

**Kentucky Retirement Systems Board of Trustees
Quarterly Board Meeting
December 4, 2024, 10:00 a.m. ET
Live Video Conference/Facebook Live
AGENDA**

- | | |
|--|--------------------------------------|
| 1. Call to Order | Lynn Hampton |
| 2. Legal Public Statement | Office of Legal Services |
| 3. Roll Call/Public Comment | Sherry Rankin |
| 4. Approval of Minutes – October 22, 2024 and November 13, 2024* | Lynn Hampton |
| 5. Approval of June 30, 2024 Actuarial Valuations for KERS Hazardous, KERS Non-Hazardous, and SPRS* | Danny White, GRS
Janie Shaw, GRS |
| 6. External Audit* | |
| a. KRS Draft FY Ended June 30, 2024 External Audit*, Includes: Financial section of the Annual Report, GASB 67 and 74; report on internal control; Auditor Communications with those Charged with Governance | Ryan Graham |
| 7. Approval of FY25-26 Contribution Rates* | John Chilton |
| 8. KRS Draft ACFR in its entirety to be approved and sent to KPPA for Publication* | Michael Lamb |
| 9. GFOA ACFR Letter | Michael Lamb |
| 10. Quarterly Investment Office Report | Ramsey Bova
Anthony Chiu/Wilshire |
| 11. Quarterly Financial Statements | Michael Lamb |
| 12. Hazardous Duty Requests* | D’Juan Surratt |
| 13. Denton Bingham Greenebaum Contract* | John Chilton |
| 14. KRS CEO Update | John Chilton |
| 15. KPPA Executive Director Report | Ryan Barrow |
| 16. New Business** | Lynn Hampton |
| 17. Closed Session ** | Lynn Hampton |
| 18. Adjourn* | Lynn Hampton |

**Board Action Required*

***Board Action May Be Required*

**MINUTES OF MEETING
KENTUCKY RETIREMENT SYSTEMS
BOARD OF TRUSTEES SPECIAL CALLED MEETING
OCTOBER 22, 2024, AT 10:00 AM, E.T.
VIA LIVE VIDEO TELECONFERENCE**

At the Meeting of the Kentucky Retirement Systems Board of Trustees held on October 22, 2024, the following members were present: Lynn Hampton, David Adkins, Mary Eaves, Prewitt Lane, and Keith Percy. Staff members present were KRS CEO John Chilton, Rebecca Adkins, Michael Lamb, Steve Willer, Brian Caldwell, Anthony Chiu, Joe Gilbert, Victoria Hale, Ashley Gabbard, Phillip Cook, Sandy Hardin, and Sherry Rankin. Others in attendance included Craig Morton, Chris Tessman, John Patterson, and David Lindberg with Wilshire.

1. Ms. Hampton called the meeting to order.
2. Ms. Hale read the Legal Public Statement.
3. Ms. Rankin called roll.

Ms. Hampton introduced agenda item **Public Comment** (*Video 00:08:28 to 00:08:33*), and Ms. Rankin indicated there were no public comments.

4. Ms. Hampton introduced agenda item **Investment Recommendation** (*Video 00:08:33 to 00:24:00*). Mr. Lane noted that the Investment Committee met earlier today, and he presented to the KRS Board a summary regarding the Investment Committee recommendation. KPPA Investment Staff is proposing an investment with Kayne Anderson in a continuation vehicle for Kraken Resources, LLC. Kraken is a private energy and production company operating in the Williston Basin along the border of North Dakota and Montana.

Given Kraken's attractive cash flows, hedged commodity price risk, and current Real Return allocations, the Investment Staff is recommending that KRS roll its existing investment of

three (3) million dollars. The investment will be shared among all KRS plans pending successful legal negotiations and represents an additional ~0.1% of plan assets.

There was discussion regarding a statute in the KRS and CERS Bylaws which allows the Investment Committee to make a decision without immediate ratification by the Board. Ms. Hale will research this further and report back to the Board.

A motion was made by Mr. Adkins and seconded by Mr. Lane to ratify the Investment Committee's recommendation to invest in the Kraken Resources, LLC, Continuation Vehicle with Kayne Anderson, subject to successful contract negotiations. The motion passed unanimously.

5. There being no further business, Ms. Hampton introduced agenda item ***Closed Session*** (*Video 00:24:00 to 00:27:32*) and requested a motion to enter closed session to discuss pending litigation pursuant to KRS 61.810(c). A motion was made by Mr. Lane and seconded by Ms. Eaves. The motion passed unanimously.

Ms. Hampton read the following statement, and the meeting moved into closed session: "A motion having been made in open session to move into a session for a specific purpose, and such motion having carried by majority vote in open, public session, the Board shall now enter closed session to discuss pending litigation, pursuant to KRS 61.810(1)(c)"

All public attendees exited the meeting.

Closed Session (*Video - Part 2 - 00:00:22 to 00:02:02*). ***(SHERRY - THERE WAS NO VIDEO PART 2. There is no video to show it was called back to open session, so I guessed.)***

Ms. Hampton called the meeting back to open session. There was no action taken by the KRS Board of Trustees.

6. There being no further business, Ms. Hampton adjourned the meeting.

Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held October 22, 2024, except documents provided during a closed session conducted pursuant to the Open Meetings Act and exempt under the Open Records Act.

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CERTIFICATION

I do certify that I was present at this meeting, and I have recorded the above actions of the Trustees on the various items considered by it at this meeting. Further, I certify that all requirements of KRS 61.805-61.850 were met in conjunction with this meeting.

Recording Secretary

I, the Chair of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of Meeting held on October 22, 2024, were approved on December 4, 2024.

Chair of the Board of Trustees

I have reviewed the Minutes of the October 22, 2024, Board of Trustees Meeting for content, form, and legality.

Executive Director Office of
Legal Services

**MINUTES OF MEETING
KENTUCKY RETIREMENT SYSTEMS
BOARD OF TRUSTEES MEETING
NOVEMBER 13, 2024, AT 10:00 AM, E.T.
VIA LIVE VIDEO TELECONFERENCE**

At the Meeting of the Kentucky Retirement Systems Board of Trustees held on November 13, 2024, the following members were present: Lynn Hampton (Chair), Ramsey Bova, Mary Eaves, Prewitt Lane, Dr. Crystal Miller, Keith Peercy, and Pamela Thompson. Staff members present were CERS CEO Ed Owens, III, KRS CEO John Chilton, Ryan Barrow, Rebecca Adkins, Erin Surratt, Connie Pettyjohn, Michael Board, Victoria Hale, Leigh Ann Davis, Michael Lamb, Connie Davis, D’Juan Surratt, Steve Willer, Ashley Gabbard, Sandy Hardin, Shaun Case, and Sherry Rankin. Others present included Tracey Garrison, Carla Whaley, and Larry Loew with Humana; Danny White, Janie Shaw, and Krysti Kiesel with GRS; and Benjamin Lewis and Janet Jakubowicz from Dentons Bingham Greenebaum.

1. Ms. Hampton called the meeting to order.
2. Mr. Board read the Legal Public Statement.
3. Ms. Rankin called roll.

Ms. Rankin noted no *Public Comment* was submitted.

4. Ms. Hampton introduced agenda item *Approval of Minutes – September 12, 2024* (Video 00:06:49 to 00:07:43). A motion was made by Ms. Eaves and seconded by Dr. Miller to approve the meeting minutes from September 12, 2024 as presented. The motion passed unanimously.
5. Ms. Hampton introduced agenda item *Review of Draft 2024 Actuarial Valuation* (Video 00:07:43 to 00:50:30). Mr. White, Ms. Shaw, and Ms. Kiesel from GRS presented the

2024 Valuation Results and addressed questions from the Trustees. In conclusion, Ms. Shaw highlighted that the increase in active members and payroll is a positive indicator of the System's financial health and that of the participating employers. She emphasized the importance of the state and participating employers continuing to make the actuarially contributions each year to enhance the System's financial security.

A motion was made by Mr. Lane and seconded by Mr. Peercy to accept the 2024 Actuarial Valuation as presented. The motion passed unanimously.

6. Ms. Hampton introduced the *Joint Retiree Health Plan Committee Report* (Video 00:50:30 to 00:58:53). Ms. Pettyjohn reported that the Joint CERS and KRS Retiree Health Plan (RHP) Committee convened on October 21, 2024. During this meeting, they reviewed an informative presentation from Humana regarding 2025 Pharmacy Review and Pharmacogenomics. Ms. Pettyjohn provided an overview of the 2025 Formulary changes, open enrollment, and retiree engagement and outreach efforts. Ms. Eaves inquired about the eligibility of retirees and employees to use the Health Savings Account (HSA) with enrollment in the Kentucky Employees Health Plan (KEHP) High Deductible Health Plan. Ms. Pettyjohn responded she would investigate this matter and follow up with the Board members.
7. Ms. Hampton introduced agenda item *KRS Update* (Video 00:58:53 to 01:00:48). Mr. Chilton reported that their last meeting in October was almost entirely focused on investment decisions. The last regularly scheduled quarterly meeting was held in September, and the next one is planned for December 4, 2024, which will primarily cover the annual report. Since the last quarterly meeting, Mr. Chilton has been working on various matters that will be discussed in closed session.

He mentioned that there will be changes in reporting, specifically related to Trustee education, which will be addressed in a future meeting. This includes aligning all members on the same education cycle and related topics. Additionally, a KPPA group has been organized to focus on accounts receivable from various employers, examining amounts and

collectability. This initiative will be presented in the future. Mr. Chilton indicated most of the work he has been involved with pertains to discussion topics for the closed session.

8. Ms. Hampton introduced agenda item ***New Business*** (*Video 01:00:48 to 01:02:29*). Ms. Hampton discussed the Continuing Professional Education (CPE) requirements, emphasizing the importance of aligning everyone on the same CPE cycle for greater efficiency. She acknowledged that Ms. Ashley Gabbard provides timely reminders about required actions. Ms. Hampton also highlighted that there are two mandatory courses for everyone: one on ethics and another on IT data security. She reminded the group that these courses, required by the legislature, can be completed online and are not time-consuming. If anyone has questions, Ms. Gabbard is available to assist.
9. Ms. Hampton introduced agenda item ***Closed Session*** (*Video 01:02:29 to 01:03:44*) and requested a motion to enter closed session to discuss pending litigation pursuant to KRS 61.810(c). A motion was made by Dr. Miller and seconded by Mr. Lane. The motion passed unanimously.

Ms. Hampton read the following statement and the meeting moved into closed session: A motion having been made in open session to move into a closed session for a specific purpose, and such motion having carried by majority vote in open, public session, the Board shall now enter closed session to consider litigation, pursuant to KRS 61.810(1)(c), because of the necessity of protecting the confidentiality of the Systems' litigation strategy and preserving any available attorney-client privilege. All public attendees exited the meeting.

Closed Session (*Video - Part 2 - 00:00:28 to 00:00:47*)

Ms. Hampton called the meeting back to open session and stated that there was no action taken by the KRS Board of Trustees as result of the Closed Session.

10. There being no further business, Ms. Hampton ***adjourned*** the meeting.

Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held November 13, 2024, except documents provided during a closed session conducted pursuant to the Open Meetings Act and exempt under the Open Records Act.

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Recording Secretary

I, the Chair of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of Meeting held on November 13, 2024, were approved on December 4, 2024.

Chair of the Board of Trustees

I have reviewed the Minutes of the November 13, 2024, Board of Trustees Meeting for content, form, and legality.

Executive Director
Office of Legal Services

**MINUTES OF MEETING
KENTUCKY RETIREMENT SYSTEMS
BOARD OF TRUSTEES MEETING
NOVEMBER 13, 2024, AT 10:00 AM, E.T.**

**ADDENDUM
ACTION ITEMS**

Action Items:

A motion was made by Mr. Lane and seconded by Mr. Peercy to accept the 2024 Actuarial Valuation as presented. The motion passed unanimously.

Actionable Items:

Ms. Eaves inquired about the eligibility of retirees and employees to use the Health Savings Account (HSA) with enrollment in the Kentucky Employees Health Plan (KEHP) High Deductible Health Plan. Ms. Pettyjohn responded she would investigate this matter and follow up with the Board members.



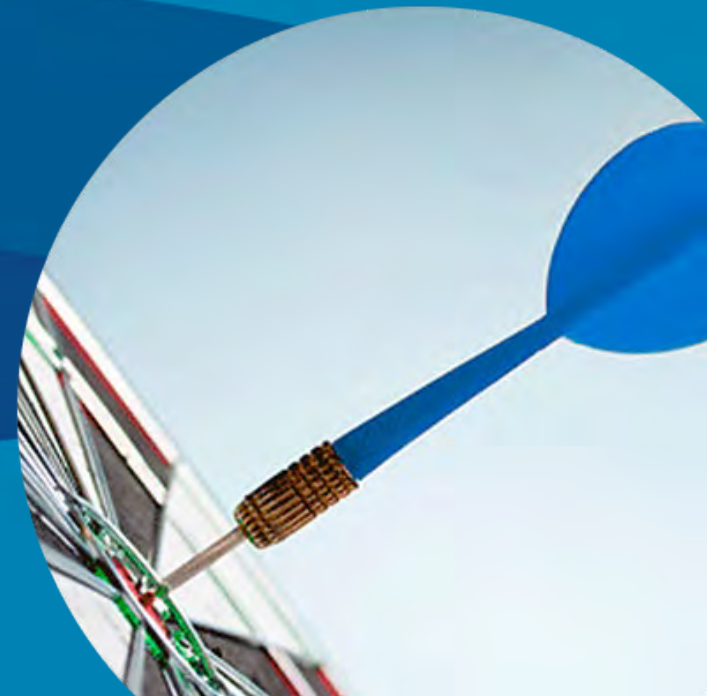
Kentucky Retirement Systems

2024 Actuarial Valuation Results

November 13, 2024

Janie Shaw, ASA, EA, MAAA

Danny White, FSA, EA, MAAA



Comments on Valuation Results

- Change in active membership and payroll
 - Active membership increased across all funds
 - KERS Hazardous: 23% increase in membership payroll
 - SPRS: 11% increase in membership payroll
 - Only the Normal Cost Rate is tied to payroll for the KERS non-hazardous fund
 - Amortization cost has a fixed allocated to employers



Comments on Valuation Results

- Overview of legislation passed in 2024
 - **HB 1:** provides \$50 million and \$25 million in additional appropriations to the KERS non-hazardous retirement fund and the SPRS retirement fund, respectively, each year for two years (FY 2025 and FY 2026)
 - **HB 6:** provides \$250 million in additional appropriations to the KERS non-hazardous retirement fund each year for two years (FY 2025 and FY 2026)



Comments on Valuation Results

- FYE 2024 Investment Experience
 - 9% to 11% 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 KERS hazardous retirement fund
 - Assumed rate of return: 6.50% for insurance funds
 - Fund assets \$336M more than expected for KERS and SPRS (\$225M pension and \$111M insurance)
 - \$89M in asset gains recognized this year (\$59M pension and \$30M insurance)



Comments on Valuation Results

- Retirement Fund Liability Experience
 - \$434M loss for all KERS/SPRS retirement funds combined
 - Primarily attributed to salary increases being greater than expected for individual active members
- Insurance Fund Liability Experience
 - \$160M loss for all KERS/SPRS insurance funds combined
 - 2025 Medicare premiums significantly higher than expected
 - 2025 non-Medicare premiums lower than expected



Salary Experience

Review of Salary Increase for KERS Members Who Were Active in FY 2023 and FY 2024 (\$ in Thousands)

NonHazardous					Hazardous				
Beginning of Year Service	Count	FY 2023 Pay	FY 2024 Pay	% Increase	Beginning of Year Service	Count	FY 2023 Pay	FY 2024 Pay	% Increase
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
1 - 5	9,297	\$ 388,253	\$ 473,728	22%	1 - 5	1,707	\$ 87,056	\$ 107,530	24%
6 - 10	5,073	264,291	303,522	15%	6 - 10	646	37,289	42,749	15%
11 - 15	4,173	232,223	261,645	13%	11 - 15	448	26,881	30,694	14%
16 - 20	4,096	239,375	267,203	12%	16 - 20	404	25,662	28,443	11%
21 - 25	3,544	215,883	239,705	11%	21 - 25	54	3,938	4,343	10%
26 - 30	1,487	97,392	107,164	10%	26 - 30	11	726	839	16%
Over 30	446	32,366	35,239	9%	Over 30	3	250	277	11%
Total	28,116	1,469,783	1,688,206	15%	Total	3,273	181,802	214,875	18%



Comments on KERS Non-Haz Retirement Fund

- Imperative to maintain contribution effort for the non-hazardous retirement fund
 - June 30, 2024 plan assets were \$4,224 million
 - Fund distributed \$1,058 million in benefit payments and administrative expenses in FYE 2024
 - Fund received \$1,392 million in employer and member contributions in FYE 2024



Actuarially Determined Employer Contributions

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2023 Val	2024 Val	2023 Val	2024 Val	2023 Val	2024 Val
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	6.99%	6.85%	23.74%	20.68%	65.79%	57.91%
Insurance Fund	<u>1.45%</u>	<u>1.14%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>2.31%</u>	<u>1.46%</u>
Actuarially Determined Contribution, payable as a percentage of payroll	8.44%	7.99%	23.74%	20.68%	68.10%	59.37%
Difference		-0.45%		-3.06%		-8.73%
Amortization Cost – Pension	\$ 855M	\$ 854M				
Amortization Cost – Insurance	<u>2M</u>	<u>12M</u>				
Amortization Cost - Total	\$ 857M	\$ 866M	N/A	N/A	N/A	N/A
Difference		\$9				

Note: The 2023 valuation establishes the contribution requirement for FYE2025 and FYE2026. The 2024 valuation was provided for informational purposes only.



Actuarially Determined Employer Contributions (\$millions)

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2023 Val	2024 Val	2023 Val	2024 Val	2023 Val	2024 Val
(1)	(2)	(3)	(4)	(5)	(4)	(5)
Pension Fund	\$968	\$981	\$50	\$54	\$43	\$42
Insurance Fund	<u>25</u>	<u>34</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>1</u>
Total Actuarially Determined Employer Contribution	\$993	\$1,015	\$50	\$54	\$45	\$43
Change in Actuarially Determined Employer Contribution		\$22		\$4		\$(2)

Note: The 2023 valuation establishes the contribution requirement for FYE2025 and FYE2026. The 2024 valuation was provided for informational purposes only.



Change in Required Employer Contributions

KERS Non-Hazardous – Amortization Cost

	KERS Non-Hazardous (\$millions)		
	Pension	Insurance	Total
Amortization Cost – 2023 Val (FY 2025)	\$ 855	\$ 2	\$ 857
\$300M in Appropriations	(25)	0	(25)
Investment Experience	(3)	(3)	(6)
Demographic Experience	<u>27</u>	<u>13</u>	<u>40</u>
Total Change	\$(1)	\$10	\$9
Amortization Cost – 2024 Val	\$ 854	\$ 12	\$ 866

Salary increases for active members higher than expected & 2025 Medicare premiums

Informational purposes only

Note: The \$25 million reduction in amortization cost reflects the recognition of the \$300 million appropriation for FY 2025. We can expect an additional reduction in amortization cost in the 2025 valuation due to the \$300 million appropriation for FY 2026.



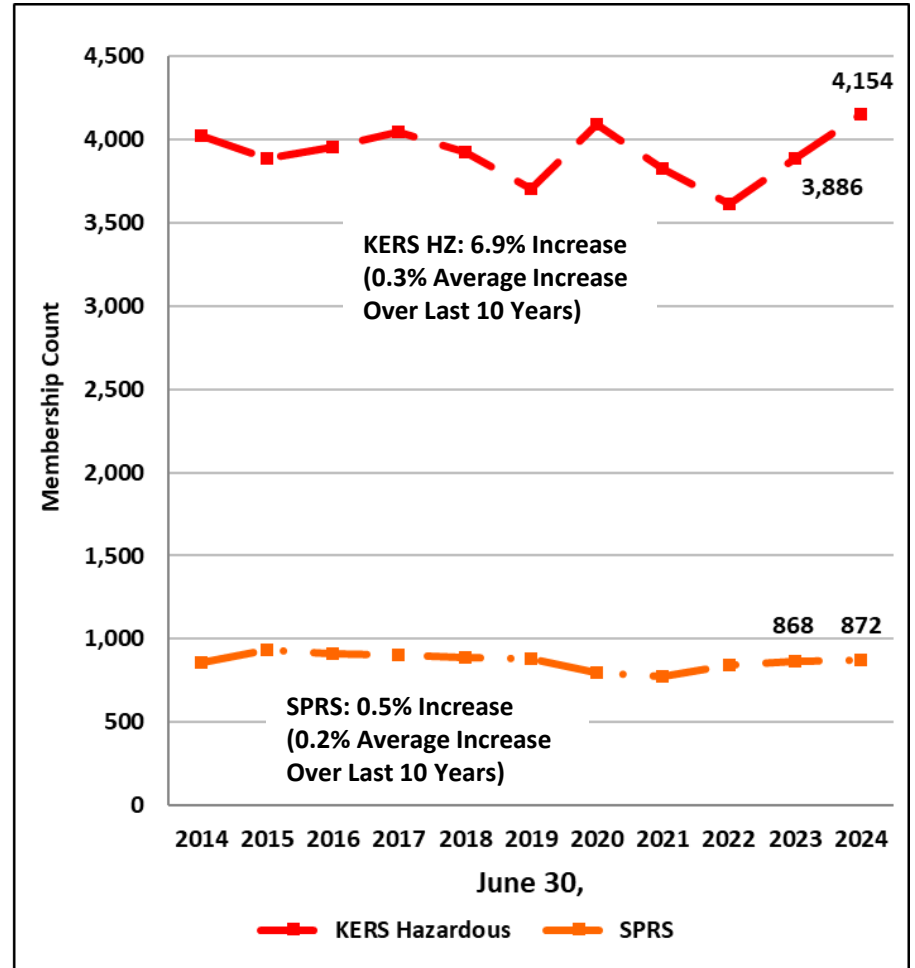
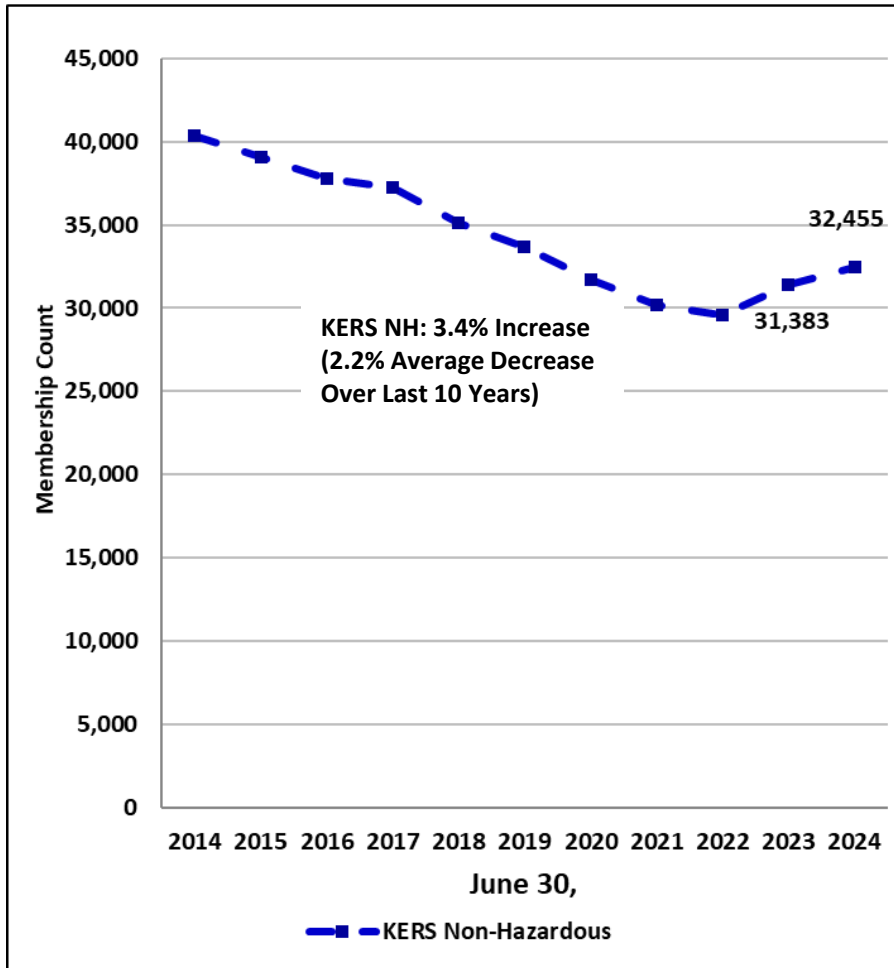
Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2023 Val	2024 Val	2023 Val	2024 Val	2023 Val	2024 Val
(1)	(2)	(3)	(4)	(5)	(4)	(5)
Pension Fund	\$12.75	\$12.53	\$0.47	\$0.46	\$0.50	\$0.48
Insurance Fund	<u>0.34</u>	<u>0.38</u>	<u>(0.26)</u>	<u>(0.27)</u>	<u>(0.00)</u>	<u>(0.01)</u>
Total Unfunded Actuarial Accrued Liability	\$13.10	\$12.91	\$0.22	\$0.18	\$0.50	\$0.47
Change in Unfunded Actuarial Accrued Liability		\$(0.19)		\$(0.03)		\$(0.03)

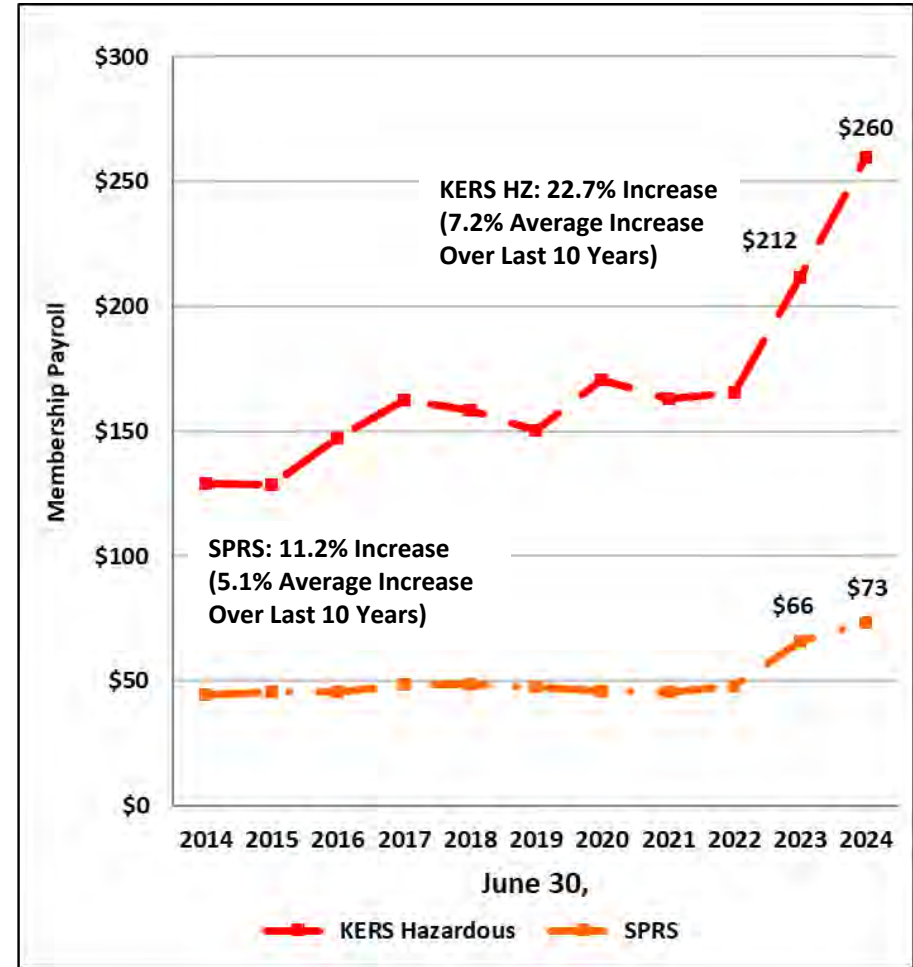
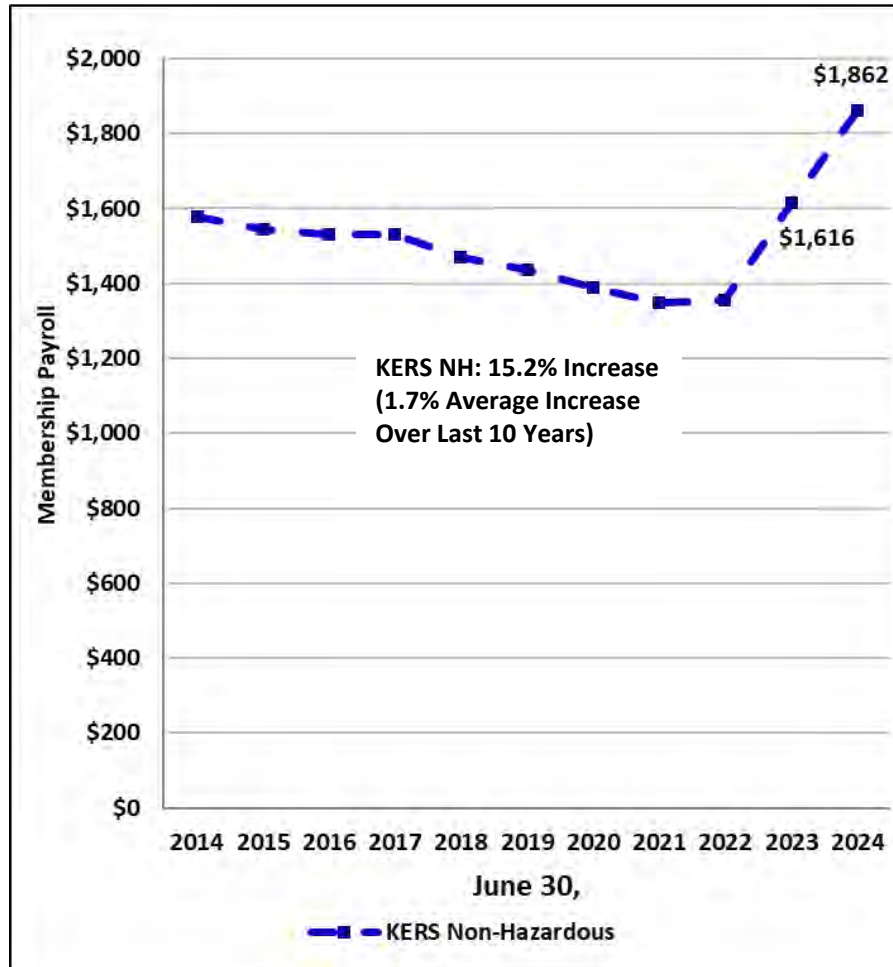
Note: Amounts may not add due to rounding



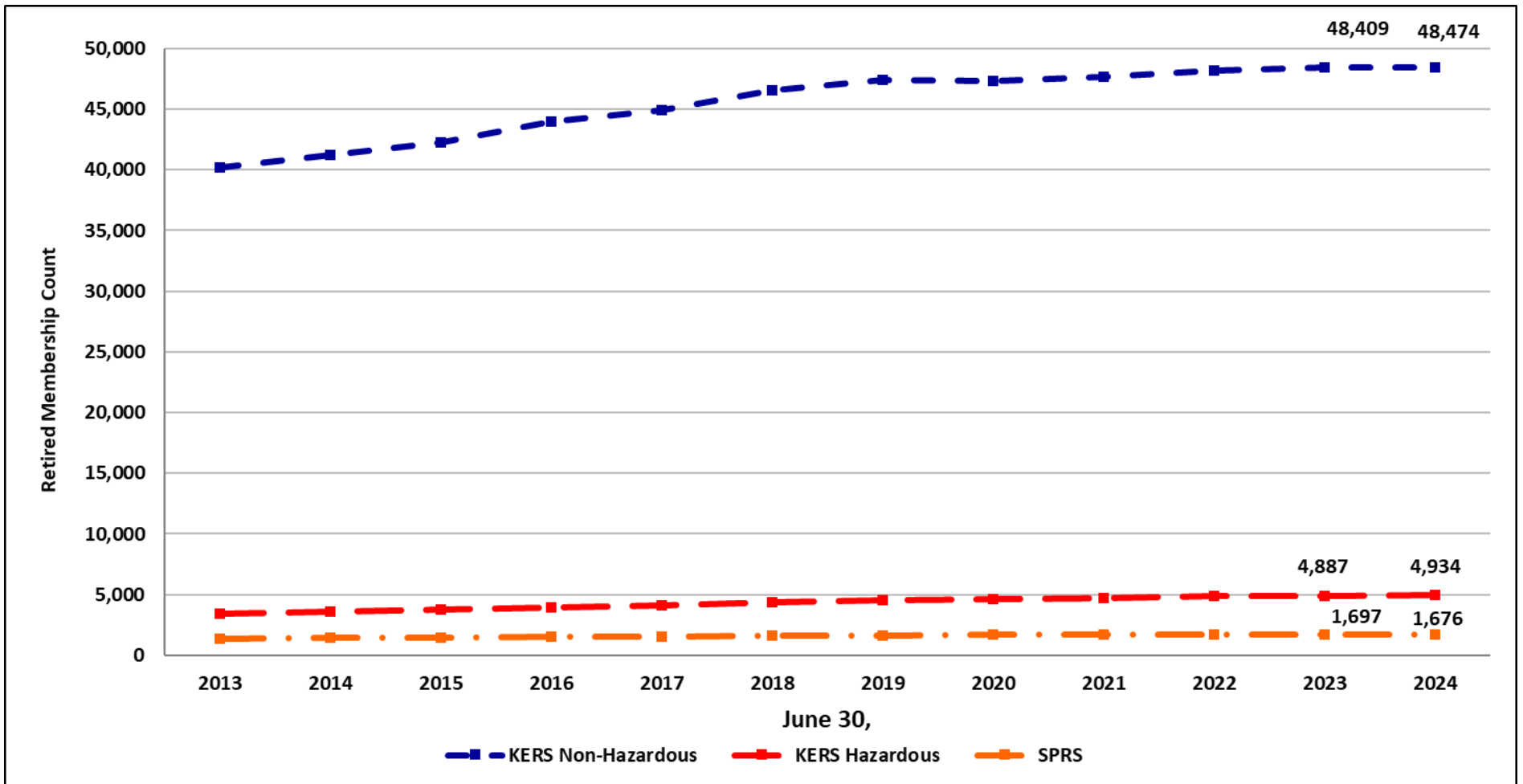
Active Membership Count



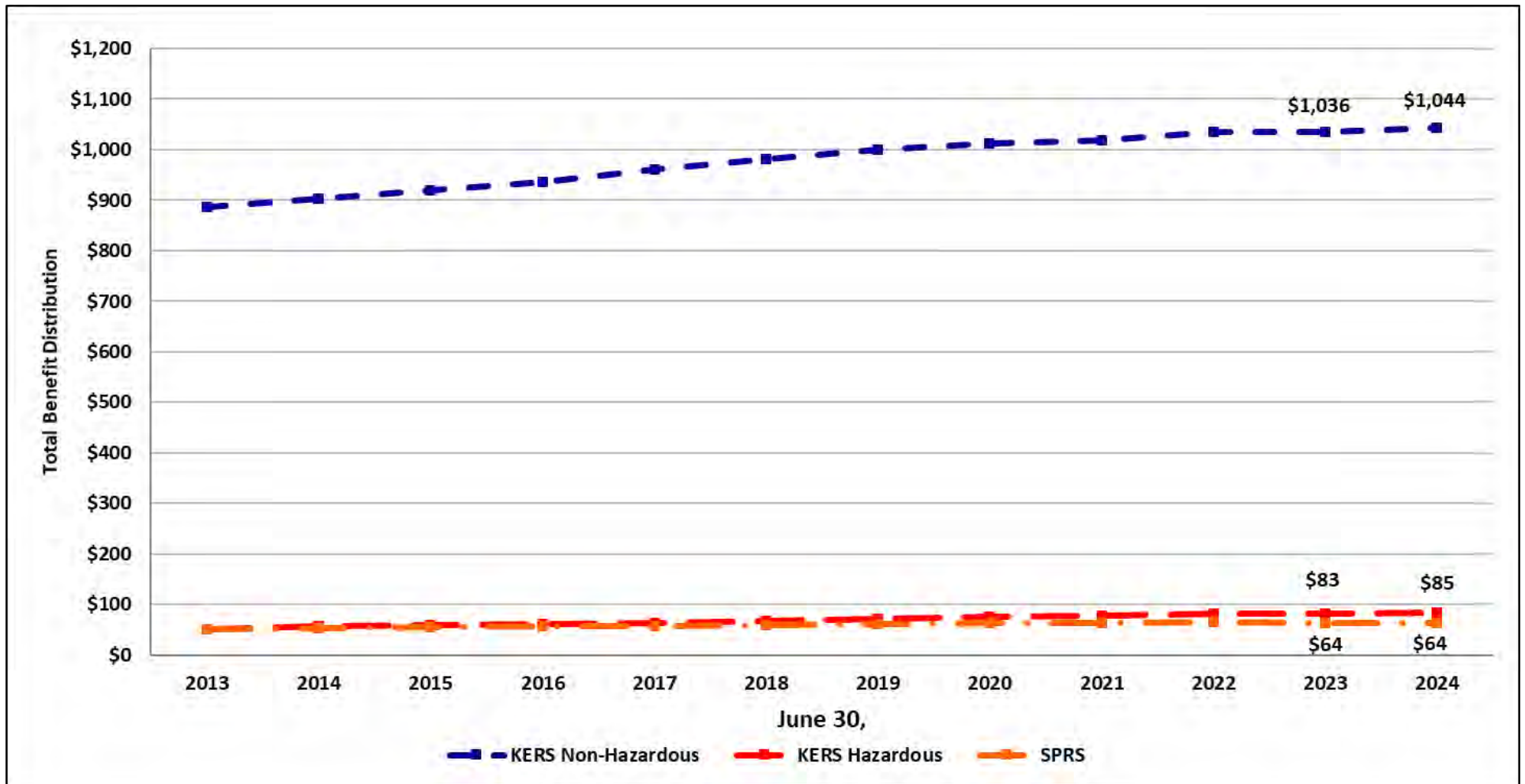
Membership Payroll (\$ in Millions)



Retired Membership Count



Pension Benefit Distributions (\$ in Millions)



Funding Results – KERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2023	2024	2023	2024	2023	2024	2023	2024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	11.13%	11.09%	1.94%	1.68%	15.00%	14.96%	2.77%	2.29%
Member Rate	<u>(5.00)%</u>	<u>(5.00)%</u>	<u>(0.54)%</u>	<u>(0.58)%</u>	<u>(8.00)%</u>	<u>(8.00)%</u>	<u>(0.75)%</u>	<u>(0.79)%</u>
Employer Normal Cost Rate	6.13%	6.09%	1.40%	1.10%	7.00%	6.96%	2.02%	1.50%
Administrative Expenses	0.86%	0.76%	0.05%	0.04%	0.71%	0.61%	0.06%	0.05%
Amortization Cost	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>16.03%</u>	<u>13.11%</u>	<u>(11.29)%</u>	<u>(10.07)%</u>
Total Actuarially Determined Rate	6.99%	6.85%	1.45%	1.14%	23.74%	20.68%	0.00%	0.00%
Amortization Cost to be Allocated	\$ 855M	\$ 854M	\$ 2M	\$ 12M	N/A	N/A	N/A	N/A
Actuarial Accrued Liability (AAL)	\$16,304	\$16,648	\$1,877	\$2,095	\$1,363	\$1,443	\$364	\$380
Actuarial Value of Assets	<u>\$3,552</u>	<u>\$4,122</u>	<u>\$1,533</u>	<u>\$1,712</u>	<u>\$891</u>	<u>\$985</u>	<u>\$620</u>	<u>\$652</u>
Unfunded AAL	\$12,752	\$12,526	\$344	\$383	\$472	\$458	\$(256)	\$(273)
Funded Ratio	21.8%	24.8%	81.7%	81.7%	65.4%	68.3%	170.4%	171.9%



Funding Results – SPRS (\$ in millions)

Item	Pension		Insurance	
	2023	2024	2023	2024
(1)	(2)	(3)	(4)	(5)
Total Normal Cost Rate	26.97%	27.33%	5.39%	4.96%
Member Rate	<u>(8.00)%</u>	<u>(8.00)%</u>	<u>(0.57)%</u>	<u>(0.60)%</u>
Employer Normal Cost Rate	18.97%	19.33%	4.82%	4.36%
Administrative Expenses	0.44%	0.43%	0.11%	0.10%
Amortization Cost	<u>46.38%</u>	<u>38.15%</u>	<u>(2.62)%</u>	<u>(3.00)%</u>
Total Actuarially Determined Rate	65.79%	57.91%	2.31%	1.46%
Actuarial Accrued Liability (AAL)	\$1,092	\$1,112	\$244	\$251
Actuarial Value of Assets	<u>\$590</u>	<u>\$631</u>	<u>\$245</u>	<u>\$263</u>
Unfunded AAL	\$502	\$481	\$(1)	\$(12)
Funded Ratio	54.0%	56.7%	100.5%	104.9%



PROJECTION INFORMATION PENSION AND INSURANCE



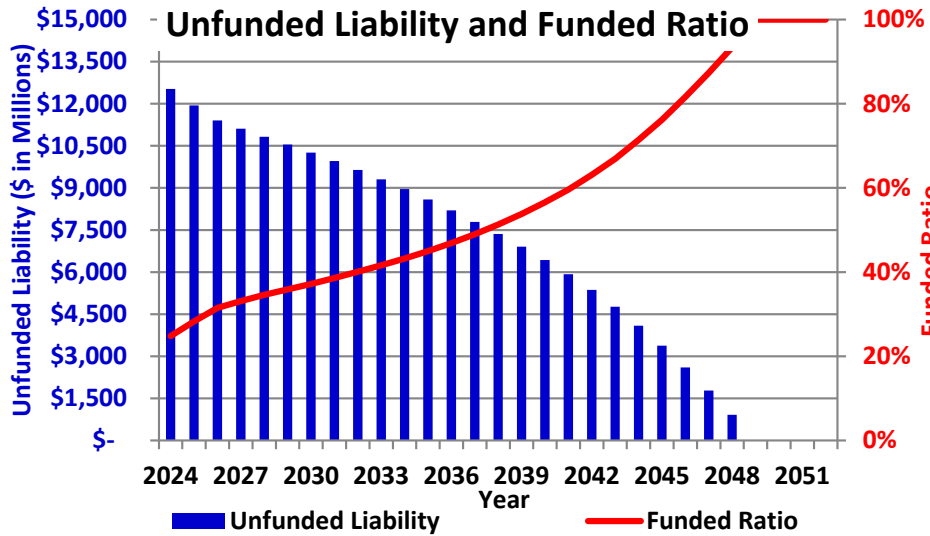
Projection Assumptions

- Assumes that all actuarial assumptions are realized, including the assumed annual asset return of 5.25%/6.25%/6.50%
- Full actuarially determined contribution paid each biennium
- Membership payroll assumed to remain level
 - Total active population assumed to decrease 2% each year

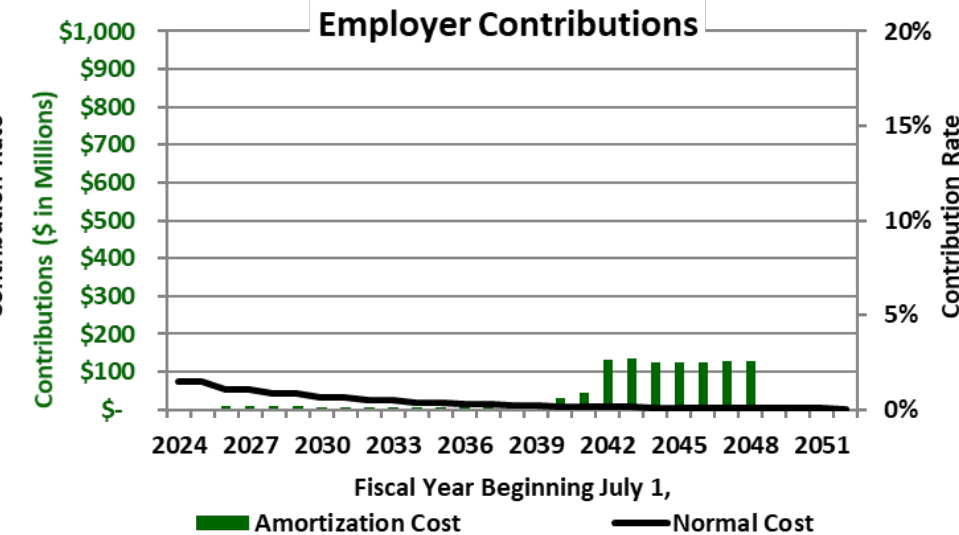
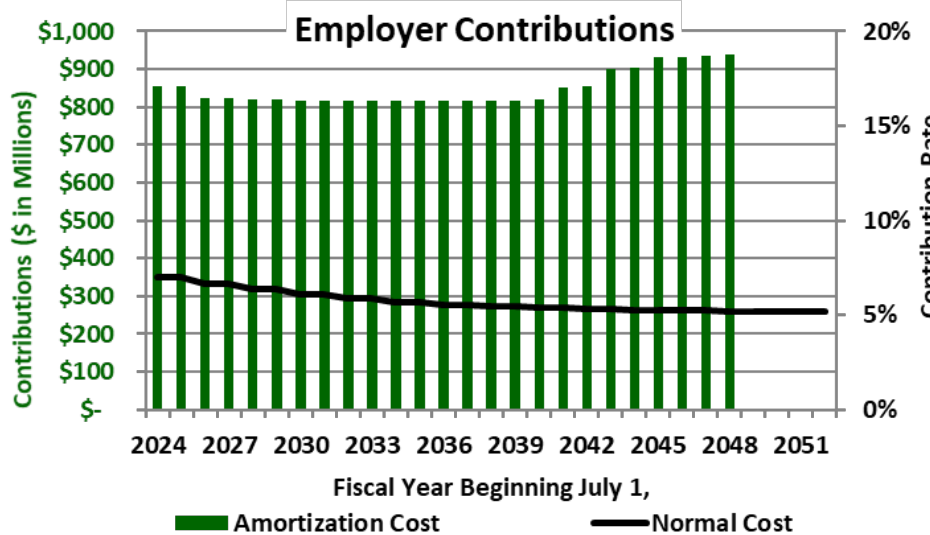
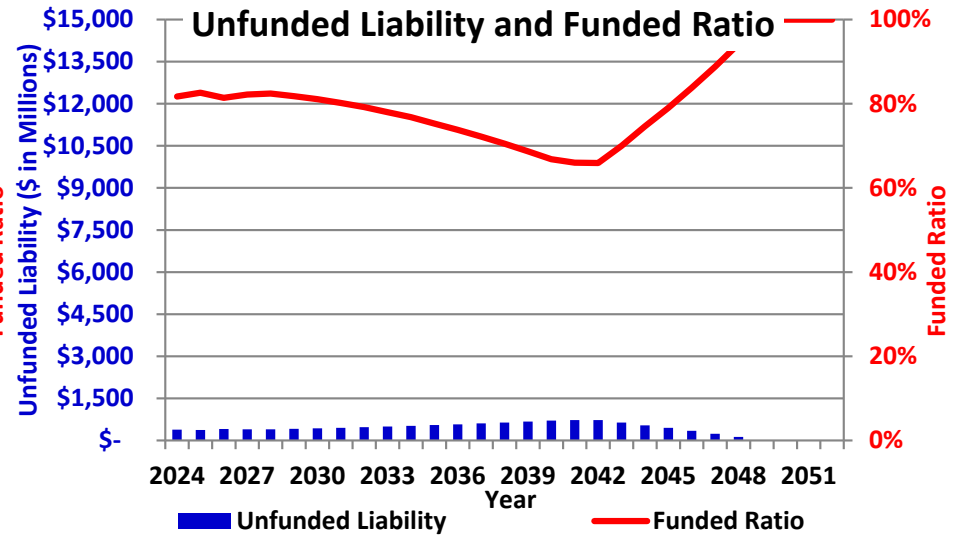


