on Valuation Results

- Change in covered payroll – KERS/SPRS
 - KERS Non-Hazardous Fund no longer collects contributions for the amortization cost on payroll
 - KERS Hazardous: 1.7% increase in covered payroll
 - SPRS: 5.6% increase in covered payroll
- Change in covered payroll – CERS
 - CERS Non-Hazardous: 6.4% increase in covered payroll
 - CERS Hazardous: 7.4% increase in covered payroll

Comments on KERS Non-Haz Retirement Fund

- Imperative to maintain or increase contribution effort for the KERS non-hazardous retirement fund
 - June 30, 2022 plan assets were \$3,014 million
 - Fund distributed \$1,048 million in benefit payments and administrative expenses in FYE 2022
 - Fund received \$1,206 million in employer and member contributions in FYE 2022

Actuarially Determined Employer Contributions

Note: The 2021 valuation established the contribution requirement for FYE2023 and FYE2024. The contributions calculated in the 2022 valuation are for informational purposes only.

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2021 Val	2022 Val	2021 Val	2022 Val	2021 Val	2022 Val
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	7.82%	7.74%	31.82%	30.12%	85.32%	85.39%
Insurance Fund	<u>2.15%</u>	<u>1.86%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>14.11%</u>	<u>3.68%</u>
Actuarially Determined Contribution Rate, payable as a percentage of payroll	9.97%	9.60%	31.82%	30.12%	99.43%	89.07%
Difference		(0.37)%		(1.70)%		(10.36)%
Amortization Cost – Pension	\$ 906M	\$ 901M				
Amortization Cost – Insurance	<u>88M</u>	<u>5M</u>				
Amortization Cost - Total	\$ 994M	\$ 906M	N/A	N/A	N/A	N/A
Difference		\$ (88)				



Actuarially Determined Employer Contributions (\$millions)

Note: The 2021 valuation established the contribution requirement for FYE2023 and FYE2024. The contributions calculated in the 2022 valuation are for informational purposes only.

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2021 Val	2022 Val	2021 Val	2022 Val	2021 Val	2022 Val
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	\$ 1,012	\$ 1,006	\$ 52	\$ 50	\$ 39	\$ 41
Insurance Fund	<u>117</u>	<u>30</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>2</u>
Total Actuarially Determined Employer Contribution	\$ 1,129	\$ 1,036	\$ 52	\$ 50	\$ 45	\$ 43
Change in Actuarially Determined Employer Contribution		\$ (93)		\$ (2)		\$ (2)

Required Employer Contributions

Note: The 2021 valuation established the contribution requirement for FYE2023. The contributions calculated in the 2022 set the contribution rates for FY2024.

	CERS Non-Hazardous		CERS Hazardous	
	2021 Val	2022 Val	2021 Val	2022 Val
(1)	(2)	(3)	(4)	(5)
Pension Fund	23.40%	23.34%	42.81%	41.11%
Insurance Fund	<u>3.39%</u>	<u>0.00%</u>	<u>6.78%</u>	<u>2.58%</u>
Actuarially Determined Contribution Rate, payable as a percentage of payroll	26.79%	23.34%	49.59%	43.69%
Difference		(3.45)%		(5.90)%

Required Employer Contributions (\$millions)

Note: The 2021 valuation established the contribution requirement for FYE2023. The contributions calculated in the 2022 set the contribution rates for FY2024.

	CERS Non-Hazardous		CERS Hazardous	
	2021 Val FYE2023	2022 Val FYE2024	2021 Val FYE2023	2022 Val FYE2024
(1)	(2)	(3)	(4)	(5)
<u>Actuarially Determined Employer Contribution</u>				
Pension Fund	\$ 604	\$ 641	\$ 253	\$ 260
Insurance Fund	<u>87</u>	<u>0</u>	<u>40</u>	<u>16</u>
Total Contribution	\$ 691	\$ 641	\$ 293	\$ 276
Change in Contribution		(\$50)		(\$17)

Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2021 Val	2022 Val	2021 Val	2022 Val	2021 Val	2022 Val
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	\$ 13.59	\$ 13.51	\$ 0.51	\$ 0.48	\$ 0.73	\$ 0.51
Insurance Fund	<u>1.28</u>	<u>0.37</u>	<u>(0.15)</u>	<u>(0.25)</u>	<u>0.05</u>	<u>0.00</u>
Total Unfunded Actuarial Accrued Liability	\$ 14.87	\$ 13.88	\$ 0.36	\$ 0.23	\$ 0.78	\$ 0.51
Change in Unfunded Actuarial Accrued Liability		\$ (0.99)		\$ (0.13)		\$ (0.27)

Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

	CERS Non-Hazardous		CERS Hazardous	
	2021 Val	2022 Val	2021 Val	2022 Val
(1)	(2)	(3)	(4)	(5)
Pension Fund	\$ 7.18	\$ 7.53	\$ 3.00	\$ 3.07
Insurance Fund	<u>0.50</u>	<u>(0.77)</u>	<u>0.28</u>	<u>(0.02)</u>
Total Unfunded Actuarial Accrued Liability	\$ 7.68	\$ 6.76	\$ 3.28	\$ 3.05
Change in Unfunded Actuarial Accrued Liability		\$ (0.92)		\$ (0.23)