KERS Non-Hazardous Projection

Pension

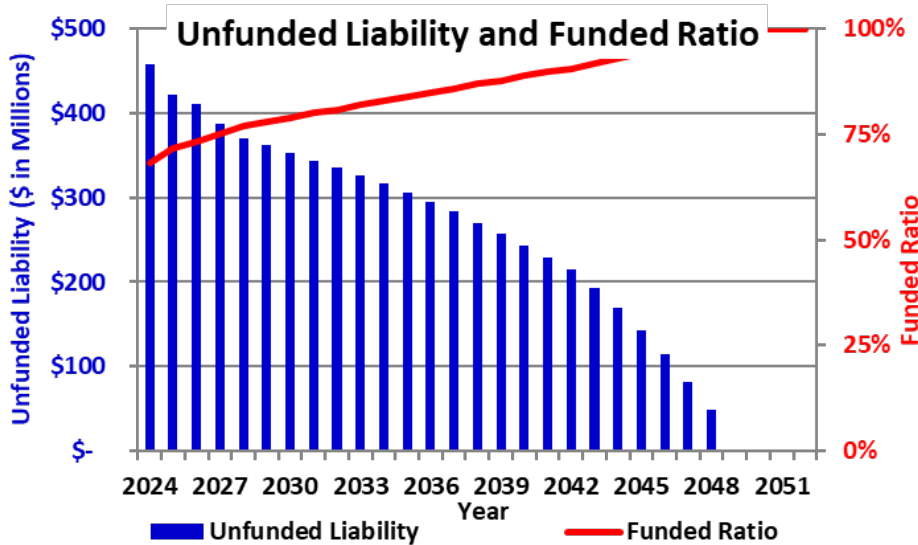


Insurance

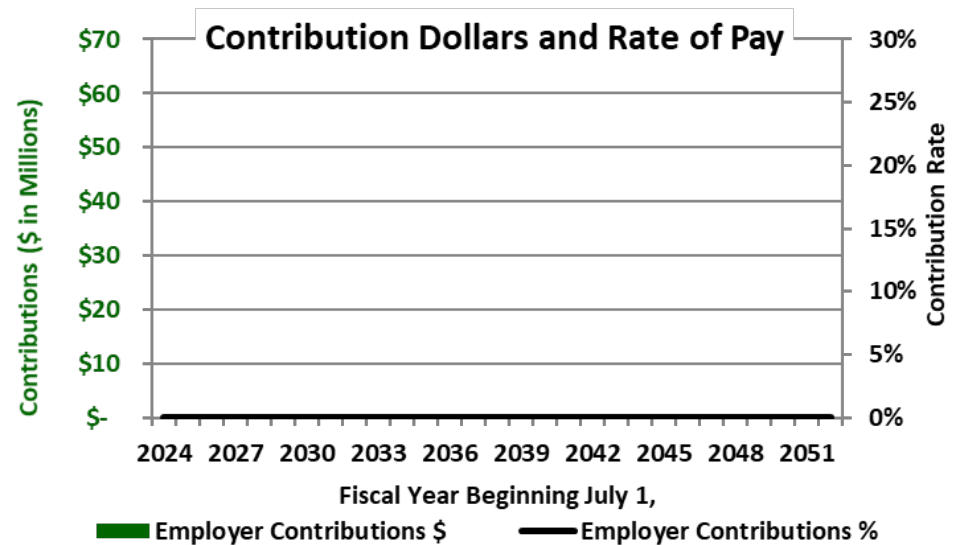
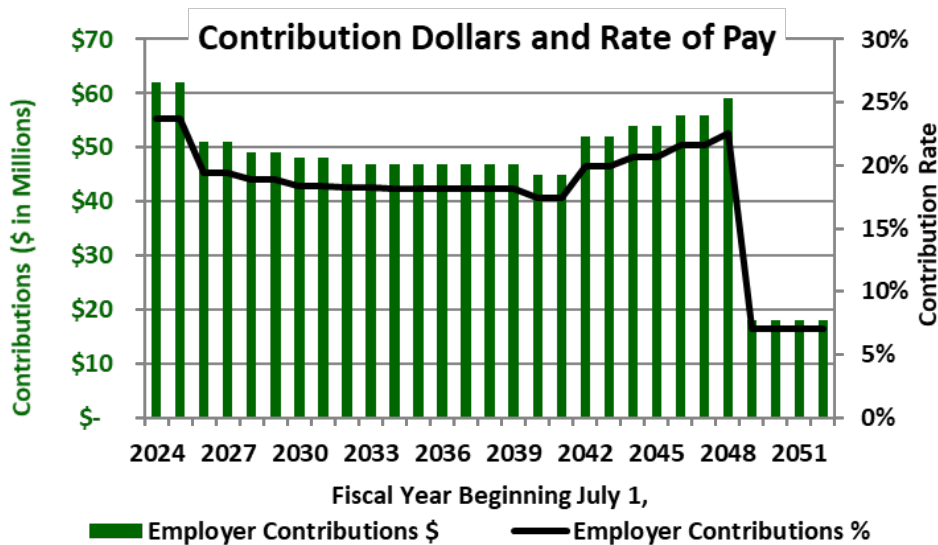
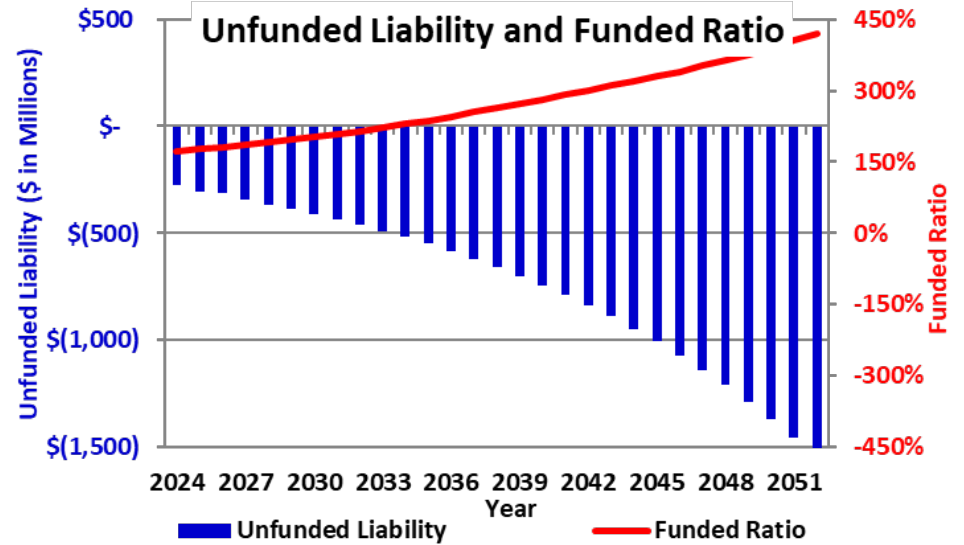


KERS Hazardous Projection

Pension

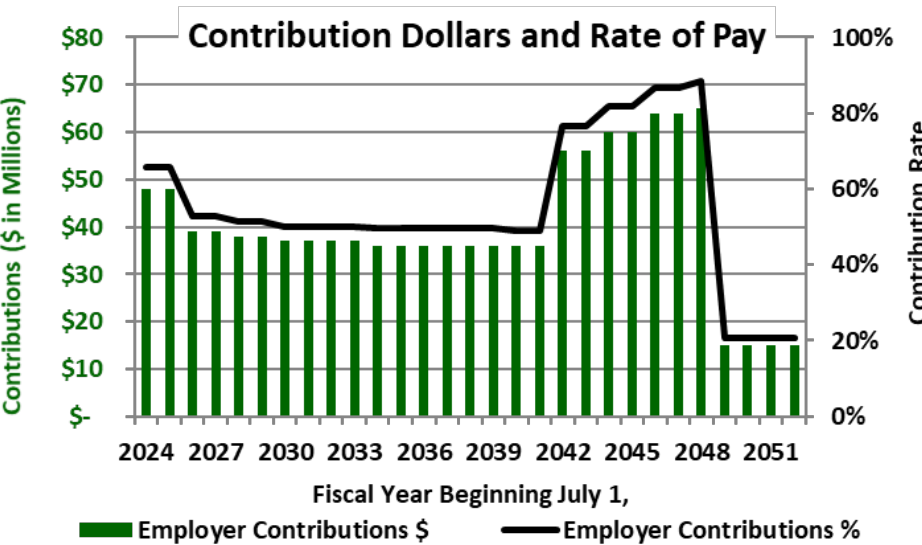
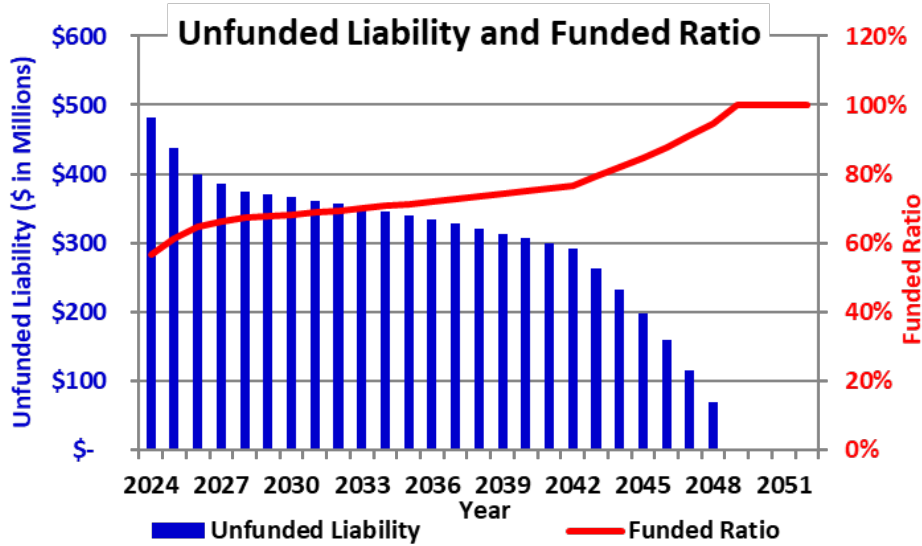


Insurance

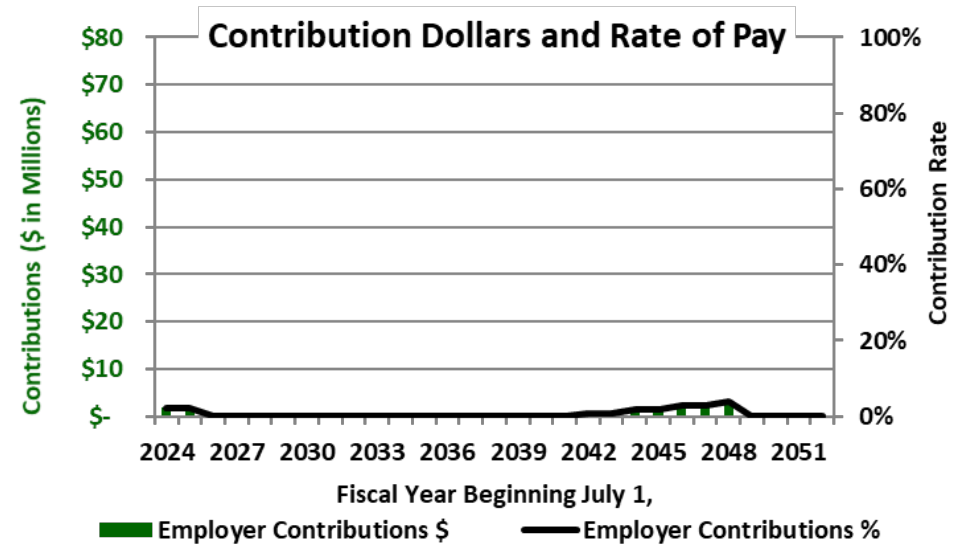
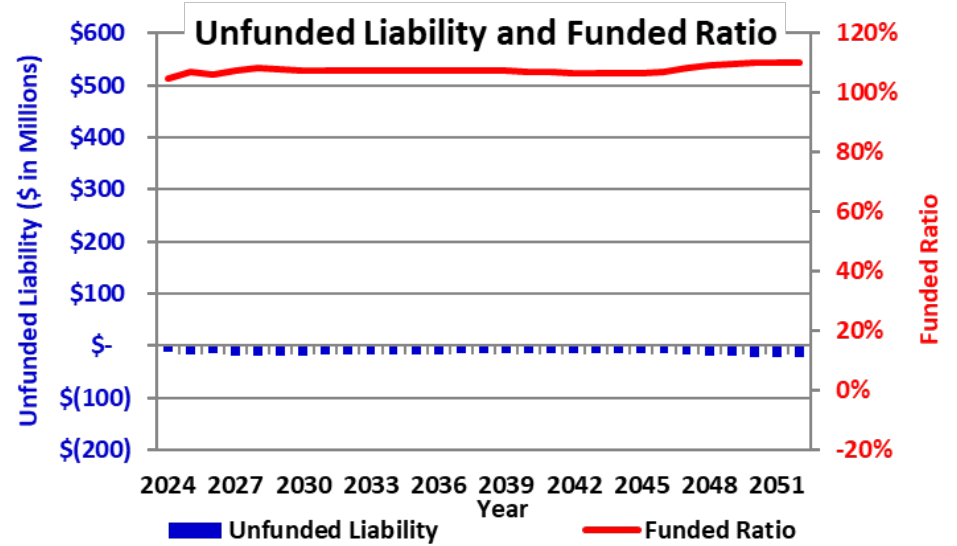


SPRS Projection

Pension



Insurance



Closing Comments on 2024 Valuation Results

- The increase in active members and payroll is a positive signal to the financial wellbeing of the System and the participating employers
- 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, 2024. 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.



Kentucky Public Pensions Authority
KERS Non-Hazardous Retirement Fund
 (\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution (excluding Appropriations)	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll (Normal Cost)	Employer Contribution (Amortization Cost)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 16,648	\$ 4,122	\$ 12,526	25%	\$ 985	\$ 93	\$ 1,862	6.99%	\$ 855
2025	16,662	4,722	11,940	28%	985	93	1,862	6.99%	855
2026	16,645	5,242	11,403	32%	947	93	1,862	6.66%	823
2027	16,603	5,490	11,113	33%	947	93	1,862	6.66%	823
2028	16,538	5,718	10,820	35%	940	93	1,862	6.36%	821
2029	16,450	5,905	10,545	36%	940	93	1,862	6.36%	821
2030	16,343	6,087	10,256	37%	932	93	1,862	6.10%	818
2031	16,220	6,264	9,956	39%	932	93	1,862	6.10%	818
2032	16,083	6,444	9,639	40%	928	93	1,862	5.88%	818
2033	15,934	6,628	9,306	42%	928	93	1,862	5.88%	818
2034	15,775	6,819	8,956	43%	924	93	1,862	5.70%	818
2035	15,614	7,028	8,586	45%	924	93	1,862	5.70%	818
2036	15,447	7,250	8,197	47%	921	93	1,862	5.54%	818
2037	15,280	7,492	7,788	49%	921	93	1,862	5.54%	818
2038	15,116	7,758	7,358	51%	919	93	1,862	5.43%	818
2039	14,957	8,052	6,905	54%	919	93	1,862	5.43%	818
2040	14,806	8,378	6,428	57%	921	93	1,862	5.36%	821
2041	14,665	8,741	5,924	60%	950	93	1,862	5.36%	850
2042	14,533	9,170	5,363	63%	954	93	1,862	5.30%	856
2043	14,411	9,644	4,767	67%	1,000	93	1,862	5.30%	902
2044	14,299	10,208	4,091	71%	1,001	93	1,862	5.26%	903
2045	14,199	10,819	3,380	76%	1,031	93	1,862	5.26%	933
2046	14,109	11,509	2,600	82%	1,029	93	1,862	5.22%	932
2047	14,030	12,250	1,780	87%	1,032	93	1,862	5.22%	935
2048	13,963	13,048	915	93%	1,035	93	1,862	5.20%	938
2049	13,907	13,907	-	100%	97	93	1,862	5.19%	-
2050	13,865	13,865	-	100%	96	93	1,862	5.18%	-
2051	13,835	13,835	-	100%	96	93	1,862	5.17%	-
2052	13,820	13,820	-	100%	96	93	1,862	5.17%	-
2053	13,819	13,819	-	100%	96	93	1,862	5.17%	-

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 5.25%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the normal cost portion of the actuarially determined contribution.

The full actuarially determined amortization cost is assumed to be allocated amongst employers each biennium.

The second year of a biannual budget is assumed to take into account any expiring amortization bases.

Per HB1 and HB6 (passed in the 2024 legislative session), \$300 million in additional appropriations assumed to be received in FYE 2025 and FYE 2026



Kentucky Public Pensions Authority
KERS Hazardous Retirement Fund
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 1,443	\$ 985	\$ 458	68%	\$ 62	\$ 21	\$ 260	23.74%	23.74%
2025	1,486	1,064	422	72%	62	21	260	23.74%	20.68%
2026	1,527	1,116	411	73%	51	21	260	19.46%	19.46%
2027	1,566	1,178	388	75%	51	21	260	19.46%	19.55%
2028	1,604	1,234	370	77%	49	21	260	18.87%	18.87%
2029	1,642	1,280	362	78%	49	21	260	18.87%	18.43%
2030	1,680	1,327	353	79%	48	21	260	18.33%	18.33%
2031	1,719	1,375	344	80%	48	21	260	18.33%	18.29%
2032	1,760	1,424	336	81%	47	21	260	18.25%	18.25%
2033	1,803	1,477	326	82%	47	21	260	18.25%	18.23%
2034	1,848	1,532	316	83%	47	21	260	18.20%	18.20%
2035	1,898	1,592	306	84%	47	21	260	18.20%	18.18%
2036	1,949	1,655	294	85%	47	21	260	18.15%	18.15%
2037	2,003	1,720	283	86%	47	21	260	18.15%	18.13%
2038	2,057	1,787	270	87%	47	21	260	18.11%	18.11%
2039	2,113	1,856	257	88%	47	21	260	18.11%	18.09%
2040	2,171	1,928	243	89%	45	21	260	17.40%	17.40%
2041	2,230	2,001	229	90%	45	21	260	17.40%	19.11%
2042	2,292	2,077	215	91%	52	21	260	19.98%	19.98%
2043	2,356	2,163	193	92%	52	21	260	19.98%	20.64%
2044	2,423	2,253	170	93%	54	21	260	20.66%	20.66%
2045	2,491	2,348	143	94%	54	21	260	20.66%	21.71%
2046	2,561	2,446	115	96%	56	21	260	21.59%	21.59%
2047	2,632	2,550	82	97%	56	21	260	21.59%	22.16%
2048	2,704	2,656	48	98%	59	21	260	22.55%	22.55%
2049	2,777	2,777	-	100%	18	21	260	7.07%	7.07%
2050	2,849	2,849	-	100%	18	21	260	7.07%	7.07%
2051	2,921	2,921	-	100%	18	21	260	7.08%	7.08%
2052	2,992	2,992	-	100%	18	21	260	7.08%	7.08%
2053	3,061	3,061	-	100%	18	21	260	7.09%	7.09%

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.25%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.



Kentucky Public Pensions Authority
SPRS Retirement Fund
 (\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 1,112	\$ 631	\$ 481	57%	\$ 48	\$ 6	73	65.79%	65.79%
2025	1,125	688	437	61%	48	6	73	65.79%	57.91%
2026	1,134	735	399	65%	39	6	73	52.77%	52.77%
2027	1,140	754	386	66%	39	6	73	52.77%	52.49%
2028	1,146	771	375	67%	38	6	73	51.25%	51.25%
2029	1,151	780	371	68%	38	6	73	51.25%	50.39%
2030	1,156	790	366	68%	37	6	73	50.15%	50.15%
2031	1,160	799	361	69%	37	6	73	50.15%	50.02%
2032	1,165	809	356	69%	37	6	73	49.90%	49.90%
2033	1,171	820	351	70%	37	6	73	49.90%	49.81%
2034	1,177	832	345	71%	36	6	73	49.74%	49.74%
2035	1,184	844	340	71%	36	6	73	49.74%	49.70%
2036	1,192	858	334	72%	36	6	73	49.65%	49.65%
2037	1,201	873	328	73%	36	6	73	49.65%	49.60%
2038	1,210	889	321	74%	36	6	73	49.57%	49.57%
2039	1,219	906	313	74%	36	6	73	49.57%	49.51%
2040	1,230	923	307	75%	36	6	73	48.90%	48.90%
2041	1,240	941	299	76%	36	6	73	48.90%	76.20%
2042	1,250	959	291	77%	56	6	73	76.69%	76.69%
2043	1,261	999	262	79%	56	6	73	76.69%	78.03%
2044	1,272	1,040	232	82%	60	6	73	81.69%	81.69%
2045	1,283	1,086	197	85%	60	6	73	81.69%	86.40%
2046	1,292	1,133	159	88%	64	6	73	86.82%	86.82%
2047	1,301	1,186	115	91%	64	6	73	86.82%	87.82%
2048	1,309	1,240	69	95%	65	6	73	88.56%	88.56%
2049	1,317	1,317	-	100%	15	6	73	20.63%	20.63%
2050	1,323	1,323	-	100%	15	6	73	20.64%	20.64%
2051	1,328	1,328	-	100%	15	6	73	20.66%	20.66%
2052	1,332	1,332	-	100%	15	6	73	20.68%	20.68%
2053	1,333	1,333	-	100%	15	6	73	20.69%	20.69%

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 5.25%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.

Per HB1 (passed in the 2024 legislative session), \$25 million in additional appropriations assumed to be received in FYE 2025 and FYE 2026



Kentucky Public Pensions Authority
KERS Non-Hazardous Insurance Fund
 (\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll (Normal Cost)	Employer Contribution (Amortization Cost)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 2,095	\$ 1,712	\$ 383	82%	\$ 29	\$ 11	\$ 1,850	1.45%	\$ 2
2025	2,148	1,774	374	83%	29	11	1,850	1.45%	2
2026	2,193	1,786	407	81%	29	12	1,850	1.03%	10
2027	2,228	1,832	396	82%	29	13	1,850	1.03%	10
2028	2,254	1,858	396	82%	24	14	1,850	0.83%	9
2029	2,271	1,858	413	82%	24	14	1,850	0.83%	9
2030	2,279	1,848	431	81%	19	15	1,850	0.65%	7
2031	2,278	1,827	451	80%	19	15	1,850	0.65%	7
2032	2,271	1,798	473	79%	16	16	1,850	0.49%	7
2033	2,259	1,762	497	78%	16	16	1,850	0.49%	7
2034	2,242	1,721	521	77%	14	17	1,850	0.36%	7
2035	2,222	1,674	548	75%	14	17	1,850	0.36%	7
2036	2,202	1,626	576	74%	12	17	1,850	0.27%	7
2037	2,182	1,576	606	72%	12	18	1,850	0.27%	7
2038	2,164	1,526	638	71%	11	18	1,850	0.21%	7
2039	2,149	1,476	673	69%	11	18	1,850	0.21%	7
2040	2,136	1,427	709	67%	33	18	1,850	0.16%	30
2041	2,127	1,403	724	66%	48	18	1,850	0.16%	45
2042	2,122	1,398	724	66%	133	18	1,850	0.13%	130
2043	2,122	1,485	637	70%	136	18	1,850	0.13%	134
2044	2,125	1,585	540	75%	126	18	1,850	0.11%	124
2045	2,132	1,685	447	79%	128	18	1,850	0.11%	126
2046	2,141	1,795	346	84%	126	18	1,850	0.09%	125
2047	2,151	1,911	240	89%	129	18	1,850	0.09%	127
2048	2,161	2,036	125	94%	130	18	1,850	0.07%	129
2049	2,170	2,170	-	100%	1	18	1,850	0.06%	-
2050	2,177	2,177	-	100%	1	18	1,850	0.05%	-
2051	2,183	2,183	-	100%	1	18	1,850	0.05%	-
2052	2,189	2,189	-	100%	1	18	1,850	0.04%	-
2053	2,193	2,193	-	100%	1	18	1,850	0.03%	-

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the normal cost portion of the actuarially determined contribution.

The full actuarially determined amortization cost is assumed to be allocated amongst employers each biennium.

The second year of a biannual budget is assumed to take into account any expiring amortization bases.



Kentucky Public Pensions Authority
KERS Hazardous Insurance Fund
 (\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 380	\$ 652	\$ (272)	172%	\$ -	\$ 2	\$ 259	0.00%	0.00%
2025	387	690	(303)	178%	-	2	259	0.00%	0.00%
2026	393	708	(315)	180%	-	2	259	0.00%	0.00%
2027	397	739	(342)	186%	-	2	259	0.00%	0.00%
2028	399	767	(368)	192%	-	2	259	0.00%	0.00%
2029	401	790	(389)	197%	-	2	259	0.00%	0.00%
2030	401	813	(412)	203%	-	2	259	0.00%	0.00%
2031	402	838	(436)	209%	-	2	259	0.00%	0.00%
2032	401	863	(462)	215%	-	3	259	0.00%	0.00%
2033	401	891	(490)	222%	-	3	259	0.00%	0.00%
2034	401	920	(519)	229%	-	3	259	0.00%	0.00%
2035	401	951	(550)	237%	-	3	259	0.00%	0.00%
2036	401	985	(584)	246%	-	3	259	0.00%	0.00%
2037	402	1,022	(620)	254%	-	3	259	0.00%	0.00%
2038	403	1,062	(659)	264%	-	3	259	0.00%	0.00%
2039	406	1,105	(699)	272%	-	3	259	0.00%	0.00%
2040	409	1,151	(742)	281%	-	3	259	0.00%	0.00%
2041	413	1,202	(789)	291%	-	3	259	0.00%	0.00%
2042	418	1,256	(838)	301%	-	3	259	0.00%	0.00%
2043	424	1,314	(890)	310%	-	3	259	0.00%	0.00%
2044	430	1,377	(947)	320%	-	3	259	0.00%	0.00%
2045	437	1,444	(1,007)	330%	-	3	259	0.00%	0.00%
2046	445	1,515	(1,070)	340%	-	3	259	0.00%	0.00%
2047	452	1,590	(1,138)	352%	-	3	259	0.00%	0.00%
2048	459	1,669	(1,210)	364%	-	3	259	0.00%	0.00%
2049	466	1,753	(1,287)	376%	-	3	259	0.00%	0.00%
2050	472	1,841	(1,369)	390%	-	3	259	0.00%	0.00%
2051	478	1,935	(1,457)	405%	-	3	259	0.00%	0.00%
2052	484	2,033	(1,549)	420%	-	3	259	0.00%	0.00%
2053	488	2,137	(1,649)	438%	-	3	259	0.00%	0.00%

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.



Kentucky Public Pensions Authority
SPRS Insurance Fund
 (\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2024	\$ 251	\$ 263	\$ (12)	105%	\$ 2	\$ -	73	2.31%	2.31%
2025	255	273	(18)	107%	2	1	73	2.31%	1.46%
2026	257	273	(16)	106%	-	1	73	0.00%	0.00%
2027	257	276	(19)	107%	-	1	73	0.00%	0.00%
2028	256	277	(21)	108%	-	1	73	0.00%	0.00%
2029	254	274	(20)	108%	-	1	73	0.00%	0.00%
2030	252	271	(19)	108%	-	1	73	0.00%	0.00%
2031	249	267	(18)	107%	-	1	73	0.00%	0.00%
2032	245	263	(18)	107%	-	1	73	0.00%	0.00%
2033	240	258	(18)	108%	-	1	73	0.00%	0.00%
2034	236	253	(17)	107%	-	1	73	0.00%	0.00%
2035	231	248	(17)	107%	-	1	73	0.00%	0.00%
2036	226	243	(17)	108%	-	1	73	0.00%	0.00%
2037	222	238	(16)	107%	-	1	73	0.00%	0.00%
2038	218	234	(16)	107%	-	1	73	0.00%	0.00%
2039	215	231	(16)	107%	-	1	73	0.00%	0.00%
2040	212	227	(15)	107%	-	1	73	0.00%	0.00%
2041	210	225	(15)	107%	-	1	73	0.00%	0.00%
2042	209	223	(14)	107%	1	1	73	0.77%	0.77%
2043	208	222	(14)	107%	1	1	73	0.77%	1.17%
2044	208	222	(14)	107%	1	1	73	1.85%	1.85%
2045	209	223	(14)	107%	1	1	73	1.85%	2.86%
2046	210	225	(15)	107%	2	1	73	2.84%	2.84%
2047	211	228	(17)	108%	2	1	73	2.84%	3.43%
2048	212	231	(19)	109%	3	1	73	3.94%	3.94%
2049	214	235	(21)	110%	-	1	73	0.00%	0.00%
2050	215	237	(22)	110%	-	1	73	0.00%	0.00%
2051	216	238	(22)	110%	-	1	73	0.00%	0.00%
2052	217	239	(22)	110%	-	1	73	0.00%	0.00%
2053	217	239	(22)	110%	-	1	73	0.00%	0.00%

Notes and assumptions:

The projection is based on the results of the June 30, 2024 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.



Kentucky Employees Retirement System (KERS)

Actuarial Valuation Report
as of June 30, 2024

DRAFT





October 30, 2024

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Subject: Actuarial Valuation as of June 30, 2024

Dear Trustees of the Board:

This report describes the current actuarial condition of the Kentucky Employees Retirement System (KERS), provides the actuarially determined employer contribution, analyzes changes in KERS's financial condition and provides various summaries of the data. The results of this actuarial valuation, including the calculated employer contribution rates will be used by the Board and stakeholders for informational purposes only as the employer contribution rate for the fiscal years ending June 30, 2025 and June 30, 2026 were certified in the June 30, 2023 actuarial valuation, which was adopted by the Board and incorporated in the Commonwealth's budget for the biennium period.

Separate reports are issued with regard to valuation results determined in accordance with Governmental Accounting Standards Board (GASB) Statements 67, 68, 74 and 75. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of June 30, the first day of the plan year for KERS. This report was prepared at the request of the Board of Trustees of the Kentucky Retirement Systems (Board) and is intended for use by the Kentucky Public Pensions Authority (KPPA) staff and those designated or approved by the Board.

FINANCING OBJECTIVES AND FUNDING POLICY

The employer contribution is determined in accordance with Section 61.565 of Kentucky Statute. As specified by the Statute, the employer contribution is comprised of a normal cost contribution and an actuarial accrued liability contribution. The actuarial accrued liability contribution is calculated by amortizing the unfunded accrued liability as of June 30, 2019 over a closed 30-year amortization period (25 years remaining as of June 30, 2024). Gains and losses incurring in years after June 30, 2019 are amortized as separate closed 20-year amortization bases.

Board of Trustees
October 30, 2024
Page 2

If the contributions made are equal to the Actuarially Determined Contribution (ADC), and if all actuarial assumptions are met, there will not be an unfunded accrued liability at the end of the 25-year period remaining from the original closed 30-year amortization base. Accordingly, the ADC under the funding policy can be considered a “Reasonable Actuarially Determined Contribution” as required by the Actuarial Standards of Practice.

House Bill 8 passed during the 2021 legislative session and specified the method for allocating and collecting contributions from the participating employers in the non-hazardous fund. Each employer will pay a normal cost contribution on the payroll of their covered employees and contribute to the fund an allocated share of the cost required to amortize the unfunded liability.

HB 1 and HB 604 were enacted in the 2022 legislative session and provided an additional \$135 million and \$105 million in appropriations to finance the unfunded actuarial accrued liability of the KERS non-hazardous retirement fund in FY 2024. The previous year’s valuation reflected the appropriations for FY 2024 in the calculated contribution requirement.

Additionally, HB 1 and HB 6 that were enacted in the 2024 legislative session provided an additional \$50 million and \$250 million in appropriations to finance the unfunded actuarial accrued liability of the KERS non-hazardous retirement fund in FY 2025 and FY 2026. The appropriations for FY 2025 have been reflected in the contribution requirement in this year’s valuation. The appropriations for FY 2026 will be reflected in the contribution requirement in next year’s valuation.

ASSUMPTIONS AND METHODS

The Board of Trustees, in consultation with the actuary, sets the actuarial assumptions and methods used in the actuarial valuation. Except where noted in this report, the assumptions used in this actuarial valuation are based on an experience study conducted with experience through June 30, 2022, adopted by the Board of Trustees on June 5, 2023.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contributions, and funding periods. The actuarial calculations are intended to provide information for rational decision making.

BENEFIT PROVISIONS

The benefit provisions reflected in these valuations are those which were in effect on June 30, 2024. There were no material benefit provision changes since the prior valuation.



Board of Trustees
October 30, 2024
Page 3

DATA

Member data for retired, active and inactive members was supplied as of June 30, 2024, by KPPA staff. The staff also supplied asset information as of June 30, 2024. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by KPPA.

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of KERS as of June 30, 2024.

All of our work conforms with generally accepted actuarial principles and practices, and is in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Kentucky Code of Laws and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

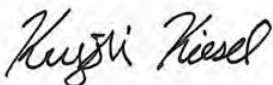
Gabriel, Roeder, Smith & Company



Daniel J. White, FSA, EA, MAAA
Senior Consultant



Jamie Shaw, ASA, EA, MAAA
Consultant



Krysti Kiesel, ASA, MAAA
Consultant



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SECTION 1

EXECUTIVE SUMMARY

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Summary of Principal Results
(Dollar amounts expressed in thousands)

	Non-Hazardous		Hazardous		Total	
	June 30, 2024	June 30, 2023	June 30, 2024	June 30, 2023	June 30, 2024	June 30, 2023
Contribution Rate, payable on covered payroll¹:						
Retirement	6.85%	6.99%	20.68%	23.74%		
Insurance	1.14%	1.45%	0.00%	0.00%		
Total	7.99%	8.44%	20.68%	23.74%	N/A	N/A
Amortization Cost to be allocated amongst employers	\$865,810	\$856,561	N/A	N/A	N/A	N/A
Assets:						
Retirement						
• Actuarial value (AVAR)	\$4,122,269	\$3,552,471	\$985,075	\$891,460	\$5,107,344	\$4,443,931
• Market value (MVAR)	\$4,223,936	\$3,539,943	\$1,019,890	\$893,533	\$5,243,826	\$4,433,476
• Ratio of actuarial to market value of assets	97.6%	100.4%	96.6%	99.8%	97.4%	100.2%
Insurance						
• Actuarial value (AVAI)	\$1,712,043	\$1,532,895	\$652,349	\$619,519	\$2,364,392	\$2,152,414
• Market value (MVAI)	\$1,765,729	\$1,532,752	\$677,948	\$625,356	\$2,443,677	\$2,158,108
• Ratio of actuarial to market value of assets	97.0%	100.0%	96.2%	99.1%	96.8%	99.7%
Funded Status:						
Retirement						
• Actuarial accrued liability	\$16,647,892	\$16,304,278	\$1,442,619	\$1,363,036	\$18,090,511	\$17,667,314
• Unfunded accrued liability on AVAR	\$12,525,623	\$12,751,807	\$457,544	\$471,576	\$12,983,167	\$13,223,383
• Funded ratio on AVAR	24.8%	21.8%	68.3%	65.4%	28.2%	25.2%
• Unfunded accrued liability on MVAR	\$12,423,956	\$12,764,335	\$422,729	\$469,503	\$12,846,685	\$13,233,838
• Funded ratio on MVAR	25.4%	21.7%	70.7%	65.6%	29.0%	25.1%
Insurance						
• Actuarial accrued liability	\$2,094,744	\$1,877,109	\$379,568	\$363,512	\$2,474,312	\$2,240,621
• Unfunded accrued liability on AVAI	\$382,701	\$344,214	(\$272,781)	(\$256,007)	\$109,920	\$88,207
• Funded ratio on AVAI	81.7%	81.7%	171.9%	170.4%	95.6%	96.1%
• Unfunded accrued liability on MVAI	\$329,015	\$344,357	(\$298,380)	(\$261,844)	\$30,635	\$82,513
• Funded ratio on MVAI	84.3%	81.7%	178.6%	172.0%	98.8%	96.3%
Membership:						
• Number of						
- Active Members	32,455	31,383	4,154	3,886	36,609	35,269
- Retirees and Beneficiaries	48,474	48,409	4,934	4,887	53,408	53,296
- Inactive Members	56,754	55,980	8,980	8,577	65,734	64,557
- Total	137,683	135,772	18,068	17,350	155,751	153,122
• Projected payroll of active members	\$1,861,522	\$1,615,868	\$259,606	\$211,602	\$2,121,128	\$1,827,470
• Average salary of active members	\$57,357	\$51,489	\$62,496	\$54,452	\$57,940	\$51,815

¹ Reflects contribution rate payable as a percentage of covered payroll. For the non-hazardous fund, this includes the normal cost portion of the contribution requirement only. For the hazardous fund, this includes both the normal cost and unfunded liability portion of the contribution requirement.

¹ Contribution rates calculated with the June 30, 2023 valuation are effective for fiscal years ending June 30, 2025 and June 30 2026.



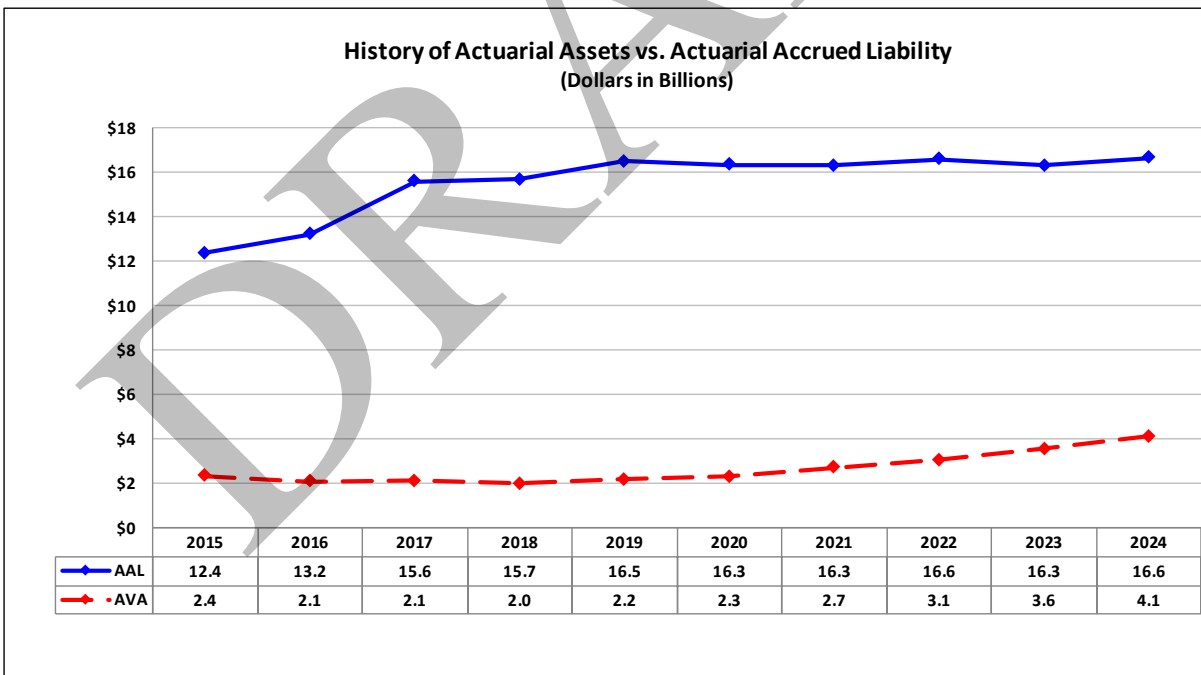
Executive Summary (Continued)

Non-Hazardous Retirement Fund

The unfunded actuarial accrued liability of the non-hazardous retirement fund decreased by \$226 million since the prior year’s valuation to \$12.526 billion. This decrease was approximately \$334 million less than expected, primarily due to liability losses as a result of salary increases for individual members being greater than assumed. These liability losses were partially offset by favorable investment experience.

For FYE 2024, the non-hazardous retirement fund distributed \$1,058 million in benefit payments and administrative expenses, and received \$1,392 million in employer and employee contributions. As of June 30, 2024, plan assets for this system were \$4,224 million (excluding assets in the 401(h) account). To stabilize the financial condition of this system, it is imperative that contributions to the system continue to exceed the benefit payments.

Below is a chart with the historical actuarial value of assets and actuarial accrued liability. The divergence in the assets and liability from 2015 through 2020 was generally due to: (1) actual contributions being insufficient to finance the unfunded actuarial accrued liability, and (2) assumption changes.

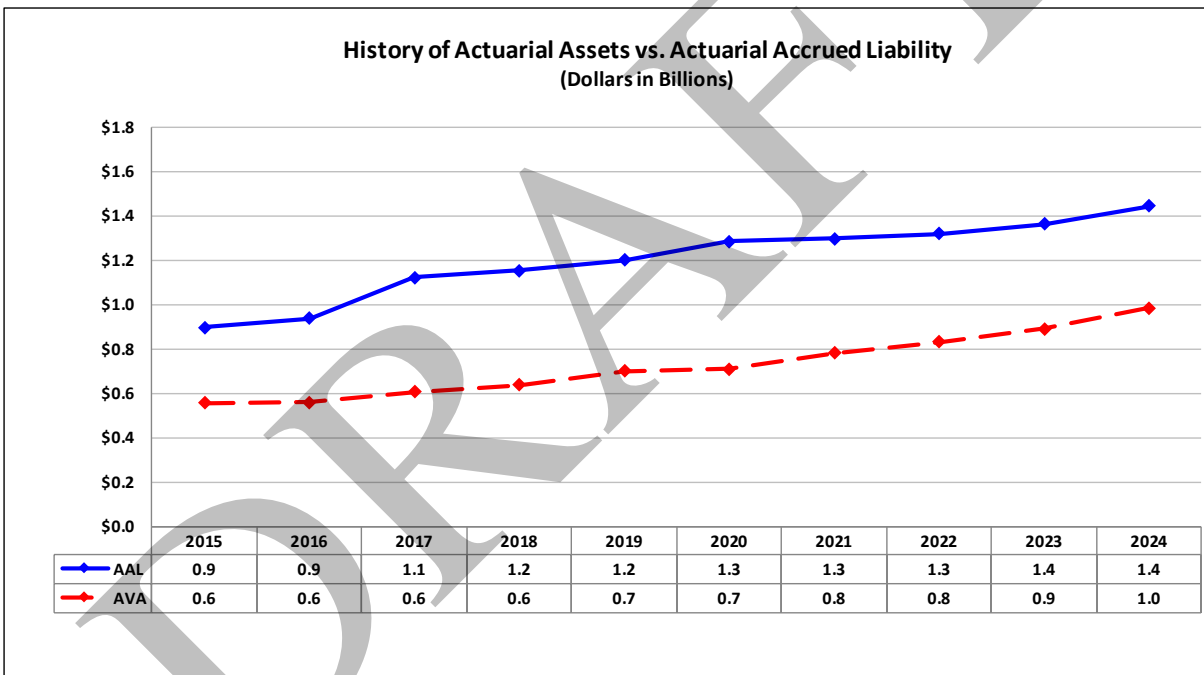


Executive Summary (Continued)

Hazardous Retirement Fund

The unfunded actuarial accrued liability of the hazardous retirement fund decreased by \$14 million since the prior year’s valuation to \$458 million. This decrease was approximately \$37 million less than expected, primarily due to liability losses as a result of salary increases for individual members being greater than assumed. These liability losses were partially offset by favorable investment experience.

Below is a chart with the historical actuarial value of assets and actuarial accrued liability. The divergence in the assets and liability from 2015 through 2020 was generally due to: (1) actual contributions being insufficient to finance the unfunded actuarial accrued liability, and (2) assumption changes.



Executive Summary (Continued)

Summary of Change in Financial Condition of the Insurance Funds

The unfunded actuarial accrued liability of the non-hazardous insurance fund increased by \$38 million since the prior year's valuation to \$383 million. The unfunded liability was expected to decrease by \$97 million; therefore, the unfunded liability was \$135 million greater than expected. This was primarily due to liability losses related to the 2025 premium experience.

The funding surplus (assets in excess of the actuarial accrued liability) of the hazardous insurance fund increased by \$17 million since the prior year's valuation to \$273 million. This increase was approximately \$2 million more than expected.

On average, pre-Medicare premiums were approximately 5% lower than expected and Medicare premiums were approximately 38% higher than expected. In conjunction with the review of the healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is also reviewed on an annual basis. As a result of our review, the ultimate annual trend assumption was increased for pre-Medicare and Medicare Plans from 4.05% to 4.25%. Additionally, the trend assumption for the pre-Medicare Plans was increased during the select period. The updates to the trend assumption increased the liability for the non-hazardous and hazardous insurance funds by approximately \$45 million and \$9 million, respectively.



SECTION 2

DISCUSSION

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Discussion

The Kentucky Employees Retirement System (KERS) is a defined benefit pension plan that provides coverage for employees of state government, non-teaching staff at regional state supported universities, local health departments, regional mental health/mental retardation agencies, and other quasi-state agencies. KERS includes both non-hazardous and hazardous duty benefits. This report presents the results of the June 30, 2024 actuarial funding valuation for both the Retirement Funds and Insurance Funds.

The primary purposes of the valuation report are to describe the current actuarial condition of KERS, analyze changes in KERS's financial condition, and provide various summaries of the data. The results of this actuarial valuation, including the calculated employer contribution rates, will be used by the Board and stakeholders for informational purposes only as the employer contribution rates for the fiscal years ending June 30, 2025 and June 30, 2026 were certified in the June 30, 2023 actuarial valuation, which was adopted by the Board and incorporated in the Commonwealth's budget for the biennium period.

The actuarially determined contribution consist of two components: a normal cost rate and an amortization cost to finance the unfunded actuarial accrued liability. The normal cost rate is the theoretical amount which would be required to pay the members' benefits, based on the current plan provisions, if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. This is the amount that it should cost to provide the benefits for an average member. Since members contribute to the fund, only the excess of the normal cost rate over the member contribution rate is included in the employer contribution. The amortization cost is the amount necessary to amortize the unfunded actuarial accrued liability. The payroll growth rate and discount rate assumptions are selected by the Board. The funding period is specified in Section 61.565 of Kentucky Statute.

All of the actuarial and financial tables referenced by the other sections of this report appear in Section 3. Section 4 provides additional details related to the calculation of the amortization of the unfunded actuarial accrued liability. Section 5 provides member data and statistical information. Section 6 provides a discussion of various risk measures, which are intended to aid stakeholders in understanding the effects of future experience differing from the assumptions used in performing an actuarial valuation. Appendices A and B provide summaries of the principle actuarial assumptions and methods and plan provisions. Appendix C provides a glossary of technical terms that are used throughout this report. Finally, Appendix D provides the allocation of the amortization cost amongst KERS Non-Hazardous employers in accordance with Statutes enacted with the passing of House Bill 8 during the 2021 legislation session.

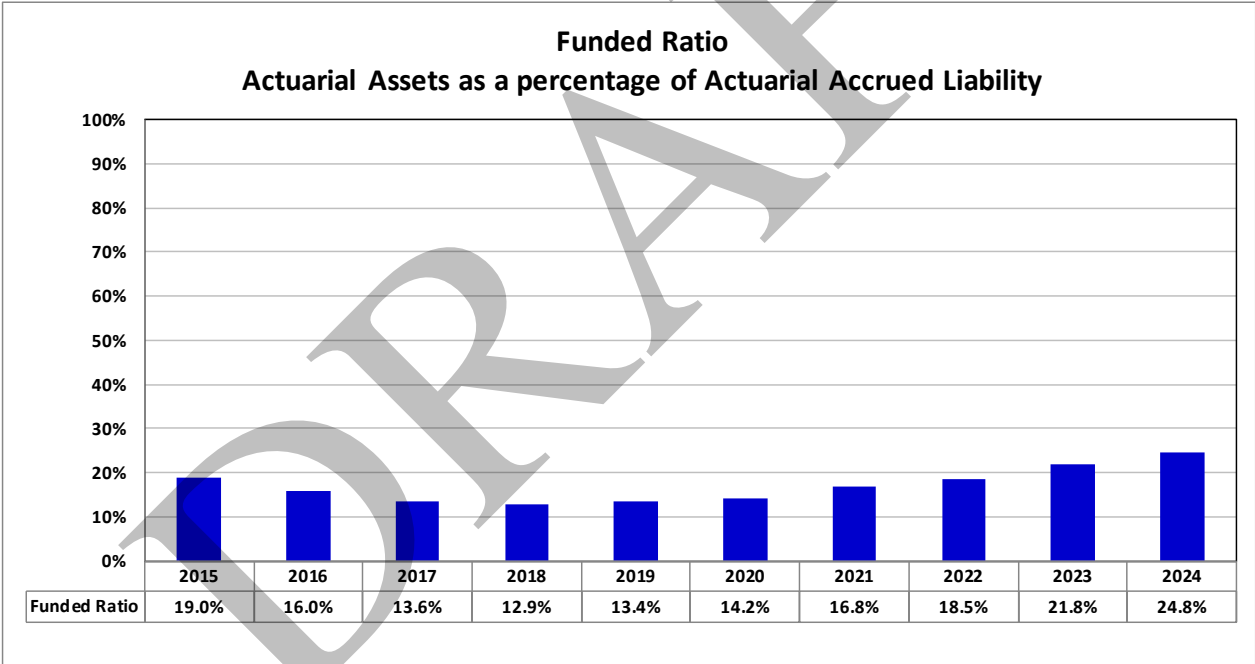


Funding Progress

The following charts provide a ten-year history of the retirement funds’ funded ratio (i.e. the Actuarial Value of Assets divided by the Actuarial Accrued Liability). The decline in the funded ratio in the first half of this ten-year period was generally due to: (1) actual contributions being insufficient to finance the unfunded actuarial accrued liability, and (2) decreases in the assumed rate of return.

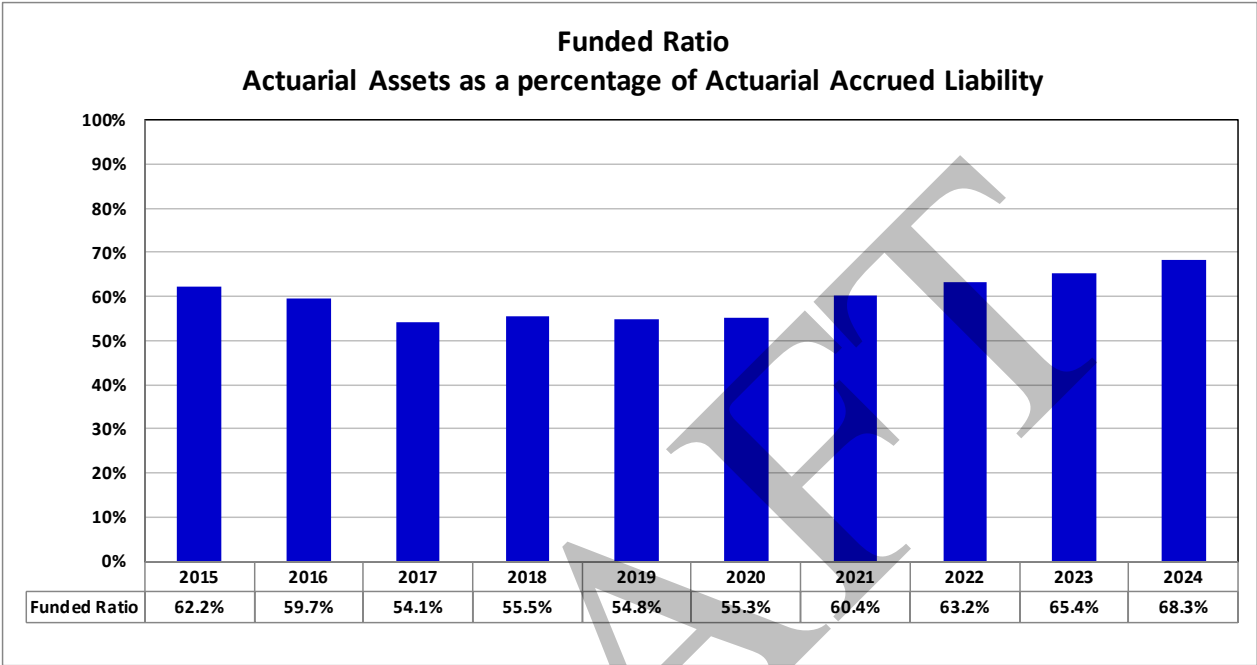
The funded ratio has been gradually increasing for the past several years for both the non-hazardous and hazardous funds. Assuming the full actuarially determined contributions are paid in future years and absent material future unfavorable experience, the funded ratio is expected to continue improving. Also, the dollar amount of the unfunded actuarial accrued liability, or the difference between the actuarial accrued liability and the actuarial value of assets, is also expected to continue a decreasing trend. Table 9, Schedule of Funding Progress, in the following section of the report provides additional detail regarding the funding progress of the retirement funds.

Non-Hazardous Retirement Fund



Funding Progress (Continued)

Hazardous Retirement Fund



Asset Gains/ (Losses)

The actuarial value of assets (“AVA”) is based on a smoothed market value of assets, using a systematic approach to phase-in the difference between the actual and expected investment return on the market value of assets (adjusted for receipts and disbursements during the year). This is appropriate because it dampens the short-term volatility inherent in investment markets. The return is computed net of investment expenses.

Non-Hazardous Retirement Fund

The actuarial value of assets for the retirement fund increased from \$3.552 billion to \$4.122 billion since the prior valuation. The rate of return on the market value of assets on a dollar-weighted basis for the prior fiscal year was 9.4% which is greater than the 5.25% expected annual return. The return on an actuarial (smoothed) asset value was 6.3%, which resulted in a \$40 million gain for the fiscal year. The market value of assets is \$102 million more than the actuarial value of assets, which signifies that the retirement fund is in a position of net deferred investment gains to be realized in future years.

Hazardous Retirement Fund

Likewise, the actuarial value of assets for the hazardous retirement fund increased from \$891 million to \$985 million since the prior valuation. The rate of return on the market value of assets on a dollar-weighted basis for the prior fiscal year was 11.2% which is greater than the 6.25% expected annual return. The return on an actuarial (smoothed) asset value was 7.6%, which resulted in a \$12 million gain for the fiscal year. The market value of assets is \$35 million more than the actuarial value of assets, which signifies that the retirement fund is in a position of net deferred investment gains to be realized in future years.

Table 6 in the following section of this report provides asset information that was included in the annual financial statements of the funds, as well as the estimated yield on a market value basis. Tables 7 and 8 provide the development of the actuarial value of assets and the estimated yield on an actuarial value basis.



Actuarial Gains/ (Losses)

The annual actuarial valuation is a snapshot analysis of the benefit liabilities, assets and funded position of the funds as of the first day of the plan year. In any one fiscal year, the experience can be better or worse from that which is assumed or expected. The actuarial assumptions do not necessarily attempt to model what the experience will be for any one given fiscal year, but instead try to model the overall experience over many years. Therefore, as long as the actual experience of a retirement system is reasonably close to the current assumptions, the long-term funding requirements of the system will remain relatively consistent.

Below are tables that separately show a reconciliation of the unfunded liability since the prior actuarial valuation for the retirement and health insurance funds, which include the effect of asset and liability gains and losses, changes in assumptions, and changes in plan provisions. See the discussion in the Executive Summary for additional information related to the liability experience and additional information in this section of the report related to the asset experience, plan changes, and assumption changes.

Retirement Experience Gain or (Loss) (Dollar amounts expressed in thousands)

	Non-Hazardous	Hazardous
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 12,751,807	\$ 471,576
2. Normal cost and administrative expenses	193,743	33,243
3. Less: contributions for the year	(1,392,310)	(111,467)
4. Interest accrual	638,007	27,029
5. Expected UAAL (Sum of Items 1 - 4)	\$ 12,191,247	\$ 420,381
6. Actual UAAL as of June 30, 2024	\$ 12,525,623	\$ 457,544
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (334,376)	\$ (37,163)
B. Source of gains and losses		
8. Asset gain (loss) for the year	\$ 40,150	\$ 11,888
9. Liability experience gain (loss) for the year	(374,526)	(49,051)
10. Plan Change	—	—
11. Assumption change	—	—
12. Total	\$ (334,376)	\$ (37,163)



Actuarial Gains/ (Losses) (Continued)

Insurance Experience Gain or (Loss) (Dollar amounts expressed in thousands)

	Non-Hazardous	Hazardous
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 344,214	\$ (256,007)
2. Normal cost and administrative expenses	31,934	5,957
3. Less: contributions for the year	(147,213)	(3,996)
4. Interest accrual	18,627	(16,577)
5. Expected UAAL (Sum of Items 1 - 4)	247,562	(270,623)
6. Actual UAAL as of June 30, 2024	\$ 382,701	(272,781)
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (135,139)	\$ 2,158
B. Source of gains and losses		
8. Asset gain (loss) for the year	\$ 17,691	\$ 8,925
9. Liability experience gain (loss) for the year	(152,830)	(6,767)
10. Plan Change	—	—
11. Assumption change	—	—
12. Total	\$ (135,139)	\$ 2,158

Note, the liability experience gain (loss) shown above includes the impact of any trend assumption changes made in conjunction with the review of the healthcare per capita claims cost, as described in the Executive Summary.



Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an annual investment return assumption. The Board of Trustees, in consultation with the actuary, sets the actuarial assumptions and methods used in the actuarial valuation.

In conjunction with the review of the healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is reviewed on an annual basis. The trend assumption was increased as a result of our review. All other assumptions were adopted by the Board and are based on an experience study conducted based on experience through June 30, 2022. It is our opinion that the assumptions are internally consistent, reasonable, and reflect anticipated future experience of the System. Appendix A includes a summary of the actuarial assumptions and methods used in this valuation.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. This report does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.



Benefit Provisions

Appendix B of this report includes a summary of the major benefit provisions for System. There were no material plan provision changes since the prior valuation.

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SECTION 3

ACTUARIAL TABLES

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Actuarial Tables

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2	19	ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS
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RETIREMENT BENEFITS

ACTUARIAL TABLES

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Development of Unfunded Actuarial Accrued Liability Retirement Benefits

(Dollar amounts expressed in thousands)

	June 30, 2024	
	Non-Hazardous (1)	Hazardous (2)
1. Projected payroll of active members	\$ 1,861,522	\$ 259,606
2. Present value of future pay	\$ 14,090,393	\$ 1,794,163
3. Normal cost rate		
a. Total normal cost rate	11.09%	14.96%
b. Less: member contribution rate	-5.00%	-8.00%
c. Employer normal cost rate	6.09%	6.96%
4. Actuarial accrued liability for active members		
a. Present value of future benefits	\$ 6,271,358	\$ 762,710
b. Less: present value of future normal costs	(1,499,686)	(263,193)
c. Actuarial accrued liability	\$ 4,771,672	\$ 499,517
5. Total actuarial accrued liability		
a. Retirees and beneficiaries	\$ 11,169,005	\$ 878,374
b. Inactive members	707,215	64,728
c. Active members (Item 4c)	4,771,672	499,517
d. Total	\$ 16,647,892	\$ 1,442,619
6. Actuarial value of assets	\$ 4,122,269	\$ 985,075
7. Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	\$ 12,525,623	\$ 457,544
8. Funded Ratio	24.8%	68.3%



Actuarial Present Value of Future Benefits
Retirement Benefits
(Dollar amounts expressed in thousands)

	June 30, 2024	
	Non-Hazardous (1)	Hazardous (2)
1. Active members		
a. Service retirement	\$ 5,513,500	\$ 654,486
b. Deferred termination benefits and refunds	506,462	78,077
c. Survivor benefits	79,803	6,751
d. Disability benefits	171,593	23,396
e. Total	\$ 6,271,358	\$ 762,710
2. Retired members		
a. Service retirement	\$ 10,141,001	\$ 803,000
b. Disability retirement	222,846	16,469
c. Beneficiaries	805,158	58,905
d. Total	\$ 11,169,005	\$ 878,374
3. Inactive members		
a. Vested terminations	\$ 648,831	\$ 50,285
b. Nonvested terminations	58,384	14,443
c. Total	\$ 707,215	\$ 64,728
4. Total actuarial present value of future benefits	\$ 18,147,578	\$ 1,705,812



Development of Actuarially Determined Contribution Rate Retirement Benefits

	June 30, 2024	
	Non-Hazardous (1)	Hazardous (2)
1. Total normal cost rate		
a. Service retirement	7.03%	9.26%
b. Deferred termination benefits and refunds	3.25%	4.81%
c. Survivor benefits	0.30%	0.27%
d. Disability benefits	<u>0.51%</u>	<u>0.62%</u>
e. Total	11.09%	14.96%
2. Less: member contribution rate	<u>-5.00%</u>	<u>-8.00%</u>
3. Total employer normal cost rate	6.09%	6.96%
4. Administrative expenses	<u>0.76%</u>	<u>0.61%</u>
5. Net employer normal cost rate	6.85%	7.57%
6. UAAL amortization contribution rate	<u>N/A</u>	<u>13.11%</u>
7. Total calculated employer contribution payable as a percentage of covered payroll	6.85%	20.68%
8. Total amortization cost to be allocated amongst employers	\$ 853,517	N/A

Note: Per House Bill 8 (passed during the 2021 legislative session), amortization cost for the KERS Non-Hazardous fund is allocated amongst employers based on their 2019 Actuarial Accrued Liability. See appendix D for more information. Amortization cost for the hazardous fund is included in the contribution rate, payable as a percentage of payroll.



Actuarial Balance Sheet
Non-Hazardous Members Retirement
(Dollar amounts expressed in thousands)

	<u>June 30, 2024</u>	<u>June 30, 2023</u>
	(1)	(2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 4,122,269	\$ 3,552,471
b. Present value of future member contributions	\$ 704,520	\$ 607,148
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 795,166	\$ 688,258
ii. Unfunded accrued liability contributions	<u>12,525,623</u>	<u>12,751,807</u>
iii. Total future employer contributions	\$ 13,320,789	\$ 13,440,065
d. Total assets	\$ 18,147,578	\$ 17,599,684
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 1,499,686	\$ 1,295,406
ii. Accrued liability	<u>4,771,672</u>	<u>4,290,593</u>
iii. Total present value of future benefits	\$ 6,271,358	\$ 5,585,999
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 11,169,005	\$ 11,316,494
c. Present value of benefits payable on account of current inactive members	\$ 707,215	\$ 697,191
d. Total liabilities	\$ 18,147,578	\$ 17,599,684



Actuarial Balance Sheet
Hazardous Members Retirement
(Dollar amounts expressed in thousands)

	June 30, 2024	June 30, 2023
	(1)	(2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 985,075	\$ 891,460
b. Present value of future member contributions	\$ 143,533	\$ 116,061
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 119,660	\$ 96,635
ii. Unfunded accrued liability contributions	457,544	471,576
iii. Total future employer contributions	\$ 577,204	\$ 568,211
d. Total assets	\$ 1,705,812	\$ 1,575,732
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 263,193	\$ 212,696
ii. Accrued liability	499,517	433,716
iii. Total present value of future benefits	\$ 762,710	\$ 646,412
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 878,374	\$ 868,920
c. Present value of benefits payable on account of current inactive members	\$ 64,728	\$ 60,400
d. Total liabilities	\$ 1,705,812	\$ 1,575,732



Reconciliation of Retirement Net Assets
(Dollar amounts expressed in thousands)¹

	Year Ending	
	June 30, 2024	June 30, 2024
	(1)	(2)
	Non-Hazardous	Hazardous
1. Value of assets at beginning of year	\$ 3,539,943	\$ 893,533
2. Revenue for the year		
a. Contributions		
i. Member contributions	\$ 96,615	\$ 21,568
ii. Employer contributions	1,055,670	89,897
iii. Other contributions (less 401h)	240,025	1
iv. Total	\$ 1,392,310	\$ 111,467
b. Income		
i. Interest, dividends, and other income	\$ 137,799	\$ 33,586
ii. Investment expenses	(25,400)	(7,521)
iii. Net	\$ 112,399	\$ 26,066
c. Net realized and unrealized gains (losses)	237,229	75,069
d. Total revenue	\$ 1,741,938	\$ 212,601
3. Expenditures for the year		
a. Disbursements		
i. Refunds	\$ 11,693	\$ 4,133
ii. Regular annuity benefits	1,032,124	80,529
iii. Other benefit payments	0	0
iv. Transfers to other systems	0	0
v. Total	\$ 1,043,817	\$ 84,662
b. Administrative expenses and depreciation	14,128	1,583
c. Total expenditures	\$ 1,057,945	\$ 86,244
4. Increase in net assets (Item 2. - Item 3.)	\$ 683,993	\$ 126,357
5. Value of assets at end of year (Item 1. + Item 4.)	\$ 4,223,936	\$ 1,019,890
6. Net external cash flow		
a. Dollar amount	\$ 334,365	\$ 25,222
b. Percentage of market value	8.6%	2.6%
7. Estimated annual return on net assets	9.4%	11.2%

¹ Amounts may not add due to rounding

¹ Excludes 401h assets



Development of Actuarial Value of Assets
Non-Hazardous Members Retirement
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024																								
1. Actuarial value of assets at beginning of year	\$ 3,552,471																								
2. Market value of assets at beginning of year	\$ 3,539,943																								
3. Net new investments																									
a. Contributions	\$ 1,392,310																								
b. Benefit payments	(1,043,817)																								
c. Administrative expenses	(14,128)																								
d. Subtotal	\$ 334,365																								
4. Market value of assets at end of year	\$ 4,223,936																								
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$ 349,628																								
6. Assumed investment return rate for fiscal year	5.25%																								
7. Expected return for immediate recognition	\$ 194,624																								
8. Excess return for phased recognition	\$ 155,004																								
9. Phased-in recognition, 20% of excess return on assets for prior years:																									
	<table border="0" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Fiscal Year</th> <th style="text-align: center;">Excess</th> <th style="text-align: center;">Recognized</th> </tr> <tr> <th style="text-align: left;"><u>Ending June 30,</u></th> <th style="text-align: center;"><u>Return</u></th> <th style="text-align: center;"><u>Amount</u></th> </tr> </thead> <tbody> <tr> <td>a. 2024</td> <td style="text-align: right;">\$ 155,004</td> <td style="text-align: right;">\$ 31,001</td> </tr> <tr> <td>b. 2023</td> <td style="text-align: right;">49,510</td> <td style="text-align: right;">9,902</td> </tr> <tr> <td>c. 2022</td> <td style="text-align: right;">(325,078)</td> <td style="text-align: right;">(65,016)</td> </tr> <tr> <td>d. 2021</td> <td style="text-align: right;">389,946</td> <td style="text-align: right;">77,989</td> </tr> <tr> <td>e. 2020</td> <td style="text-align: right;">(65,343)</td> <td style="text-align: right;">(13,069)</td> </tr> <tr> <td>f. Total</td> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$ 40,808</td> </tr> </tbody> </table>	Fiscal Year	Excess	Recognized	<u>Ending June 30,</u>	<u>Return</u>	<u>Amount</u>	a. 2024	\$ 155,004	\$ 31,001	b. 2023	49,510	9,902	c. 2022	(325,078)	(65,016)	d. 2021	389,946	77,989	e. 2020	(65,343)	(13,069)	f. Total		\$ 40,808
Fiscal Year	Excess	Recognized																							
<u>Ending June 30,</u>	<u>Return</u>	<u>Amount</u>																							
a. 2024	\$ 155,004	\$ 31,001																							
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d. 2021	389,946	77,989																							
e. 2020	(65,343)	(13,069)																							
f. Total		\$ 40,808																							
10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$ 4,122,269																								
11. Ratio of actuarial value to market value	97.6%																								
12. Estimated annual return on actuarial value of assets	6.3%																								

* Amounts may not add due to rounding



Development of Actuarial Value of Assets
Hazardous Members Retirement
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024																												
1. Actuarial value of assets at beginning of year	\$ 891,460																												
2. Market value of assets at beginning of year	\$ 893,533																												
3. Net new investments																													
a. Contributions	\$ 111,467																												
b. Benefit payments	(84,662)																												
c. Administrative expenses	(1,583)																												
d. Subtotal	\$ 25,222																												
4. Market value of assets at end of year	\$ 1,019,890																												
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$ 101,134																												
6. Assumed investment return rate for fiscal year	6.25%																												
7. Expected return for immediate recognition	\$ 56,634																												
8. Excess return for phased recognition	\$ 44,500																												
9. Phased-in recognition, 20% of excess return on assets for prior years:																													
<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 5%;"></th> <th style="text-align: center; border-bottom: 1px solid black;">Fiscal Year Ending June 30,</th> <th style="text-align: center; border-bottom: 1px solid black;">Excess Return</th> <th style="text-align: center; border-bottom: 1px solid black;">Recognized Amount</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">a.</td> <td style="text-align: center;">2024</td> <td style="text-align: right;">\$ 44,500</td> <td style="text-align: right;">\$ 8,900</td> </tr> <tr> <td style="padding-left: 20px;">b.</td> <td style="text-align: center;">2023</td> <td style="text-align: right;">25,604</td> <td style="text-align: right;">5,121</td> </tr> <tr> <td style="padding-left: 20px;">c.</td> <td style="text-align: center;">2022</td> <td style="text-align: right;">(105,331)</td> <td style="text-align: right;">(21,066)</td> </tr> <tr> <td style="padding-left: 20px;">d.</td> <td style="text-align: center;">2021</td> <td style="text-align: right;">129,924</td> <td style="text-align: right;">25,985</td> </tr> <tr> <td style="padding-left: 20px;">e.</td> <td style="text-align: center;">2020</td> <td style="text-align: right;">(35,903)</td> <td style="text-align: right;">(7,181)</td> </tr> <tr> <td style="padding-left: 20px;">f.</td> <td style="text-align: center;">Total</td> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$ 11,759</td> </tr> </tbody> </table>		Fiscal Year Ending June 30,	Excess Return	Recognized Amount	a.	2024	\$ 44,500	\$ 8,900	b.	2023	25,604	5,121	c.	2022	(105,331)	(21,066)	d.	2021	129,924	25,985	e.	2020	(35,903)	(7,181)	f.	Total		\$ 11,759	
	Fiscal Year Ending June 30,	Excess Return	Recognized Amount																										
a.	2024	\$ 44,500	\$ 8,900																										
b.	2023	25,604	5,121																										
c.	2022	(105,331)	(21,066)																										
d.	2021	129,924	25,985																										
e.	2020	(35,903)	(7,181)																										
f.	Total		\$ 11,759																										
10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$ 985,075																												
11. Ratio of actuarial value to market value	96.6%																												
12. Estimated annual return on actuarial value of assets	7.6%																												

* Amounts may not add due to rounding



**Schedule of Funding Progress
Retirement Benefits
(Dollar amounts expressed in thousands)**

June 30, (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (AAL) (3)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2) (4)	Funded Ratio (2)/(3) (5)	Annual Covered Payroll (6)	UAAL as % of Payroll (4)/(6) (7)
Non-Hazardous Members						
2015	\$ 2,350,990	\$ 12,359,673	\$ 10,008,683	19.0%	\$ 1,544,234	648.1%
2016	2,112,286	13,224,698	11,112,412	16.0%	1,529,249	726.7%
2017	2,123,623	15,591,641	13,468,018	13.6%	1,531,535	879.4%
2018	2,019,278	15,675,232	13,655,954	12.9%	1,471,477	928.0%
2019	2,206,280	16,466,428	14,260,148	13.4%	1,437,647	991.9%
2020	2,323,298	16,348,961	14,025,663	14.2%	1,387,761	1010.7%
2021	2,735,876	16,321,372	13,585,496	16.8%	1,349,330	1006.8%
2022	3,065,263	16,576,631	13,511,368	18.5%	1,355,267	997.0%
2023	3,552,471	16,304,278	12,751,807	21.8%	1,615,868	789.2%
2024	4,122,269	16,647,892	12,525,623	24.8%	1,861,522	672.9%
Hazardous Members						
2015	\$ 556,688	\$ 895,433	\$ 338,745	62.2%	\$ 128,680	263.2%
2016	559,487	936,706	377,219	59.7%	147,563	255.6%
2017	607,159	1,121,420	514,261	54.1%	162,418	316.6%
2018	639,262	1,151,923	512,661	55.5%	158,213	324.0%
2019	671,647	1,226,195	554,548	54.8%	150,446	368.6%
2020	709,587	1,283,769	574,182	55.3%	170,826	336.1%
2021	782,496	1,295,243	512,747	60.4%	162,836	314.9%
2022	832,436	1,316,825	484,389	63.2%	165,637	292.4%
2023	891,460	1,363,036	471,576	65.4%	211,602	222.9%
2024	985,075	1,442,619	457,544	68.3%	259,606	176.2%
Total KERS Members						
2015	\$ 2,907,678	\$ 13,255,106	\$ 10,347,428	21.9%	\$ 1,672,914	618.5%
2016	2,671,773	14,161,404	11,489,631	18.9%	1,676,812	685.2%
2017	2,730,782	16,713,061	13,982,279	16.3%	1,693,953	825.4%
2018	2,658,540	16,827,155	14,168,615	15.8%	1,629,690	869.4%
2019	2,877,927	17,692,623	14,814,696	16.3%	1,588,093	932.9%
2020	3,032,885	17,632,730	14,599,845	17.2%	1,558,587	936.7%
2021	3,518,372	17,616,615	14,098,243	20.0%	1,512,166	932.3%
2022	3,897,699	17,893,456	13,995,757	21.8%	1,520,904	920.2%
2023	4,443,931	17,667,314	13,223,383	25.2%	1,827,470	723.6%
2024	5,107,344	18,090,511	12,983,167	28.2%	2,121,128	612.1%



Summary of Principal Assumptions and Methods

Below is a summary of the principal economic assumptions, cost method, and the method for financing the unfunded actuarial accrued liability:

	Non-Hazardous June 30, 2024	Hazardous June 30, 2024
Valuation date:	Non-Hazardous June 30, 2024	Hazardous June 30, 2024
Actuarial cost method:	Entry Age Normal	Entry Age Normal
Amortization method:	Level percentage of payroll (0% payroll growth assumed)	Level percentage of payroll (0% payroll growth assumed)
Amortization period for contribution rate:	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases
Asset valuation method:	5-Year Smoothed Market	5-Year Smoothed Market
Actuarial assumptions:		
Investment rate of return	5.25%	6.25%
Projected salary increases	3.30% to 15.30% (varies by service)	3.55% to 20.05% (varies by service)
Inflation	2.50%	2.50%
Post-retirement benefit adjustments	0.00%	0.00%
Retiree Mortality	System-specific mortality table based on mortality experience from 2013 to 2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.	System-specific mortality table based on mortality experience from 2013 to 2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.



Solvency Test
Retirement Benefits
(Dollar amounts expressed in thousands)

June 30, (1)	Actuarial Accrued Liability			Valuation Assets (5)	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions (2)	Retired Members & Beneficiaries (3)	Active Members (Employer Financed) (4)		Active (6)	Retired (7)	ER Financed (8)
Non-Hazardous Members							
2015	\$ 925,934	\$ 9,437,468	\$ 1,996,271	\$ 2,350,990	100.0%	15.1%	0.0%
2016	920,120	10,010,168	2,294,410	2,112,286	100.0%	11.9%	0.0%
2017	934,559	11,608,346	3,048,736	2,123,623	100.0%	10.2%	0.0%
2018	892,033	11,929,019	2,854,180	2,019,278	100.0%	9.4%	0.0%
2019	881,020	12,513,231	3,072,177	2,206,280	100.0%	10.6%	0.0%
2020	869,196	12,467,522	3,012,243	2,323,298	100.0%	11.7%	0.0%
2021	877,142	12,425,951	3,018,279	2,735,876	100.0%	15.0%	0.0%
2022	859,591	12,700,595	3,016,445	3,065,263	100.0%	17.4%	0.0%
2023	889,146	12,013,685	3,401,447	3,552,471	100.0%	22.2%	0.0%
2024	935,186	11,876,220	3,836,486	4,122,269	100.0%	26.8%	0.0%
Hazardous Members							
2015	\$ 83,606	\$ 633,189	\$ 178,638	\$ 556,688	100.0%	74.7%	0.0%
2016	86,705	648,482	201,519	559,487	100.0%	72.9%	0.0%
2017	93,350	746,350	281,720	607,159	100.0%	68.8%	0.0%
2018	89,106	810,311	252,506	639,262	100.0%	67.9%	0.0%
2019	86,663	879,818	259,714	671,647	100.0%	66.5%	0.0%
2020	95,528	898,128	290,113	709,587	100.0%	68.4%	0.0%
2021	97,559	916,431	281,253	782,496	100.0%	74.7%	0.0%
2022	94,538	946,328	275,959	832,436	100.0%	78.0%	0.0%
2023	103,310	929,320	330,406	891,460	100.0%	84.8%	0.0%
2024	116,828	943,102	382,689	985,075	100.0%	92.1%	0.0%



INSURANCE BENEFITS

ACTUARIAL TABLES

DRAFT

Development of Unfunded Actuarial Accrued Liability Insurance Benefits

(Dollar amounts expressed in thousands)

	June 30, 2024	
	Non-Hazardous (1)	Hazardous (2)
1. Projected payroll of active members	\$ 1,861,522	\$ 259,606
2. Present value of future pay	\$ 12,898,595	\$ 1,762,024
3. Normal cost rate		
a. Total normal cost rate	1.68%	2.29%
b. Less: member contribution rate	-0.58%	-0.79%
c. Employer normal cost rate	1.10%	1.50%
4. Actuarial accrued liability for active members		
a. Present value of future benefits	\$ 1,098,721	\$ 152,567
b. Less: present value of future normal costs	(193,208)	(36,736)
c. Actuarial accrued liability	\$ 905,513	\$ 115,831
5. Total actuarial accrued liability		
a. Retirees and beneficiaries	\$ 1,056,470	\$ 252,726
b. Inactive members	132,761	11,011
c. Active members (Item 4c)	905,513	115,831
d. Total	\$ 2,094,744	\$ 379,568
6. Actuarial value of assets	\$ 1,712,043	\$ 652,349
7. Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	\$ 382,701	\$ (272,781)
8. Funded Ratio	81.7%	171.9%



Development of Actuarially Determined Contribution Rate Insurance Benefits

	June 30, 2024	
	Non-Hazardous (1)	Hazardous (2)
1. Total normal cost rate	1.68%	2.29%
2. Less: member contribution rate	<u>-0.58%</u>	<u>-0.79%</u>
3. Total employer normal cost rate	1.10%	1.50%
4. Administrative expenses	<u>0.04%</u>	<u>0.05%</u>
5. Net employer normal cost rate	1.14%	1.55%
6. UAAL amortization contribution rate	<u>N/A</u>	<u>-10.07%</u>
7. Total calculated employer contribution payable as a percentage of covered payroll Max (0%, item 5. + item6.)	1.14%	0.00%
8. Total amortization cost to be allocated amongst employers	\$ 12,293	N/A

Note: Per House Bill 8 (passed during the 2021 legislative session), amortization cost for the KERS Non-Hazardous fund is allocated amongst employers based on their 2019 Actuarial Accrued Liability. See appendix D for more information. Amortization cost for the hazardous fund is included in the contribution rate, payable as a percentage of payroll.



Actuarial Balance Sheet
Non-Hazardous Members Insurance
(Dollar amounts expressed in thousands)

	<u>June 30, 2024</u>	<u>June 30, 2023</u>
	(1)	(2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 1,712,043	\$ 1,532,895
b. Present value of future member contributions	\$ 88,900	\$ 71,426
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 104,308	\$ 121,548
ii. Unfunded accrued liability contributions	382,701	344,214
iii. Total future employer contributions	<u>\$ 487,009</u>	<u>\$ 465,762</u>
d. Total assets	\$ 2,287,952	\$ 2,070,083
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 193,208	\$ 192,974
ii. Accrued liability	905,513	836,765
iii. Total present value of future benefits	<u>\$ 1,098,721</u>	<u>\$ 1,029,739</u>
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 1,056,470	\$ 886,696
c. Present value of benefits payable on account of current inactive members	\$ 132,761	\$ 153,648
d. Total liabilities	\$ 2,287,952	\$ 2,070,083



Actuarial Balance Sheet
Hazardous Members Insurance
(Dollar amounts expressed in thousands)

	June 30, 2024	June 30, 2023
	(1)	(2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 652,349	\$ 619,519
b. Present value of future member contributions	\$ 15,678	\$ 12,197
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 21,058	\$ 22,776
ii. Unfunded accrued liability contributions	(272,781)	(256,007)
iii. Total future employer contributions	\$ (251,723)	\$ (233,231)
d. Total assets	\$ 416,304	\$ 398,485
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 36,736	\$ 34,973
ii. Accrued liability	115,831	113,323
iii. Total present value of future benefits	\$ 152,567	\$ 148,296
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 252,726	\$ 235,809
c. Present value of benefits payable on account of current inactive members	\$ 11,011	\$ 14,380
d. Total liabilities	\$ 416,304	\$ 398,485



Reconciliation of Insurance Net Assets

(Dollar amounts expressed in thousands)¹

	Year Ending	
	June 30, 2024	June 30, 2024
	(1)	(2)
	Non-Hazardous	Hazardous
1. Value of assets at beginning of year	\$ 1,532,752	\$ 625,356
2. Revenue for the year		
a. Contributions		
i. Member contributions	\$ 10,585	\$ 2,086
ii. Employer contributions	129,145	45
iii. Other contributions (less 401h)	7,484	1,865
iv. Total	\$ 147,213	\$ 3,996
b. Income		
i. Interest, dividends, and other income	\$ 55,530	\$ 22,038
ii. Investment expenses	(12,103)	(6,340)
iii. Net	\$ 43,427	\$ 15,699
c. Net realized and unrealized gains (losses)	129,677	52,742
d. Total revenue	\$ 320,317	\$ 72,437
3. Expenditures for the year		
a. Disbursements		
i. Refunds	\$ 0	\$ 0
ii. Healthcare premium subsidies	93,751	20,260
iii. Other benefit payments ²	(7,138)	(533)
iv. Transfers to other systems	0	0
v. Total	\$ 86,613	\$ 19,727
b. Administrative expenses and depreciation	727	117
c. Total expenditures	\$ 87,340	\$ 19,845
4. Increase in net assets (Item 2. - Item 3.)	\$ 232,977	\$ 52,592
5. Value of assets at end of year (Item 1. + Item 4.)	\$ 1,765,729	\$ 677,948
6. Net external cash flow		
a. Dollar amount	\$ 59,873	\$ (15,849)
b. Percentage of market value	3.6%	-2.4%
7. Estimated annual return on net assets	11.1%	11.1%

¹ Amounts may not add due to rounding and include 401h assets

² Benefit payments have been offset by Medicare Drug Reimbursements, Insurance Premiums, and Humana Gain Share Payments



Development of Actuarial Value of Assets
Non-Hazardous Members Insurance
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024		
1. Actuarial value of assets at beginning of year	\$	1,532,895	
2. Market value of assets at beginning of year	\$	1,532,752	
3. Net new investments			
a. Contributions	\$	147,213	
b. Benefit payments		(86,613)	
c. Administrative expenses		(727)	
d. Subtotal	\$	59,873	
4. Market value of assets at end of year	\$	1,765,729	
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$	173,104	
6. Assumed investment return rate for fiscal year		6.50%	
7. Expected return for immediate recognition	\$	101,575	
8. Excess return for phased recognition	\$	71,529	
9. Phased-in recognition, 20% of excess return on assets for prior years:			
	Fiscal Year	Excess	Recognized
	Ending June 30,	Return	Amount
a.	2024	\$ 71,529	\$ 14,306
b.	2023	46,032	9,206
c.	2022	(178,776)	(35,755)
d.	2021	201,770	40,354
e.	2020	(52,052)	(10,410)
f.	Total		\$ 17,701
10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$	1,712,043	
11. Ratio of actuarial value to market value		97.0%	
12. Estimated annual return on actuarial value of assets		7.6%	

* Amounts may not add due to rounding



Development of Actuarial Value of Assets
Hazardous Members Insurance
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024		
1. Actuarial value of assets at beginning of year	\$	619,519	
2. Market value of assets at beginning of year	\$	625,356	
3. Net new investments			
a. Contributions	\$	3,996	
b. Benefit payments		(19,727)	
c. Administrative expenses		(117)	
d. Subtotal	\$	(15,849)	
4. Market value of assets at end of year	\$	677,948	
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$	68,441	
6. Assumed investment return rate for fiscal year		6.50%	
7. Expected return for immediate recognition	\$	40,133	
8. Excess return for phased recognition	\$	28,308	
9. Phased-in recognition, 20% of excess return on assets for prior years:			
	Fiscal Year	Excess	Recognized
	Ending June 30,	Return	Amount
a.	2024	\$ 28,308	\$ 5,662
b.	2023	17,530	3,506
c.	2022	(66,985)	(13,397)
d.	2021	96,144	19,229
e.	2020	(32,268)	(6,454)
f.	Total		\$ 8,546
10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$	652,349	
11. Ratio of actuarial value to market value		96.2%	
12. Estimated annual return on actuarial value of assets		8.0%	

* Amounts may not add due to rounding



**Schedule of Funding Progress
Insurance Benefits
(Dollar amounts expressed in thousands)**

June 30,	Actuarial Value of	Actuarial Accrued	Unfunded Actuarial	Funded Ratio	Annual Covered	UAAL as % of
(1)	Assets (AVA)	Liability (AAL)	Accrued Liability (UAAL) (3) - (2)	(2)/(3)	Payroll	Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Non-Hazardous Members						
2015	\$ 695,018	\$ 2,413,705	\$ 1,718,687	28.8%	\$ 1,544,234	111.3%
2016	743,270	2,456,678	1,713,408	30.3%	1,529,249	112.0%
2017	823,918	2,683,496	1,859,578	30.7%	1,531,535	121.4%
2018	887,121	2,435,505	1,548,384	36.4%	1,471,477	105.2%
2019	991,427	2,733,065	1,741,638	36.3%	1,437,647	121.1%
2020	1,095,959	2,564,788	1,468,829	42.7%	1,387,761	105.8%
2021	1,291,472	2,574,112	1,282,640	50.2%	1,349,330	95.1%
2022	1,409,553	1,782,386	372,833	79.1%	1,355,267	27.5%
2023	1,532,895	1,877,109	344,214	81.7%	1,615,868	21.3%
2024	1,712,043	2,094,744	382,701	81.7%	1,861,522	20.6%
Hazardous Members						
2015	\$ 451,514	\$ 374,904	\$ (76,610)	120.4%	\$ 128,680	-59.5%
2016	473,160	377,745	(95,415)	125.3%	147,563	-64.7%
2017	493,458	419,439	(74,019)	117.6%	162,418	-45.6%
2018	511,441	393,481	(117,960)	130.0%	158,213	-74.6%
2019	525,315	426,704	(98,611)	123.1%	150,446	-65.5%
2020	539,251	427,977	(111,274)	126.0%	170,826	-65.1%
2021	575,025	424,455	(150,570)	135.5%	162,836	-92.5%
2022	597,701	347,044	(250,657)	172.2%	165,637	-151.3%
2023	619,519	363,512	(256,007)	170.4%	211,602	-121.0%
2024	652,349	379,568	(272,781)	171.9%	259,606	-105.1%
Total KERS Members						
2015	\$ 1,146,532	\$ 2,788,609	\$ 1,642,077	41.1%	\$ 1,672,914	98.2%
2016	1,216,430	2,834,423	1,617,993	42.9%	1,676,812	96.5%
2017	1,317,376	3,102,935	1,785,559	42.5%	1,693,953	105.4%
2018	1,398,562	2,828,986	1,430,424	49.4%	1,629,690	87.8%
2019	1,516,742	3,159,769	1,643,027	48.0%	1,588,093	103.5%
2020	1,635,210	2,992,765	1,357,555	54.6%	1,558,587	87.1%
2021	1,866,497	2,998,567	1,132,070	62.2%	1,512,166	74.9%
2022	2,007,254	2,129,430	122,176	94.3%	1,520,904	8.0%
2023	2,152,414	2,240,621	88,207	96.1%	1,827,470	4.8%
2024	2,364,392	2,474,312	109,920	95.6%	2,121,128	5.2%



**Solvency Test
Insurance Benefits**
(Dollar amounts expressed in thousands)

June 30,	Actuarial Accrued Liability			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed)		Active	Retired	ER Financed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Non-Hazardous Members							
2015	\$ -	\$ 1,428,350	\$ 985,355	\$ 695,018	100.0%	48.7%	0.0%
2016	-	1,483,636	973,042	743,270	100.0%	50.1%	0.0%
2017	-	1,575,294	1,108,202	823,918	100.0%	52.3%	0.0%
2018	-	1,475,953	959,552	887,121	100.0%	60.1%	0.0%
2019	-	1,686,604	1,046,461	991,427	100.0%	58.8%	0.0%
2020	-	1,589,743	975,045	1,095,959	100.0%	68.9%	0.0%
2021	-	1,609,775	964,337	1,291,472	100.0%	80.2%	0.0%
2022	-	967,051	815,335	1,409,553	100.0%	100.0%	54.3%
2023	-	1,040,344	836,765	1,532,895	100.0%	100.0%	58.9%
2024	-	1,189,231	905,513	1,712,043	100.0%	100.0%	57.7%
Hazardous Members							
2015	\$ -	\$ 221,115	\$ 153,789	\$ 451,514	100.0%	100.0%	100.0%
2016	-	228,361	149,384	473,160	100.0%	100.0%	100.0%
2017	-	243,816	175,623	493,458	100.0%	100.0%	100.0%
2018	-	248,775	144,706	511,441	100.0%	100.0%	100.0%
2019	-	282,069	144,635	525,315	100.0%	100.0%	100.0%
2020	-	281,924	146,053	539,251	100.0%	100.0%	100.0%
2021	-	288,014	136,441	575,025	100.0%	100.0%	100.0%
2022	-	232,585	114,459	597,701	100.0%	100.0%	100.0%
2023	-	250,189	113,323	619,519	100.0%	100.0%	100.0%
2024	-	263,737	115,831	652,349	100.0%	100.0%	100.0%



SECTION 4

AMORTIZATION BASES

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Amortization of Unfunded Liability

Non-Hazardous Members Retirement

Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ 14,260,148	\$ 13,234,431	\$ 938,364	25
June 30, 2020	(153,145)	(29,575)	(2,708)	16
June 30, 2021	(342,123)	(336,478)	(29,636)	17
June 30, 2022	172,536	(62,562)	(5,319)	18
June 30, 2023	(293,189)	(560,259)	(46,113)	19
June 30, 2024	280,066	280,066	(1,071)	20
Total		\$ 12,525,623	\$ 853,517	
Projected Payroll for FYE 2026			N/A	
Amortization Payments as a Percentage of Payroll			N/A	

Hazardous Members Retirement

Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ 554,548	\$ 518,714	\$ 40,306	25
June 30, 2020	24,023	17,474	1,706	16
June 30, 2021	(49,498)	(47,643)	(4,491)	17
June 30, 2022	(19,031)	(20,576)	(1,878)	18
June 30, 2023	(3,443)	(19,505)	(1,729)	19
June 30, 2024	9,080	9,080	118	20
Total		\$ 457,544	\$ 34,032	
Projected Payroll for FYE 2026			\$ 259,606	
Amortization Payments as a Percentage of Payroll			13.11%	

Note:

Budgeted contribution rates for FYE 2025 were known at the time of the June 30, 2024 Valuation. Amortization bases established at this valuation date were adjusted accordingly. Per House Bill 8 (passed during the 2021 legislative session), amortization cost for the KERS Non-Hazardous fund is allocated amongst employers based on their 2019 Actuarial Accrued Liability. See appendix D for more information. Amortization cost for the hazardous fund is included in the contribution rate, payable as a percentage of payroll.