Funding Results – KERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2021	2022	2021	2022	2021	2022	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	11.96%	11.76%	2.54%	2.29%	16.01%	15.72%	4.46%	4.07%
Member Rate	<u>(5.00%)</u>	<u>(5.00%)</u>	<u>(0.45%)</u>	<u>(0.49%)</u>	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.66%)</u>	<u>(0.70%)</u>
Employer Normal Cost Rate	6.96%	6.76%	2.09%	1.80%	8.01%	7.72%	3.80%	3.37%
Administrative Expenses	0.86%	0.98%	0.06%	0.06%	0.77%	0.88%	0.07%	0.08%
Amortization Cost	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>23.04%</u>	<u>21.52%</u>	<u>(7.59%)</u>	<u>(13.39%)</u>
Total Actuarially Determined Rate	7.82%	7.74%	2.15%	1.86%	31.82%	30.12%	0.00%	0.00%
Amortization Cost to be Allocated	\$906	\$901	\$88	\$5	N/A	N/A	N/A	N/A
Actuarial Accrued Liability (AAL)	\$16,321	\$16,577	\$2,574	\$1,782	\$1,295	\$1,317	\$424	\$347
Actuarial Value of Assets	<u>2,736</u>	<u>3,065</u>	<u>1,291</u>	<u>1,410</u>	<u>782</u>	<u>832</u>	<u>575</u>	<u>598</u>
Unfunded AAL	\$13,585	\$13,511	\$1,283	\$373	\$513	\$484	(\$151)	(\$251)
Funded Ratio	16.8%	18.5%	50.2%	79.1%	60.4%	63.2%	135.5%	172.2%



Funding Results – SPRS (\$ in millions)

Item	Pension		Insurance	
	2021	2022	2021	2022
(1)	(2)	(3)	(4)	(5)
Total Normal Cost Rate	26.13%	26.92%	7.35%	7.03%
Member Rate	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.46%)</u>	<u>(0.52%)</u>
Employer Normal Cost Rate	18.13%	18.92%	6.89%	6.51%
Administrative Expenses	0.47%	0.57%	0.20%	0.15%
Amortization Cost	<u>66.72%</u>	<u>65.90%</u>	<u>7.02%</u>	<u>(2.98%)</u>
Total Actuarially Determined Rate	85.32%	85.39%	14.11%	3.68%
Actuarial Accrued Liability (AAL)	\$1,053	\$1,067	\$272	\$233
Actuarial Value of Assets	<u>323</u>	<u>560</u>	<u>223</u>	<u>234</u>
Unfunded AAL	\$730	\$507	\$49	\$(1)
Funded Ratio	30.7%	52.5%	82.0%	100.6%

Funding Results – CERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2021	2022	2021	2022	2021	2022	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	10.44%	10.22%	3.07%	2.69%	18.39%	18.02%	4.83%	4.50%
Member Rate	<u>(5.00%)</u>	<u>(5.00%)</u>	<u>(0.55%)</u>	<u>(0.59%)</u>	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.55%)</u>	<u>(0.59%)</u>
Employer Normal Cost Rate	5.44%	5.22%	2.52%	2.10%	10.39%	10.02%	4.28%	3.91%
Administrative Expenses	0.86%	0.84%	0.04%	0.04%	0.32%	0.32%	0.09%	0.08%
Amortization Cost	<u>17.10%</u>	<u>17.28%</u>	<u>0.83%</u>	<u>-3.01%</u>	<u>32.10%</u>	<u>30.77%</u>	<u>2.41%</u>	<u>-1.41%</u>
Total Actuarially Determined Rate	23.40%	23.34%	3.39%	0.00%	42.81%	41.11%	6.78%	2.58%
Actuarial Accrued Liability (AAL)	\$14,895	\$15,674	\$3,450	\$2,392	\$5,629	\$5,862	\$1,751	\$1,538
Actuarial Value of Assets	<u>7,716</u>	<u>8,149</u>	<u>2,947</u>	<u>3,160</u>	<u>2,629</u>	<u>2,789</u>	<u>1,476</u>	<u>1,554</u>
Unfunded AAL	\$7,179	\$7,525	\$503	(\$768)	\$3,000	\$3,073	\$276	(\$16)
Funded Ratio	51.8%	52.0%	85.4%	132.1%	46.7%	47.6%	84.3%	101.0%



Closing Comments on 2022 Valuation Results

- The decrease in the Medicare premiums from 2022 to 2023 significantly improved the funded status of the insurance funds and lowered the required contribution effort across all funds
- The FYE 2022 investment losses offset approximately 80% of the FYE 2021 investment gains (compared to the investment return assumption)
- It is imperative the State and participating employers continue contributing the actuarially determined contributions in each future year to improve the System's financial security

Disclaimers

- This presentation is intended to be used in conjunction with the actuarial valuation as of June 30, 2022. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.