Amortization of Unfunded Liability

Non-Hazardous Members Insurance

Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ 1,741,638	\$ 1,621,616	\$ 128,822	25
June 30, 2020	(246,890)	(228,973)	(22,715)	16
June 30, 2021	(159,148)	(159,415)	(15,279)	17
June 30, 2022	(883,398)	(913,747)	(84,872)	18
June 30, 2023	39,201	(44,123)	(3,983)	19
June 30, 2024	107,343	107,343	10,320	20
Total		\$ 382,701	\$ 12,293	
Projected Payroll for FYE 2026			N/A	
Amortization Payments as a Percentage of Payroll			N/A	

Hazardous Members Insurance

Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ (98,611)	\$ (96,185)	\$ (7,641)	25
June 30, 2020	(9,508)	(9,711)	(963)	16
June 30, 2021	(39,458)	(41,590)	(3,986)	17
June 30, 2022	(97,145)	(107,132)	(9,951)	18
June 30, 2023	4,456	(13,510)	(1,220)	19
June 30, 2024	(4,653)	(4,653)	(2,287)	20
Total		\$ (272,781)	\$ (26,048)	
Projected Payroll for FYE 2026			\$ 258,708	
Amortization Payments as a Percentage of Payroll			-10.07%	

Note:

Budgeted contribution rates for FYE 2025 were known at the time of the June 30, 2024 Valuation.

Amortization bases established at this valuation date were adjusted accordingly.

Per House Bill 8 (passed during the 2021 legislative session), amortization cost for the KERS

Non-Hazardous fund is allocated amongst employers based on their 2019 Actuarial Accrued Liability.

See appendix D for more information. Amortization cost for the hazardous fund is included in the contribution rate, payable as a percentage of payroll.



SECTION 5

MEMBERSHIP INFORMATION

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Membership Tables

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33	54	SCHEDULE OF ANNUITANTS ADDED TO AND REMOVED FROM ROLLS

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Summary of Membership Data
(Total dollar amounts expressed in thousands)

	Non-Hazardous June 30, 2024 (1)	Hazardous June 30, 2024 (2)	Total June 30, 2024 (3)	Total June 30, 2023 (4)
1. Active members				
a. Males	11,996	2,969	14,965	14,416
b. Females	20,459	1,185	21,644	20,853
c. Total members	32,455	4,154	36,609	35,269
d. Total annualized prior year salaries	\$ 1,861,522	\$ 259,606	\$ 2,121,128	\$ 1,827,470
e. Average salary ³	\$ 57,357	\$ 62,496	\$ 57,940	\$ 51,815
f. Average age	45.5	39.9	44.9	45.0
g. Average service	10.7	7.1	10.3	10.5
h. Member contributions with interest	\$ 935,186	\$ 116,828	\$ 1,052,014	\$ 992,456
i. Average contributions with interest ³	\$ 28,815	\$ 28,124	\$ 28,736	\$ 28,140
2. Vested inactive members ²				
a. Number	30,641	2,343	32,984	33,411
b. Total annual deferred benefits	\$ 88,617	\$ 5,857	\$ 94,474	\$ 94,117
c. Average annual deferred benefit ³	\$ 2,892	\$ 2,500	\$ 2,864	\$ 2,817
d. Average age at the valuation date	54.3	49.3	54.0	53.3
3. Nonvested inactive members ²				
a. Number	26,113	6,637	32,750	31,146
b. Total member contributions with interest	\$ 56,609	\$ 14,333	\$ 70,942	\$ 65,412
c. Average contributions with interest ³	\$ 2,168	\$ 2,160	\$ 2,166	\$ 2,100
4. Service retirees ¹				
a. Number	41,471	4,209	45,680	45,593
b. Total annual benefits	\$ 876,310	\$ 68,553	\$ 944,863	\$ 945,690
c. Average annual benefit ³	\$ 21,131	\$ 16,287	\$ 20,684	\$ 20,742
d. Average age at the valuation date	71.2	66.5	70.7	70.3
5. Disabled retirees ¹				
a. Number	1,595	156	1,751	1,811
b. Total annual benefits	\$ 21,004	\$ 1,475	\$ 22,479	\$ 23,347
c. Average annual benefit ³	\$ 13,169	\$ 9,455	\$ 12,838	\$ 12,892
d. Average age at the valuation date	67.8	61.4	67.2	66.9
6. Beneficiaries ¹				
a. Number	5,408	569	5,977	5,892
b. Total annual benefits	\$ 86,943	\$ 6,209	\$ 93,152	\$ 90,110
c. Average annual benefit ³	\$ 16,077	\$ 10,912	\$ 15,585	\$ 15,294
d. Average age at the valuation date	70.7	68.3	70.5	70.3

¹ 2,417 members receiving benefits in both the non-hazardous and hazardous fund. Members' headcounts and hazardous benefits included in the hazardous summary above. Members' additional \$25,136,000 in non-hazardous annual benefits not included in summary above.

² Vested inactive member section includes Tier 1 members eligible for a benefit equal to the actuarially equivalent of two times the member's contribution balance.

³ Average dollar amounts shown are expressed to the dollar.



Summary of Historical Active Membership

June 30, (1)	Active Members		Covered Payroll ¹		Average Annual Pay	
	Number (2)	Percent Increase / (Decrease) (3)	Amount in Thousands (4)	Percent Increase / (Decrease) (5)	Amount (6)	Percent Increase / (Decrease) (7)
Non-Hazardous Members						
2015	39,056		\$ 1,544,234		\$ 39,539	
2016	37,779	-3.3%	1,529,249	-1.0%	40,479	2.4%
2017	37,234	-1.4%	1,531,535	0.1%	41,133	1.6%
2018	35,139	-5.6%	1,471,477	-3.9%	41,876	1.8%
2019	33,696	-4.1%	1,437,647	-2.3%	42,665	1.9%
2020	31,703	-5.9%	1,387,761	-3.5%	43,774	2.6%
2021	30,186	-4.8%	1,349,330	-2.8%	44,701	2.1%
2022	29,551	-2.1%	1,355,267	0.4%	45,862	2.6%
2023	31,383	6.2%	1,615,868	19.2%	51,489	12.3%
2024	32,455	3.4%	1,861,522	15.2%	57,357	11.4%
Hazardous Members						
2015	3,886		\$ 128,680		\$ 33,114	
2016	3,959	1.9%	147,563	14.7%	37,273	12.6%
2017	4,047	2.2%	162,418	10.1%	40,133	7.7%
2018	3,929	-2.9%	158,213	-2.6%	40,268	0.3%
2019	3,705	-5.7%	150,446	-4.9%	40,606	0.8%
2020	4,094	10.5%	170,826	13.5%	41,726	2.8%
2021	3,827	-6.5%	162,836	-4.7%	42,549	2.0%
2022	3,617	-5.5%	165,637	1.7%	45,794	7.6%
2023	3,886	7.4%	211,602	27.8%	54,452	18.9%
2024	4,154	6.9%	259,606	22.7%	62,496	14.8%

¹ Covered payroll is the annualized, projected compensation for the following year and does not include payroll attributable to working retirees.



Distribution of Active Members by Age and by Years of Service
Non-Hazardous Members

Attained Age	Years of Credited Service												Total Count & Avg. Comp.	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	
Under 20	39 \$31,154	1 \$48,553	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	40 \$31,589
20-24	546 \$33,087	421 \$42,066	148 \$47,218	43 \$44,464	6 \$50,024	2 \$39,237	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1,166 \$38,640
25-29	618 \$36,579	727 \$44,520	497 \$47,854	285 \$52,267	207 \$52,664	281 \$56,229	4 \$60,365	1 \$63,165	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	2,620 \$46,053
30-34	479 \$37,098	510 \$46,799	432 \$48,200	214 \$53,750	245 \$54,895	976 \$58,655	217 \$60,408	4 \$56,767	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	3,077 \$51,347
35-39	388 \$38,156	492 \$48,105	321 \$48,265	165 \$54,497	173 \$56,280	945 \$60,240	830 \$62,767	220 \$64,116	4 \$62,643	0 \$0	0 \$0	0 \$0	0 \$0	3,538 \$55,419
40-44	335 \$38,730	441 \$48,534	318 \$50,081	156 \$55,933	188 \$58,286	805 \$61,389	855 \$64,313	989 \$67,578	341 \$67,584	34 \$72,127	0 \$0	0 \$0	0 \$0	4,462 \$59,777
45-49	316 \$39,644	370 \$49,152	251 \$50,460	133 \$51,827	146 \$56,368	654 \$60,751	658 \$64,146	876 \$67,503	1,014 \$69,652	338 \$70,667	6 \$80,860	0 \$0	0 \$0	4,762 \$61,859
50-54	259 \$39,054	301 \$48,279	245 \$47,734	117 \$55,337	142 \$56,237	649 \$56,492	588 \$61,391	717 \$65,265	907 \$68,604	597 \$74,159	113 \$74,836	8 \$83,921	8 \$83,921	4,643 \$61,594
55-59	168 \$40,553	234 \$46,830	211 \$49,009	81 \$54,485	105 \$55,540	495 \$57,788	494 \$57,429	631 \$62,438	631 \$66,083	453 \$69,128	155 \$77,683	43 \$79,613	43 \$79,613	3,701 \$60,310
60-64	103 \$40,653	143 \$46,628	125 \$49,066	66 \$54,815	88 \$55,527	373 \$56,015	433 \$59,358	552 \$60,140	467 \$61,569	315 \$69,147	76 \$79,341	59 \$80,087	59 \$80,087	2,800 \$59,491
65 & Over	48 \$49,563	66 \$62,544	68 \$51,387	28 \$54,739	45 \$72,991	236 \$59,252	287 \$59,641	347 \$61,646	234 \$63,602	164 \$68,705	60 \$78,283	63 \$83,482	63 \$83,482	1,646 \$62,829
Total	3,299 \$37,423	3,706 \$46,825	2,616 \$48,678	1,288 \$53,540	1,345 \$56,181	5,416 \$58,964	4,366 \$61,825	4,337 \$64,825	3,598 \$67,115	1,901 \$71,002	410 \$77,340	173 \$81,383	173 \$81,383	32,455 \$57,357



Distribution of Active Members by Age and by Years of Service
Hazardous Members

Attained Age	Years of Credited Service												Total Count & Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 20	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
20-24	134 \$47,957	112 \$63,225	70 \$69,573	3 \$67,147	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	319 \$58,241
25-29	148 \$48,822	122 \$58,547	112 \$62,301	89 \$62,714	56 \$64,378	62 \$68,178	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	589 \$59,015
30-34	131 \$48,559	102 \$63,868	82 \$65,881	53 \$65,035	74 \$62,486	210 \$66,872	43 \$69,016	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	695 \$62,388
35-39	66 \$49,272	78 \$60,640	43 \$61,119	29 \$60,559	32 \$58,588	133 \$66,482	139 \$68,038	32 \$64,506	0 \$0	0 \$0	0 \$0	0 \$0	552 \$62,689
40-44	66 \$50,946	66 \$60,288	30 \$61,452	19 \$63,756	24 \$61,042	90 \$63,709	105 \$67,988	165 \$67,596	20 \$81,195	1 \$65,991	0 \$0	0 \$0	586 \$64,125
45-49	47 \$47,040	48 \$61,349	31 \$60,562	8 \$71,702	21 \$63,687	70 \$63,311	72 \$69,660	105 \$69,908	43 \$71,316	5 \$81,864	0 \$0	0 \$0	450 \$64,906
50-54	43 \$51,711	35 \$59,025	31 \$57,925	14 \$57,733	16 \$72,921	70 \$62,088	52 \$66,056	89 \$70,013	36 \$76,173	20 \$71,229	0 \$0	0 \$0	406 \$64,628
55-59	34 \$47,620	29 \$60,496	18 \$57,940	11 \$64,477	16 \$67,272	54 \$65,612	53 \$64,167	67 \$65,551	25 \$69,793	5 \$72,335	2 \$90,774	1 \$68,802	315 \$63,158
60-64	4 \$41,958	11 \$60,764	6 \$68,750	7 \$53,351	9 \$53,440	31 \$66,341	43 \$61,532	35 \$66,441	23 \$75,027	4 \$69,461	1 \$94,641	1 \$86,986	175 \$64,664
65 & Over	1 \$60,764	2 \$60,207	4 \$48,348	1 \$42,958	1 \$29,719	13 \$59,904	21 \$59,828	17 \$67,774	4 \$63,671	3 \$59,873	0 \$0	0 \$0	67 \$60,729
Total	674 \$48,827	605 \$61,159	427 \$63,334	234 \$62,842	249 \$62,892	733 \$65,487	528 \$66,889	510 \$67,958	151 \$73,893	38 \$71,553	3 \$92,063	2 \$77,894	4,154 \$62,496



**Distribution of Annuitant Monthly Benefit by Status and Age
Non-Hazardous Retirees and Beneficiaries
(Dollar amounts expressed in thousands)**

Current Age (1)	Retirement		Disability		Survivors & Beneficiaries		Total	
	Number of Annuitants (2)	Total Annual Benefit Amount (3)	Number of Annuitants (4)	Total Annual Benefit Amount (5)	Number of Annuitants (6)	Total Annual Benefit Amount (7)	Number of Annuitants (8)	Total Annual Benefit Amount (9)
Under 50	310	\$ 7,168	55	\$ 650	538	\$ 6,451	903	\$ 14,269
50 - 54	1,208	29,685	102	1,565	231	3,163	1,541	34,414
55 - 59	2,885	69,029	179	2,641	282	3,990	3,346	75,660
60 - 64	5,204	117,781	264	3,589	465	6,786	5,933	128,156
65 - 69	8,692	180,141	346	4,678	660	10,434	9,698	195,253
70 - 74	9,667	201,305	285	3,671	864	15,462	10,816	220,438
75 - 79	7,314	155,561	199	2,372	850	15,551	8,363	173,485
80 - 84	3,716	73,592	97	1,060	726	12,771	4,539	87,423
85 - 89	1,698	30,610	53	613	481	8,274	2,232	39,496
90 And Over	777	11,438	15	165	311	4,060	1,103	15,663
Total	41,471	\$ 876,310	1,595	\$ 21,004	5,408	\$ 86,943	48,474	\$ 984,257

*Amounts may not add due to rounding



**Distribution of Annuitant Monthly Benefit by Status and Age
Hazardous Retirees and Beneficiaries
(Dollar amounts expressed in thousands)**

Current Age (1)	Retirement		Disability		Survivors & Beneficiaries		Total	
	Number of Annuitants (2)	Total Annual Benefit Amount (3)	Number of Annuitants (4)	Total Annual Benefit Amount (5)	Number of Annuitants (6)	Total Annual Benefit Amount (7)	Number of Annuitants (8)	Total Annual Benefit Amount (9)
Under 50	207	\$ 4,507	22	\$ 244	62	\$ 629	291	\$ 5,380
50 - 54	416	8,191	22	257	33	447	471	8,896
55 - 59	534	9,731	24	207	27	400	585	10,338
60 - 64	637	11,186	31	332	74	893	742	12,412
65 - 69	761	12,363	30	234	77	948	868	13,544
70 - 74	764	10,945	16	129	96	1,229	876	12,302
75 - 79	595	8,474	5	43	85	775	685	9,291
80 - 84	204	2,275	2	9	66	520	272	2,803
85 - 89	71	697	4	20	27	217	102	934
90 And Over	20	184	0	0	22	152	42	336
Total	4,209	\$ 68,553	156	\$ 1,475	569	\$ 6,209	4,934	\$ 76,237

*Amounts may not add due to rounding



Non-Hazardous Retired Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	4,512	\$ 7,895,495	13,674	\$ 19,448,738	18,186	\$ 27,344,233
Joint & Survivor:						
100% to Beneficiary	2,950	5,260,203	1,755	2,236,577	4,705	7,496,780
66 2/3% to Beneficiary	770	2,087,835	665	1,225,382	1,435	3,313,218
50% to Beneficiary	1,071	2,678,337	1,600	3,097,171	2,671	5,775,508
Pop-up Option	3,963	9,556,996	3,932	7,584,072	7,895	17,141,068
Social Security Option:						
Age 62 Basic	349	708,276	846	1,441,487	1,195	2,149,764
Age 62 Survivorship	669	1,364,859	566	920,128	1,235	2,284,987
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	0	0	0	0
5 Years Certain	0	0	0	0	0	0
10 Years Certain	0	0	0	0	0	0
10 Years Certain & Life	1,002	1,777,634	2,382	3,635,895	3,384	5,413,528
15 Years Certain & Life	444	724,774	759	1,060,546	1,203	1,785,319
20 Years Certain & Life	445	961,661	712	1,110,124	1,157	2,071,784
Total:	16,175	\$ 33,016,069	26,891	\$ 41,760,121	43,066	\$ 74,776,190



Hazardous Retired Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	757	\$ 852,151	627	\$ 711,502	1,384	\$ 1,563,653
Joint & Survivor:						
100% to Beneficiary	523	654,320	84	102,064	607	756,384
66 2/3% to Beneficiary	143	212,847	39	51,130	182	263,977
50% to Beneficiary	187	300,889	81	123,983	268	424,872
Pop-up Option	983	1,578,573	226	327,344	1,209	1,905,917
Social Security Option:						
Age 62 Basic	59	80,330	29	24,591	88	104,921
Age 62 Survivorship	134	165,490	21	27,609	155	193,100
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	0	0	0	0
5 Years Certain	0	0	0	0	0	0
10 Years Certain	46	95,315	17	24,854	63	120,169
10 Years Certain & Life	116	152,229	87	86,127	203	238,356
15 Years Certain & Life	55	67,657	35	32,672	90	100,329
20 Years Certain & Life	77	104,935	39	59,025	116	163,960
Total:	3,080	\$ 4,264,736	1,285	\$ 1,570,899	4,365	\$ 5,835,636



Non-Hazardous Beneficiary Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	35	\$ 26,020	55	\$ 73,312	90	\$ 99,332
Joint & Survivor:						
100% to Beneficiary	397	370,210	1,605	1,975,930	2,002	2,346,140
66 2/3% to Beneficiary	75	81,697	311	464,345	386	546,043
50% to Beneficiary	189	175,141	500	464,041	689	639,182
Pop-up Option	304	493,591	994	1,853,041	1,298	2,346,632
Social Security Option:						
Age 62 Basic	1	815	12	11,412	13	12,227
Age 62 Survivorship	82	115,697	341	596,467	423	712,164
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	1	92	1	92
5 Years Certain	51	60,336	64	67,786	115	128,122
10 Years Certain	81	95,795	96	78,868	177	174,663
10 Years Certain & Life	30	29,085	49	46,897	79	75,983
15 Years Certain & Life	19	18,622	48	43,353	67	61,975
20 Years Certain & Life	26	39,974	42	62,733	68	102,707
Total:	1,290	\$ 1,506,982	4,118	\$ 5,738,279	5,408	\$ 7,245,261



Hazardous Beneficiary Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	2	\$ 1,361	13	\$ 9,335	15	\$ 10,696
Joint & Survivor:						
100% to Beneficiary	17	13,019	186	143,417	203	156,435
66 2/3% to Beneficiary	1	481	24	12,256	25	12,737
50% to Beneficiary	6	3,888	44	19,349	50	23,237
Pop-up Option	13	16,919	167	193,512	180	210,430
Social Security Option:						
Age 62 Basic	0	0	2	47	2	47
Age 62 Survivorship	2	801	52	49,430	54	50,231
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	0	0	0	0
5 Years Certain	1	3,247	4	9,138	5	12,385
10 Years Certain	4	3,726	9	11,355	13	15,081
10 Years Certain & Life	1	1,100	2	1,266	3	2,366
15 Years Certain & Life	3	3,692	2	2,037	5	5,729
20 Years Certain & Life	2	4,048	12	14,001	14	18,049
Total:	52	\$ 52,280	517	\$ 465,143	569	\$ 517,423



Schedule of Retirees Added to And Removed from Rolls
(Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to	Removed	Rolls End of the Year		% Increase in Annual Benefit	Average Annual Benefit
	Rolls	from Rolls	Number	Annual Benefits		
(1)	Number	Number	(4)	(5)	(6)	(7)
	(2)	(3)				
Non-Hazardous						
2015	2,140	1,094	42,269	\$ 883,578		\$ 20,904
2016	2,441	706	44,004	934,930	5.8%	21,246
2017	2,181	1,269	44,916	921,302	-1.5%	20,512
2018	2,853	1,243	46,526	952,951	3.4%	20,482
2019	2,226	1,342	47,410	968,706	1.7%	20,433
2020	1,806	1,883	47,333	967,963	-0.1%	20,450
2021	2,026	1,659	47,700	972,434	0.5%	20,386
2022	2,471	1,976	48,195	981,369	0.9%	20,362
2023	2,115	1,901	48,409	984,280	0.3%	20,333
2024	2,031	1,966	48,474	984,257	0.0%	20,305
Hazardous						
2015	203	65	3,758	\$ 56,431		\$ 15,016
2016	237	29	3,966	59,001	4.6%	14,877
2017	206	79	4,093	59,162	0.3%	14,455
2018	321	44	4,370	64,050	8.3%	14,657
2019	227	60	4,537	67,523	5.4%	14,883
2020	214	123	4,628	69,081	2.3%	14,927
2021	263	165	4,726	70,803	2.5%	14,982
2022	300	176	4,850	73,689	4.1%	15,194
2023	210	173	4,887	74,867	1.6%	15,320
2024	207	160	4,934	76,237	1.8%	15,451



SECTION 6

ASSESSMENT AND DISCLOSURE OF RISK

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Risks Associated with Measuring the Accrued Liability And Actuarially Determined Contribution (As Required by ASOP No. 51)

The determination of KERS's accrued liability and actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. The risk measures illustrated in this section are intended to aid stakeholders in understanding the effects of future experience differing from the assumptions used in performing an actuarial valuation. These risk measures may also help with illustrating the potential volatility in the funded status and actuarially determined contributions that result from differences between actual experience and the expected experience based on the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience (economic and demographic) differing from the assumptions, changes in assumptions due to changing conditions, changes in contribution requirements due to modifications to the funding policy, and changes in the liability and cost due to changes in plan provisions or applicable law. The scope of this actuarial valuation does not include any analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the System's future financial condition include:

- Investment risk – actual investment returns may differ from expected returns;
- Longevity risk – members may live longer or shorter than expected and receive pensions for a time period different than assumed;
- Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future contributions differing from expected;
- Salary and payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liabilities or contributions differing from expected;
- Asset/Liability mismatch – changes in assets may be inconsistent with changes in liabilities, thereby altering the relative difference between the assets and liabilities which may alter the funded status and contribution requirements;
- Contribution risk – actual contributions may differ from expected future contributions (for example, actual contributions not being paid in accordance with the System's funding policy, withdrawal liability assessments or other anticipated payments to the plan are not being paid, or material changes occurring in the anticipated number of covered employees, covered payroll, or another relevant contribution base).

Effects of certain experience can generally be anticipated. For example, if investment returns since the most recent actuarial valuation are less (or more) than the assumed rate of return, then the funded status of the plan can be expected to decrease (or increase) more than anticipated.

The required contributions in this report were established in accordance with applicable Statutes and assumptions adopted by the Board. However, stakeholders should be aware that the scheduled contributions specified in State Code do not necessarily guarantee that the contribution requirements will not increase in a future year.



Employer Risk with Contribution Rates

Currently contributions for the hazardous fund are collected from participating employers based on the employer's total payroll of employees who are earning benefits in KERS (i.e. covered payroll). The actuarially determined contribution rate is comprised of two components - the normal cost rate (to pay for the benefits accruing in the next year) and the unfunded amortization (to pay for the benefits accrued by members in previous years). The unfunded amortization is calculated by first determining the dollar amount necessary to pay for the unfunded liability based on KERS's funding policy, and then by dividing that dollar amount by expected covered payroll to convert that contribution requirement to a percentage of payroll (i.e. a contribution rate).

As the contribution requirement, as a percentage of payroll, increases then there is increased incentive for participating employers to make deliberate business action to reduce their payroll reported to the System in order to reduce their pension cost. House Bill 8 passed during the 2021 legislative session and changed how the amortization cost would be collected and allocated amongst employers in the non-hazardous fund. This portion of the contribution requirement is no longer collected as a percentage of payroll for the non-hazardous fund.

Plan Specific Risk Measures

Risks faced by a pension plan evolve over time. A relatively new plan with virtually no assets and paying few benefits will experience lower investment risk than a mature plan with a significant amount of assets and large number of members receiving benefits. There are a few measures that can assist stakeholders in understanding and comparing the maturity of a plan to other systems, which include:

- **Ratio of market value of assets to payroll:** The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. If assets are approximately the same as covered payroll, an investment return that is 5% different than assumed would equal 5% of payroll. In another example, if the assets are approximately twice as large as covered payroll, an investment return that is 5% different than assumed would equal 10% of payroll. A ratio that increases over time generally indicates the potential of an increasing volatility in employer contribution rates as a percentage of payroll.
- **Ratio of actuarial accrued liability to payroll:** The ratio of actuarial accrued liability to payroll can be used as a measure to indicate the potential volatility of contributions due to volatility in the liability experience. For instance, if the actuarial accrued liability is 5 times the size of the covered payroll, then a change in the liability that is 2% different than expected would be a change in magnitude that is 10% of payroll. A ratio that increases over time generally indicates the potential of an increasing volatility in employer contribution rates as a percentage of payroll.
- **Percentage of Expected Contributions Actually Received:** This measure identifies the percentage difference between the contributions the fund expects to receive during the fiscal year to and actual contributions received by the fund during the fiscal year. A percentage that is less than 100% means that actual contributions the fund received were less than the expected contributions determined by a prior actuarial valuation. On the other hand, a percentage that is greater than 100% means that actual contributions the fund received were more than the expected contributions.



- Ratio of active to retired members:** A relatively mature open plan is likely to have close to the same number of actives to retirees resulting in a ratio that is around 1.0. On the other hand, a super-mature plan, or a plan that is closed to new entrants will have more retirees than active members resulting in a ratio below 1.0. As this ratio declines, a larger portion of the total actuarial accrued liability in the System is attributable to retirees. This metric also typically moves in tandem with the liability to payroll metric, which provides an indication of potential contribution volatility.

The following tables provide a summary of these measures for KERS Non-Hazardous and Hazardous Funds for the current year and the prior four years so stakeholders can identify how these measures are trending. While ASOP No. 51 requires this disclosure with respect to only the retirement funds, we have included this information for the insurance funds for completeness.

	KERS Non-Hazardous									
	Retirement Fund					Insurance Fund				
	June 30,					June 30,				
	2024	2023	2022	2021	2020	2024	2023	2022	2021	2020
Ratio of the market value of assets to total payroll	2.27	2.19	2.22	2.24	1.66	0.95	0.95	1.01	1.05	0.76
Ratio of actuarial accrued liability to payroll	8.94	10.09	12.23	12.10	11.78	1.13	1.16	1.32	1.91	1.85
Ratio of net cash flow to market value of assets	8.6%	9.5%	5.2%	7.3%	1.0%	3.6%	2.5%	2.4%	7.1%	5.2%
Percentage of Expected Contribution Actually Received	100% ¹	100%	100%	94%	93%	100% ¹	100%	100%	99%	96%
Ratio of actives to retirees and beneficiaries	0.67	0.65	0.61	0.63	0.67					

¹ Expected contribution for FYE2024 based on the actuarially determined contribution from the June 30, 2021 valuation.

	KERS Hazardous									
	Retirement Fund					Insurance Fund				
	June 30,					June 30,				
	2024	2023	2022	2021	2020	2024	2023	2022	2021	2020
Ratio of the market value of assets to total payroll	3.93	4.22	4.90	5.32	4.04	2.61	2.96	3.55	3.89	3.05
Ratio of actuarial accrued liability to payroll	5.56	6.44	7.95	7.95	7.52	1.46	1.72	2.10	2.61	2.51
Ratio of net cash flow to market value of assets	2.6%	0.7%	-0.5%	0.3%	0.4%	-2.4%	-2.7%	-2.9%	-2.8%	-2.5%
Percentage of Expected Contribution Actually Received	134% ¹	138%	108%	101%	114%	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Ratio of actives to retirees and beneficiaries	0.84	0.80	0.75	0.81	0.88					

¹ Expected contribution for FYE2024 based on the actuarially determined contribution rate of 31.82% from the June 30, 2021 valuation, and expected compensation based on census data from the June 30, 2023 valuation. As of the 2018 valuation (FYE2020), the required employer contribution was 0% of pay for the insurance fund.



Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Kentucky Employees’ Retirement System (KERS) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities is set equal to the **expected return** on each fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the non-hazardous retirement fund, the investment return assumption is 5.25%. For the hazardous retirement fund, the investment return assumption is 6.25%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement and can vary greatly from year to year. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 5.32% as of June 30, 2024. *Note, since the investment return assumption for the non-hazardous fund is currently less than the 5.32% rate, the LDROM measurement is shown as equal to the valuation liabilities.* This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

In normal economic conditions, the difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio. However, the LDROM is not a particularly useful measure for the non-hazardous fund as of June 30, 2024 because of the market rate used as a reference on this date to comply with this disclosure requirement.

Non-Hazardous Retirement Fund		Hazardous Retirement Fund	
Valuation	Accrued Liabilities	Valuation	Accrued Liabilities
\$16,647,892,788	LDROM \$16,647,892,788	\$1,442,618,733	LDROM \$1,610,323,196



APPENDIX A

ACTUARIAL ASSUMPTIONS AND METHODS

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Summary of Actuarial Methods and Assumptions

The following presents a summary of the actuarial assumptions and methods used in the valuation of the Kentucky Employees Retirement System.

In general, the assumptions and methods used in the valuation are based on the actuarial experience study as of June 30, 2022 and adopted by the Board in June 2023.

Investment return rate:

Assumed annual rate of 5.25% net of investment expenses for the non-hazardous retirement fund

Assumed annual rate of 6.25% net of investment expenses for the hazardous retirement fund

Assumed annual rate of 6.50% net of investment expenses for the insurance funds

Price Inflation:

Assumed annual rate of 2.50%

Payroll Growth Assumption (used for amortization of unfunded accrued liabilities):

Assumed annual rate of 0.00%

Rates of Annual Salary Increase:

Assumed rates of annual salary increases are shown below.

Service Years	Annual Rates of Salary					
	Merit & Seniority		Price Inflation & Productivity		Total Increase	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
0	12.00%	16.50%	3.30%	3.55%	15.30%	20.05%
1	3.50%	4.00%	3.30%	3.55%	6.80%	7.55%
2	2.75%	3.00%	3.30%	3.55%	6.05%	6.55%
3	2.50%	3.00%	3.30%	3.55%	5.80%	6.55%
4	2.00%	2.00%	3.30%	3.55%	5.30%	5.55%
5	1.50%	1.50%	3.30%	3.55%	4.80%	5.05%
6	1.25%	1.00%	3.30%	3.55%	4.55%	4.55%
7	1.00%	0.50%	3.30%	3.55%	4.30%	4.05%
8	0.75%	0.50%	3.30%	3.55%	4.05%	4.05%
9	0.50%	0.00%	3.30%	3.55%	3.80%	3.55%
10	0.50%	0.00%	3.30%	3.55%	3.80%	3.55%
11 & Over	0.00%	0.00%	3.30%	3.55%	3.30%	3.55%



Retirement rates:

Assumed annual rates of retirement are shown below. Rates are only applicable for members who are eligible for a service retirement.

Age	Non-Hazardous				Service	Hazardous			
	Normal Retirement		Early Retirement ¹			Members participating before 9/1/2008 ²		Members participating between 9/1/2008 and 1/1/2014 ³	Members participating after 1/1/2014 ³
	Male	Female	Male	Female		Age 55-61	Age 62+		
Under 45	20.0%	33.0%			5	10.0%	35.0%		
45	21.0%	33.0%			6	10.0%	35.0%		
46	22.0%	33.0%			7	10.0%	35.0%		
47	23.0%	33.0%			8	10.0%	35.0%		
48	24.0%	33.0%			9	10.0%	35.0%		
49	25.0%	33.0%			10	10.0%	35.0%		
50	26.0%	33.0%			11	10.0%	35.0%		
51	27.0%	33.0%			12	10.0%	35.0%		
52	28.0%	33.0%			13	10.0%	35.0%		
53	29.0%	33.0%			14	10.0%	35.0%		
54	30.0%	33.0%			15	10.0%	35.0%		
55	30.0%	33.0%	5.0%	5.0%	16	10.0%	35.0%		
56	30.0%	33.0%	5.0%	5.0%	17	10.0%	35.0%		
57	30.0%	33.0%	5.0%	5.0%	18	10.0%	35.0%		
58	30.0%	33.0%	5.0%	5.0%	19	10.0%	35.0%		
59	30.0%	33.0%	5.0%	5.0%	20	50.0%	50.0%		
60	30.0%	33.0%	5.0%	8.0%	21	32.0%	32.0%		
61	30.0%	33.0%	8.0%	9.0%	22	32.0%	32.0%		
62	35.0%	35.0%	15.0%	20.0%	23	32.0%	32.0%		
63	30.0%	33.0%	15.0%	18.0%	24	32.0%	32.0%		
64	30.0%	33.0%	15.0%	16.0%	25	32.0%	32.0%	25.6%	16.0%
65	30.0%	33.0%			26	32.0%	32.0%	25.6%	16.0%
66	30.0%	33.0%			27	32.0%	32.0%	25.6%	16.0%
67	30.0%	33.0%			28	32.0%	32.0%	25.6%	16.0%
68	30.0%	33.0%			29	32.0%	32.0%	25.6%	16.0%
69	30.0%	33.0%			30+	32.0%	32.0%	25.6%	100.0%
70	30.0%	33.0%							
71	30.0%	33.0%							
72	30.0%	33.0%							
73	30.0%	33.0%							
74	30.0%	33.0%							
75	100.0%	100.0%							

¹ The annual rate of retirement is 12% for male members and 14% for female members with 25-26 years of service.

² The annual rate of retirement is 100% at age 65.

³ The annual rate of retirement is 100% at age 60.

Non-Hazardous: There is a 1% increase in the first two years a member becomes eligible under the age of 65. For members hired after 7/1/2003, the rates shown above are multiplied by 80% if the member is under age 65 to reflect the different retiree health insurance benefit.

Hazardous: For members hired after 7/1/2003 and prior to 9/1/2008, the rates shown above are multiplied by 80% if the member is under age 65 to reflect the different retiree health insurance benefit.



Disability rates:

An abbreviated table with assumed rates of disability is shown below.

Age	Non-Hazardous		Hazardous	
	Male	Female	Male	Female
20	0.03%	0.03%	0.05%	0.05%
30	0.05%	0.05%	0.08%	0.08%
40	0.11%	0.11%	0.18%	0.18%
50	0.31%	0.31%	0.50%	0.50%
60	0.80%	0.80%	1.32%	1.32%

Withdrawal rates (for causes other than disability and retirement):

Assumed annual rates of withdrawal are shown below and include pre-retirement mortality rates as described on the next page.

Service Years	Annual Rates of Withdrawal	
	Non-Hazardous	Hazardous
1	22.00%	32.50%
2	18.10%	25.58%
3	14.73%	19.66%
4	12.77%	16.19%
5	11.37%	13.73%
6	10.29%	11.82%
7	9.41%	10.26%
8	8.66%	8.93%
9	8.01%	7.79%
10	7.44%	6.79%
11	6.93%	5.89%
12	6.47%	5.07%
13	6.04%	4.33%
14	5.65%	3.64%
15	5.29%	3.00%
16	4.96%	2.42%
17	4.64%	1.86%
18	4.36%	1.34%
19	4.07%	0.86%
20	3.82%	0.39%
21	3.56%	0.00%
22	3.32%	0.00%
23	3.10%	0.00%
24	2.88%	0.00%
25	2.67%	0.00%
26 & Over	0.00%	0.00%



Mortality Assumption:

Pre-retirement mortality: PUB-2010 General Mortality table, for the non-hazardous funds, and the PUB-2010 Public Safety Mortality table for the hazardous funds, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

Post-retirement mortality (non-disabled): System-specific mortality table based on mortality experience from 2013-2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.

The following table provides the life expectancy for a non-disabled retiree in future years based on the assumption with full generational projection:

Life Expectancy for an Age 65 Retiree in Years					
Gender	Year of Retirement				
	2025	2030	2035	2040	2045
Male	19.8	20.2	20.6	21.0	21.3
Female	22.4	22.7	23.1	23.4	23.7

Post-retirement mortality (disabled): PUB-2010 Disabled Mortality table, with rates multiplied by 150% for both male and female rates, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

Marital status:

100% of employees are assumed to be married, with the female spouse 3 years younger than the male spouse.

Line of Duty/Duty-Related Disability

Non-Hazardous: 2% of disabilities are assumed to be duty-related (100% of which are assumed to be “total and permanent”)

Hazardous: 10% of disabilities are assumed to occur in the line of duty (10% of which are assumed to be “total and permanent”)

Line of Duty Death

25% of deaths are assumed to occur in the line of duty

Dependent Children:

For members in the Hazardous Plan who receive a duty-related death or disability benefit, the member is assumed to be survived by two dependent children, each age 6 with payments for 15 years.

Form of Payment:

Members are assumed to elect a life-only annuity at retirement.

Actuarial Cost Method:

Entry Age Normal, Level Percentage of Pay. The Entry Age Normal actuarial cost method allocates the System’s actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of pay necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

Health Care Age Related Morbidity/Claims Utilization:

To model the impact of aging on the underlying health care costs for Medicare retirees, the valuation relied on the Society of Actuaries’ 2013 Study “Health Care Costs – From Birth to Death”. Table 4 (Development of Plan Specific Medicare Age Curve) was used to model the impact of aging for ages 65 and over.

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Health Care Cost Trend Rates:

Year	Non-Medicare Plans ¹	Medicare Plans ¹	Dollar Contribution ²
2026	7.10%	8.00%	1.50%
2027	7.00%	8.00%	1.50%
2028	6.80%	8.00%	1.50%
2029	6.60%	7.50%	1.50%
2030	6.40%	7.00%	1.50%
2031	6.20%	6.50%	1.50%
2032	6.00%	6.00%	1.50%
2033	5.80%	5.50%	1.50%
2034	5.60%	5.00%	1.50%
2035	5.40%	4.50%	1.50%
2036	5.20%	4.25%	1.50%
2037	5.00%	4.25%	1.50%
2038	4.75%	4.25%	1.50%
2039	4.50%	4.25%	1.50%
2040 & Beyond	4.25%	4.25%	1.50%

¹All increases are assumed to occur on January 1. The 2025 premiums were known at the time of the valuation and were incorporated into the liability measurement.

²Applies to members participating on or after July 1, 2003. All increases are assumed to occur on July 1.

Health care trend assumptions are based on the model issued by the Society of Actuaries "Getzen model of Long-Run Medical Cost Trends for the SOA; Thomas E. Getzen, iHEA and Temple University 2014 © Society of Actuaries.

The underlying assumptions used to develop the health care trend rates include:

- A short run period-this is a period for which anticipated health care trend rates are manually set based on local information as well as plan-specific and carrier information.
- Long term real GDP growth – 1.75%
- Long term rate of inflation – 2.30%
- Long term nominal GDP growth – 4.25%
- Year that excess rate converges to 0 – 2036

Health care trend rates are thus the manually set rates for the short run period and rates which decline to an ultimate trend rate which equals the assumed nominal long-term GDP growth rate.



Health Care Participation Assumptions:

- Active members are assumed to elect health coverage at retirement at the following participation rates.

Service at Retirement	Members participating before 7/1/2003*	Members participating after 7/1/2003
Under 10	50%	100%
10-14	75%	100%
15-19	90%	100%
Over 20	100%	100%

* 100% of members with a duty disability or a duty death (in service) benefit are assumed to elect coverage at retirement.

- Future retirees are assumed to have a similar distribution by plan type as the current retirees.

Medicare Plan	Participation Percentage	Non-Medicare Plan	Participation Percentage
Medical Only ¹	5%	LivingWell Basic	4%
Essential Plan	7%	LivingWell CDHP	35%
Premium Plan	88%	LivingWell PPO	61%

¹Includes Mirror Plans

- 50% of deferred vested members participating before July 1, 2003 are assumed to elect health coverage at retirement. 100% of deferred vested members participating after July 1, 2003 are assumed to elect health coverage at retirement.
- Deferred vested members receiving insurance benefits from the non-hazardous fund are assumed to begin health coverage at age 55 for members participating before September 1, 2008, at age 60 for members participating on or after September 1, 2008 but before January 1, 2014, and at age 65 for members participating on or after January 1, 2014.
- Deferred vested members receiving insurance benefits from the hazardous fund are assumed to begin health coverage at age 50 for members participating before January 1, 2014 and at age 60 for members participating on or after January 1, 2014.
- 50% of future retirees, with hazardous service, are assumed to elect spouse health care coverage. No dependent coverage is assumed for members who only have non-hazardous service. 100% of spouses with health care coverage are assumed to continue coverage after the member’s death.



Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): Current fiscal year payroll.
2. Individual salaries used to project benefits: For salary amounts prior to the valuation date, the salary from the last fiscal year is projected backward with the valuation salary scale assumption. For future salaries, the salary from the last fiscal year is projected forward with one year's salary scale.
3. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported salaries represent amounts paid to members during the year ending on the valuation date.
4. Current active members that terminated employment (for reasons other than retirement, disability, or death) are assumed to commence their retirement benefits at first unreduced retirement eligibility. Members are assumed to elect a refund of member contributions if the value of their account balance exceeds the present value of the deferred benefit. Members participating in the Cash Balance plan are assumed to elect to receive a lump sum of their cash balance account if their account balance exceeds the present value of the deferred benefit and the member is not eligible for insurance benefits at termination.
5. The beneficiaries of current active members that die while active are assumed to commence their survivor benefits at the member's first unreduced retirement eligibility. Beneficiaries are assumed to elect a refund of member contributions if the value of the member's account balance exceeds the present value of the survivor benefit. Beneficiaries of active members that die while in the line of duty are assumed to commence their survivor benefits immediately at the death of the member.
6. There will be no recoveries once disabled.
7. Cash Balance Provisions: The cash balance interest crediting rate while a member is an active employee is assumed to equal 5.90% for the non-hazardous fund and 6.75% for the hazardous fund. The interest crediting rate after a member terminates employment is 4% for all plans.
8. Decrement timing: Decrements of all types are assumed to occur mid-year. Decrement rates are used as described in this report, without adjustment for multiple decrement table effects.
9. Service: All members are assumed to accrue 1 year of benefit and eligibility service each year.
10. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
11. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
12. Current Inactive Population (Retirement Funds): All non-vested members are assumed to take an immediate refund of member contributions. Vested members are assumed to elect an immediate refund of member contributions at the valuation date if the value of their



account balance exceeds the present value of their deferred benefit. Non-hazardous members are assumed to retire at age 65. Hazardous members hired prior to September 1, 2008 are assumed to retire at age 55 and hazardous members hired on or after September 1, 2008 are assumed to retire at age 60.

13. The additional \$5 per year of service insurance dollar subsidy effective January 1, 2023 is assumed to be paid in all applicable years.

Participant Data

Participant data was supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active and terminated members included date of birth, gender, date of participation, benefit tier indicator, service with the current system, total vesting service, salary, employee contribution account balances, and employer pay credits for members participating in the cash balance plan. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

Changes in assumptions since the prior valuation:

In conjunction with the review of healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is reviewed on an annual basis. The trend assumption was increased as a result of our review.



Development of Baseline Claims Cost

For non-Medicare retirees, the initial per capita costs were based on the plan premiums effective January 1, 2025, and are used for both current and future retirees. An inherent assumption in this methodology is that the projected future retirees will have a similar distribution by plan type as the current retirees. The spouse/dependent premium of \$1,104.08 for non-Medicare retirees is based on a blending of Family and Couple premiums for the current retirees that have over 4 years of hazardous service. The fully-insured premiums paid to the Kentucky Employees’ Health Plan (KEHP) are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit rate subsidy for the non-Medicare eligible retirees. Actuarial Standard of Practice No. 6 (ASOP No. 6) requires aging subsidies (or implicit rate subsidies) to be recognized. However, the health insurance trusts are only used to reimburse KEHP for the employer’s portion of the blended premiums. Said another way, the trusts are not used to fund the difference between the underlying retiree claims and the blended KEHP premiums. As a result, the retiree health care liabilities developed in this report for the non-Medicare retirees are based solely on the premiums charged by KEHP, without any age-adjustment. GASB Statements No. 74 and No. 75 prohibit such a deviation from ASOP No. 6. The liabilities developed in this report are solely for the purpose of funding the benefits paid by the health insurance funds and are not appropriate for financial statement disclosures required by GASB. GRS provides separate GASB reports which include the liabilities associated with the implicit rate subsidy.

2025 MONTHLY COSTS FOR THOSE NOT ELIGIBLE FOR MEDICARE		
AGE	MEMBER	SPOUSE/DEPENDENTS
<65	\$939.54	\$1,104.08

For Medicare retirees, the initial per capita costs were estimated based on the plan premiums effective January 1, 2025, and are used for both current and future retirees. An inherent assumption in this methodology is that the projected future retirees will have a similar distribution by plan type as the current retirees. Age graded and sex distinct premiums are utilized for retirees over the age of 65. These costs are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific costs more accurately reflect the health care utilization and cost at that age.

2025 MONTHLY COSTS FOR THOSE ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE
65	\$ 121.05	\$ 114.17
75	141.62	138.19
85	149.75	151.51

Appendix B of the report provides a full schedule of premiums.



The percentage of the insurance premium paid by KERS is calculated based on the Medical Only premium amounts. The majority of KERS Medicare retirees are covered under the Premium Medicare Advantage plan. Because the premiums for the Medical Only plan are higher than the Premium Medical Advantage plan, retirees with less than 20 years of service pay a smaller contribution toward their insurance coverage. To model the impact of the employer contribution being based on the Medical Only Plan rather than the plan selected by the retiree, the employer share for retirees qualifying for percentage-based subsidies was blended to reflect retiree plan selection.

The above assumption implicitly implies that the Medical Only plan premiums will increase at a rate of 4.80% as of January 1, 2025, decreasing over 6 years to an ultimate trend rate of 4.25%, and that the remaining Medicare plan premiums will increase at the Medicare trend assumption used in the actuarial valuation.

Blake Orth is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.



Blake Orth, FSA, EA, MAAA

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APPENDIX B

BENEFIT PROVISIONS

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Summary of Benefit Provisions for Kentucky Employees Retirement System (KERS)

KERS Non-Hazardous Employees

Retirement: Tier 1, Participation before 9/1/2008

Normal Retirement Eligibility	Age 65 with at least 1 month of service credit; or Any age with at least 27 years of service
Benefit Amount	<p>If a member has at least 48 months of service, the monthly benefit is 2.00% times final average compensation times years of service. For members who did not have 13 months of service credit for 1/1/1998-1/1/1999, the monthly benefit is 1.97% times final average compensation times years of service.</p> <p>If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member’s contributions with interest.</p> <p>Final average compensation is based on the member’s highest 5 years of compensation.</p>
Early Retirement Eligibility	Any age (prior to age 65) with at least 25 years of service; or Age 55 with at least 5 years of service
Early Retirement Reduction	Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member’s retirement eligibility precedes the member’s normal retirement date.

KERS Non-Hazardous Employees (continued)

Retirement: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

- Normal Retirement Eligibility Age 65 with at least 5 years of service; or Rule of 87 (Age 57 or older if age plus service equals 87)
- Benefit Amount The monthly benefit is equal to the applicable benefit multiplier times final average compensation times years of service.

Years of Service	Benefit Multiplier
10 or less	1.10%
10-20	1.30%
20-26	1.50%
26-30	1.75%
Greater than 30*	2.00%

* The 2.00% benefit multiplier only applies to service credit in excess of 30 years. If a member has greater than 30 years of service at retirement, service prior to 30 years will be multiplied by the 1.75% benefit multiplier.

Final compensation is based on the member’s last 5 years of compensation.

- Early Retirement Eligibility Age 60 with at least 10 years of service
- Early Retirement Reduction Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member’s retirement date precedes the member’s normal retirement eligibility.

Retirement: Tier 3, Participation on or after 1/1/2014

- Normal Retirement Eligibility Age 65 with at least 5 years of service; or Rule of 87 (Age 57 or older if age plus service equals 87)
- Benefit Amount Each year that the member is active, a 4.00% employer pay credit and the employee’s 5.00% contribution will be credited to each member’s hypothetical cash balance account. The hypothetical account will earn interest at a minimum rate of 4%, annually. If the System’s geometric average net investment return for the previous five years exceeds 4%, then the hypothetical account will be credited with an additional amount of interest in that year equal to 75% of the amount of the return which exceeds 4%. All interest credits will be applied to the hypothetical account balance on June 30 based on the account balance as of June 30 of the previous year.

At retirement, the member’s hypothetical account balance may be converted into an annuity based on an actuarial factor.
- Early Retirement Eligibility N/A

KERS Non-Hazardous Employees (continued)

Deferred Vested Benefit: Tier 1, Participation before 9/1/2008

Eligibility	At least 1 month of service credit
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

Eligibility	5 years of service
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit Tier 3, Participation on or after 1/1/2014

Eligibility	5 years of service
Benefit Amount	At termination of employment, members may choose to leave their account balance with the System and retire once they are eligible. The hypothetical account balance will earn 4% annual interest after termination. Members may also choose to withdrawal their entire accumulated balance. If a member does not have 5 years of service at termination, the member is eligible to receive a partial refund of their account balance. This refund includes the member’s contributions with interest.

Disability Retirement: Participation before 8/1/2004

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	Disability benefits are calculated in the same manner as the normal retirement benefit with years of service and final compensation being determined as of the date of disability, except that service credit shall be added to the person’s total service beginning with the last date of paid employment and continuing to the member’s 65 th birthday, with total service not exceeding 25 years. Total service credit added shall not be greater than the member’s actual service at disability. For members with at least 25 years of service on the last day of paid employment but less than 27 years of service, total service shall be 27 years. For members with 27 or more years of service credit, actual service will be used.

KERS Non-Hazardous Employees (continued)

Disability Retirement: Participation on or after 8/1/2004 but before 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 20% of the member’s final monthly rate of pay or the member’s normal retirement benefit (without reduction for early retirement) with years and final compensation being determined as of the date of disability.

Disability Retirement: Participation on or after 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 20% of the member’s final monthly rate of pay or the member’s retirement benefit calculated at the member’s normal retirement date.

Duty-Related Disability Benefit

Disability Benefit	If the disability is a direct result of an act in the line of duty, the benefit shall not be less than 25% of the member’s final monthly final rate of pay. If the disability is deemed to be Total and Permanent (and the member is working in a non-hazardous position that could be certified as a hazardous position), then this benefit shall not be less than 75% of the member’s monthly average pay.
Child Benefit	Additionally, each eligible dependent child will receive 10% of the member’s monthly average pay up to a maximum of 40%. Member and dependent payment shall not exceed 100% of member’s monthly average pay.

Pre-Retirement Death Benefit

Eligibility	Eligible for early or normal retirement; or Under age 65 with at least 60 months of service and actively working at the time of death; or At least 144 months of service, if no longer actively working
Spouse Benefit	The member’s retirement benefit calculated in the same manner as if the member had retired on the day of the member’s death and elected a 100% joint and survivor benefit. The benefit is actuarially reduced if the member dies prior to their normal retirement age.

KERS Non-Hazardous Employees (continued)

Pre-Retirement Death Benefit (Death in the Line of Duty)

Eligibility	One month of service credit
Spouse Benefit	A \$10,000 lump sum payment plus a monthly payment of 75% of the deceased member’s final monthly average pay. Each dependent child will receive 10% of the final monthly average pay (not to exceed a total child benefit of 25% while the spouse is alive). A spouse may also elect the non-line of duty death benefit.
Child Benefit	In the event there is no surviving spouse, the benefit is 50% of final monthly average pay for one child, 65% of final monthly average pay for two children, or 75% of final monthly average pay for three or more eligible children.

Post-Retirement Death Benefit

Eligibility	48 months of service, and in receipt of retirement benefits
Death Benefit	A \$5,000 lump sum payment

Member Contributions

Tier 1, Participation before 9/1/2008	5% of creditable compensation. Members who do not receive a retirement benefit are entitled to a full refund of contributions with interest. The annual interest rate is set by the Board, not less than 2.0%.
Tier 2, Participation on or after 9/1/2008 but before 1/1/2014	5% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest. The annual interest rate is 2.5%.
Tier 3, Participation after 1/1/2014	5% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest.

Change in Retirement Plan Benefits for Non-Hazardous Members since the Prior Valuation

There have been no changes in benefits since the prior valuation.



KERS Hazardous Employees

Retirement: Tier 1, Participation before 9/1/2008

Normal Retirement Eligibility	Age 55 with at least 1 month of service credit; or Any age with at least 20 years of service
Benefit Amount	If a member has at least 60 months of service, the monthly benefit is 2.49% times final average compensation times years of service. If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest. Final average compensation is based on the member's highest 3 years of compensation.
Early Retirement Eligibility	Age 50 with at least 15 years of service
Early Retirement Reduction	Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member's retirement date precedes the member's normal retirement eligibility.

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KERS Hazardous Employees (continued)

Retirement: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

Normal Retirement Eligibility Age 60 with at least 5 years of service; or
Any age with at least 25 years of service

Benefit Amount The monthly benefit is equal to the applicable benefit multiplier times final average compensation times years of service.

Years of Service	Benefit Multiplier
10 or less	1.30%
10-20	1.50%
20-25	2.25%
Greater than 25	2.50%

Final average compensation is based on the member’s highest 3 years of compensation.

Early Retirement Eligibility Age 50 with at least 15 years of service

Early Retirement Reduction Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member’s retirement date precedes the member’s normal retirement eligibility.

Retirement: Tier 3, Participation on or after 1/1/2014

Normal Retirement Eligibility Age 60 with at least 5 years of service; or
Any age with at least 25 years of service

Benefit Amount Each year that the member is active, a 7.50% employer pay credit and the employee’s 8.00% contribution will be credited to each member’s hypothetical cash balance account. The hypothetical account will earn interest at a minimum rate of 4%, annually. If the System’s geometric average net investment return for the previous five years exceeds 4%, then the hypothetical account will be credited with an additional amount of interest in that year equal to 75% of the amount of the return which exceeds 4%. All interest credits will be applied to the hypothetical account balance on June 30 based on the account balance as of June 30 of the previous year.

At retirement, the member’s hypothetical account balance may be converted into an annuity based on an actuarial factor.

Early Retirement Eligibility N/A

KERS Hazardous Employees (continued)

Deferred Vested Benefit: Tier 1, Participation before 9/1/2008

Eligibility	At least 1 month of service credit
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

Eligibility	5 years of service
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit Tier 3, Participation on or after 1/1/2014

Eligibility	5 years of service
Benefit Amount	At termination of employment, members may choose to leave their account balance with the System and retire once they are eligible. The hypothetical account balance will earn 4% annual interest after termination. Members may also choose to withdrawal their entire accumulated balance. If a member does not have 5 years of service at termination, the member is eligible to receive a partial refund of their account balance. This refund includes the member’s contributions with interest.

Disability Retirement: Participation before 8/1/2004

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	Disability benefits are calculated in the same manner as the normal retirement benefit with years of service and final compensation being determined as of the date of disability, except that if the member has less than 20 years of service at disability, service credit shall be added to the person’s total service beginning with the last date of paid employment and continuing to the member’s 55 th birthday, with total service not exceeding 20 years. Total service credit added shall not be greater than the member’s actual service at disability.

KERS Hazardous Employees (continued)

Disability Retirement: Participation on or after 8/1/2004 but before 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 25% of the member’s final monthly rate of pay or the member’s normal retirement benefit (without reduction for early retirement) with years and final compensation being determined as of the date of disability.

Disability Retirement: Participation on or after 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 25% of the member’s final monthly rate of pay or the member’s retirement benefit calculated at the member’s normal retirement date.

Line of Duty Disability Benefit

Disability Benefit	If the disability is a direct result of an act in the line of duty, the benefit shall not be less than 25% of the member’s final monthly final rate of pay. If the disability is deemed to be Total and Permanent, then this benefit shall not be less than 75% of the member’s monthly average pay.
Child Benefit	Additionally, each eligible dependent child will receive 10% of the member’s monthly average pay up to a maximum of 40%. Member and dependent payment shall not exceed 100% of member’s monthly average pay.

Pre-Retirement Death Benefit

Eligibility	Eligible for early or normal retirement; or Under age 55 with at least 60 months of service and actively working at the time of death; or At least 144 months of service, if no longer actively working
Spouse Benefit	The member’s retirement benefit calculated in the same manner as if the member had retired on the day of the member’s death and elected a 100% joint and survivor benefit. The benefit is actuarially reduced if the member dies prior to their normal retirement age.

KERS Hazardous Employees (continued)

Pre-Retirement Death Benefit (Death in the Line of Duty)

Eligibility	One month of service credit
Spouse Benefit	A \$10,000 lump sum payment plus a monthly payment of 75% of the deceased member’s final monthly average pay. Each dependent child will receive 10% of the final monthly average pay (not to exceed a total child benefit of 25% while the spouse is alive). A spouse may also elect the non-line of duty death benefit.
Non-Spouse Benefit	If the beneficiary is only one person who is a dependent receiving at least 50% of his or her support from the member, the beneficiary may elect a lump-sum payment of \$10,000.
Child Benefit	In the event there is no surviving spouse, the benefit is 50% of final monthly average pay for one child, 65% of final average pay for two children, or 75% of final average pay for three or more eligible children.

Post-Retirement Death Benefit

Eligibility	48 months of service, and in receipt of retirement benefits
Death Benefit	A \$5,000 lump sum payment

Member Contributions

Tier 1, Participation before 9/1/2008	8% of creditable compensation. Members who do not receive a retirement benefit are entitled to a full refund of contributions with interest. The annual interest rate is set by the Board, not less than 2.0%.
Tier 2, Participation on or after 9/1/2008 but before 1/1/2014	8% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest. The annual interest rate is 2.5%.
Tier 3, Participation after 1/1/2014	8% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest.

Change in Retirement Plan Benefits for Hazardous Members since the Prior Valuation

There have been no changes in benefits since the prior valuation.

Summary of Main Retiree Insurance Benefit Provisions

Insurance: Participation began before 7/1/2003

Benefit Eligibility Recipient of a retirement allowance

Benefit Amount

Non-Hazardous Service	Percentage of Member Premium Paid by Retirement System	Hazardous Service	Percentage of Member & Dependent Premium Paid by Retirement System
Less than 4 years	0%	Less than 4 years	0%
4 – 9 years	25%	4 – 9 years	25%
10 – 14 years	50%	10 – 14 years	50%
15 – 19 years	75%	15 – 19 years	75%
20 or more years	100%	20 or more years	100%

The percentage paid by the retirement system is applied to the ‘contribution’ plan selected by the Board.

Duty Disability Retirement If disability was a result of injuries sustained while in the line of duty, the member receives 100% of the maximum contribution for the member and dependents. This benefit is provided to members in the Non-hazardous and Hazardous plans alike.

Duty Death in Service If an active employee’s death was a result of injuries sustained while in the line of duty, the member’s spouse and children receive a fully subsidized health insurance benefit. This benefit is provided to members in the Non-hazardous and Hazardous plans alike.

Non-Duty Death in Service If the surviving spouses is in receipt of a pension allowance, he or she is eligible for continued health coverage. The percentage of the premium paid for by the retirement system is based on the member’s years of hazardous service at the time of death.

Surviving Spouse of a Retiree A surviving spouse of a retiree, who is in receipt of a pension allowance, will receive a premium subsidy based on the member’s years of hazardous service.

Hazardous employees who retired prior to August 1, 1998 System’s contribution for spouse and dependents is based on total service.

Insurance: Participation began on or after 7/1/2003

Benefit Eligibility

Recipient of a retirement allowance with at least 120 months of service at retirement (180 months if participation began on or after 9/1/2008)

Non-Hazardous Subsidy

Monthly contribution of \$10 for each year of earned non-hazardous service. The monthly contribution is increased by 1.5% each July 1. As of July 1, 2024, the Non-Hazardous monthly contribution was \$14.63/year of service. Upon the retiree's death, the surviving spouse may continue coverage (if in receipt of a retirement allowance) but will be 100% responsible for the premiums.

Effective January 1, 2023, members will receive an additional dollar contribution of \$5 for every year of non-hazardous service a member attains over 27 years. This additional dollar contribution does not increase by 1.5% annually and is only payable for non-Medicare retirees. Also, it is only payable when the applicable insurance fund is at least 90% funded on an actuarial value of asset basis as of the last actuarial valuation.

Hazardous Subsidy

Monthly contribution of \$15 for each year of earned hazardous service. The monthly contribution is increased by 1.5% each July 1. As of July 1, 2024, the Hazardous monthly contribution was \$21.94/year of service. Upon the retiree's death, the surviving spouse of a hazardous duty member will receive a monthly contribution of \$10 (\$14.63 as of July 1, 2024) for each year of hazardous service.

Effective January 1, 2023, members will receive an additional dollar contribution of \$5 for every year of hazardous service a Tier 1 member attains over 20 years and a Tier 2 member attains 25 years. This additional dollar contribution does not increase by 1.5% annually and is only payable for non-Medicare retirees. Also, it is only payable when the applicable insurance fund is at least 90% funded on an actuarial value of asset basis as of the last actuarial valuation.

Duty Disability Retirement

If disability was a result of injuries sustained while in the line of duty or was duty-related, the member receives a benefit based on at least 20 years of service. This benefit is provided to members in the Non-Hazardous and Hazardous plans alike.

If the disability is deemed to be Total and Permanent, the insurance premium for the member, the member's spouse, and the member's dependent children shall also be paid in full by the System. For non-hazardous members to be eligible for this benefit, they must be working in a position that could be certified as a hazardous position.



Duty Death in Service

If an active employee’s death was a result of injuries sustained while in the line of duty, the member’s spouse and children receive a fully subsidized health insurance benefit. This benefit is provided to members in the Non-Hazardous and Hazardous plans alike.

Non-Duty Death in Service

If the surviving spouse is in receipt of a pension allowance, he or she is eligible for continued health coverage. The percentage of the premium paid for by the retirement system is based on the member’s years of hazardous service at the time of death.

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Monthly Health Plan Premiums – Effective January 1, 2025

Plan Option	Non-Medicare Plan Options				
	Single	Parent Plus	Couple	Family	Family X-Ref
LivingWell PPO	\$949.04	\$1,320.40	\$1,981.62	\$2,185.78	\$1,126.28
LivingWell CDHP	930.76	1,269.28	1,866.24	2,078.08	1,068.66
LivingWell Basic	901.04	1,234.80	1,863.04	2,069.88	1,057.40
LivingWell HDHP	835.42	1,144.86	1,727.36	1,919.14	980.38

Medicare Plan Options	
Medical Only Plan	\$191.95
Essential Mirror Plan	202.69
Premium Mirror Plan	341.59
Essential Medical Advantage Plan	0.00
Premium Medical Advantage Plan	144.91

Contribution plan selected by the Board was the LivingWell PPO plan option for non-Medicare retirees. Contribution plan selected by the Board was the Medical Only plan for the Medicare retirees.

Dollar Contribution Amount for Participation on or after 7/1/2003

Monthly contribution amounts per year of service as of July 1, 2024.

Non-Hazardous Service	Hazardous Service
\$14.63	\$21.94

Changes in Health Insurance Benefits since the Prior Valuation

None.



APPENDIX C

GLOSSARY

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Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.



Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations that provide the financial information of the plan, such as the funded ratio, unfunded actuarial accrued liability and the ADC.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Actuarially Determined Contribution (ADC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and the Amortization Payment.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.



Amortization Payment: The portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is specified in State statute. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on a statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 67 and GASB 68: Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting and reporting rules for public retirement systems and the employers that sponsor, participate in, or contribute to them. Statement No. 67 sets the accounting rules for the financial reporting of the retirement systems, while Statement No. 68 sets the rules for the employers that sponsor, participate in, or contribute to public retirement systems.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded



Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but may not decrease by exactly one year in the subsequent year's actuarial valuation. For instance, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

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APPENDIX D

**KERS NON-HAZARDOUS EMPLOYER CONTRIBUTION
BY AGENCY**

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Appendix D

Kentucky Employees Retirement System (Non-Hazardous) - Retirement and Insurance Combined

Employer Contribution by Agency

Agency Name ¹	Agency Classification ¹	Fixed Percentage of the Total Amortization Cost				Components of Required Contribution for FYE 2026		Change in Amortization Cost from FY25 to FY26
		Accrued Liability based on June 30, 2019 Valuation ²	Fixed Allocation of Amortization Cost	Amortization Cost for prior year (FYE2025)	Amortization Cost Remains Level until Actuarial Investigation ³	Normal Cost (% of Pay) for all employers	Amortization Cost	
		(3)	(4) = (3) / \$18,813M	(5)	(6), per KRS 61.565(1)(d)1d	(7) = 8.44% ⁴ of pay for all employers	(8) = (4) x \$857M ⁴	
LEGISLATIVE BRANCH AGENCIES	LEGISLATIVE BRANCH	343,338,931	1.82505%	15,632,667	No	8.44%	15,632,667	-
JUDICIAL BRANCH AGENCIES	JUDICIAL BRANCH	471,819,378	2.50801%	21,482,637	No	8.44%	21,482,637	-
EXECUTIVE BRANCH AGENCIES	EXECUTIVE BRANCH	14,661,188,769	77.93303%	667,543,975	No	8.44%	667,543,975	-
LEX FAYETTE CO HLTH DEPT	Health Departments	87,677,599	0.46606%	4,766,461	Yes	8.44%	3,992,088	(774,373)
LAKE CUMBERLAND DISTRICT	Health Departments	73,620,021	0.39134%	4,002,276	Yes	8.44%	3,352,066	(650,210)
BARREN RVR DIST HLTH DEPT	Health Departments	68,379,065	0.36348%	3,717,357	Yes	8.44%	3,113,428	(603,929)
GREEN RVR DIST HLTH DEPT	Health Departments	81,739,718	0.43450%	4,443,692	Yes	8.44%	3,721,758	(721,934)
NORTHERN KY DIST HLTH DEP	Health Departments	54,194,473	0.28808%	2,946,205	Yes	8.44%	2,467,581	(478,624)
LINCOLN TRL DIST HLTH DEP	Health Departments	66,500,206	0.35349%	3,615,244	Yes	8.44%	3,027,858	(587,386)
KY RIVER DIST HEALTH DEPT	Health Departments	70,220,607	0.37327%	3,817,495	Yes	8.44%	3,197,285	(620,210)
MADISON CO HEALTH DEP	Health Departments	53,457,239	0.28416%	2,906,171	Yes	8.44%	2,434,004	(472,167)
CUMBERLAND VLY DIST HEALT	Health Departments	89,949,862	0.47814%	4,889,995	Yes	8.44%	4,095,561	(794,434)
WEDCO DIST HEALTH DEPT	Health Departments	28,173,710	0.14976%	1,531,594	Yes	8.44%	1,282,786	(248,808)
FRANKLIN CO HEALTH DEPT	Health Departments	22,299,178	0.11854%	1,212,256	Yes	8.44%	1,015,367	(196,889)
WHITLEY CO HEALTH DEPT	Health Departments	28,890,387	0.15357%	1,570,588	Yes	8.44%	1,315,421	(255,167)
PIKE CO HEALTH DEPT	Health Departments	24,182,977	0.12855%	1,314,681	Yes	8.44%	1,101,109	(213,572)
THREE RIVERS DIST HLTH	Health Departments	22,852,018	0.12147%	1,242,308	Yes	8.44%	1,040,465	(201,843)
KNOX CO HEALTH DEPT	Health Departments	28,079,768	0.14926%	1,526,499	Yes	8.44%	1,278,503	(247,996)
PURCHASE DIST HLTH DEPT	Health Departments	43,960,371	0.23368%	2,389,886	Yes	8.44%	2,001,612	(388,274)
CLARK CO HEALTH DEPT	Health Departments	16,463,623	0.08751%	894,998	Yes	8.44%	749,577	(145,421)
GATEWAY DIST HEALTH DEPT	Health Departments	29,474,251	0.15667%	1,602,304	Yes	8.44%	1,341,974	(260,330)
N CENTRAL DIST HLTH DEPT	Health Departments	21,562,812	0.11462%	1,172,222	Yes	8.44%	981,790	(190,432)
BREATHITT CO HEALTH DEPT	Health Departments	18,123,824	0.09634%	985,257	Yes	8.44%	825,211	(160,046)
PENNYRILE DIST HLTH DEPT	Health Departments	15,661,674	0.08325%	851,429	Yes	8.44%	713,087	(138,342)
MARSHALL CO HEALTH DEPT	Health Departments	15,263,463	0.08113%	829,800	Yes	8.44%	694,928	(134,872)
CHRISTIAN CO HEALTH DEPT	Health Departments	13,360,854	0.07102%	726,335	Yes	8.44%	608,330	(118,005)
MONTGOMERY CO HEALTH DEPT	Health Departments	10,699,698	0.05688%	581,692	Yes	8.44%	487,212	(94,480)
HOPKINS CO HEALTH DEPT	Health Departments	17,815,060	0.09470%	968,516	Yes	8.44%	811,163	(157,353)
JOHNSON CO HEALTH DEPT	Health Departments	15,484,079	0.08231%	841,758	Yes	8.44%	705,035	(136,723)
FLOYD CO HEALTH CENTER	Health Departments	12,298,013	0.06537%	668,519	Yes	8.44%	559,934	(108,585)
ASHLAND BOYD CO HEALTH DP	Health Departments	17,566,824	0.09338%	954,998	Yes	8.44%	799,857	(155,141)
LAUREL CO HEALTH DEPT	Health Departments	14,475,341	0.07695%	786,958	Yes	8.44%	659,124	(127,834)
BULLITT CO HEALTH DEPT	Health Departments	13,823,739	0.07348%	751,499	Yes	8.44%	629,401	(122,098)
BELL CO HEALTH DEPT	Health Departments	10,731,667	0.05705%	583,459	Yes	8.44%	488,668	(94,791)
GREENUP CO HLTH DEPT	Health Departments	11,509,071	0.06118%	625,677	Yes	8.44%	524,044	(101,633)
JESSAMINE CO HEALTH DEPT	Health Departments	8,409,539	0.04470%	457,222	Yes	8.44%	382,883	(74,339)
GRAVES CO HEALTH CENTER	Health Departments	6,110,503	0.03248%	332,232	Yes	8.44%	278,211	(54,021)
HARLAN CO HEALTH DEPT	Health Departments	7,218,470	0.03837%	392,439	Yes	8.44%	328,662	(63,777)
OLDHAM CO HEALTH DEPT	Health Departments	10,480,598	0.05571%	569,733	Yes	8.44%	477,190	(92,543)
ALLEN CO HEALTH DEPT	Health Departments	7,911,333	0.04205%	430,082	Yes	8.44%	360,184	(69,898)
BUFFALO TRACE HEALTH DEPT	Health Departments	10,788,599	0.05735%	586,475	Yes	8.44%	491,238	(95,237)
MUHLENBERG CO HEALTH DEPT	Health Departments	7,886,100	0.04192%	428,730	Yes	8.44%	359,070	(69,660)
MERCER CO HEALTH DEPT	Health Departments	8,877,255	0.04719%	482,594	Yes	8.44%	404,211	(78,383)
LAWRENCE CO HEALTH DEPT	Health Departments	3,868,705	0.02056%	210,362	Yes	8.44%	176,109	(34,253)
WOODFORD CO HEALTH DEPT	Health Departments	5,453,322	0.02899%	296,461	Yes	8.44%	248,317	(48,144)
CALLOWAY CO HEALTH DEPT	Health Departments	4,137,638	0.02199%	224,919	Yes	8.44%	188,358	(36,561)
MAGOFFIN CO HEALTH DEPT	Health Departments	6,467,092	0.03438%	351,573	Yes	8.44%	294,486	(57,087)
MARTIN CO HEALTH DEPT	Health Departments	5,286,010	0.02810%	287,414	Yes	8.44%	240,694	(46,720)
BOYLE CO HEALTH DEPT	Health Departments	6,346,920	0.03374%	345,022	Yes	8.44%	289,004	(56,018)
BOURBON CO HEALTH CENTER	Health Departments	7,775,901	0.04133%	422,699	Yes	8.44%	354,017	(68,682)
ANDERSON CO HEALTH DEPT	Health Departments	5,076,042	0.02698%	275,976	Yes	8.44%	231,100	(44,876)
LEWIS CO HEALTH DEPT	Health Departments	3,061,131	0.01627%	166,376	Yes	8.44%	139,362	(27,014)
ESTILL CO HEALTH DEPT	Health Departments	5,579,547	0.02966%	303,324	Yes	8.44%	254,056	(49,268)
LINCOLN CO HEALTH DEPT	Health Departments	4,897,375	0.02603%	266,201	Yes	8.44%	222,963	(43,238)
BRECKINRIDGE CO HEALTH BD	Health Departments	7,704,261	0.04095%	418,851	Yes	8.44%	350,762	(68,089)
GRAYSON COUNTY HEALTH DEPT	Health Departments	4,598,067	0.02444%	249,980	Yes	8.44%	209,344	(40,636)
GARRARD COUNTY HEALTH DPT	Health Departments	3,926,271	0.02087%	213,481	Yes	8.44%	178,764	(34,717)
TODD CO HEALTH DEPT	Health Departments	4,687,868	0.02492%	254,867	Yes	8.44%	213,455	(41,412)
FLEMING CO HEALTH DEP	Health Departments	4,386,549	0.02332%	238,437	Yes	8.44%	199,750	(38,687)
MONROE CO HEALTH DEPT	Health Departments	3,137,459	0.01668%	170,535	Yes	8.44%	142,874	(27,661)
BRACKEN CO HEALTH DEPT	Health Departments	2,410,616	0.01281%	131,021	Yes	8.44%	109,725	(21,296)
POWELL CO HEALTH DEPT	Health Departments	4,200,545	0.02233%	228,351	Yes	8.44%	191,270	(37,081)
CARTER CO HEALTH DEPT	Health Departments	5,555,239	0.02953%	301,972	Yes	8.44%	252,942	(49,030)
KY HIGHER ED STUD LN CORP	Non-P1 State Assoc/Corp.	81,896,904	0.43533%	3,728,867	No	8.44%	3,728,867	-
CSG HEADQUARTERS	Non-P1 State Assoc/Corp.	19,274,916	0.10246%	877,632	No	8.44%	877,632	-
KET FOUNDATION	Non-P1 State Assoc/Corp.	15,066,238	0.08009%	686,020	No	8.44%	686,020	-
ASST OF COMMONWEALTH ATTY	Non-P1 State Assoc/Corp.	5,807,856	0.03087%	264,420	No	8.44%	264,420	-
HIGHSCHOOL ATHLETIC ASSOC	Non-P1 State Assoc/Corp.	1,413,847	0.00752%	64,413	No	8.44%	64,413	-
O A S I S	Non-P1 State Agencies	2,304,549	0.01225%	125,302	Yes	8.44%	104,929	(20,373)
KDVA	Non-P1 State Agencies	2,431,059	0.01292%	132,165	Yes	8.44%	110,668	(21,497)
B.R.A.S.S.	Non-P1 State Agencies	2,132,362	0.01133%	115,943	Yes	8.44%	97,048	(18,895)
BLUEGRASS RAPE CRISIS CTR	Non-P1 State Agencies	2,744,493	0.01459%	149,218	Yes	8.44%	124,972	(24,246)
SAFE HARBOR	Non-P1 State Agencies	1,312,696	0.00698%	71,334	Yes	8.44%	59,788	(11,546)
SANCTUARY INC	Non-P1 State Agencies	2,510,255	0.01334%	136,428	Yes	8.44%	114,265	(22,163)
LOTUS	Non-P1 State Agencies	1,074,054	0.00571%	58,440	Yes	8.44%	48,910	(9,530)
BETHANY HOUSE ABUSE SHEL	Non-P1 State Agencies	1,675,224	0.00890%	91,091	Yes	8.44%	76,234	(14,857)
SPRINGHAVEN INC	Non-P1 State Agencies	1,527,812	0.00812%	83,084	Yes	8.44%	69,553	(13,531)
KASAP	Non-P1 State Agencies	943,862	0.00502%	51,265	Yes	8.44%	42,999	(8,266)



Appendix D Kentucky Employees Retirement System (Non-Hazardous) - Retirement and Insurance Combined Employer Contribution by Agency

Agency Name ¹	Agency Classification ¹	Fixed Percentage of the Total Amortization Cost				Components of Required Contribution for FYE 2026		Change in Amortization Cost from FY25 to FY26
		Accrued Liability based on June 30, 2019 Valuation ²	Fixed Allocation of Amortization Cost	Amortization Cost for prior year (FYE2025)	Amortization Cost Remains Level until Actuarial Investigation ³	Normal Cost (% of Pay)	Amortization Cost	
		(3)	(4) = (3) / \$18,813M	(5)	(6), per KRS 61.565(1)(d)1d	(7) = 8.44% ⁴ of pay for all employers	(8) = (4) x \$857M ⁴	
SILVERLEAF	Non-P1 State Agencies	2,017,711	0.01073%	109,704	Yes	8.44%	91,909	(17,795)
WOMEN AWARE	Non-P1 State Agencies	975,811	0.00519%	53,032	Yes	8.44%	44,456	(8,576)
D.O.V.E.S.	Non-P1 State Agencies	1,319,147	0.00701%	71,750	Yes	8.44%	60,045	(11,705)
NURSING HOME OMBUDSMAN	Non-P1 State Agencies	879,808	0.00468%	40,087	No	8.44%	40,087	-
HOPE HARBOR INC	Non-P1 State Agencies	824,202	0.00438%	44,818	Yes	8.44%	37,517	(7,301)
CHILD WATCH ADVOCACY CTR	Non-P1 State Agencies	718,149	0.00382%	38,994	Yes	8.44%	32,721	(6,273)
FRANKLIN CO COUNCIL AGING	Non-P1 State Agencies	2,147,140	0.01141%	97,734	No	8.44%	97,734	-
JUDI'S PLACE FOR KIDS, INC.	Non-P1 State Agencies	777,468	0.00413%	42,218	Yes	8.44%	35,376	(6,842)
CUMBERLAND V C A CENTER	Non-P1 State Agencies	821,917	0.00437%	44,714	Yes	8.44%	37,432	(7,282)
KY ASSOC OF REGIONAL PROG	Non-P1 State Agencies	1,817,343	0.00966%	98,786	Yes	8.44%	82,744	(16,042)
BARREN RIVER CHILD ADVOCA	Non-P1 State Agencies	406,450	0.00216%	22,045	Yes	8.44%	18,502	(3,543)
CHILD ADV CTR OF GRN RVR	Non-P1 State Agencies	572,517	0.00304%	31,091	Yes	8.44%	26,039	(5,052)
MUN ELEC POW ASSOC OF KY	Non-P1 State Agencies	1,745,743	0.00928%	79,489	No	8.44%	79,489	-
KY RIVER CHILD ADVOCACY	Non-P1 State Agencies	290,885	0.00155%	15,806	Yes	8.44%	13,277	(2,529)
PENNYRILE CHILD ADV CTR	Non-P1 State Agencies	460,162	0.00245%	25,060	Yes	8.44%	20,986	(4,074)
LAKE CUMB CHILD ADV CTR	Non-P1 State Agencies	545,959	0.00290%	29,636	Yes	8.44%	24,840	(4,796)
BUFFALO TR CHILD ADV INC	Non-P1 State Agencies	252,189	0.00134%	13,726	Yes	8.44%	11,478	(2,248)
NEW VISTA OF THE BLUEGRASS, INC.	Reg Mental Hlth Units	183,780,745	0.97691%	9,991,080	Yes	8.44%	8,367,830	(1,623,250)
CUMBERLAND RIVER MHMR	Reg Mental Hlth Units	98,252,502	0.52227%	5,341,394	Yes	8.44%	4,473,561	(867,833)
LIFESKILLS INC	Reg Mental Hlth Units	129,215,562	0.68686%	7,024,702	Yes	8.44%	5,883,375	(1,141,327)
COMMUNICARE INC	Reg Mental Hlth Units	66,572,026	0.35387%	3,619,091	Yes	8.44%	3,031,113	(587,978)
ADANTA/BEHAVIORAL HLTH SR	Reg Mental Hlth Units	89,012,578	0.47316%	4,839,042	Yes	8.44%	4,052,904	(786,138)
MOUNTAIN COMP CARE CENTER	Reg Mental Hlth Units	45,808,460	0.24350%	2,490,335	Yes	8.44%	2,085,726	(404,609)
GREEN RVR REG MHMR BD	Reg Mental Hlth Units	29,849,717	0.15867%	1,622,789	Yes	8.44%	1,359,105	(263,684)
NORTHERN KY REG MHMR BD	Reg Mental Hlth Units	57,271,755	0.30443%	3,113,517	Yes	8.44%	2,607,629	(505,888)
WESTERN KY REG MHMR ADV	Reg Mental Hlth Units	35,526,557	0.18885%	1,931,416	Yes	8.44%	1,617,616	(313,800)
COMPREHEND INC REG MHMR B	Reg Mental Hlth Units	29,064,447	0.15450%	1,580,501	Yes	8.44%	1,323,387	(256,664)
SEVEN CO SERVICES INC	Reg Mental Hlth Units	154,213,520	0.81974%	8,383,681	Yes	8.44%	7,021,573	(1,362,108)
KY RIVER COMM CARE INC	Reg Mental Hlth Units	26,687,511	0.14186%	1,450,798	Yes	8.44%	1,215,117	(235,681)
EASTERN KY UNIV	Universities	239,031,382	1.27060%	10,883,465	No	8.44%	10,883,465	-
KCTCS	Universities	156,197,124	0.83028%	7,111,855	No	8.44%	7,111,855	-
WESTERN KENTUCKY UNIV	Universities	180,798,950	0.96106%	8,232,066	No	8.44%	8,232,066	-
MURRAY STATE UNIV	Universities	132,693,175	0.70534%	6,041,668	No	8.44%	6,041,668	-
MOREHEAD STATE UNIVERSITY	Universities	120,999,617	0.64319%	5,509,315	No	8.44%	5,509,315	-
KENTUCKY STATE UNIVERSITY	Universities	44,391,511	0.23597%	2,021,227	No	8.44%	2,021,227	-
ALLEN COUNTY ATTORNEY	County Attorneys	1,658,981	0.00882%	75,549	No	8.44%	75,549	-
ANDERSON COUNTY ATTORNEY	County Attorneys	1,971,500	0.01048%	89,768	No	8.44%	89,768	-
BARREN COUNTY ATTORNEY	County Attorneys	2,875,029	0.01528%	130,883	No	8.44%	130,883	-
BATH COUNTY ATTORNEY	County Attorneys	2,729	0.00001%	86	No	8.44%	86	-
BELL COUNTY ATTORNEY	County Attorneys	1,931,690	0.01027%	87,969	No	8.44%	87,969	-
BOONE COUNTY ATTORNEY	County Attorneys	5,092,956	0.02707%	231,871	No	8.44%	231,871	-
BOYLE COUNTY ATTORNEY	County Attorneys	155,378	0.00083%	7,109	No	8.44%	7,109	-
BRECKINRIDGE CO ATTORNEY	County Attorneys	1,029,674	0.00547%	46,854	No	8.44%	46,854	-
BULLITT COUNTY ATTORNEY	County Attorneys	703,350	0.00374%	32,035	No	8.44%	32,035	-
CALLOWAY COUNTY ATTORNEY	County Attorneys	54,643	0.00029%	2,484	No	8.44%	2,484	-
CARROLL COUNTY ATTORNEY	County Attorneys	873,614	0.00464%	39,744	No	8.44%	39,744	-
CASEY COUNTY ATTORNEY	County Attorneys	947,428	0.00504%	43,171	No	8.44%	43,171	-
CHILD SUPPORT ENFORCEMENT	County Attorneys	255,979	0.00136%	11,649	No	8.44%	11,649	-
CHRISTIAN COUNTY ATTORNEY	County Attorneys	984,086	0.00523%	44,798	No	8.44%	44,798	-
CLARK COUNTY ATTORNEY	County Attorneys	1,322,750	0.00703%	60,216	No	8.44%	60,216	-
CRITTENDEN CO ATTORNEY	County Attorneys	365,437	0.00194%	16,617	No	8.44%	16,617	-
DAVESS COUNTY ATTORNEY	County Attorneys	1,578,350	0.00839%	71,865	No	8.44%	71,865	-
EDMONSON COUNTY ATTORNEY	County Attorneys	474,886	0.00252%	21,585	No	8.44%	21,585	-
FAYETTE CO ATTORNEY OFF	County Attorneys	3,136,743	0.01667%	142,789	No	8.44%	142,789	-
FLOYD COUNTY ATTORNEY	County Attorneys	1,121,075	0.00596%	51,051	No	8.44%	51,051	-
FRANKLIN COUNTY ATTORNEY	County Attorneys	4,833,960	0.02570%	220,136	No	8.44%	220,136	-
GARRARD COUNTY ATTORNEY	County Attorneys	988,761	0.00526%	45,055	No	8.44%	45,055	-
GRANT COUNTY CHILD SUPPOR	County Attorneys	363,477	0.00193%	16,532	No	8.44%	16,532	-
GRAVES COUNTY ATTORNEY	County Attorneys	3,272,663	0.01740%	149,042	No	8.44%	149,042	-
HANCOCK COUNTY ATTORNEY	County Attorneys	386,098	0.00205%	17,560	No	8.44%	17,560	-
HARRISON COUNTY ATTORNEY	County Attorneys	114,873	0.00061%	5,225	No	8.44%	5,225	-
HICKMAN COUNTY ATTORNEY	County Attorneys	1,028,593	0.00547%	46,854	No	8.44%	46,854	-
HOPKINS COUNTY ATTORNEY	County Attorneys	1,751,470	0.00931%	79,746	No	8.44%	79,746	-
JACKSON COUNTY ATTORNEY	County Attorneys	700,551	0.00372%	31,864	No	8.44%	31,864	-
JEFFERSON CO ATTORNEY	County Attorneys	17,081,131	0.09080%	777,757	No	8.44%	777,757	-
JOHNSON COUNTY ATTORNEY	County Attorneys	230,506	0.00123%	10,536	No	8.44%	10,536	-
KENTON COUNTY ATTORNEY	County Attorneys	1,021,997	0.00543%	46,511	No	8.44%	46,511	-
KNOTT COUNTY ATTORNEY	County Attorneys	900,207	0.00479%	41,029	No	8.44%	41,029	-
KNOX COUNTY ATTORNEY	County Attorneys	5,454	0.00003%	257	No	8.44%	257	-
LARUE COUNTY ATTORNEY	County Attorneys	1,041,769	0.00554%	47,453	No	8.44%	47,453	-
LAUREL COUNTY ATTORNEY	County Attorneys	353,526	0.00188%	16,103	No	8.44%	16,103	-
LAWRENCE COUNTY ATTORNEY	County Attorneys	144	0.00000%	-	No	8.44%	-	-
LEE COUNTY ATTORNEY	County Attorneys	888,298	0.00472%	40,430	No	8.44%	40,430	-
LOGAN COUNTY ATTORNEY	County Attorneys	1,781,059	0.00947%	81,116	No	8.44%	81,116	-
MADISON COUNTY ATTORNEY	County Attorneys	6,471,517	0.03440%	294,657	No	8.44%	294,657	-
MAGOFFIN CO ATTORNEY	County Attorneys	195,563	0.00104%	8,908	No	8.44%	8,908	-
MCCRACKEN COUNTY ATTORNEY	County Attorneys	1,092,697	0.00581%	49,766	No	8.44%	49,766	-
MCCREARY COUNTY ATTORNEY	County Attorneys	1,920,823	0.01021%	87,455	No	8.44%	87,455	-
MEADE COUNTY ATTORNEY	County Attorneys	1,485,282	0.00790%	67,668	No	8.44%	67,668	-



Appendix D Kentucky Employees Retirement System (Non-Hazardous) - Retirement and Insurance Combined Employer Contribution by Agency

Agency Name ¹	Agency Classification ¹	Fixed Percentage of the Total Amortization Cost				Components of Required Contribution for FYE 2026		Change in Amortization Cost from FY25 to FY26 (9) = (8) - (5)
		Accrued Liability based on June 30, 2019 Valuation ²	Fixed Allocation of Amortization Cost	Amortization Cost for prior year (FYE2025)	Amortization Cost Remains Level until Actuarial Investigation ³	Normal Cost (% of Pay)	Amortization Cost	
		(3)	(4) = (3) / \$18,813M	(5)	(6), per KRS 61.565(1)(d)1d	(7) = 8.44% ⁴ of pay for all employers	(8) = (4) x \$857M ⁴	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MENIFEE COUNTY ATTORNEY	County Attorneys	568,840	0.00302%	25,868	No	8.44%	25,868	-
MERCER COUNTY ATTORNEY	County Attorneys	507,084	0.00270%	23,127	No	8.44%	23,127	-
MONROE CO ATTORNEY	County Attorneys	617,699	0.00328%	28,095	No	8.44%	28,095	-
MONTGOMERY CO ATTORNEY	County Attorneys	1,684,951	0.00896%	76,748	No	8.44%	76,748	-
MORGAN COUNTY ATTORNEY	County Attorneys	1,815,404	0.00965%	82,658	No	8.44%	82,658	-
OLDHAM COUNTY ATTORNEY	County Attorneys	1,690,959	0.00899%	77,005	No	8.44%	77,005	-
OWEN COUNTY ATTORNEY	County Attorneys	490,212	0.00261%	22,356	No	8.44%	22,356	-
PENDLETON COUNTY ATTORNEY	County Attorneys	155,600	0.00083%	7,109	No	8.44%	7,109	-
POWELL COUNTY ATTORNEY	County Attorneys	26,895	0.00014%	1,199	No	8.44%	1,199	-
PULASKI COUNTY ATTORNEY	County Attorneys	1,602,159	0.00852%	72,979	No	8.44%	72,979	-
ROCKCASTLE CO ATTORNEY	County Attorneys	774,276	0.00412%	35,290	No	8.44%	35,290	-
ROWAN COUNTY ATTORNEY	County Attorneys	820,120	0.00436%	37,346	No	8.44%	37,346	-
SHELBY COUNTY ATTORNEY	County Attorneys	400,120	0.00213%	18,245	No	8.44%	18,245	-
SIMPSON COUNTY ATTORNEY	County Attorneys	521,989	0.00277%	23,727	No	8.44%	23,727	-
SPENCER COUNTY ATTORNEY	County Attorneys	1,200,709	0.00638%	54,649	No	8.44%	54,649	-
TRIGG COUNTY ATTORNEY	County Attorneys	933,350	0.00496%	42,485	No	8.44%	42,485	-
TRIMBLE COUNTY ATTORNEY	County Attorneys	749,934	0.00399%	34,177	No	8.44%	34,177	-
UNION COUNTY ATTORNEY	County Attorneys	293,278	0.00156%	13,362	No	8.44%	13,362	-
WAYNE COUNTY ATTORNEY	County Attorneys	668,657	0.00355%	30,408	No	8.44%	30,408	-
WEBSTER COUNTY ATTORNEY	County Attorneys	1,413,256	0.00751%	64,328	No	8.44%	64,328	-
WHITLEY COUNTY ATTORNEY	County Attorneys	2,013,956	0.01071%	91,738	No	8.44%	91,738	-
OHIO COUNTY ATTORNEY	County Attorneys	-	0.00000%	-	No	8.44%	-	-
GALLATIN COUNTY ATTORNEY	County Attorneys	-	0.00000%	-	No	8.44%	-	-
SCOTT COUNTY ATTORNEY	County Attorneys	-	0.00000%	-	No	8.44%	-	-
LETCHER COUNTY ATTORNEY	County Attorneys	-	0.00000%	-	No	8.44%	-	-
Total		18,812,529,777	100.00000%	876,349,193	N/A	8.44%	856,561,041	(19,788,152)
Agencies that have ceased participation in the System:								
KENTUCKY BAR ASSOCIATION	Non-P1 State Agencies	9,726,855	N/A	N/A	N/A	N/A	N/A	N/A
KENTUCKY ASSOCIATION OF CHILDREN'S ADVOC	Non-P1 State Agencies	14,508	N/A	N/A	N/A	N/A	N/A	N/A
COMMONWEALTH CREDIT UNION	Non-P1 State Agencies	46,950,704	N/A	N/A	N/A	N/A	N/A	N/A
KENTUCKY EMPLOYERS MUTUAL INSURANCE	Non-P1 State Agencies	15,220,243	N/A	N/A	N/A	N/A	N/A	N/A
GATEWAY CHILD ADVOCACY	Non-P1 State Agencies	53,228	N/A	N/A	N/A	N/A	N/A	N/A
NORTHERN KY UNIVERSITY	Universities	216,716,312	N/A	N/A	N/A	N/A	N/A	N/A
KENTUCKY HOUSING CORP	Non-P1 State Assoc/Corp.	98,280,874	N/A	N/A	N/A	N/A	N/A	N/A
Total		19,199,492,501	100.00000%	876,349,193	N/A	8.44%	856,561,041	(19,788,152)

Notes and Assumptions

- ¹ Agency names and classification information have been provided to GRS by KPPA. We have reviewed this data for consistency but did not audit the data.
- ² The accrued liability as of June 30, 2019 has been adjusted based on the approved employer appeals. The liability associated with these appeals was compiled by KPPA based on the liability amounts provided by GRS.
- ³ The amortization cost for certain employers (as defined in KRS 61.565(1)(d)1d) will not be adjusted in terms of dollars paid by the individual employer, except for after the completion of an actuarial investigation as provided by KRS 61.670, so long as at least four years have passed since the last adjustment.
Applicable employers are first eligible for an adjustment in their amortization cost in FYE 2026.
- ⁴ The normal cost and amortization cost is based on the June 30, 2023 actuarial valuation, which set the contribution requirement for FYE 2025 and FYE 2026. The contribution requirement calculated in the June 30, 2024 actuarial valuation was for informational purposes only.





October 30, 2024

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Re: Sensitivity Analysis Based on Results of the June 30, 2024 Actuarial Valuation – KERS

Dear Members of the Board:

Per Kentucky State Statute 61.670, we are providing this supplemental information regarding the sensitivity of the valuation results to changes in some of the economic assumptions. Specifically, the enclosed tables show the impact for the **Kentucky Employees Retirement System (KERS)** due to changes in the investment return assumption, the inflation rate assumption, and the payroll growth rate assumption.

Background

Investment Assumption

The investment return assumption is used to discount future expected benefit payments to the valuation date in order to determine the liabilities of the plans. The lower the investment return assumption, the less the benefit payments are discounted and the higher the valuation liability. The current investment return assumption is 5.25% for the non-hazardous retirement fund, 6.25% for the hazardous retirement fund, and 6.50% for both insurance funds. The sensitivity analysis shows the financial impact of a 1.00% increase and a 1.00% decrease in the investment return assumption. For purposes of this sensitivity analysis, the inflation assumption and payroll growth assumption remain unchanged from the valuation assumption.

Inflation Assumption

The inflation assumption underlies most of the other economic assumptions, including the investment return, salary increases, and payroll growth rate. This is a macroeconomic assumption and as such the same assumption is used in the valuation of each of the retirement systems. The current assumption is 2.50% for all funds. The sensitivity analysis shows the financial impact of a 0.25% increase and a 0.25% decrease in the inflation assumption. Note, the change in the inflation assumption results in a corresponding change in the investment return assumption, the individual salary increase assumption for projecting members' benefit amounts, the payroll growth rate assumption, and the healthcare trend assumption that is used in the valuation of the health insurance funds.

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October 30, 2024
Page 2

Payroll Growth Assumption

Participating employers of the hazardous fund make contributions to the system as a percentage of covered payroll. Therefore, as payroll changes over time these amortization payments will also change. If actual covered payroll increases at a rate that is less than assumed, then the retirement system receives fewer contribution dollars than expected to finance the unfunded liability, which means the contribution rate in future years will be required to increase in order to finance the unfunded liability over the same time period. The current payroll growth assumption is 0.00% for both the retirement and insurance funds. The analysis shows the impact of a 1.00% increase and a 1.00% decrease in the payroll growth assumption.

For completeness, we have included this sensitivity for the non-hazardous fund. House Bill 8 passed during the 2021 legislative session and changed how contributions are collected and allocated amongst employers. The portion of the required contribution that amortizes (or pays for) the unfunded liability for the non-hazardous fund is no longer collected as a percentage of payroll. This sensitivity for the non-hazardous fund shows the impact of assuming that the amortization cost contributions paid by employers either decrease by 1% or increase by 1% annually (versus the valuation assumption that they remain level through the end of the funding period).

Please note that the payroll growth assumption does not impact the valuation liabilities, unfunded liability, or funded status of the system. Rather, this assumption only impacts the amortization rate for financing the existing unfunded actuarial accrued liability and the actuarially determined employer contribution. For purposes of this analysis, the investment return assumption and the inflation assumption are held at their current valuation assumptions.

Certification

The information provided in this letter compliments the information provided in the June 30, 2024 actuarial valuation report. Please refer to the June 30, 2024 actuarial valuation report for additional discussion of the actuarial valuation, including the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rate, and funding periods. The actuarial calculations are intended to provide information for rational decision making. The purpose of this information is to provide stakeholders the financial sensitivity of the unfunded liability and contribution rates to changes in the inflation, assumed rate of return, and payroll growth assumption.

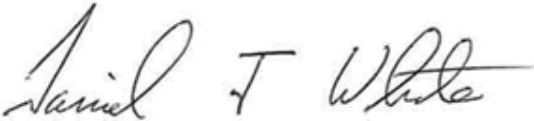


Board of Trustees
October 30, 2024
Page 3

To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

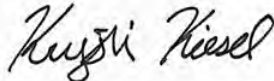
Gabriel, Roeder, Smith & Company



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Krysti Kiesel, ASA, MAAA
Consultant

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Sensitivity Analysis - Discount Rate
Non-Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	4.25%	5.25%	6.25%
Discount Rate - Insurance	5.50%	6.50%	7.50%
Retirement			
Actuarial Accrued Liability	\$ 18,630,281	\$ 16,647,892	\$ 15,001,505
Actuarial Value of Assets	4,122,269	4,122,269	4,122,269
Unfunded Actuarial Accrued Liability	14,508,012	12,525,623	10,879,236
Funded Ratio	22.1%	24.8%	27.5%
Normal Cost Rate	10.00%	6.85%	4.71%
Amortization Cost	\$ 925,010	\$ 853,517	\$ 788,996
Insurance			
Actuarial Accrued Liability	\$ 2,341,943	\$ 2,094,744	\$ 1,888,217
Actuarial Value of Assets	1,712,043	1,712,043	1,712,043
Unfunded Actuarial Accrued Liability	629,900	382,701	176,174
Funded Ratio	73.1%	81.7%	90.7%
Normal Cost Rate	1.64%	1.14%	0.76%
Amortization Cost	\$ 30,617	\$ 12,293	\$ 0
Combined			
Actuarial Accrued Liability	\$ 20,972,224	\$ 18,742,636	\$ 16,889,722
Actuarial Value of Assets	5,834,312	5,834,312	5,834,312
Unfunded Actuarial Accrued Liability	15,137,912	12,908,324	11,055,410
Funded Ratio	27.8%	31.1%	34.5%
Normal Cost Rate	11.64%	7.99%	5.47%
Amortization Cost	\$ 955,627	\$ 865,810	\$ 788,996



Sensitivity Analysis - Inflation Rate
Non-Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.25%	2.50%	2.75%
Discount Rate - Retirement	5.00%	5.25%	5.50%
Discount Rate - Insurance	6.25%	6.50%	6.75%
Retirement			
Actuarial Accrued Liability	\$ 17,076,523	\$ 16,647,892	\$ 16,238,220
Actuarial Value of Assets	4,122,269	4,122,269	4,122,269
Unfunded Actuarial Accrued Liability	12,954,254	12,525,623	12,115,951
Funded Ratio	24.1%	24.8%	25.4%
Normal Cost Rate	7.30%	6.85%	6.43%
Amortization Cost	\$ 888,400	\$ 853,517	\$ 820,088
Insurance			
Actuarial Accrued Liability	\$ 2,117,742	\$ 2,094,744	\$ 2,073,030
Actuarial Value of Assets	1,712,043	1,712,043	1,712,043
Unfunded Actuarial Accrued Liability	405,699	382,701	360,987
Funded Ratio	80.8%	81.7%	82.6%
Normal Cost Rate	1.20%	1.14%	1.08%
Amortization Cost	\$ 14,514	\$ 12,293	\$ 10,184
Combined			
Actuarial Accrued Liability	\$ 19,194,265	\$ 18,742,636	\$ 18,311,250
Actuarial Value of Assets	5,834,312	5,834,312	5,834,312
Unfunded Actuarial Accrued Liability	13,359,953	12,908,324	12,476,938
Funded Ratio	30.4%	31.1%	31.9%
Normal Cost Rate	8.50%	7.99%	7.51%
Amortization Cost	\$ 902,914	\$ 865,810	\$ 830,272



Sensitivity Analysis - Payroll Growth
Non-Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	5.25%	5.25%	5.25%
Discount Rate - Insurance	6.50%	6.50%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 16,647,892	\$ 16,647,892	\$ 16,647,892
Actuarial Value of Assets	4,122,269	4,122,269	4,122,269
Unfunded Actuarial Accrued Liability	12,525,623	12,525,623	12,525,623
Funded Ratio	24.8%	24.8%	24.8%
Normal Cost Rate	6.85%	6.85%	6.85%
Amortization Cost	\$ 935,250	\$ 853,517	\$ 775,988
Insurance			
Actuarial Accrued Liability	\$ 2,094,744	\$ 2,094,744	\$ 2,094,744
Actuarial Value of Assets	1,712,043	1,712,043	1,712,043
Unfunded Actuarial Accrued Liability	382,701	382,701	382,701
Funded Ratio	81.7%	81.7%	81.7%
Normal Cost Rate	1.14%	1.14%	1.14%
Amortization Cost	\$ 16,129	\$ 12,293	\$ 8,675
Combined			
Actuarial Accrued Liability	\$ 18,742,636	\$ 18,742,636	\$ 18,742,636
Actuarial Value of Assets	5,834,312	5,834,312	5,834,312
Unfunded Actuarial Accrued Liability	12,908,324	12,908,324	12,908,324
Funded Ratio	31.1%	31.1%	31.1%
Normal Cost Rate	7.99%	7.99%	7.99%
Amortization Cost	\$ 951,379	\$ 865,810	\$ 784,663



Sensitivity Analysis - Discount Rate
Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	5.25%	6.25%	7.25%
Discount Rate - Insurance	5.50%	6.50%	7.50%
Retirement			
Actuarial Accrued Liability	\$ 1,624,303	\$ 1,442,619	\$ 1,298,044
Actuarial Value of Assets	985,075	985,075	985,075
Unfunded Actuarial Accrued Liability	639,228	457,544	312,969
Funded Ratio	60.6%	68.3%	75.9%
Actuarially Determined Contribution Rate	28.90%	20.68%	14.08%
Insurance			
Actuarial Accrued Liability	\$ 425,124	\$ 379,568	\$ 341,988
Actuarial Value of Assets	652,349	652,349	652,349
Unfunded Actuarial Accrued Liability	(227,225)	(272,781)	(310,361)
Funded Ratio	153.4%	171.9%	190.8%
Actuarially Determined Contribution Rate	0.00%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 2,049,427	\$ 1,822,187	\$ 1,640,032
Actuarial Value of Assets	1,637,424	1,637,424	1,637,424
Unfunded Actuarial Accrued Liability	412,003	184,763	2,608
Funded Ratio	79.9%	89.9%	99.8%
Actuarially Determined Contribution Rate	28.90%	20.68%	14.08%



Sensitivity Analysis - Inflation Rate
Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.25%	2.50%	2.75%
Discount Rate - Retirement	6.00%	6.25%	6.50%
Discount Rate - Insurance	6.25%	6.50%	6.75%
Retirement			
Actuarial Accrued Liability	\$ 1,481,290	\$ 1,442,619	\$ 1,406,254
Actuarial Value of Assets	985,075	985,075	985,075
Unfunded Actuarial Accrued Liability	496,215	457,544	421,179
Funded Ratio	66.5%	68.3%	70.0%
Actuarially Determined Contribution Rate	22.67%	20.68%	18.83%
Insurance			
Actuarial Accrued Liability	\$ 384,533	\$ 379,568	\$ 374,897
Actuarial Value of Assets	652,349	652,349	652,349
Unfunded Actuarial Accrued Liability	(267,816)	(272,781)	(277,452)
Funded Ratio	169.6%	171.9%	174.0%
Actuarially Determined Contribution Rate	0.00%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,865,823	\$ 1,822,187	\$ 1,781,151
Actuarial Value of Assets	1,637,424	1,637,424	1,637,424
Unfunded Actuarial Accrued Liability	228,399	184,763	143,727
Funded Ratio	87.8%	89.9%	91.9%
Actuarially Determined Contribution Rate	22.67%	20.68%	18.83%



Sensitivity Analysis - Payroll Growth
Hazardous Members
(Dollar amounts expressed in thousands)

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	6.25%	6.25%	6.25%
Discount Rate - Insurance	6.50%	6.50%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 1,442,619	\$ 1,442,619	\$ 1,442,619
Actuarial Value of Assets	<u>985,075</u>	<u>985,075</u>	<u>985,075</u>
Unfunded Actuarial Accrued Liability	457,544	457,544	457,544
Funded Ratio	68.3%	68.3%	68.3%
Actuarially Determined Contribution Rate	22.04%	20.68%	19.40%
Insurance			
Actuarial Accrued Liability	\$ 379,568	\$ 379,568	\$ 379,568
Actuarial Value of Assets	<u>652,349</u>	<u>652,349</u>	<u>652,349</u>
Unfunded Actuarial Accrued Liability	(272,781)	(272,781)	(272,781)
Funded Ratio	171.9%	171.9%	171.9%
Actuarially Determined Contribution Rate	0.00%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,822,187	\$ 1,822,187	\$ 1,822,187
Actuarial Value of Assets	<u>1,637,424</u>	<u>1,637,424</u>	<u>1,637,424</u>
Unfunded Actuarial Accrued Liability	184,763	184,763	184,763
Funded Ratio	89.9%	89.9%	89.9%
Actuarially Determined Contribution Rate	22.04%	20.68%	19.40%



State Police Retirement System (SPRS)

Actuarial Valuation Report
as of June 30, 2024

DRAFT





October 30, 2024

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Subject: Actuarial Valuation as of June 30, 2024

Dear Trustees of the Board:

This report describes the current actuarial condition of the State Police Retirement System (SPRS), provides the actuarially determined employer contribution rate, analyzes changes in SPRS's financial condition, and provides various summaries of the data. The results of this actuarial valuation, including the calculated employer contribution rates will be used by the Board and stakeholders for informational purposes only as the employer contribution rate for the fiscal years ending June 30, 2025 and June 30, 2026 were certified in the June 30, 2023 actuarial valuation, which was adopted by the Board and incorporated in the Commonwealth's budget for the biennium period.

Separate reports are issued with regard to valuation results determined in accordance with Governmental Accounting Standards Board (GASB) Statements 67, 68, 74 and 75. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of June 30, the first day of the plan year for SPRS. This report was prepared at the request of the Board of Trustees of the Kentucky Retirement Systems (Board) and is intended for use by the Kentucky Public Pensions Authority (KPPA) staff and those designated or approved by the Board.

FINANCING OBJECTIVES AND FUNDING POLICY

The employer contribution rate is determined in accordance with Section 61.565 of Kentucky Statute. As specified by the Statute, the employer contribution is comprised of a normal cost contribution and an actuarial accrued liability contribution. The actuarial accrued liability contribution is calculated by amortizing the unfunded accrued liability as of June 30, 2019 over a closed 30-year amortization period (25 years remaining as of June 30, 2024). Gains and losses incurring in years after June 30, 2019 are amortized as separate closed 20-year amortization bases.

Board of Trustees
October 30, 2024
Page 2

If the contributions made are equal to the Actuarially Determined Contribution (ADC), and if all actuarial assumptions are met, there will not be an unfunded accrued liability at the end of the 25-year period remaining from the original closed 30-year amortization base. Accordingly, the ADC under the funding policy can be considered a “Reasonable Actuarially Determined Contribution” as required by the Actuarial Standards of Practice.

HB 1 was enacted in the 2024 legislative session and provided an additional \$25 million to finance the unfunded actuarial accrued liability of the SPRS retirement fund in FY 2025 and FY 2026. The appropriation for FY 2025 has been reflected in the contribution requirement in this year’s valuation. The appropriation for FY 2026 will be reflected in the contribution requirement in next year’s valuation.

ASSUMPTIONS AND METHODS

The Board of Trustees, in consultation with the actuary, sets the actuarial assumptions and methods used in the actuarial valuation. Except where noted in this report, the assumptions used in this actuarial valuation are based on an experience study conducted with experience through June 30, 2022, adopted by the Board of Trustees on June 5, 2023.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rate, and funding periods. The actuarial calculations are intended to provide information for rational decision making.

BENEFIT PROVISIONS

The benefit provisions reflected in these valuations are those which were in effect on June 30, 2024. There were no material benefit provision changes since the prior valuation.

DATA

Member data for retired, active and inactive members was supplied as of June 30, 2024, by KPPA staff. The staff also supplied asset information as of June 30, 2024. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by KPPA.



Board of Trustees
October 30, 2024
Page 3

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of SPRS as of June 30, 2024.

All of our work conforms with generally accepted actuarial principles and practices, and is in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Kentucky Code of Laws and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

Gabriel, Roeder, Smith & Company



Daniel J. White, FSA, EA, MAAA
Senior Consultant



Jamie Shaw, ASA, EA, MAAA
Consultant



Krysti Kiesel, ASA, MAAA
Consultant



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SECTION 1

EXECUTIVE SUMMARY

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Summary of Principal Results
(Dollar amounts expressed in thousands)

	SPRS	
	June 30, 2024	June 30, 2023
Actuarially Determined Contribution:		
Retirement	57.91%	65.79%
Insurance	<u>1.46%</u>	<u>2.31%</u>
Total	59.37%	68.10%
Contribution Rate for Next Fiscal Year¹	68.10%	68.10%
Assets:		
Retirement		
• Actuarial value (AVAR)	\$631,186	\$589,848
• Market value (MVAR)	\$651,790	\$591,514
• Ratio of actuarial to market value of assets	96.8%	99.7%
Insurance		
• Actuarial value (AVAI)	\$263,369	\$245,172
• Market value (MVAI)	\$273,517	\$248,109
• Ratio of actuarial to market value of assets	96.3%	98.8%
Funded Status:		
Retirement		
• Actuarial accrued liability	\$1,112,310	\$1,091,795
• Unfunded accrued liability on AVAR	\$481,124	\$501,947
• Funded ratio on AVAR	56.7%	54.0%
• Unfunded accrued liability on MVAR	\$460,520	\$500,281
• Funded ratio on MVAR	58.6%	54.2%
Insurance		
• Actuarial accrued liability	\$251,178	\$244,059
• Unfunded accrued liability on AVAI	(\$12,191)	(\$1,113)
• Funded ratio on AVAI	104.9%	100.5%
• Unfunded accrued liability on MVAI	(\$22,339)	(\$4,050)
• Funded ratio on MVAI	108.9%	101.7%
Membership:		
• Number of		
- Active Members	872	868
- Retirees and Beneficiaries	1,676	1,697
- Inactive Members	<u>747</u>	<u>714</u>
- Total	3,295	3,279
• Projected payroll of active members	\$73,295	\$65,913
• Average salary of active members	\$84,054	\$75,937

¹ Contribution rates calculated with the June 30, 2023 valuation are effective for fiscal years ending June 30, 2025 and June 30 2026.

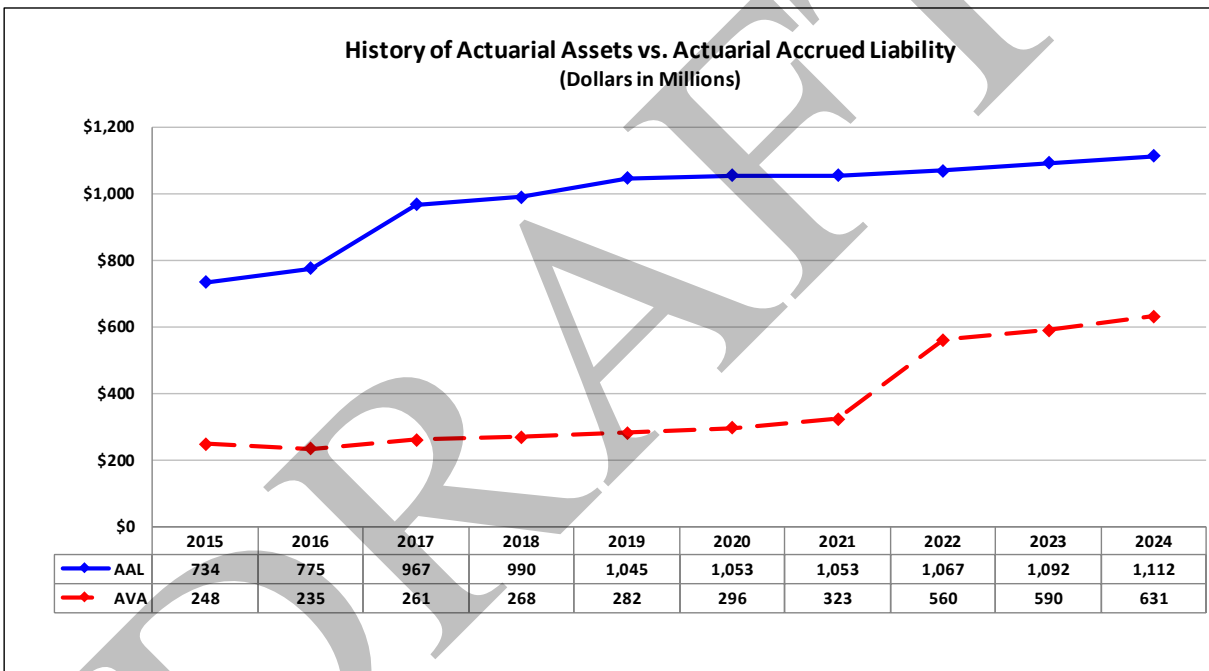


Executive Summary (Continued)

Retirement Fund

The unfunded actuarial accrued liability of the retirement fund decreased by \$21 million since the prior year’s valuation to \$481 million. This decrease was approximately \$4 million less than expected, primarily due to liability losses as a result of salary increases for individual members being greater than assumed. These liability losses were partially offset by favorable investment experience.

Below is a chart with the historical actuarial value of assets and actuarial accrued liability. The increase in the actuarial value of assets in FY 2022 was due to a one-time \$215 million appropriation made by the Commonwealth.



Insurance Fund

The funding surplus (assets in excess of the actuarial accrued liability) of the insurance fund increased by \$11 million since the prior year's valuation to \$12 million. This increase was approximately \$4 million more than expected. This was primarily due to favorable investment experience.

On average, pre-Medicare premiums were approximately 5% lower than expected and Medicare premiums were approximately 38% higher than expected. In conjunction with the review of the healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is also reviewed on an annual basis. As a result of our review, the ultimate annual trend assumption was increased for pre-Medicare and Medicare Plans from 4.05% to 4.25%. Additionally, the trend assumption for the pre-Medicare Plans was increased during the select period. The updates to the trend assumption increased the liability for the insurance fund by approximately \$8 million.

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SECTION 2

DISCUSSION

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Discussion

The State Police Retirement System (SPRS) is a defined benefit pension plan that provides coverage for uniformed state police officers. SPRS includes hazardous duty benefits only. This report presents the results of the June 30, 2024 actuarial funding valuation for both the Retirement Fund and Insurance Fund.

The primary purposes of the valuation report are to describe the current actuarial condition of SPRS, analyze changes in SPRS's financial condition, and provide various summaries of the data. The results of this actuarial valuation, including the calculated employer contribution rate, will be used by the Board and stakeholders for informational purposes only as the employer contribution rate for the fiscal years ending June 30, 2025 and June 30, 2026 was certified in the June 30, 2023 actuarial valuation, which was adopted by the Board and incorporated in the Commonwealth's budget for the biennium period.

The actuarially determined contribution consist of two components: a normal cost rate and an amortization cost to finance the unfunded actuarial accrued liability. The normal cost rate is the theoretical amount which would be required to pay the members' benefits, based on the current plan provisions, if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. This is the amount that it should cost to provide the benefits for an average member. Since members contribute to the fund, only the excess of the normal cost rate over the member contribution rate is included in the employer contribution. The amortization cost is the amount necessary to amortize the unfunded actuarial accrued liability. The payroll growth rate and discount rate assumptions are selected by the Board. The funding period is specified in Section 61.565 of Kentucky Statute.

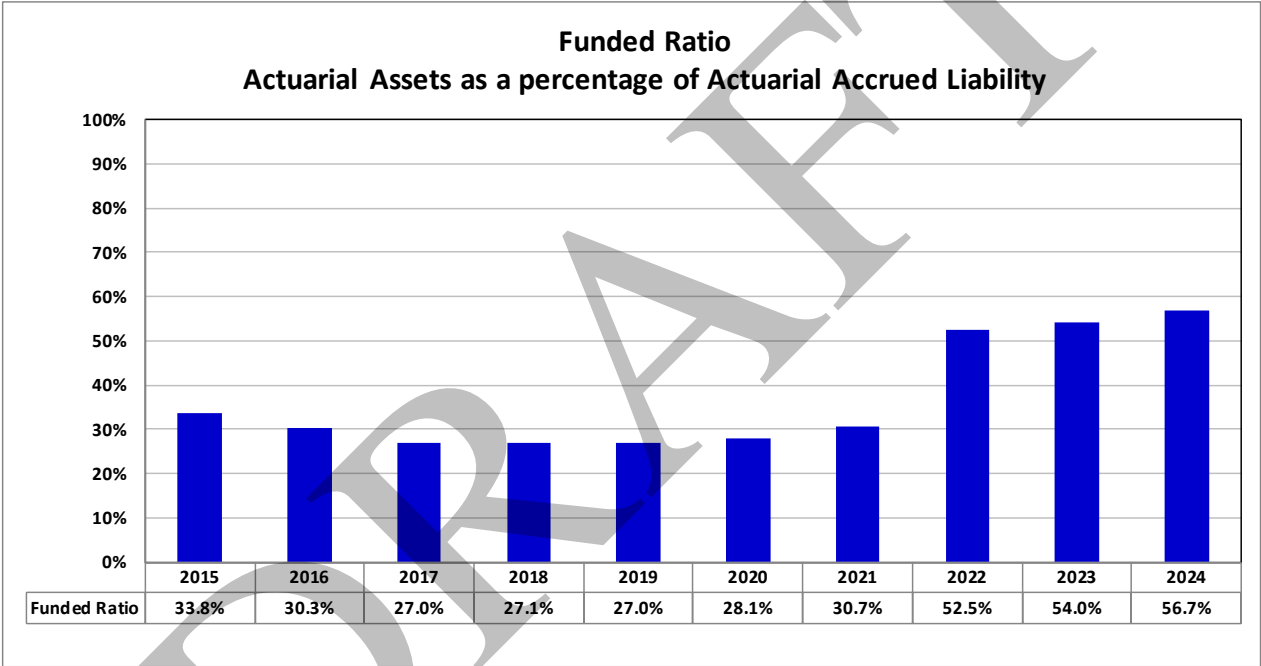
All of the actuarial and financial tables referenced by the other sections of this report appear in Section 3. Section 4 provides additional details related to the calculation of the amortization of the unfunded actuarial accrued liability. Section 5 provides member data and statistical information. Section 6 provides a discussion of various risk measures, which are intended to aid stakeholders in understanding the effects of future experience differing from the assumptions used in performing an actuarial valuation. Appendices A and B provide summaries of the principle actuarial assumptions and methods and plan provisions. Finally, Appendix C provides a glossary of technical terms that are used throughout this report.



Funding Progress

The following chart provides a ten-year history of the retirement fund’s funded ratio (i.e. the Actuarial Value of Assets divided by the Actuarial Accrued Liability). The significant increase in the funded ratio from 2021 to 2022 was due to a \$215 million appropriation made by the Commonwealth in fiscal year 2022.

Assuming the full actuarially determined contributions are paid in future years and absent material future unfavorable experience, the funded ratio is expected to continue improving. Also, the dollar amount of the unfunded actuarial accrued liability, or the difference between the actuarial accrued liability and the actuarial value of assets, is expected to continue a decreasing trend. Table 9, Schedule of Funding Progress, in the following section of the report provides additional detail regarding the funding progress of the retirement fund.



Asset Gains/ (Losses)

The actuarial value of assets (“AVA”) is based on a smoothed market value of assets, using a systematic approach to phase-in the difference between the actual and expected investment return on the market value of assets (adjusted for receipts and disbursements during the year). This is appropriate because it dampens the short-term volatility inherent in investment markets. The return is computed net of investment expenses.

Retirement Fund

The actuarial value of assets for the retirement fund increased from \$590 million to \$631 million since the prior valuation. The rate of return on the market value of assets on a dollar-weighted basis for the prior fiscal year was 9.6% which is more than the 5.25% expected annual return. The return on an actuarial (smoothed) asset value was 6.4%, which resulted in a \$7 million gain for the fiscal year. The market value of assets is \$21 million more than the actuarial value of assets, which signifies that the retirement fund is in a position of net deferred investment gains to be realized in future years.

Table 6 in the following section of this report provides asset information that was included in the annual financial statements of the funds, as well as the estimated yield on a market value basis. Table 7 provides the development of the actuarial value of assets and the estimated yield on an actuarial value basis.

Actuarial Gains/ (Losses)

The annual actuarial valuation is a snapshot analysis of the benefit liabilities, assets and funded position of the funds as of the first day of the plan year. In any one fiscal year, the experience can be better or worse from that which is assumed or expected. The actuarial assumptions do not necessarily attempt to model what the experience will be for any one given fiscal year, but instead try to model the overall experience over many years. Therefore, as long as the actual experience of a retirement system is reasonably close to the current assumptions, the long-term funding requirements of the system will remain relatively consistent.

Below is a table that separately shows a reconciliation of the unfunded liability since the prior actuarial valuation for the retirement and health insurance funds, which include the effect of asset and liability gains and losses, changes in assumptions, and changes in plan provisions. See the discussion in the Executive Summary for additional information related to the liability experience and additional information in this section of the report related to the asset experience, plan changes, and assumption changes.

Experience Gain or (Loss)		Retirement	Insurance
(Dollar amounts expressed in thousands)		<u>Retirement</u>	<u>Insurance</u>
A. Calculation of total actuarial gain or loss			
1. Unfunded actuarial accrued liability (UAAL), previous year	\$	501,947	\$ (1,113)
2. Normal cost and administrative expenses		18,067	3,625
3. Less: contributions for the year		(67,701)	(10,558)
4. Interest accrual		25,049	(298)
5. Expected UAAL (Sum of Items 1 - 4)	\$	477,362	\$ (8,344)
6. Actual UAAL as of June 30, 2024	\$	481,124	\$ (12,191)
7. Total gain (loss) for the year (Item 5 - Item 6)	\$	(3,762)	\$ 3,847
B. Source of gains and losses			
8. Asset gain (loss) for the year	\$	6,939	\$ 3,866
9. Liability experience gain (loss) for the year		(10,701)	(19)
10. Plan Change		—	—
11. Assumption change		—	—
12. Total	\$	(3,762)	\$ 3,847

Note, the liability experience gain (loss) shown above includes the impact of any trend assumption changes made in conjunction with the review of the healthcare per capita claims cost, as described in the Executive Summary.



Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an annual investment return assumption. The Board of Trustees, in consultation with the actuary, sets the actuarial assumptions and methods used in the actuarial valuation.

In conjunction with the review of the healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is reviewed on an annual basis. The trend assumption was increased as a result of our review. All other assumptions were adopted by the Board and are based on an experience study conducted based on experience through June 30, 2022. It is our opinion that the assumptions are internally consistent, reasonable, and reflect anticipated future experience of the System. Appendix A includes a summary of the actuarial assumptions and methods used in this valuation.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. This report does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Benefit Provisions

Appendix B of this report includes a summary of the major benefit provisions for System. There have been no material plan provision changes since the prior valuation.

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Annual Cost of Tier 3 Pay Credit for Unused Sick Leave (HB 259 Enacted in the 2022 Legislative Session)

Effective July 1, 2023, members earning benefits in the Tier 3 cash balance plan with five or more years of service credit will receive an additional employer pay credit equal to an amount by multiplying the member’s unused sick leave in excess of 480 hours (i.e. 60 days) by the member’s hourly base pay. Tier 3 members who retire from the State Police Retirement System will receive an additional employer pay credit equal to an amount by multiplying the member’s hours of accumulated sick leave upon termination of employment by the member’s hourly base pay.

Section KRS 7A.255 was also amended to require the Department of State Police and the Kentucky Public Pensions Authority to jointly report to the Public Pension Oversight Board on the costs and effectiveness of this benefit provided to the Tier 3 members.

The employer contribution rate documented in this report is intended to fund the expected cost of HB 259. The employer contribution rate, excluding the cost of HB 259, is documented below. Note, the information below is based upon the prior year’s actuarial valuation as of June 30, 2023, which set the employer contribution rates for FY 2025 and FY 2026.

Development of Employer Contribution Rate without HB 259 Benefits

Applicable for fiscal years ending	June 30, 2025 and June 30, 2026
Based on the results of the actuarial valuation as of	June 30, 2023
1. Projected payroll of active members	\$ 65,913,000
2. Projected payroll of active members - Tier 3 Only	\$ 22,077,000
3. Increase in Tier 3 normal cost rate due to HB 259	6.65%
4. Increase in employer contribution due to HB 259 (Item 2 x Item 3)	\$ 1,468,000
5. Increase in employer contribution due to HB 259 as a percentage of payroll (Item 4 / Item 1)	2.23%
6. Employer contribution rate - with HB 259	68.10%
7. Employer contribution rate - without HB 259 (Item 6 - Item 5)	65.87%

Note, the incremental difference in the Tier 3 normal cost rate of 6.65% of pay is expected to remain relatively unchanged in future years, however the amount of the dollar cost of this benefit enhancement as well as the impact on the employer contribution rate will increase over time as the number of members (and covered payroll) increase as new members enter the System and earn Tier 3 benefits.



SECTION 3

ACTUARIAL TABLES

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Actuarial Tables

<u>TABLE NUMBER</u>	<u>PAGE</u>	<u>CONTENT OF TABLE</u>
1	15	DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
2	16	ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS
3	17	DEVELOPMENT OF REQUIRED CONTRIBUTION RATE
4	18	ACTUARIAL BALANCE SHEET – RETIREMENT
5	19	ACTUARIAL BALANCE SHEET – INSURANCE
6	20	RECONCILIATION OF SYSTEM NET ASSETS
7	21	DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS – RETIREMENT
8	22	DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS – INSURANCE
9	23	SCHEDULE OF FUNDING PROGRESS
10	24	SUMMARY OF PRINCIPAL ASSUMPTIONS AND METHODS
11	25	SOLVENCY TEST

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Development of Unfunded Actuarial Accrued Liability

(Dollar amounts expressed in thousands)

	June 30, 2024	
	Retirement (1)	Insurance (2)
1. Projected payroll of active members	\$ 73,295	\$ 73,295
2. Present value of future pay	\$ 746,130	\$ 675,913
3. Normal cost rate		
a. Total normal cost rate	27.33%	4.96%
b. Less: member contribution rate	-8.00%	-0.60%
c. Employer normal cost rate	19.33%	4.36%
4. Actuarial accrued liability for active members		
a. Present value of future benefits	\$ 498,637	\$ 95,060
b. Less: present value of future normal costs	(195,262)	(23,780)
c. Actuarial accrued liability	\$ 303,375	\$ 71,280
5. Total actuarial accrued liability		
a. Retirees and beneficiaries	\$ 797,326	\$ 176,612
b. Inactive members	11,609	3,286
c. Active members (Item 4c)	303,375	71,280
d. Total	\$ 1,112,310	\$ 251,178
6. Actuarial value of assets	\$ 631,186	\$ 263,369
7. Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	\$ 481,124	\$ (12,191)
8. Funded Ratio	56.7%	104.9%



Actuarial Present Value of Future Benefits
 (Dollar amounts expressed in thousands)

	June 30, 2024	
	Retirement (1)	Insurance (2)
1. Active members		
a. Service retirement	\$ 473,505	
b. Deferred termination benefits and refunds	7,342	
c. Survivor benefits	3,309	
d. Disability benefits	14,481	
e. Total	\$ 498,637	\$ 95,060
2. Retired members		
a. Service retirement	\$ 718,451	
b. Disability retirement	10,715	
c. Beneficiaries	68,160	
d. Total	\$ 797,326	\$ 176,612
3. Inactive members		
a. Vested terminations	\$ 11,008	\$ 3,286
b. Nonvested terminations	601	N/A
c. Total	\$ 11,609	\$ 3,286
4. Total actuarial present value of future benefits	\$ 1,307,572	\$ 274,958



Development of Actuarially Determined Contribution Rate

	June 30, 2024	
	Retirement (1)	Insurance (2)
1. Total normal cost rate		
a. Service retirement	24.50%	
b. Deferred termination benefits and refunds	1.26%	
c. Survivor benefits	0.32%	
d. Disability benefits	<u>1.25%</u>	
e. Total	27.33%	4.96%
2. Less: member contribution rate	<u>-8.00%</u>	<u>-0.60%</u>
3. Total employer normal cost rate	19.33%	4.36%
4. Administrative expenses	<u>0.43%</u>	<u>0.10%</u>
5. Net employer normal cost rate	19.76%	4.46%
6. UAAL amortization contribution rate	<u>38.15%</u>	<u>-3.00%</u>
7. Total calculated employer contribution	57.91%	1.46%



Actuarial Balance Sheet
Retirement Benefits
(Dollar amounts expressed in thousands)

	June 30, 2024 (1)	June 30, 2023 (2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 631,186	\$ 589,848
b. Present value of future member contributions	\$ 59,690	\$ 53,971
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 135,572	\$ 117,795
ii. Unfunded accrued liability contributions	481,124	501,947
iii. Total future employer contributions	\$ 616,696	\$ 619,742
d. Total assets	\$ 1,307,572	\$ 1,263,561
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 195,262	\$ 171,766
ii. Accrued liability	303,375	266,112
iii. Total present value of future benefits	\$ 498,637	\$ 437,878
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 797,326	\$ 814,982
c. Present value of benefits payable on account of current inactive members	\$ 11,609	\$ 10,701
d. Total liabilities	\$ 1,307,572	\$ 1,263,561



Actuarial Balance Sheet
Insurance Benefits
(Dollar amounts expressed in thousands)

	June 30, 2024	June 30, 2023
	(1)	(2)
1. Assets - Present and Expected Future Resources		
a. Current assets (actuarial value)	\$ 263,369	\$ 245,172
b. Present value of future member contributions	\$ 5,776	\$ 5,024
c. Present value of future employer contributions		
i. Normal cost contributions	\$ 18,004	\$ 18,773
ii. Unfunded accrued liability contributions	(12,191)	(1,113)
iii. Total future employer contributions	\$ 5,813	\$ 17,660
d. Total assets	\$ 274,958	\$ 267,856
2. Liabilities - Present Value of Expected Future Benefit Payments		
a. Active members		
i. Present value of future normal costs	\$ 23,780	\$ 23,797
ii. Accrued liability	71,280	67,471
iii. Total present value of future benefits	\$ 95,060	\$ 91,268
b. Present value of benefits payable on account of current retired members and beneficiaries	\$ 176,612	\$ 172,154
c. Present value of benefits payable on account of current inactive members	\$ 3,286	\$ 4,434
d. Total liabilities	\$ 274,958	\$ 267,856



Reconciliation of Net Assets
(Dollar amounts expressed in thousands)¹

	Year Ending	
	June 30, 2024	June 30, 2024
	(1)	(2)
	Retirement	Insurance
1. Value of assets at beginning of year	\$ 591,514	\$ 248,109
2. Revenue for the year		
a. Contributions		
i. Member contributions	\$ 5,703	\$ 396
ii. Employer contributions	61,998	10,158
iii. Other contributions (less 401h)	0	5
iv. Total	\$ 67,701	\$ 10,558
b. Income		
i. Interest, dividends, and other income	\$ 21,959	\$ 8,960
ii. Investment expenses	(3,285)	(2,434)
iii. Net	\$ 18,673	\$ 6,526
c. Net realized and unrealized gains (losses)	38,258	20,437
d. Total revenue	\$ 124,633	\$ 37,521
3. Expenditures for the year		
a. Disbursements		
i. Refunds	\$ 221	\$ 0
ii. Regular annuity benefits / Healthcare premiums	63,823	12,412
iii. Other benefit payments ²	0	(369)
iv. Transfers to other systems	0	0
v. Total	\$ 64,044	\$ 12,043
b. Administrative expenses and depreciation	314	71
c. Total expenditures	\$ 64,358	\$ 12,113
4. Increase in net assets (Item 2. - Item 3.)	\$ 60,275	\$ 25,407
5. Value of assets at end of year (Item 1. + Item 4.)	\$ 651,790	\$ 273,517
6. Net external cash flow		
a. Dollar amount	\$ 3,344	\$ (1,555)
b. Percentage of market value	0.5%	-0.6%
7. Estimated annual return on net assets	9.6%	10.9%

¹ Amounts may not add due to rounding. Retirement assets exclude 401h assets. Insurance assets include 401h assets

² Insurance benefit payments have been offset by Medicare Drug Reimbursements, Insurance Premiums, and Humana Gain Share Payments



Development of Actuarial Value of Assets
Retirement Benefits
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024																																								
1. Actuarial value of assets at beginning of year	\$ 589,848																																								
2. Market value of assets at beginning of year	\$ 591,514																																								
3. Net new investments																																									
a. Contributions	\$ 67,701																																								
b. Benefit payments	(64,044)																																								
c. Administrative expenses	(314)																																								
d. Subtotal	\$ 3,344																																								
4. Market value of assets at end of year	\$ 651,790																																								
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$ 56,932																																								
6. Assumed investment return rate for fiscal year	5.25%																																								
7. Expected return for immediate recognition	\$ 31,142																																								
8. Excess return for phased recognition	\$ 25,789																																								
9. Phased-in recognition, 20% of excess return on assets for prior years:																																									
	<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;"></th> <th style="text-align: center; width: 20%;"><u>Fiscal Year</u></th> <th style="text-align: center; width: 20%;"><u>Excess</u></th> <th style="text-align: center; width: 20%;"><u>Return</u></th> <th style="text-align: center; width: 20%;"><u>Recognized</u></th> </tr> <tr> <td></td> <td style="text-align: center;"><u>Ending June 30,</u></td> <td></td> <td></td> <td style="text-align: center;"><u>Amount</u></td> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">a.</td> <td style="text-align: center;">2024</td> <td style="text-align: center;">\$</td> <td style="text-align: right;">25,789</td> <td style="text-align: right;">\$ 5,158</td> </tr> <tr> <td style="padding-left: 20px;">b.</td> <td style="text-align: center;">2023</td> <td></td> <td style="text-align: right;">11,768</td> <td style="text-align: right;">2,354</td> </tr> <tr> <td style="padding-left: 20px;">c.</td> <td style="text-align: center;">2022</td> <td></td> <td style="text-align: right;">(40,859)</td> <td style="text-align: right;">(8,172)</td> </tr> <tr> <td style="padding-left: 20px;">d.</td> <td style="text-align: center;">2021</td> <td></td> <td style="text-align: right;">46,279</td> <td style="text-align: right;">9,256</td> </tr> <tr> <td style="padding-left: 20px;">e.</td> <td style="text-align: center;">2020</td> <td></td> <td style="text-align: right;">(8,720)</td> <td style="text-align: right;">(1,744)</td> </tr> <tr> <td style="padding-left: 20px;">f.</td> <td style="text-align: center;">Total</td> <td></td> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$ 6,851</td> </tr> </tbody> </table>		<u>Fiscal Year</u>	<u>Excess</u>	<u>Return</u>	<u>Recognized</u>		<u>Ending June 30,</u>			<u>Amount</u>	a.	2024	\$	25,789	\$ 5,158	b.	2023		11,768	2,354	c.	2022		(40,859)	(8,172)	d.	2021		46,279	9,256	e.	2020		(8,720)	(1,744)	f.	Total			\$ 6,851
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10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$ 631,186																																								
11. Ratio of actuarial value to market value	96.8%																																								
12. Estimated annual return on actuarial value of assets	6.4%																																								

* Amounts may not add due to rounding



Development of Actuarial Value of Assets
Insurance Benefits
(Dollar amounts expressed in thousands)*

Year Ending	June 30, 2024																												
1. Actuarial value of assets at beginning of year	\$ 245,172																												
2. Market value of assets at beginning of year	\$ 248,109																												
3. Net new investments																													
a. Contributions	\$ 10,558																												
b. Benefit payments	(12,043)																												
c. Administrative expenses	(71)																												
d. Subtotal	\$ (1,555)																												
4. Market value of assets at end of year	\$ 273,517																												
5. Net earnings (Item 4. - Item 2. - Item 3.d.)	\$ 26,963																												
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7. Expected return for immediate recognition	\$ 16,077																												
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	<u>Fiscal Year</u> <u>Ending June 30,</u>	<u>Excess</u> <u>Return</u>	<u>Recognized</u> <u>Amount</u>																										
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10. Actuarial value of assets as of June 30, 2024 (Item 1. + Item 3.d. + Item 7.+ Item 9.f.)	\$ 263,369																												
11. Ratio of actuarial value to market value	96.3%																												
12. Estimated annual return on actuarial value of assets	8.1%																												

* Amounts may not add due to rounding



Schedule of Funding Progress
(Dollar amounts expressed in thousands)

June 30,	Actuarial Value of	Actuarial Accrued	Unfunded Actuarial	Funded Ratio	Annual Covered	UAAL as % of
(1)	Assets (AVA)	Liability (AAL)	Accrued Liability	(2)/(3)	Payroll	Payroll (4)/(6)
(1)	(2)	(3)	(UAAL) (3) - (2)	(5)	(6)	(7)
Retirement						
2015	\$ 248,388	\$ 734,156	\$ 485,768	33.8%	\$ 45,765	1061.4%
2016	234,568	775,160	540,592	30.3%	45,551	1186.8%
2017	261,320	967,145	705,825	27.0%	48,598	1452.4%
2018	268,259	989,528	721,269	27.1%	48,808	1477.8%
2019	282,162	1,045,318	763,156	27.0%	47,752	1598.2%
2020	296,126	1,053,158	757,032	28.1%	46,145	1640.6%
2021	323,250	1,053,259	730,009	30.7%	45,338	1610.1%
2022	559,973	1,067,447	507,474	52.5%	47,885	1059.8%
2023	589,848	1,091,795	501,947	54.0%	65,913	761.5%
2024	631,186	1,112,310	481,124	56.7%	73,295	656.4%
Insurance						
2015	\$ 167,775	\$ 254,839	\$ 87,064	65.8%	\$ 45,765	190.2%
2016	172,704	257,197	84,493	67.1%	45,551	185.5%
2017	180,464	276,641	96,177	65.2%	48,598	197.9%
2018	187,535	262,088	74,553	71.6%	48,808	152.7%
2019	197,395	276,809	79,414	71.3%	47,752	166.3%
2020	207,018	276,144	69,126	75.0%	46,145	149.8%
2021	223,251	272,406	49,155	82.0%	45,338	108.4%
2022	234,239	232,798	(1,441)	100.6%	47,885	-3.0%
2023	245,172	244,059	(1,113)	100.5%	65,913	-1.7%
2024	263,369	251,178	(12,191)	104.9%	73,295	-16.6%



Summary of Principal Assumptions and Methods

Below is a summary of the principal economic assumptions, cost method, and the method for financing the unfunded actuarial accrued liability:

Valuation date:	June 30, 2024
Actuarial cost method:	Entry Age Normal
Amortization method:	Level percentage of payroll (0% payroll growth assumed)
Amortization period for contribution rate:	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases
Asset valuation method:	5-Year Smoothed Market
Actuarial assumptions:	
Investment rate of return, retirement	5.25%
Investment rate of return, insurance	6.50%
Projected salary increases	3.55% to 16.05% (varies by service)
Inflation	2.50%
Post-retirement pension benefit adjustments	0.00%
Retiree Mortality	System-specific mortality table based on mortality experience from 2013 to 2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.



Solvency Test
(Dollar amounts expressed in thousands)

June 30,	Actuarial Accrued Liability			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed)		Active	Retired	ER Financed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Retirement							
2015	\$ 41,567	\$ 605,855	\$ 86,734	\$ 248,388	100.0%	34.1%	0.0%
2016	41,871	636,499	96,791	234,568	100.0%	30.3%	0.0%
2017	44,798	773,982	148,365	261,320	100.0%	28.0%	0.0%
2018	43,835	800,788	144,905	268,259	100.0%	28.0%	0.0%
2019	41,948	848,397	154,973	282,162	100.0%	28.3%	0.0%
2020	40,831	863,580	148,747	296,126	100.0%	29.6%	0.0%
2021	42,035	860,801	150,423	323,250	100.0%	32.7%	0.0%
2022	42,027	870,200	155,220	559,973	100.0%	59.5%	0.0%
2023	47,394	825,683	218,718	589,848	100.0%	65.7%	0.0%
2024	52,957	808,935	250,418	631,186	100.0%	71.5%	0.0%
Insurance							
2015	\$ -	\$ 170,447	\$ 84,392	\$ 167,775	100.0%	98.4%	0.0%
2016	-	177,094	80,103	172,704	100.0%	97.5%	0.0%
2017	-	186,390	90,251	180,464	100.0%	96.8%	0.0%
2018	-	183,151	78,937	187,535	100.0%	100.0%	5.6%
2019	-	199,959	76,850	197,395	100.0%	98.7%	0.0%
2020	-	207,638	68,506	207,018	100.0%	99.7%	0.0%
2021	-	206,707	65,699	223,251	100.0%	100.0%	25.2%
2022	-	172,664	60,134	234,239	100.0%	100.0%	100.0%
2023	-	176,588	67,471	245,172	100.0%	100.0%	100.0%
2024	-	179,898	71,280	263,369	100.0%	100.0%	100.0%



SECTION 4

AMORTIZATION BASES

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Amortization of Unfunded Liability

Retirement				
Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ 763,156	\$ 703,112	\$ 49,853	25
June 30, 2020	3,748	4,590	420	16
June 30, 2021	(231,783)	(227,309)	(20,021)	17
June 30, 2022	16,308	15,353	1,305	18
June 30, 2023	170	(12,016)	(989)	19
June 30, 2024	(2,606)	(2,606)	(2,604)	20
Total		\$ 481,124	\$ 27,964	
Projected Payroll for FYE 2026			\$ 73,295	
Amortization Payments as a Percentage of Payroll			38.15%	

Insurance				
Valuation Year Base Established	Original Amortization Base	Remaining at June 30, 2024	Payments for FYE 2026	Funding Period at June 30, 2024
June 30, 2019	\$ 79,414	\$ 70,907	\$ 5,633	25
June 30, 2020	(5,896)	(5,865)	(582)	16
June 30, 2021	(18,445)	(18,528)	(1,776)	17
June 30, 2022	(48,536)	(50,584)	(4,698)	18
June 30, 2023	4,090	(3,359)	(303)	19
June 30, 2024	(4,762)	(4,762)	(472)	20
Total		\$ (12,191)	\$ (2,198)	
Projected Payroll for FYE 2026			\$ 73,295	
Amortization Payments as a Percentage of Payroll			-3.00%	

Note:

Budgeted contribution rates for FYE 2025 were known at the time of the June 30, 2024 Valuation. Amortization bases established at this valuation date were adjusted accordingly.



SECTION 5

MEMBERSHIP INFORMATION

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Membership Tables

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Summary of Membership Data
 (Total dollar amounts expressed in thousands)

	June 30, 2024 (1)	June 30, 2023 (2)
1. Active members		
a. Males	844	841
b. Females	28	27
c. Total members	872	868
d. Total annualized prior year salaries	\$ 73,295	\$ 65,913
e. Average salary ²	\$ 84,054	\$ 75,937
f. Average age	37.4	36.9
g. Average service	11.1	10.5
h. Member contributions with interest	\$ 52,957	\$ 47,394
i. Average contributions with interest ²	\$ 60,731	\$ 54,601
2. Vested inactive members ¹		
a. Number	345	324
b. Total annual deferred benefits	\$ 1,226	\$ 1,121
c. Average annual deferred benefit ²	\$ 3,554	\$ 3,460
d. Average age at the valuation date	45.0	45.0
3. Nonvested inactive members ¹		
a. Number	402	390
b. Total member contributions with interest	\$ 599	\$ 521
c. Average contributions with interest ²	\$ 1,490	\$ 1,336
4. Service retirees		
a. Number	1,368	1,385
b. Total annual benefits	\$ 54,168	\$ 55,037
c. Average annual benefit ²	\$ 39,596	\$ 39,738
d. Average age at the valuation date	65.0	64.4
5. Disabled retirees		
a. Number	51	54
b. Total annual benefits	\$ 834	\$ 905
c. Average annual benefit ²	\$ 16,353	\$ 16,759
d. Average age at the valuation date	58.5	58.3
6. Beneficiaries		
a. Number	257	258
b. Total annual benefits	\$ 7,620	\$ 7,352
c. Average annual benefit ²	\$ 29,650	\$ 28,496
d. Average age at the valuation date	69.2	68.1

¹ Vested inactive member section includes Tier 1 members eligible for a benefit equal to the actuarially equivalent of two times the member's contribution balance.

² Average dollar amounts shown are expressed to the dollar.



Summary of Historical Active Membership

June 30, (1)	Active Members		Covered Payroll ¹		Average Annual Pay	
	Number (2)	Percent Increase /(Decrease) (3)	Amount in Thousands (4)	Percent Increase /(Decrease) (5)	Amount (6)	Percent Increase /(Decrease) (7)
2015	937		\$ 45,765		\$ 48,842	
2016	908	-3.1%	45,551	-0.5%	50,167	2.7%
2017	903	-0.6%	48,598	6.7%	53,819	7.3%
2018	886	-1.9%	48,808	0.4%	55,088	2.4%
2019	883	-0.3%	47,752	-2.2%	54,079	-1.8%
2020	798	-9.6%	46,145	-3.4%	57,826	6.9%
2021	775	-2.9%	45,338	-1.7%	58,501	1.2%
2022	844	8.9%	47,885	5.6%	56,736	-3.0%
2023	868	2.8%	65,913	37.6%	75,937	33.8%
2024	872	0.5%	73,295	11.2%	84,054	10.7%

¹ Covered payroll is the annualized, projected compensation for the following year and does not include payroll attributable to working retirees.



Distribution of Active Members by Age and by Years of Service

SPRS Members

Attained Age	Years of Credited Service												Total Count & Avg. Comp.	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.		
Under 20	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
20-24	17 \$42,197	20 \$62,359	23 \$67,124	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	60 \$58,473
25-29	14 \$44,819	20 \$63,218	59 \$66,471	29 \$68,803	4 \$60,205	36 \$73,284	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	162 \$65,975
30-34	3 \$43,336	6 \$63,896	15 \$67,772	7 \$68,024	2 \$72,931	97 \$87,439	5 \$76,818	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	135 \$81,613
35-39	1 \$42,334	1 \$61,304	6 \$65,434	1 \$71,392	2 \$71,699	55 \$83,113	78 \$82,244	10 \$92,024	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	154 \$81,932
40-44	1 \$42,334	1 \$63,535	1 \$69,425	0 \$0	0 \$0	18 \$82,108	45 \$82,462	59 \$96,969	18 \$108,564	1 \$122,917	0 \$0	0 \$0	0 \$0	144 \$91,405
45-49	0 \$0	0 \$0	1 \$74,910	0 \$0	1 \$69,096	7 \$92,425	18 \$80,079	32 \$97,018	56 \$106,643	6 \$123,142	0 \$0	0 \$0	0 \$0	121 \$99,569
50-54	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	4 \$119,509	7 \$84,408	12 \$97,262	23 \$107,742	15 \$114,418	3 \$151,935	0 \$0	0 \$0	64 \$107,596
55-59	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	2 \$84,813	6 \$88,792	10 \$104,933	5 \$122,443	3 \$145,175	0 \$0	0 \$0	26 \$107,671
60-64	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	2 \$87,841	1 \$91,974	1 \$109,180	1 \$112,299	0 \$0	0 \$0	5 \$97,827
65 & Over	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1 \$78,499	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1 \$78,499
Total	36 \$43,319	48 \$62,912	105 \$66,849	37 \$68,726	9 \$66,575	217 \$84,304	155 \$82,012	122 \$95,902	108 \$106,903	28 \$117,837	7 \$143,376	0 \$0	0 \$0	872 \$84,054



**Distribution of Annuitant Monthly Benefit by Status and Age
Retirees and Beneficiaries**
(Dollar amounts expressed in thousands)

Current Age (1)	Retirement		Disability		Survivors & Beneficiaries		Total	
	Number of Annuitants (2)	Total Annual Benefit Amount (3)	Number of Annuitants (4)	Total Annual Benefit Amount (5)	Number of Annuitants (6)	Total Annual Benefit Amount (7)	Number of Annuitants (8)	Total Annual Benefit Amount (9)
Under 50	108	\$ 3,844	11	\$ 185	28	\$ 404	147	\$ 4,433
50 - 54	203	8,192	11	184	10	241	224	8,617
55 - 59	207	7,915	7	139	16	314	230	8,368
60 - 64	180	7,355	5	75	21	579	206	8,009
65 - 69	140	5,825	8	117	24	749	172	6,691
70 - 74	241	9,852	4	54	50	1,523	295	11,428
75 - 79	180	7,369	3	55	48	1,694	231	9,118
80 - 84	77	2,685	1	1	26	870	104	3,556
85 - 89	20	619	1	24	18	599	39	1,242
90 And Over	12	514	0	0	16	647	28	1,161
Total	1,368	\$ 54,168	51	\$ 834	257	\$ 7,620	1,676	\$ 62,623

*Amounts may not add due to rounding



Retired Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	158	\$ 474,320	17	\$ 42,925	175	\$ 517,245
Joint & Survivor:						
100% to Beneficiary	182	530,096	2	9,093	184	539,189
66 2/3% to Beneficiary	92	338,527	2	7,542	94	346,068
50% to Beneficiary	77	273,055	2	7,515	79	280,570
Pop-up Option	663	2,332,061	6	11,230	669	2,343,292
Social Security Option:						
Age 62 Basic	24	57,726	0	0	24	57,726
Age 62 Survivorship	89	163,004	1	4,416	90	167,420
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	0	0	0	0
5 Years Certain	0	0	0	0	0	0
10 Years Certain	8	26,125	0	0	8	26,125
10 Years Certain & Life	34	113,581	3	6,330	37	119,911
15 Years Certain & Life	17	46,210	2	9,579	19	55,789
20 Years Certain & Life	38	126,257	2	3,979	40	130,236
Total:	1,382	\$ 4,480,962	37	\$ 102,609	1,419	\$ 4,583,571



Beneficiary Lives Summary

Form of Payment (1)	Male Lives		Female Lives		Total	
	Number (2)	Monthly Benefit Amount (3)	Number (4)	Monthly Benefit Amount (5)	Number (6)	Monthly Benefit Amount (7)
Basic	2	\$ 820	7	\$ 9,859	9	\$ 10,679
Joint & Survivor:						
100% to Beneficiary	6	10,268	60	170,993	66	181,261
66 2/3% to Beneficiary	2	1,272	21	53,447	23	54,718
50% to Beneficiary	2	2,249	21	33,566	23	35,816
Pop-up Option	1	365	72	219,257	73	219,622
Social Security Option:						
Age 62 Basic	0	0	3	3,103	3	3,103
Age 62 Survivorship	2	934	47	91,450	49	92,385
Partial Deferred (Old Plan)	0	0	0	0	0	0
Widows Age 60	0	0	0	0	0	0
5 Years Certain	0	0	1	7,845	1	7,845
10 Years Certain	1	2,038	2	14,018	3	16,056
10 Years Certain & Life	0	0	0	0	0	0
15 Years Certain & Life	0	0	1	721	1	721
20 Years Certain & Life	1	6,686	5	6,092	6	12,777
Total:	17	\$ 24,633	240	\$ 610,351	257	\$ 634,984



Schedule of Retirees Added to And Removed from Rolls
 (Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls	Removed from Rolls	Rolls End of the Year		% Increase in Annual Benefit	Average Annual Benefit
	Number	Number	Number	Annual Benefits		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2015	62	15	1,460	\$ 54,930		\$ 37,624
2016	65	10	1,515	56,650	3.1%	37,393
2017	30	9	1,536	57,253	1.1%	37,274
2018	81	17	1,600	59,626	4.1%	37,266
2019	74	27	1,647	61,404	3.0%	37,282
2020	61	39	1,669	62,432	1.7%	37,407
2021	55	51	1,673	62,700	0.4%	37,477
2022	76	47	1,702	63,780	1.7%	37,473
2023	43	48	1,697	63,294	-0.8%	37,298
2024	41	62	1,676	62,623	-1.1%	37,364

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SECTION 6

ASSESSMENT AND DISCLOSURE OF RISK

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Risks Associated with Measuring the Accrued Liability And Actuarially Determined Contribution

(As Required by ASOP No. 51)

The determination of SPRS's accrued liability and actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. The risk measures illustrated in this section are intended to aid stakeholders in understanding the effects of future experience differing from the assumptions used in performing an actuarial valuation. These risk measures may also help with illustrating the potential volatility in the funded status and actuarially determined contributions that result from differences between actual experience and the expected experience based on the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience (economic and demographic) differing from the assumptions, changes in assumptions due to changing conditions, changes in contribution requirements due to modifications to the funding policy, and changes in the liability and cost due to changes in plan provisions or applicable law. The scope of this actuarial valuation does not include any analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the System's future financial condition include:

- Investment risk – actual investment returns may differ from expected returns;
- Longevity risk – members may live longer or shorter than expected and receive pensions for a time period different than assumed;
- Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future contributions differing from expected;
- Salary and payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liabilities or contributions differing from expected;
- Asset/Liability mismatch – changes in assets may be inconsistent with changes in liabilities, thereby altering the relative difference between the assets and liabilities which may alter the funded status and contribution requirements;
- Contribution risk – actual contributions may differ from expected future contributions (for example, actual contributions not being paid in accordance with the System's funding policy, withdrawal liability assessments or other anticipated payments to the plan are not being paid, or material changes occurring in the anticipated number of covered employees, covered payroll, or another relevant contribution base).

Effects of certain experience can generally be anticipated. For example, if investment returns since the most recent actuarial valuation are less (or more) than the assumed rate of return, then the funded status of the plan can be expected to decrease (or increase) more than anticipated.

The required contributions in this report were established in accordance with applicable Statutes and assumptions adopted by the Board. However, stakeholders should be aware that the scheduled contributions specified in State Code do not necessarily guarantee that the contribution requirements will not increase in a future year.



Employer Risk with Contribution Rates

Currently contributions are collected from the Commonwealth based on the total payroll of employees who are earning benefits in SPRS (i.e. covered payroll). The actuarially determined contribution rate is comprised of two components - the normal cost rate (to pay for the benefits accruing in the next year) and the unfunded amortization (to pay for the benefits accrued by members in previous years). The unfunded amortization is calculated by first determining the dollar amount necessary to pay for the unfunded liability based on SPRS's funding policy, and then by dividing that dollar amount by expected covered payroll to convert that contribution requirement to a percentage of payroll (i.e. a contribution rate).

As the contribution requirement, as a percentage of payroll, increases then there is increased incentive for participating employers to make deliberate business action to reduce their payroll reported to the System in order to reduce their pension cost.

Plan Specific Risk Measures

Risks faced by a pension plan evolve over time. A relatively new plan with virtually no assets and paying few benefits will experience lower investment risk than a mature plan with a significant amount of assets and large number of members receiving benefits. There are a few measures that can assist stakeholders in understanding and comparing the maturity of a plan to other systems, which include:

- Ratio of market value of assets to payroll: The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. If assets are approximately the same as covered payroll, an investment return that is 5% different than assumed would equal 5% of payroll. In another example, if the assets are approximately twice as large as covered payroll, an investment return that is 5% different than assumed would equal 10% of payroll. A ratio that increases over time generally indicates the potential of an increasing volatility in employer contribution rates as a percentage of payroll.
- Ratio of actuarial accrued liability to payroll: The ratio of actuarial accrued liability to payroll can be used as a measure to indicate the potential volatility of contributions due to volatility in the liability experience. For instance, if the actuarial accrued liability is 5 times the size of the covered payroll, then a change in the liability that is 2% different than expected would be a change in magnitude that is 10% of payroll. A ratio that increases over time generally indicates the potential of an increasing volatility in employer contribution rates as a percentage of payroll.
- Percentage of Expected Contributions Actually Received: This measure identifies the percentage difference between the contributions the fund expects to receive during the fiscal year to and actual contributions received by the fund during the fiscal year. A percentage that is less than 100% means that actual contributions the fund received were less than the expected contributions determined by a prior actuarial valuation. On the other hand, a percentage that is greater than 100% means that actual contributions the fund received were more than the expected contributions.



- Ratio of active to retired members: A relatively mature open plan is likely to have close to the same number of actives to retirees resulting in a ratio that is around 1.0. On the other hand, a super-mature plan, or a plan that is closed to new entrants will have more retirees than active members resulting in a ratio below 1.0. As this ratio declines, a larger portion of the total actuarial accrued liability in the System is attributable to retirees. This metric also typically moves in tandem with the liability to payroll metric, which provides an indication of potential contribution volatility.

The following tables provide a summary of these measures for SPRS for the current year and the prior four years so stakeholders can identify how these measures are trending. While ASOP No. 51 requires this disclosure with respect to only the retirement fund, we have included this information for the insurance fund for completeness.

	SPRS									
	Retirement Fund					Insurance Fund				
	June 30,					June 30,				
	2024	2023	2022	2021	2020	2024	2023	2022	2021	2020
Ratio of the market value of assets to total payroll	8.89	8.97	11.52	7.86	6.37	3.73	3.76	4.83	5.45	4.36
Ratio of actuarial accrued liability to payroll	15.18	16.56	22.29	23.23	22.82	3.43	3.70	4.86	6.01	5.98
Ratio of net cash flow to market value of assets	0.5%	-0.2%	47.9%	0.2%	0.5%	-0.6%	-1.9%	-2.2%	-1.9%	-0.5%
Percentage of Expected Contribution Actually Received	110% ¹	142%	107%	104%	103%	109% ¹	137%	107%	102%	101%
Ratio of actives to retirees and beneficiaries	0.52	0.51	0.50	0.46	0.48					

¹ Expected contribution for FYE2024 based on the actuarially determined contribution rate of 99.43% from the June 30, 2021 valuation and expected compensation based on census data from the June 30, 2023 valuation.



Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDRM). The rationale that the ASB cited for the calculation and disclosure of the LDRM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDRM

One of the fundamental financial objectives of the State Police Retirement System (SPRS) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of SPRS is set equal to the **expected return** on each fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the retirement fund, the investment return assumption is 5.25%.

The LDRM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDRM is very dependent upon market interest rates at the time of the LDRM measurement and can vary greatly from year to year. The lower the market interest rates, the higher the LDRM, and vice versa. The LDRM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 5.32% as of June 30, 2024. *Note, since the investment return assumption for the retirement fund is currently less than the 5.32% rate, the LDRM measurement is shown as equal to the valuation liabilities.* This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

In normal economic conditions, the difference between the two measures (Valuation and LDRM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio. However, the LDRM is not a particularly useful measure for SPRS as of June 30, 2024 because of the market rate used as a reference on this date to comply with this disclosure requirement.

Retirement Fund

Valuation Accrued Liabilities	LDRM
\$1,112,310,302	\$1,112,310,302



APPENDIX A

ACTUARIAL ASSUMPTIONS AND METHODS

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Summary of Actuarial Methods and Assumptions

The following presents a summary of the actuarial assumptions and methods used in the valuation of the State Police Retirement System.

In general, the assumptions and methods used in the valuation are based on the actuarial experience study as of June 30, 2022 and adopted by the Board in June 2023.

Investment return rate:

Assumed annual rate of 5.25% net of investment expenses for the retirement fund

Assumed annual rate of 6.50% net of investment expenses for the insurance fund

Price Inflation:

Assumed annual rate of 2.50%

Payroll Growth Assumption (used for amortization of unfunded accrued liabilities):

Assumed annual rate of 0.00%

Rates of Annual Salary Increase:

Assumed rates of annual salary increases are shown below.

Service Years	Annual Rates of Salary Increases		
	Merit & Seniority	Price Inflation & Productivity	Total Increase
0	12.50%	3.55%	16.05%
1	5.00%	3.55%	8.55%
2	4.00%	3.55%	7.55%
3	2.00%	3.55%	5.55%
4	2.00%	3.55%	5.55%
5	2.00%	3.55%	5.55%
6	2.00%	3.55%	5.55%
7	1.00%	3.55%	4.55%
8	1.00%	3.55%	4.55%
9	0.00%	3.55%	3.55%
10 & Over	0.00%	3.55%	3.55%



Retirement rates:

Assumed annual rates of retirement are shown below. Rates are only applicable for members who are eligible for a service retirement.

Service	Members participating Before 9/1/2008 ¹	Members participating on or after 9/1/2008 ²	Members participating after 1/1/2014 ²
20	22.0%		
21	22.0%		
22	22.0%		
23	28.0%		
24	28.0%		
25	28.0%	17.6%	16.0%
26	28.0%	17.6%	16.0%
27	28.0%	17.6%	16.0%
28	44.0%	22.4%	16.0%
29	44.0%	22.4%	16.0%
30	44.0%	22.4%	100.0%
31	58.0%	22.4%	
32	58.0%	22.4%	
33	58.0%	35.2%	
34	58.0%	35.2%	
35	58.0%	35.2%	
36	58.0%	46.4%	
37	58.0%	46.4%	
38	58.0%	46.4%	
39	58.0%	46.4%	
40+	58.0%	46.4%	

¹ The annual rate of service retirement is 100% at age 55.

² The annual rate of service retirement is 100% at age 60.

For members hired after 7/1/2003 and prior to 9/1/2008, the rates shown above are multiplied by 80% if the member is under the age of 55 to reflect the different retiree health insurance benefit.



Disability rates:

An abbreviated table with assumed rates of disability is show below.

Age	Annual Rates of Disability	
	Male	Female
20	0.05%	0.05%
30	0.09%	0.09%
40	0.20%	0.20%
50	0.56%	0.56%
60	1.46%	1.46%

Withdrawal rates (for causes other than disability and retirement):

Assumed annual rates of withdrawal are shown below and include pre-retirement mortality rates as described on the next page.

Service	Annual Rates of Withdrawal
1	15.00%
2	5.30%
3	4.14%
4	3.47%
5	2.98%
6	2.61%
7	2.30%
8	2.05%
9	1.83%
10	1.63%
11	1.45%
12	1.29%
13	1.14%
14	1.01%
15	0.88%
16	0.77%
17	0.66%
18	0.56%
19	0.46%
20	0.37%
21 & Over	0.00%

Mortality Assumption:

Pre-retirement mortality: PUB-2010 Public Safety Mortality, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

Post-retirement mortality (non-disabled): System-specific mortality table based on mortality experience from 2013-2022, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2023.

The following table provides the life expectancy for a non-disabled retiree in future years based on the assumption with full generational projection:

Life Expectancy for an Age 65 Retiree in Years					
Gender	Year of Retirement				
	2025	2030	2035	2040	2045
Male	19.8	20.2	20.6	21.0	21.3
Female	22.4	22.7	23.1	23.4	23.7

Post-retirement mortality (disabled): PUB-2010 Disabled Mortality table, with rates multiplied by 150% for both male and female rates, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

Marital status:

100% of employees are assumed to be married, with the female spouse 3 years younger than the male spouse.

Line of Duty Disability

70% of disabilities are assumed to occur in the line of duty (10% of which are assumed to be “total and permanent”)

Line of Duty Death

25% of deaths are assumed to occur in the line of duty

Dependent Children:

For members who receive a duty-related death or disability benefit, the member is assumed to be survived by two dependent children, each age 6 with payments for 15 years.

Form of Payment:

Members are assumed to elect a life-only annuity at retirement.

Actuarial Cost Method:

Entry Age Normal, Level Percentage of Pay. The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of pay necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

Health Care Age Related Morbidity/Claims Utilization:

To model the impact of aging on the underlying health care costs for Medicare retirees, the valuation relied on the Society of Actuaries' 2013 Study "Health Care Costs – From Birth to Death". Table 4 (Development of Plan Specific Medicare Age Curve) was used to model the impact of aging for ages 65 and over.

Health Care Cost Trend Rates:

Year	Non-Medicare Plans ¹	Medicare Plans ¹	Dollar Contribution ²
2026	7.10%	8.00%	1.50%
2027	7.00%	8.00%	1.50%
2028	6.80%	8.00%	1.50%
2029	6.60%	7.50%	1.50%
2030	6.40%	7.00%	1.50%
2031	6.20%	6.50%	1.50%
2032	6.00%	6.00%	1.50%
2033	5.80%	5.50%	1.50%
2034	5.60%	5.00%	1.50%
2035	5.40%	4.50%	1.50%
2036	5.20%	4.25%	1.50%
2037	5.00%	4.25%	1.50%
2038	4.75%	4.25%	1.50%
2039	4.50%	4.25%	1.50%
2040 & Beyond	4.25%	4.25%	1.50%

¹All increases are assumed to occur on January 1. The 2025 premiums were known at the time of the valuation and were incorporated into the liability measurement

²Applies to members participating on or after July 1, 2003. All increases are assumed to occur on July 1.

Health care trend assumptions are based on the model issued by the Society of Actuaries “Getzen model of Long-Run Medical Cost Trends for the SOA; Thomas E. Getzen, iHEA and Temple University 2014 © Society of Actuaries.

The underlying assumptions used to develop the health care trend rates include:

- A short run period-this is a period for which anticipated health care trend rates are manually set based on local information as well as plan-specific and carrier information.
- Long term real GDP growth – 1.75%
- Long term rate of inflation – 2.30%
- Long term nominal GDP growth – 4.25%
- Year that excess rate converges to 0 – 2036

Health care trend rates are thus the manually set rates for the short run period and rates which decline to an ultimate trend rate which equals the assumed nominal long-term GDP growth rate.



Health Care Participation Assumptions:

- Active members are assumed to elect health coverage at retirement at the following participation rates.

Service at Retirement	Members participating before 7/1/2003*	Members participating after 7/1/2003
Under 10	100%	100%
10-14	100%	100%
15-19	100%	100%
Over 20	100%	100%

* 100% of members with a duty disability or a duty death (in service) benefit are assumed to elect coverage at retirement.

- Future retirees are assumed to have a similar distribution by plan type as the current retirees.

Medicare Plan	Participation Percentage	Non-Medicare Plan	Participation Percentage
Medical Only ¹	5%	LivingWell Basic	4%
Essential Plan	7%	LivingWell CDHP	35%
Premium Plan	88%	LivingWell PPO	61%

¹Includes Mirror Plans

- 100% of deferred vested members participating are assumed to elect health coverage at retirement.
- Deferred vested members are assumed to begin health coverage at age 50 for members participating before January 1, 2014 and at age 60 for members participating on or after January 1, 2014.
- 85% of future retirees, with hazardous service, are assumed to elect spouse health care coverage. 100% of spouses with health care coverage are assumed to continue coverage after the member’s death.



Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): Current fiscal year payroll.
2. Individual salaries used to project benefits: For salary amounts prior to the valuation date, the salary from the last fiscal year is projected backward with the valuation salary scale assumption. For future salaries, the salary from the last fiscal year is projected forward with one year's salary scale.
3. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported salaries represent amounts paid to members during the year ending on the valuation date.
4. Current active members that terminated employment (for reasons other than retirement, disability, or death) are assumed to commence their retirement benefits at first unreduced retirement eligibility. Members are assumed to elect a refund of member contributions if the value of their account balance exceeds the present value of the deferred benefit. Members participating in the Cash Balance plan are assumed to elect to receive a lump sum of their cash balance account if their account balance exceeds the present value of the deferred benefit and the member is not eligible for insurance benefits at termination.
5. The beneficiaries of current active members that die while active are assumed to commence their survivor benefits at the member's first unreduced retirement eligibility. Beneficiaries are assumed to elect a refund of member contributions if the value of the member's account balance exceeds the present value of the survivor benefit. Beneficiaries of active members that die while in the line of duty are assumed to commence their survivor benefits immediately at the death of the member.
6. There will be no recoveries once disabled.
7. Cash Balance Provisions: The cash balance interest crediting rate while a member is an active employee is assumed to equal 5.90%. The interest crediting rate after a member terminates employment is 4%.
8. Cash Balance Credit for Unused Sick Leave (annual and at retirement): It is assumed Tier 3 members will receive an additional 7.5% of pay employer pay credit each year due to the conversion of unused sick leave after the member attains five years of service. It is also assumed the Tier 3 members will have fund 480 hours of unused sick leave to convert to pay credit at the time of their retirement. It is assumed that the General Assembly will fund this benefit in all future years.
9. Decrement timing: Decrements of all types are assumed to occur mid-year. Decrement rates are used as described in this report, without adjustment for multiple decrement table effects.
10. Service: All members are assumed to accrue 1 year of benefit and eligibility service each year.
11. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.



12. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
13. Current Inactive Population (Retirement Fund): All non-vested members are assumed to take an immediate refund of member contributions. Vested members are assumed to elect an immediate refund of member contributions at the valuation date if the value of their account balance exceeds the present value of their deferred benefit. Members hired prior to September 1, 2008 are assumed to retire at age 55 and members hired on or after September 1, 2008 are assumed to retire at age 60.
14. The additional \$5 per year of service insurance dollar subsidy effective January 1, 2023 is assumed to be paid in all applicable years.

Participant Data

Participant data was supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active and terminated members included date of birth, gender, date of participation, benefit tier indicator, service with the current system, total vesting service, salary, employee contribution account balances, and employer pay credits for members participating in the cash balance plan. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

Changes in assumptions since the prior valuation:

In conjunction with the review of healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is reviewed on an annual basis. The trend assumption was increased as a result of our review.

Development of Baseline Claims Cost

For non-Medicare retirees, the initial per capita costs were based on the plan premiums effective January 1, 2025, and are used for both current and future retirees. An inherent assumption in this methodology is that the projected future retirees will have a similar distribution by plan type as the current retirees. The spouse/dependent premium of \$1,104.08 for non-Medicare retirees is based on a blending of Family and Couple premiums for the current retirees that have over 4 years of hazardous service. The fully-insured premiums paid to the Kentucky Employees’ Health Plan (KEHP) are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit rate subsidy for the non-Medicare eligible retirees. Actuarial Standard of Practice No. 6 (ASOP No. 6) requires aging subsidies (or implicit rate subsidies) to be recognized. However, the health insurance trusts are only used to reimburse KEHP for the employer’s portion of the blended premiums. Said another way, the trusts are not used to fund the difference between the underlying retiree claims and the blended KEHP premiums. As a result, the retiree health care liabilities developed in this report for the non-Medicare retirees are based solely on the premiums charged by KEHP, without any age-adjustment. GASB Statements No. 74 and No. 75 prohibit such a deviation from ASOP No. 6. The liabilities developed in this report are solely for the purpose of funding the benefits paid by the health insurance funds and are not appropriate for financial statement disclosures required by GASB. GRS provides separate GASB reports which include the liabilities associated with the implicit rate subsidy.

2025 MONTHLY COSTS FOR THOSE NOT ELIGIBLE FOR MEDICARE		
AGE	MEMBER	SPOUSE/DEPENDENTS
<65	\$939.54	\$1,104.08

For Medicare retirees, the initial per capita costs were estimated based on the plan premiums effective January 1, 2025, and are used for both current and future retirees. An inherent assumption in this methodology is that the projected future retirees will have a similar distribution by plan type as the current retirees. Age graded and sex distinct premiums are utilized for retirees over the age of 65. These costs are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific costs more accurately reflect the health care utilization and cost at that age.

2025 MONTHLY COSTS FOR THOSE ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE
65	\$ 121.05	\$ 114.17
75	141.62	138.19
85	149.75	151.51

Appendix B of the report provides a full schedule of premiums.



The percentage of the insurance premium paid by SPRS is calculated based on the Medical Only premium amounts. The majority of SPRS Medicare retirees are covered under the Premium Medicare Advantage plan. Because the premiums for the Medical Only plan are higher than the Premium Medical Advantage plan, retirees with less than 20 years of service pay a smaller contribution toward their insurance coverage. To model the impact of the employer contribution being based on the Medical Only Plan rather than the plan selected by the retiree, the employer share for retirees qualifying for percentage-based subsidies was blended to reflect retiree plan selection.

The above assumption implicitly implies that the Medical Only plan premiums will increase at a rate of 4.80% as of January 1, 2025, decreasing over 6 years to an ultimate trend rate of 4.25%, and that the remaining Medicare plan premiums will increase at the Medicare trend assumption used in the actuarial valuation.

Blake Orth is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.



Blake Orth, FSA, EA, MAAA

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APPENDIX B

BENEFIT PROVISIONS

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Summary of Benefit Provisions for State Police Retirement System (SPRS)

SPRS Employees

Retirement: Tier 1, Participation before 9/1/2008

Normal Retirement Eligibility	Age 55 with at least 1 month of service credit; or Any age with at least 20 years of service
Benefit Amount	<p>If a member has at least 60 months of service, the monthly benefit is 2.50% times final average compensation times years of service.</p> <p>If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member’s contributions with interest.</p> <p>Final average compensation is based on the member’s highest 3 years of compensation.</p>
Early Retirement Eligibility	Age 50 with at least 15 years of service
Early Retirement Reduction	Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member’s retirement eligibility precedes the member’s normal retirement date.



SPRS Employees (continued)

Retirement: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

Normal Retirement Eligibility Age 60 with at least 5 years of service; or
Any age with at least 25 years of service

Benefit Amount The monthly benefit is equal to the applicable benefit multiplier times final average compensation times years of service.

Years of Service	Benefit Multiplier
10 or less	1.30%
10-20	1.50%
20-25	2.25%
Greater than 25	2.50%

Final compensation is based on the member’s highest 3 years of compensation.

Early Retirement Eligibility Age 50 with at least 15 years of service

Early Retirement Reduction Normal Retirement benefit reduced 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member’s retirement date precedes the member’s normal retirement eligibility.

Retirement: Tier 3, Participation on or after 1/1/2014

Normal Retirement Eligibility Age 60 with at least 5 years of service; or
Any age with at least 25 years of service

Benefit Amount Each year that the member is active, a 7.50% employer pay credit and the employee’s 8.00% contribution will be credited to each member’s hypothetical cash balance account. The hypothetical account will earn interest at a minimum rate of 4%, annually. If the System’s geometric average net investment return for the previous five years exceeds 4%, then the hypothetical account will be credited with an additional amount of interest in that year equal to 75% of the amount of the return which exceeds 4%. All interest credits will be applied to the hypothetical account balance on June 30 based on the account balance as of June 30 of the previous year.

Each June 30 (beginning June 30, 2023), members with at least five years of service credit will receive an employer pay credit based on their unused sick leave in excess of 480 hours. Members will also receive an employer pay credit based on their balance of unused sick leave upon termination of employment.

At retirement, the member’s hypothetical account balance may be converted into an annuity based on an actuarial factor.

Early Retirement Eligibility N/A

SPRS Employees (continued)

Deferred Vested Benefit: Tier 1, Participation before 9/1/2008

Eligibility	At least 1 month of service credit
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit: Tier 2, Participation on or after 9/1/2008 but before 1/1/2014

Eligibility	5 years of service
Benefit Amount	Normal retirement benefit deferred to normal retirement age, or a reduced retirement benefit at an early retirement age

Deferred Vested Benefit Tier 3, Participation on or after 1/1/2014

Eligibility	5 years of service
Benefit Amount	At termination of employment, members may choose to leave their account balance with the System and retire once they are eligible. The hypothetical account balance will earn 4% annual interest after termination. Members may also choose to withdrawal their entire accumulated balance. If a member does not have 5 years of service at termination, the member is eligible to receive a partial refund of their account balance. This refund includes the member’s contributions with interest.

Disability Retirement: Participation before 8/1/2004

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	Disability benefits are calculated in the same manner as the normal retirement benefit with years of service and final compensation being determined as of the date of disability, except that if the member has less than 20 years of service at disability, service credit shall be added to the person’s total service beginning with the last date of paid employment and continuing to the member’s 55 th birthday, with total service not exceeding 20 years. Total service credit added shall not be greater than the member’s actual service at disability.

SPRS Employees (continued)

Disability Retirement: Participation on or after 8/1/2004 but before 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 25% of the member’s final monthly rate of pay or the member’s normal retirement benefit (without reduction for early retirement) with years and final compensation being determined as of the date of disability.

Disability Retirement: Participation on or after 1/1/2014

Eligibility	60 months of service (requirement is waived if line of duty disability)
Disability Benefit	The higher of 25% of the member’s final monthly rate of pay or the member’s retirement benefit calculated at the member’s normal retirement date.

Line of Duty Disability Benefit

Disability Benefit	If the disability is a direct result of an act in the line of duty, the benefit shall not be less than 25% of the member’s final monthly final rate of pay. If the disability is deemed to be Total and Permanent, then this benefit shall not be less than 75% of the member’s monthly average pay.
Child Benefit	Additionally, each eligible dependent child will receive 10% of the member’s monthly average pay up to a maximum of 40%. Member and dependent payment shall not exceed 100% of member’s monthly average pay.

Pre-Retirement Death Benefit

Eligibility	Eligible for early or normal retirement; or Under age 55 with at least 60 months of service and actively working at the time of death; or At least 144 months of service, if no longer actively working
Spouse Benefit	The member’s retirement benefit calculated in the same manner as if the member had retired on the day of the member’s death and elected a 100% joint and survivor benefit. The benefit is actuarially reduced if the member dies prior to their normal retirement age.

SPRS Employees (continued)

Pre-Retirement Death Benefit (Death in the Line of Duty)

Eligibility	One month of service credit
Spouse Benefit	A \$10,000 lump sum payment plus a monthly payment of 75% of the deceased member’s final monthly average pay. Each dependent child will receive 10% of the final monthly average pay (not to exceed a total child benefit of 25% while the spouse is alive). A spouse may also elect the non-line of duty death benefit.
Non-Spouse Benefit	If the beneficiary is only one person who is a dependent receiving at least 50% of his or her support from the member, the beneficiary may elect a lump sum payment of \$10,000.
Child Benefit	In the event there is no surviving spouse, the benefit is 50% of final monthly average pay for one child, 65% of final average pay for two children, or 75% of final average pay for three or more eligible children.

Post-Retirement Death Benefit

Eligibility	48 months of service, and in receipt of retirement benefits
Death Benefit	A \$5,000 lump sum payment

Member Contributions

Tier 1, Participation before 9/1/2008	8% of creditable compensation. Members who do not receive a retirement benefit are entitled to a full refund of contributions with interest. The annual interest rate is set by the Board, not less than 2.0%.
Tier 2, Participation on or after 9/1/2008 but before 1/1/2014	8% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest. The annual interest rate is 2.5%.
Tier 3, Participation after 1/1/2014	8% of creditable compensation plus 1% of creditable compensation, which is deposited into the 401(h) account and is not refundable. Members who do not receive a retirement benefit are entitled to a refund of non-401(h) contributions with interest.

Changes in Retirement Benefits since the Prior Valuation

There have been no changes in benefits since the prior valuation.

Summary of Main Retiree Insurance Benefit Provisions

Insurance: Participation began before 7/1/2003

Benefit Eligibility Recipient of a retirement allowance

Benefit Amount

Non-Hazardous Service	Percentage of Member Premium Paid by Retirement System	Hazardous Service	Percentage of Member & Dependent Premium Paid by Retirement System
Less than 4 years	0%	Less than 4 years	0%
4 – 9 years	25%	4 – 9 years	25%
10 – 14 years	50%	10 – 14 years	50%
15 – 19 years	75%	15 – 19 years	75%
20 or more years	100%	20 or more years	100%

The percentage paid by the retirement system is applied to the ‘contribution’ plan selected by the Board.

- Duty Disability Retirement** If disability was a result of injuries sustained while in the line of duty, the member receives 100% of the maximum contribution for the member and dependents.
- Duty Death in Service** If an active employee’s death was a result of injuries sustained while in the line of duty, the member’s spouse and children receive a fully subsidized health insurance benefit.
- Non-Duty Death in Service** If the surviving spouses is in receipt of a pension allowance, he or she is eligible for continued health coverage. The percentage of the premium paid for by the retirement system is based on the member’s years of hazardous service at the time of death.
- Surviving Spouse of a Retiree** A surviving spouse of a retiree, who is in receipt of a pension allowance, will receive a premium subsidy based on the member’s years of hazardous service.
- Hazardous employees who retired prior to August 1, 1998** System’s contribution for spouse and dependents is based on total service.

Insurance: Participation began on or after 7/1/2003

Benefit Eligibility

Recipient of a retirement allowance with at least 120 months of service at retirement (180 months if participation began on or after 9/1/2008)

Non-Hazardous Subsidy

Monthly contribution of \$10 for each year of earned non-hazardous service. The monthly contribution is increased by 1.5% each July 1. As of July 1, 2024, the Non-Hazardous monthly contribution was \$14.63/year of service. Upon the retiree's death, the surviving spouse may continue coverage (if in receipt of a retirement allowance) but will be 100% responsible for the premiums.

Effective January 1, 2023, members will receive an insurance dollar contribution of \$5 for every year of non-hazardous service a member attains over 27 years. This additional dollar contribution does not increase by 1.5% annually and is only payable for non-Medicare retirees. Also, it is only payable when the applicable insurance fund is at least 90% funded on an actuarial value of asset basis as of the last actuarial valuation.

Hazardous Subsidy

Monthly contribution of \$15 for each year of earned hazardous service. The monthly contribution is increased by 1.5% each July 1. As of July 1, 2024, the hazardous monthly contribution was \$21.94/year of service. Upon the retiree's death, the surviving spouse of a hazardous duty member will receive a monthly contribution of \$10 (\$14.63 as of July 1, 2024) for each year of hazardous service.

Effective January 1, 2023, members will receive an insurance dollar contribution of \$5 for every year of hazardous service a Tier 1 member attains over 20 years and a Tier 2 member attains over 25 years. This additional dollar contribution does not increase by 1.5% annually and is only payable for non-Medicare retirees. Also, it is only payable when the applicable insurance fund is at least 90% funded on an actuarial value of asset basis as of the last actuarial valuation.

Duty Disability Retirement

If disability was a result of injuries sustained while in the line of duty or was duty-related, the member receives a benefit based on at least 20 years of service. This benefit is provided to members in the Non-Hazardous and Hazardous plans alike.

If the disability is deemed to be Total and Permanent, the insurance premium for the member, the member's spouse, and the member's dependent children shall also be paid in full by the System. For non-hazardous members to be eligible for this benefit, they must be working in a position that could be certified as a hazardous position.



Duty Death in Service

If an active employee's death was a result of injuries sustained while in the line of duty, the member's spouse and children receive a fully subsidized health insurance benefit.

Non-Duty Death in Service

If the surviving spouse is in receipt of a pension allowance, he or she is eligible for continued health coverage. The percentage of the premium paid for by the retirement system is based on the member's years of hazardous service at the time of death.

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Monthly Health Plan Premiums – Effective January 1, 2025

Plan Option	Non-Medicare Plan Options				
	Single	Parent Plus	Couple	Family	Family X-Ref
LivingWell PPO	\$949.04	\$1,320.40	\$1,981.62	\$2,185.78	\$1,126.28
LivingWell CDHP	930.76	1,269.28	1,866.24	2,078.08	1,068.66
LivingWell Basic	901.04	1,234.80	1,863.04	2,069.88	1,057.40
LivingWell HDHP	835.42	1,144.86	1,727.36	1,919.14	980.38

Medicare Plan Options	
Medical Only Plan	\$191.95
Essential Mirror Plan	202.69
Premium Mirror Plan	341.59
Essential Medical Advantage Plan	0.00
Premium Medical Advantage Plan	144.91

Contribution plan selected by the Board was the LivingWell PPO plan option for non-Medicare retirees.
 Contribution plan selected by the Board was the Medical Only plan for the Medicare retirees.

Dollar Contribution Amount for Participation on or after 7/1/2003

Monthly contribution amounts per year of service as of July 1, 2024.

Non-Hazardous Service	Hazardous Service
\$14.63	\$21.94

Note: Non-Hazardous benefits are applicable to SPRS members with prior service in a Non-Hazardous System.

Changes in Health Insurance Benefits since the Prior Valuation

None.



APPENDIX C

GLOSSARY

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Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.



Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations that provide the financial information of the plan, such as the funded ratio, unfunded actuarial accrued liability and the ADC.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Actuarially Determined Contribution (ADC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and the Amortization Payment.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay



method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: The portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is specified in State statute. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on a statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 67 and GASB 68: Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting and reporting rules for public retirement systems and the employers that sponsor, participate in, or contribute to them. Statement No. 67 sets the accounting rules for the financial reporting of the retirement systems, while Statement No. 68 sets the rules for the employers that sponsor, participate in, or contribute to public retirement systems.



Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but may not decrease by exactly one year in the subsequent year's actuarial valuation. For instance, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

DRAFT



October 30, 2024

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Re: Sensitivity Analysis Based on Results of the June 30, 2024 Actuarial Valuation – SPRS

Dear Members of the Board:

Per Kentucky State Statute 61.670, we are providing this supplemental information regarding the sensitivity of the valuation results to changes in some of the economic assumptions. Specifically, the attached tables show the impact for the **State Police Retirement System (SPRS)** due to changes in the investment return assumption, the inflation rate assumption, and the payroll growth rate assumption.

Background

Investment Assumption

The investment return assumption is used to discount future expected benefit payments to the valuation date in order to determine the liabilities of the plans. The lower the investment return assumption, the less the benefit payments are discounted and the higher the valuation liability. The current investment return assumption is 5.25% for the retirement fund and 6.50% for the insurance fund. The sensitivity analysis shows the financial impact of a 1.00% increase and a 1.00% decrease in the investment return assumption. For purposes of this sensitivity analysis, the inflation assumption and payroll growth assumption remain unchanged from the valuation assumption.

Inflation Assumption

The inflation assumption underlies most of the other economic assumptions, including the investment return, salary increases, and payroll growth rate. This is a macroeconomic assumption and as such the same assumption is used in the valuation of each of the retirement systems. The current assumption is 2.50% for all funds. The sensitivity analysis shows the financial impact of a 0.25% increase and a 0.25% decrease in the inflation assumption. Note, the change in the inflation assumption results in a corresponding change in the investment return assumption, the individual salary increase assumption for projecting members' benefit amounts, the payroll growth rate assumption, and the healthcare trend assumption that is used in the valuation of the health insurance funds.

Board of Trustees
October 30, 2024
Page 2

Payroll Growth Assumption

Participating employers of SPRS make contributions to the system as a percentage of covered payroll. Therefore, as payroll changes over time these amortization payments will also change. If actual covered payroll increases at a rate that is less than assumed, then the retirement system receives fewer contribution dollars than expected to finance the unfunded liability, which means the contribution rates in future years will be required to increase in order to finance the unfunded liability over the same time period. The current payroll growth assumption is 0.00% for both the retirement and insurance funds. The analysis shows the impact of a 1.00% increase and a 1.00% decrease in the payroll growth assumption.

Please note that the payroll growth assumption does not impact the valuation liabilities, unfunded liability, or funded status of the system. Rather, this assumption only impacts the amortization rate for financing the existing unfunded actuarial accrued liability and the actuarially determined employer contribution. For purposes of this analysis, the investment return assumption and the inflation assumption are held at their current valuation assumptions.

Certification

The information provided in this letter compliments the information provided in the June 30, 2024 actuarial valuation report. Please refer to the June 30, 2024 actuarial valuation report for additional discussion of the actuarial valuation, including the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rate, and funding periods. The actuarial calculations are intended to provide information for rational decision making. The purpose of this information is to provide stakeholders the financial sensitivity of the unfunded liability and contribution rates to changes in the inflation, assumed rate of return, and payroll growth assumption.

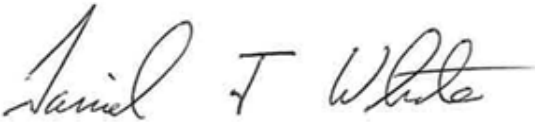


Board of Trustees
October 30, 2024
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To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

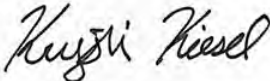
Gabriel, Roeder, Smith & Company



Daniel J. White, FSA, EA, MAAA
Senior Consultant



Janie Shaw, ASA, EA, MAAA
Consultant



Krysti Kiesel, ASA, MAAA
Consultant

DRAFT



Sensitivity Analysis - Discount Rate
(Dollar amounts expressed in thousands)

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	4.25%	5.25%	6.25%
Discount Rate - Insurance	5.50%	6.50%	7.50%
Retirement			
Actuarial Accrued Liability	\$ 1,253,211	\$ 1,112,310	\$ 996,309
Actuarial Value of Assets	631,186	631,186	631,186
Unfunded Actuarial Accrued Liability	622,025	481,124	365,123
Funded Ratio	50.4%	56.7%	63.4%
Actuarially Determined Contribution Rate	77.13%	57.91%	41.39%
Insurance			
Actuarial Accrued Liability	\$ 278,397	\$ 251,178	\$ 228,407
Actuarial Value of Assets	263,369	263,369	263,369
Unfunded Actuarial Accrued Liability	15,028	(12,191)	(34,962)
Funded Ratio	94.6%	104.9%	115.3%
Actuarially Determined Contribution Rate	6.30%	1.46%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,531,608	\$ 1,363,488	\$ 1,224,716
Actuarial Value of Assets	894,555	894,555	894,555
Unfunded Actuarial Accrued Liability	637,053	468,933	330,161
Funded Ratio	58.4%	65.6%	73.0%
Actuarially Determined Contribution Rate	83.43%	59.37%	41.39%

Sensitivity Analysis - Inflation Rate

(Dollar amounts expressed in thousands)

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.25%	2.50%	2.75%
Discount Rate - Retirement	5.00%	5.25%	5.50%
Discount Rate - Insurance	6.25%	6.50%	6.75%
Retirement			
Actuarial Accrued Liability	\$ 1,143,769	\$ 1,112,310	\$ 1,082,362
Actuarial Value of Assets	631,186	631,186	631,186
Unfunded Actuarial Accrued Liability	512,583	481,124	451,176
Funded Ratio	55.2%	56.7%	58.3%
Actuarially Determined Contribution Rate	62.95%	57.91%	53.13%
Insurance			
Actuarial Accrued Liability	\$ 253,100	\$ 251,178	\$ 249,359
Actuarial Value of Assets	263,369	263,369	263,369
Unfunded Actuarial Accrued Liability	(10,269)	(12,191)	(14,010)
Funded Ratio	104.1%	104.9%	105.6%
Actuarially Determined Contribution Rate	1.90%	1.46%	1.03%
Combined			
Actuarial Accrued Liability	\$ 1,396,869	\$ 1,363,488	\$ 1,331,721
Actuarial Value of Assets	894,555	894,555	894,555
Unfunded Actuarial Accrued Liability	502,314	468,933	437,166
Funded Ratio	64.0%	65.6%	67.2%
Actuarially Determined Contribution Rate	64.85%	59.37%	54.16%



Sensitivity Analysis - Payroll Growth
(Dollar amounts expressed in thousands)

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.50%	2.50%	2.50%
Discount Rate - Retirement	5.25%	5.25%	5.25%
Discount Rate - Insurance	6.50%	6.50%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 1,112,310	\$ 1,112,310	\$ 1,112,310
Actuarial Value of Assets	<u>631,186</u>	<u>631,186</u>	<u>631,186</u>
Unfunded Actuarial Accrued Liability	481,124	481,124	481,124
Funded Ratio	56.7%	56.7%	56.7%
Actuarially Determined Contribution Rate	62.69%	57.91%	53.46%
Insurance			
Actuarial Accrued Liability	\$ 251,178	\$ 251,178	\$ 251,178
Actuarial Value of Assets	<u>263,369</u>	<u>263,369</u>	<u>263,369</u>
Unfunded Actuarial Accrued Liability	(12,191)	(12,191)	(12,191)
Funded Ratio	104.9%	104.9%	104.9%
Actuarially Determined Contribution Rate	1.40%	1.46%	1.52%
Combined			
Actuarial Accrued Liability	\$ 1,363,488	\$ 1,363,488	\$ 1,363,488
Actuarial Value of Assets	<u>894,555</u>	<u>894,555</u>	<u>894,555</u>
Unfunded Actuarial Accrued Liability	468,933	468,933	468,933
Funded Ratio	65.6%	65.6%	65.6%
Actuarially Determined Contribution Rate	64.09%	59.37%	54.98%



REPORT OF INDEPENDENT AUDITORS

To the Members
Kentucky Retirement Systems
Frankfort, Kentucky

Report on the Audit of Financial Statements

Opinion

We have audited the accompanying financial statements of Kentucky Retirement Systems (KRS), a component unit of the Commonwealth of Kentucky, as of and for the year ended June 30, 2024, and the related notes to the financial statements, which collectively comprise KRS's financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of KRS, as of June 30, 2024, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of KRS and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about KRS's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that

REPORT OF INDEPENDENT AUDITORS (Continued)

includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of KRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about KRS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages XX through XX, and the defined benefit pension plan and other post-employment benefit plan supplemental schedules on pages XX through XX, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic

REPORT OF INDEPENDENT AUDITORS (Continued)

financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinion on the financial statements that collectively comprise KRS's basic financial statements. The accompanying schedules of administrative expense, direct investment expenses, and professional consultant fees are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules of administrative expense, direct investment expenses, and professional consultant fees are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated DATE, on our consideration of KRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of KRS's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KRS's internal control over financial reporting and compliance.

Blue & Co., LLC

Lexington, Kentucky

DATE

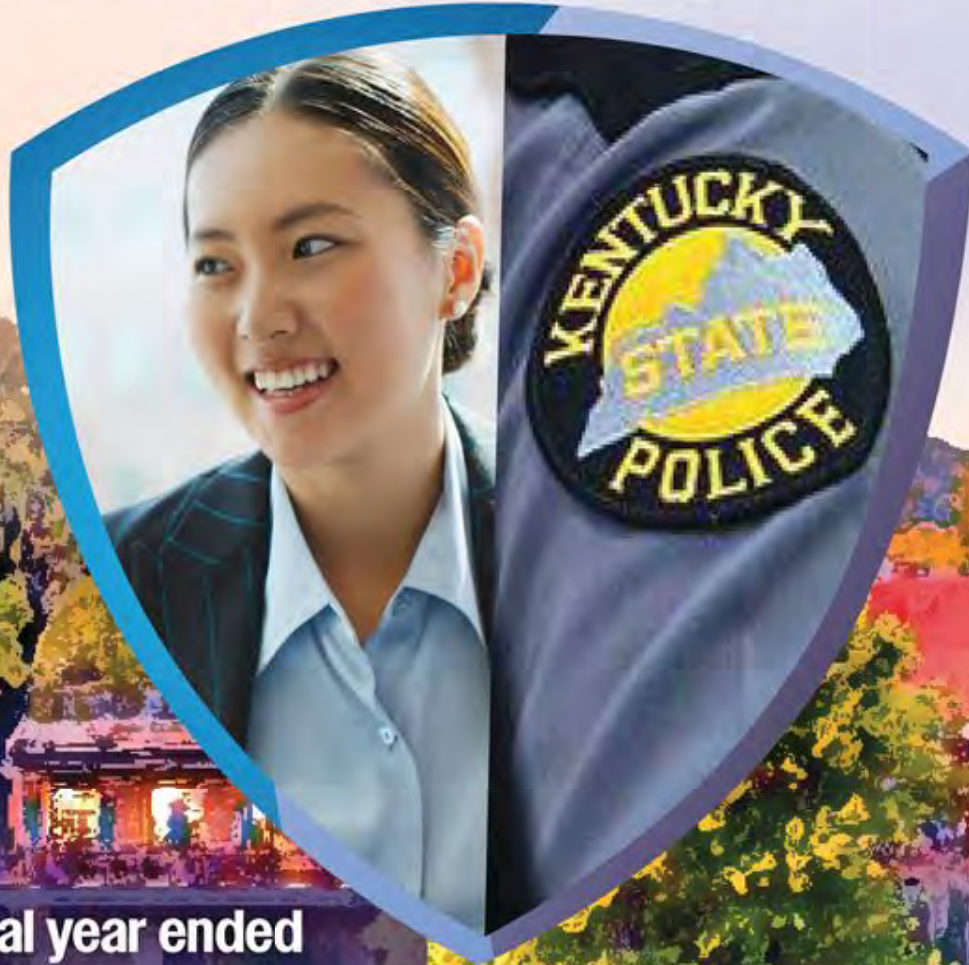


KRS

Kentucky Retirement Systems (KRS)

Comprising the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS), each a component unit and pension trust fund of the Commonwealth of Kentucky.

Annual Comprehensive *Financial Report*



For the fiscal year ended
June 30

2024

*Prepared through the joint efforts
of KPPA's team members.*

Available online at kyret.ky.gov

Photo, front cover: Overview of Frankfort, KY, dry brush stylized.

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Management's Discussion & Analysis (Unaudited)

INTRODUCTION

Management's Discussion and Analysis (MD&A) provides insight into the financial performance of KRS for the Fiscal Year ended June 30, 2024. It is meant to be read in the context of the accompanying Letter of Transmittal in the Introduction, the Basic Financial Statements and the Notes to those statements, the Required Supplementary Information (RSI), and additional material following this section. Together, this information provides a comprehensive picture of KRS' financial position.

KRS is comprised of the Kentucky Employee Retirement System (KERS), and the State Police Retirement System (SPRS). KERS includes hazardous and nonhazardous defined benefit pension and OPEB (hospital and medical insurance benefits) plans for Kentucky state employees. SPRS is a single employer system providing benefits to Kentucky State Police troopers and other employees. Governance of both KERS and SPRS is vested with the nine-member KRS board of Trustees. Daily system activities, including investment management, benefits counseling, legal services, accounting, and payroll functions, are performed by a staff of professional employees of KPPA, which is the special-purpose government responsible for the administration of KRS.

FINANCIAL HIGHLIGHTS AND ANALYSIS

The following are the Condensed Comparative Statements of Fiduciary Net Position and Condensed Comparative Statements of Changes in Fiduciary Net Position of KRS for the fiscal years ended June 30, 2024, and 2023:

Condensed Summary of Fiduciary Net Position				
As of June 30 (\$ in Thousands)				
	KRS TOTAL	KRS TOTAL		
	2024	2023	CHANGE	% CHANGE
ASSETS				
Cash, Short-term Investments, and Receivables	\$614,898	\$1,256,199	\$(641,301)	(51.05%)
Investments, at fair value	8,321,759	6,412,672	1,909,087	29.77%
TOTAL ASSETS	8,936,657	7,668,871	1,267,786	16.53%
TOTAL LIABILITIES				
	323,848	237,664	86,184	36.26%
FIDUCIARY NET POSITION	\$8,612,809	\$7,431,207	\$1,181,602	15.90%

KRS DRAFT RAN 11-13-2024

Management's Discussion & Analysis (Unaudited)

Condensed Summary of Changes in Fiduciary Net Position As of June 30 (\$ in Thousands)				
	KRS TOTAL 2024	KRS TOTAL 2023	CHANGE	% CHANGE
ADDITIONS				
Member Contributions	\$136,995	\$117,351	\$19,644	(16.74%)
Employer Contributions	368,848	319,600	49,247	15.41%
Actuarially Accrued Liability Contributions (AALC)	987,445	986,220	1,226	0.12%
General Fund Appropriations	240,000	240,000	-	0.00%
Total Contributions	1,733,288	1,663,171	70,117	4.22%
Net Investment Income (Loss)	776,200	540,790	235,411	43.53%
Other Additions	\$9,485	\$5,448	\$4,037	74.10%
TOTAL ADDITIONS	\$2,518,973	\$2,209,409	\$309,565	14.01%
DEDUCTIONS				
Benefits and Refunds	1,192,522	1,182,198	10,324	0.87%
Other Deductions	144,849	156,348	(11,497)	(7.35%)
TOTAL DEDUCTIONS	1,337,371	1,338,546	(1,173)	(0.09%)
NET INCREASE (DECREASE)	\$1,181,602	\$870,863	\$310,738	35.68%
FIDUCIARY NET POSITION				
Beginning of the Period	\$7,431,207	\$6,560,345	\$870,863	13.27%
End of Period	\$8,612,809	\$7,431,208	\$1,181,601	15.90%

Management's Discussion & Analysis (Unaudited)

Fiduciary Net Position

The Fiduciary Net Position of KRS was \$7,431.2 million at the beginning of the fiscal year and increased by 15.90% to \$8,612.8 million as of June 30, 2024. The \$1,181.6 million increase is primarily attributable to the appreciation of the fair value of investments, and continued AALC payments and general fund appropriations.

Contributions

Total contributions reported for fiscal year 2024 were \$1,733.3 million compared to \$1,663.2 million in fiscal year 2023, an increase of 4.22% or \$70.1 million. This increase was driven by an increase in covered payroll for all plans, as the employer contribution rates remained constant from year to year.

Investments

The KRS pension and insurance portfolios investment returns averaged 10.6% for the fiscal year ended June 30, 2024, compared to 8.8% for the fiscal year ended June 30, 2023. This was due to the Core Fixed Income, Specialty Credit, and Real Return portfolios significantly outpacing their benchmarks, and sizeable returns in the Public Equity portfolio. See investment results beginning on page 98 of the investment section.

The fair value of investments, as of June 30, 2024, were \$8,322 million, an increase of \$1,909 million from the prior year, and net investment income was \$776 million for the current year, compared to \$540 million for the prior year.

Investment returns are reported net of fees and investment expenses, including carried interests. Investment fees and expenses totaled \$66 million for fiscal year 2024 compared to \$48 million in the prior fiscal year.

(\$ in millions)	1-year return		Fair Value of Investments			Investment fees & expenses			Net Investment Income		
	2024	2023	2024	2023	change	2024	2023	change	2024	2023	change
PENSION											
KERS											
Nonhazardous	9.50%	6.70%	\$4,100	\$2,964	\$1,136	\$29	\$20	\$9	\$356	\$220	\$136
KERS Hazardous	11.10%	9.50%	1,008	830	178	9	7	2	102	77	25
SPRS	9.60%	7.60%	635	469	166	4	3	1	57	41	16
INSURANCE											
KERS											
Nonhazardous	11.10%	9.90%	1,649	1,311	338	14	11	3	167	128	39
KERS Hazardous	11.20%	9.30%	662	599	63	7	5	2	67	53	14
SPRS	11.00%	9.50%	268	240	28	3	2	1	27	21	6
AVERAGE / TOTAL	10.60%	8.80%	\$8,322	\$6,413	\$1,909	\$66	\$48	\$18	\$776	\$540	\$236

Management's Discussion & Analysis (Unaudited)

Asset allocation is the primary driver of long-term investment performance and is designed to achieve an optimal long-term asset mix. The investment policy statement (IPS) of the KRS board has established the following asset allocation guidelines. See also the investment overview beginning on page 94 if the investment section.

Asset Class	KERS Nonhazardous Pension & SPRS Pension funds			KERS Hazardous Pension & all KRS Insurance Funds		
	Target	Minimum	Maximum	Target	Minimum	Maximum
Public Equity	30.00%	20.00%	40.00%	40.00%	2.00%	50.00%
Private Equity	6.00%	3.00%	9.00%	8.00%	4.00%	12.00%
Core Fixed Income	27.00%	22.00%	35.00%	10.00%	8.00%	15.00%
Specialty Credit	20.00%	15.00%	25.00%	25.00%	20.00%	30.00%
Cash	2.00%	0.00%	5.00%	2.00%	0.00%	5.00%
Real Estate	5.00%	3.00%	7.00%	7.00%	4.00%	10.00%
Real Return	10.00%	7.00%	13.00%	8.00%	5.00%	11.00%
	100.00%			100.00%		

Deductions

Benefits and refunds paid for fiscal year 2024 totaled \$1,192.5 million compared to \$1,182.2 million in fiscal year 2023, a 0.87% increase, due to the slight increase in retired membership of the systems.

ACTUARIAL HIGHLIGHTS

The actuarial accrued liability (AAL) is the measure of the cost of benefits that have been earned to date, but not yet paid, and is calculated using the entry age normal cost method (EANC) as required by state statute. The difference in value between the AAL and the actuarial value of assets is defined as the unfunded actuarial accrued liability (UAAL).

The UAAL for KRS, from the June 30, 2024, actuarial valuation, is \$13,564 million for fiscal year ended June 30, 2024, compared to \$13,813 million for fiscal year ended June 30, 2023, a decrease of \$249 million. The UAAL for the Pension Plans decreased by \$261 million due to in the increase in the fair value of the assets related to favorable market conditions, an increase in covered payroll, and the \$240 million in general fund appropriation during fiscal year 2024. The UAAL for the Insurance Plans increased by \$12 million, due to static contribution rates for the insurance funds for fiscal year 2024.

Management's Discussion & Analysis (Unaudited)

Schedule of Unfunded Actuarial Accrued Liability (UAAL)												
As of June 30 (\$ in millions)												
	KERS Nonhazardous				KERS Hazardous				SPRS			
	Pension		Insurance		Pension		Insurance		Pension		Insurance	
	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
Actuarial Accrued Liability (AAL)	\$16,648	\$16,304	\$2,095	\$1,877	\$1,443	\$1,363	\$380	\$364	\$1,112	\$1,092	\$251	\$244
Actuarial Value of Assets	4,122	3,552	1,712	1,533	985	891	652	620	631	590	263	245
Unfunded Actuarial Accrued Liability (UAAL)	\$12,526	\$12,752	\$383	\$344	\$458	\$472	(\$272)	(\$256)	\$481	\$502	(\$12)	(\$1)
Funded Ratio	24.76%	21.79%	81.72%	81.67%	68.26%	65.37%	171.58%	170.33%	56.74%	54.03%	104.78%	100.41%

Please refer to Note I and the RSI of the Financial Section, as well as the Actuarial Section for more analysis of the funding status, asset values, actuarial assumptions, and actuarially determined employer contributions.

INFORMATION REQUESTS

This financial report is designed to provide a general overview of KRS' financial position. Questions concerning any of the information provided in this report or requests for additional information should be directed to:

ATTN: Director of Accounting

Kentucky Public Pensions Authority

1260 Louisville Road

Frankfort, KY 40601

KRS DRAFT RAN 11-13-2024

Management's Discussion & Analysis (Unaudited)

Fiduciary Net Position						
As of June 30 (\$ in Thousands)						
	Pension Plans		Insurance Plans		Total	
	2024	2023	2024	2023	2024	2023
Cash & Invest.	\$6,085,818	\$5,135,319	\$2,677,836	\$2,360,594	\$8,763,654	\$7,495,913
Receivables	141,958	140,618	31,045	32,340	173,003	172,958
Capital Assets	-	-	-	-	-	-
Total Assets	6,227,776	5,275,937	2,708,881	2,392,934	8,936,657	7,668,871
Total Liabilities	(247,069)	(173,338)	(76,779)	(64,326)	(323,848)	(237,664)
Fiduciary Net Position	\$5,980,707	\$5,102,599	\$2,632,102	\$2,328,608	\$8,612,809	\$7,431,207
<i>Capital Assets include capital assets, intangible assets, depreciation and amortization.</i>						

KRS DRAFT RAN 11-13-2024

Management's Discussion & Analysis (Unaudited)

Basic Financial Statements

Combining Statement of Fiduciary Net Position							
As of June 30, 2024 (\$ in Thousands)							
	Pension			Insurance			KRS Total 2024
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	
ASSETS							
CASH AND SHORT-TERM INVESTMENTS							
Cash Deposits	\$268	\$27	\$29	\$100	\$23	\$18	\$465
Short-term Investments	254,633	49,952	38,006	68,261	20,702	9,876	441,430
Total Cash and Short-term Investments	254,901	49,979	38,035	68,361	20,725	9,894	441,895
RECEIVABLES							
Accounts Receivable	93,357	4,965	2,498	14,426	462	918	116,626
Accounts Receivable - Investments	30,542	5,671	4,925	10,444	3,303	1,492	56,377
Total Receivables	123,899	10,636	7,423	24,870	3,765	2,410	173,003
INVESTMENTS, AT FAIR VALUE							
Core Fixed Income	1,096,029	115,245	166,303	189,154	75,625	29,762	1,672,118
Public Equities	1,347,282	431,605	205,635	708,372	284,692	114,446	3,092,032
Private Equities	194,862	66,044	31,411	111,418	48,804	21,728	474,267
Specialty Credit	785,092	229,560	123,774	375,074	151,347	61,598	1,726,445
Derivatives	(73)	9	(9)	10	(3)	3	(63)
Real Return	349,425	79,738	56,205	135,580	45,489	18,475	684,912
Real Estate	217,911	58,902	35,155	95,993	42,344	16,169	466,474
Securities Lending Collateral	109,246	26,629	16,923	33,811	13,516	5,449	205,574
Total Investments, at Fair Value	4,099,774	1,007,732	635,397	1,649,412	661,814	267,630	8,321,759
Total Assets	4,478,574	1,068,347	680,855	1,742,643	686,304	279,934	8,936,657
LIABILITIES							
Accounts Payable	4,456	988	113	132	2	1	5,692
Accounts Payable - Investments	67,302	10,809	10,603	16,606	4,869	2,393	112,582
Securities Lending Collateral	109,246	26,629	16,923	33,811	13,516	5,449	205,574
Total Liabilities	181,004	38,426	27,639	50,549	18,387	7,843	323,848
Fiduciary Net Position							
Total Restricted for Benefits	\$4,297,570	\$1,029,921	\$653,216	\$1,692,094	\$667,917	\$272,091	\$8,612,809

See accompanying notes which are an integral part of these combining financial statements.

Note: The displayed fair values include investable assets held by each System and its associated contributions, payables, equipment and intangible assets; unlike those found in the Investment Section, which include only those investable assets held by each System.

KRS DRAFT RAN 11-13-2024

Management's Discussion & Analysis (Unaudited)

Combining Statement of Changes In Fiduciary Net Position							
For the fiscal year ending June 30, 2024 (\$ in Thousands)							
	Pension			Insurance			KRS Total 2024
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	
ADDITIONS							
Member Contributions	\$96,597	\$21,560	\$5,691	\$10,682	\$2,070	\$395	\$136,995
Employer Contributions	156,032	89,899	61,998	48,846	1,910	10,163	368,848
Actuarially Accrued Liability Contributions	899,663	-	-	87,782	-	-	987,445
General Fund Appropriations	240,000	-	-	-	-	-	240,000
Other	-	-	-	8,444	651	390	9,485
Total Contributions	1,392,292	111,459	67,689	155,754	4,631	10,948	1,742,773
INVESTMENT INCOME							
Net Appreciation (Depreciation) in FV of Investments	243,618	76,073	38,386	123,287	51,737	20,310	553,411
Interest/Dividends	137,373	33,477	21,885	55,349	21,973	8,932	278,989
Securities Lending Income	4,235	1,169	744	1,583	551	242	8,524
Less: Investment Expense	19,394	5,797	2,666	9,243	4,573	1,818	43,491
Less: Performance Fees	6,006	1,724	620	2,860	1,766	616	13,592
Less: Securities Lending Fees, Expenses, and Rebates	3,808	1,059	671	1,402	487	214	7,641
Net Investment Income (loss)	356,018	102,139	57,058	166,714	67,435	26,836	776,200
Total Additions	1,748,310	213,598	124,747	322,468	72,066	37,784	2,518,973
DEDUCTIONS							
Benefit Payments	1,032,124	80,528	63,823	-	-	-	1,176,475
Refunds	11,693	4,133	221	-	-	-	16,047
Administrative Expenses	14,128	1,583	314	734	117	71	16,947
Healthcare Expenses	-	-	-	95,129	20,354	12,419	127,902
Total Deductions	1,057,945	86,244	64,358	95,863	20,471	12,490	1,337,371
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	690,365	127,354	60,389	226,605	51,595	25,294	1,181,602
Total Fiduciary Net Position Restricted for Benefits							
Beginning of Period	3,607,206	902,567	592,826	1,465,489	616,322	246,797	7,431,207
End of Period	\$4,297,571	\$1,029,921	\$653,215	\$1,692,094	\$667,917	\$272,091	\$8,612,809

See accompanying notes, which are an integral part of these combining financial statements.

NOTE A. Summary of Significant Accounting Policies

Kentucky Retirement Systems (KRS) is responsible for the administration of the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS). KPPA is responsible for administering the personnel system, the system of accounting, the day-to-day functions of KRS, as well as selecting consulting and service contractors to provide administrative services including an external auditor. KPPA is also responsible for promulgating administrative regulations on behalf of KRS, individually or collectively. It is additionally tasked with administering and operating any jointly held assets for KRS including, but not limited to real estate, office space, equipment, and supplies. KPPA staff manages assets in accordance with investment policies developed by the KRS Investment Committee and approved by the Board. KPPA staff recommends to the Board the hiring, retention and termination of investment managers. The Board is responsible for selection of investment services for the management and custody of the assets while KPPA is responsible for the remaining investment services.

This summary of KPPA's significant accounting policies is presented to assist in understanding the combining financial statements for KRS. The combining financial statements and notes are representations of KPPA's management, which is responsible for their integrity and objectivity. These accounting policies conform to Generally Accepted Accounting Principles (GAAP) and have been consistently applied in the preparation of the combining financial statements.

Basis of Accounting

KRS's combining financial statements are prepared using the accrual basis of accounting. Member contributions are recognized in the period in which contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Premium payments are recognized when due and payable in accordance with the insurance terms of the plan. Administrative and investment expenses are recognized when incurred. The net position represents the three funds of KERS and SPRS, and the three funds of the Kentucky Retirement Insurance Trust Fund (Insurance Fund) that have accumulated thus far to pay pension benefits for retirees, active and inactive members, and health care premiums for current and future employees.

Method Used to Value Investments

Investments are reported at fair value. Fair value is the price that would be received upon selling an asset or the amount paid to transfer a liability in an orderly transaction between market participants at the measurement date. Short-term investments are reported at cost, which approximates fair value. See Investments Note D for further discussion of fair value measurements. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the dividend date. Gain (loss) on investments includes gains and losses on investments bought and sold as well as held during the fiscal year. Investment returns are recorded in all plans net of investment fees.

Investment Unitization

Within the plan accounting structure there are two primary types of accounts: Plan Accounts and Pool Accounts. Plan Accounts are the owners of the investment pool. An account is established for each plan/fund and these accounts hold Units of Participation that represent the plan's/fund's invested value of the investment pool. Pool Accounts are accounts that hold the assets of the investment pool where all investment related activity and earnings occur. The pooled accounts are the investment strategies of the pool. Units of Participation are bought and sold as each plan/fund contributes or withdraws cash or assets from the investment pool. The investment pool earnings are then allocated to plans utilizing a cost distribution method that allows for fluctuating prices experienced in capital markets. This involves earnings allocated to the plan accounts with an increase or decrease in cost on the Unit of Participation Holdings of the Plan Accounts. Correspondingly, the price of the Unit of Participation Holdings is updated to reflect change in fair value in the investment pool. Earnings are allocated based on the daily weighted average of Master Trust Units held by each plan/fund account during each monthly earnings period. This method is commonly used when plans make multiple contributions or withdrawals from the investment pool throughout the month as it eliminates allocation distortion due to large end of month cash flows.

Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Equipment

Office equipment is valued at historical cost and depreciation is computed utilizing the straight-line method over the estimated useful lives of the assets ranging from three to ten years. Improvements, which increase the useful life of the equipment, are capitalized. Maintenance and repairs are charged as an expense when incurred. The capitalization threshold used in fiscal year 2024 was \$3,000.

Intangible Assets

Intangible assets, currently computer software, are valued at historical cost and amortization is computed utilizing the straight-line method over the estimated useful lives of the assets which is ten years. The capitalization threshold used in fiscal year 2024 was \$3,000.

Accounts Receivable

Accounts Receivable consist of amounts due from employers. Management considers accounts receivable to be fully collectible; accordingly, no allowance for doubtful accounts is considered necessary. If amounts become uncollectible, they will be charged to operations when that determination is made. If amounts previously written off are collected, they will be credited to income when received.

The Investment Accounts Receivable and Investment Accounts Payable consist of investment management earnings and fee accruals, as well as all buys and sells of securities which have not closed as of the reporting date.

Payment of Benefits

Benefits are recorded when paid.

Expense Allocation

Administrative expenses are allocated based on a hybrid allocation developed by the Boards. The hybrid allocation is based on a combination of plan membership and direct plan expenses. All investment related expenses are allocated in proportion to the percentage of investment assets held by each plan.

Component Unit

KRS is a component unit of the Commonwealth of Kentucky (the Commonwealth) for financial reporting purposes.

KERS was created by the Kentucky General Assembly on July 1, 1956, pursuant to Kentucky Revised Statutes 61.515. SPRS was created by the Kentucky General Assembly on July 1, 1958, pursuant to Kentucky Revised Statutes 16.510. Six of the nine trustees are appointed by the Governor. The administrative budget of KPPA, which incorporates KRS administrative cost is subject to approval by the Kentucky General Assembly. KRS employer contribution rates are set by statute and subject to legislative approval. The methods used to determine the employer rates for KRS (KERS and SPRS) are specified in Kentucky Revised Statutes 61.565.

Perimeter Park West, Incorporated (PPW) is governed by a three-member board selected by shareholders. Although it is legally separate from KPPA, PPW is reported as part of KPPA, because its sole ownership is Kentucky Retirement Systems, and therefore through unitization is owned by KERS, CERS, and SPRS. PPW functions as a real estate holding company for the offices used by the plans administered by KPPA.

Recent Accounting Pronouncements

KPPA determined that the KPPA lease agreements are not material to the overall financial statements. Therefore, KPPA did not report the leases according to *Statement Number 87 Leases*.

KPPA determined that the KPPA SBITAs lease agreements are not material to the overall financial statements. Therefore, KPPA did not report the SBITAs leases according to *Statement Number 96 SBITAs*.

GASB Statement Number 100, Accounting Changes and Error Corrections - an amendment of *GASB Statement No. 62*. The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2024. KPPA had no Accounting Changes or Error Corrections for fiscal year June 30, 2024.

GASB Statement Number 101, Compensated Absences. The requirements of the Statement will take effect for financial statements starting with the fiscal year that ends December 31, 2024. KPPA is evaluating the impact of the Statement to the financial report.

GASB Statement Number 102, Certain Risk Disclosures. The requirements of the Statement will take effect for financial statements for fiscal years beginning after June 15, 2024. KPPA is evaluating the impact of the Statement to the financial report.

Note B. Descriptions & Contribution Information

Membership Combined As of June 30				
	Retirees and Beneficiaries Receiving Benefits	Inactive Memberships	Active Members	Total
KERS Nonhazardous	45,041	51,743	31,940	128,724
KERS Hazardous	3,492	7,545	4,145	15,182
SPRS	1,543	452	872	2,867
Total	50,076	59,740	36,957	146,773

Note: Each person is only counted once in the Membership by System report. A member who has both a membership account and a retired account is included in the retired count. Members who have multiple membership accounts are included under the system where they most recently contributed. Members who have more than one retirement account are included in the system with the greatest service credit.

Retiree Medical Insurance Coverage As of June 30, 2024						
	Single	Couple/ Family	Parent	Medicare Without Prescription	Medicare With Prescription	
KERS Nonhazardous	6,334	473	395	939		22,947
KERS Hazardous	621	462	108	66		1,843
KERS Total	6,955	935	503	1,005		24,790
SPRS	239	415	79	16		1,019
Total	7,194	1,350	582	1,021		25,809

Note: Medical Insurance coverage is provided based on the member's initial participation date and length of service. Members receive either a percentage or dollar amount for insurance coverage. The counts are the number of medical plans contracted with the Department of Employee Insurance or Medicare vendor and are not representative of the number of persons.

Plan Descriptions

The Kentucky Employees Retirement System (KERS), and the State Police Retirement System (SPRS) provide retirement, disability, and death benefits to system members. Retirement benefits may be extended to beneficiaries of members under certain circumstances. KPPA provides administrative support to KERS, SPRS, and Kentucky Retirement System Insurance Trust Fund (Insurance Fund). In addition to executive management, the KERS, SPRS, and Insurance Fund share investment management, accounting, and information system services, the costs of which are allocated to the plans on an equitable basis.

KERS - Kentucky Employees Retirement System

KERS was established by Kentucky Revised Statutes 61.515. The KERS system is comprised of two plans - KERS Nonhazardous plan and KERS Hazardous plan. The KERS Nonhazardous plan was established to provide retirement benefits to all regular full-time members employed in positions of any state department, board, or agency directed by Executive Order to participate in KERS. The membership of the KERS Hazardous plan includes employees whose position is considered hazardous with principal job duties including, but are not limited to, active law enforcement, probation and parole officer, detective, pilots, paramedics, and emergency medical technicians, with duties that require frequent exposure to a high degree of danger and also require a high degree of physical condition.

The responsibility for the general administration and operation of KERS is vested with the Kentucky Retirement Systems (KRS) Board of Trustees. The KRS Board of Trustees consist of 9 members. Six trustees are appointed by the governor and three are elected. Of the elected trustees, two are elected by KERS members and one is elected by SPRS members. Active, inactive and retired members of the appropriate system are invited to participate in the election of trustees. Of the six appointed trustees, three must have investment experience and three must have retirement experience as defined by statute. All appointments by the governor are subject to Senate confirmation. The two trustees elected by the KERS membership must be members of or retired from KERS. The one trustee elected by the SPRS membership must be a member of or retired from SPRS.

SPRS - State Police Retirement System

SPRS is a single employer defined benefit pension plan and was established by Kentucky Revised Statutes 16.510 to provide retirement benefits to all full-time state troopers employed in positions by the Kentucky State Police. The responsibility for the general administration and operation of the SPRS is vested with the KRS Board of Trustees (see KERS - Kentucky Employees Retirement System for KRS Board composition).

Kentucky Retirement System Insurance Trust Fund

The Insurance Fund was established by Kentucky Revised Statutes 61.701 for the purpose of providing hospital and medical insurance benefits for eligible members receiving benefits from CERS Nonhazardous, CERS Hazardous, KERS Nonhazardous, KERS Hazardous, and SPRS (collectively the Insurance Fund). The responsibility for the general administration and operation of the Insurance Fund is vested with both the CERS Board of Trustees and the KRS Boards of Trustees. Each of the OPEB funds: CERS Nonhazardous, CERS Hazardous, KERS Nonhazardous, KERS Hazardous, and SPRS is legally separated with benefits only eligibility to be paid for each of the respective membership groups.

Cost of Living Adjustment (COLA)

Prior to July 1, 2009, COLAs were provided to retirees annually equal to the percentage increase in the annual average of the consumer price index (CPI) for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. After July 1, 2009, the COLAs were to be limited to 1.50%.

In 2013 the General Assembly created a new law to govern how COLAs will be granted. Language included in Senate Bill 2 during the 2013 Regular Session states COLAs will only be granted in the future if the Systems' Boards determine that assets of the Systems are greater than 100% of the actuarial liabilities and legislation authorizes the use of surplus funds for the COLA; or the General Assembly fully prefunds the COLA or directs the payment of funds in the year the COLA is provided. The granting of COLAs for the KERS and SPRS membership is covered under Kentucky Revised Statutes 61.691. No COLA has been granted since July 1, 2011.

Employer Contributions

The Commonwealth is required to contribute at an actuarially determined rate for KERS and SPRS pensions. The KRS Board of Trustees recommends the rates each year following the annual actuarial valuation, but the rates are set by the legislature within the budget bill for each biennium. The contribution rates from July 1, 2023, through June 30, 2024, were set within HB 1, passed in the 2022 Regular Legislative Session, for KERS Nonhazardous, KERS Hazardous and SPRS employers.

The KERS Nonhazardous employer contribution rate shall include, (1) the normal cost contribution and (2) the prorated amount of the actuarially accrued liability assigned to each individual nonhazardous employer in accordance with Kentucky Revised Statutes 61.565(1)(d). Each employer pays the normal cost as a percentage of reported payroll plus a flat amount to cover the employer-specific actuarially accrued liability contribution for the fiscal year as determined by the annual valuation.

Per Kentucky Revised Statutes 61.565 and 16.645(18), normal contribution and past service contribution rates shall be determined by the KRS Board on the basis of the last annual valuation preceding July 1 of a new biennium. The KRS Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the KRS Board. However, formal commitment to provide the contributions by the employer is made through the biennial budget for KERS and SPRS.

For the fiscal year ended June 30, 2024, participating employers of KERS Nonhazardous, KERS Hazardous and SPRS contributed a percentage of each employee's creditable compensation. The actuarially determined rates set by the Board for the fiscal year is a percentage of each employee's creditable compensation. Administrative costs of KPPA are financed through employer contributions and investment earnings. See the charts on the following page for the fiscal year employer contribution rates, including the actuarially recommended rates.

Contribution Rate Breakdown by Fund						
As of June 30, 2024						
Fund	Pension		Insurance		Combined Total	
	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates
KERS Nonhazardous *	7.82%	7.74%	2.15%	1.86%	9.97%	9.60%
KERS Hazardous	31.82%	30.12%	0.00%	0.00%	31.82%	30.12%
SPRS **	85.32%	85.39%	14.11%	3.68%	99.43%	89.07%

* House Bill 8 passed during the 2021 legislative session required, beginning July 1, 2021, the KERS Nonhazardous employers pay the normal cost for all employees plus a flat amount which is equal to their assigned percentage of the annual dollar amount that is sufficient to amortize the total unfunded actuarial accrued liability of the system over a closed period. The percentage is based on the liability that was attributable to the agency as of June 30, 2019.

** House Bill 1 passed during the 2022 legislative session included \$215 million in FY 2021-2022 for SPRS pension fund to be applied to the unfunded liability, which immediately lowered the SPRS contribution rate from the Fiscal Year 2022 146.06% rate to 99.43% for Fiscal Years 2023 and 2024.

As of June 30, 2024, the date of the most recent actuarial valuation, membership consisted of:

TIER 1:

Tier 1 plan members who began participating prior to September 1, 2008, are required to contribute 5% (Nonhazardous) or 8% (Hazardous) of their annual creditable compensation. These members are classified in the Tier 1 structure of benefits. Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest.

TIER 2:

Tier 2 plan members, who began participating on or after September 1, 2008, and before January 1, 2014, are required to contribute 6% (Nonhazardous) or 9% (Hazardous) of their annual creditable compensation. Further, 1% of these contributions are deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Insurance Fund (see Kentucky Administrative Regulation (KAR) 105 KAR 1:420). These members are classified in the Tier 2 structure of benefits. Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% Health Insurance Contribution (HIC) to the 401(h) account is non-refundable and is forfeited.

TIER 3:

Tier 3 plan members, who began participating on or after January 1, 2014, are required to contribute to the Cash Balance Plan. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and a defined contribution plan. Members contribute 5% (Nonhazardous) or 8% (Hazardous) of their monthly creditable compensation which is deposited into their account, and an additional 1% which is deposited to an account created for payment of health insurance benefits under 26 USC Section 401(h) in the Insurance Fund (see 105 KAR1:420), which is not refundable. Tier 3 member accounts are also credited with an employer pay credit in the amount of 4% (Non-Hazardous) or 7.5% (Hazardous) of the member's monthly creditable compensation. The employer pay credit amount is deducted from the total employer contribution rate paid on the member's monthly creditable compensation. If a vested (60 months of service) member terminates employment and applies to take a refund, the member is entitled to the members contributions (less HIC) plus employer pay credit plus interest (for both employee contributions and employer pay). If a non-vested (less than 60 months) member terminates employment and applies to take a refund, the member is entitled to receive employee contributions (less HIC) plus interest (on employee contributions only).

Tier 3

Interest is paid into the Tier 3 member's account. The account currently earns 4% interest credit on the member's accumulated account balance as of June 30 of the previous year. The member's account may be credited with additional interest if the fund's five-year Geometric Average Net Investment Return (GANIR) exceeded 4%. If the member was actively employed and participating in the fiscal year, and if KRS's GANIR for the previous five years exceeds 4%, then the member's account will be credited with 75% of the amount of the returns over 4% on the account balance as of June 30 of the previous year (Upside Sharing Interest). It is possible that one fund in KRS may get an Upside Sharing Interest, while another may not.

Upside Sharing Interest

Upside Sharing Interest is credited to both the member contribution balance and Employer Pay Credit balance. Upside Sharing Interest is an additional interest credit. Member accounts automatically earn 4% interest annually. The GANIR is calculated on an individual fund basis.

The chart below shows the interest calculated on the members' balances as of June 30, 2023, and credited to each member's account as of June 30, 2024.

(A-B) = C x 75% = D then B + D = Interest (\$ in Thousands)						
	A	B	C	D		
Fund	5-Year Geometric Average Return	Less Guarantee Rate of 4%	Upside Sharing Interest	Upside Sharing Interest X 75% = Upside Gain	Interest Rate Earned (4% + Upside)	Total Interest Credited to Member Accounts
KERS Nonhazardous	6.39%	4.00%	2.39%	1.79%	5.79%	\$13,424
KERS Hazardous	7.47%	4.00%	3.47%	2.60%	6.60%	\$4,668
SPRS	6.87%	4.00%	2.87%	2.15%	6.15%	\$791

Insurance Fund Description

The Insurance Fund was established to provide hospital and medical insurance for eligible members receiving benefits from KERS and SPRS. The eligible non-Medicare retirees are covered by the Department of Employee Insurance (DEI) plans. KPPA contracts with Humana to provide health care benefits to the eligible Medicare retirees through a Medicare Advantage Plan. KPPA submits the premium payments to DEI and Humana. The Insurance Fund pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal year ended June 30, 2024, insurance premiums withheld from benefit payments for KRS's members were \$15.8 million and \$1.2 million for KERS Nonhazardous and Hazardous, respectively; and \$0.4 million for SPRS.

The amount of benefit paid by the Insurance Fund is based on years of service. For members who began participating prior to July 1, 2003, a percentage of the contribution rate is paid based on years of service with 100% of the contribution rate being paid with 20 years of service. Since the passage of House Bill 290 (2004 Kentucky General Assembly), medical insurance benefits have been calculated differently for members who began participating on or after July 1, 2003. Once members reach a minimum vesting period of 10 years, Nonhazardous employees whose participation began on or after July 1, 2003, earn \$10 per month for insurance benefits at retirement for every year of earned service. Hazardous employees whose participation began on or after July 1, 2003 earn \$15 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Upon death of a Hazardous employee, the employee's spouse receives \$10 per month for insurance benefits for each year of the deceased employee's earned Hazardous service. This dollar amount is subject to adjustment annually, which is currently 1.5%, based upon Kentucky Revised Statutes. House Bill 1 (2008 Kentucky General Assembly) changed the minimum vesting requirement for participation in the health insurance plan to 15 years for members whose participation began on or after September 1, 2008. This benefit is not protected under the inviolable contract provisions of Kentucky Revised Statutes 16.652, and 61.692. The Kentucky General Assembly reserves the right to suspend or reduce this benefit if, in its judgment, the welfare of the Commonwealth so demands. The Insurance Plan pays 100% of the contribution rate for hospital and medical insurance premiums for the spouse and dependents of members who die as a direct result of an act in the line of duty or from a duty-related injury.

For members participating prior to July 1, 2003, years of service and respective percentages of the maximum benefit are as follows:

Portion Paid by Insurance Fund As of June 30, 2024	
Years of Service	Paid by Insurance Fund (%)
20+ years	100.00%
15-19 years	75.00%
10-14 years	50.00%
4-9 years	25.00%
Less than 4 years	0.00%

The amount of benefit paid by the Insurance Fund is based on years of service. For members participating on or after July 1, 2003, the dollar amounts of the benefit per year of service are as follows:

Dollar Contribution for Fiscal Year 2024 For Member participation date on or after July 1, 2003	
	(in Whole \$)
KERS Nonhazardous	\$14.41
KERS Hazardous	\$21.62
SPRS	\$21.62

Note C. Cash, Short-Term Investments & Securities Lending Collateral

The provisions of GASB *Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions* require that cash received as collateral on securities lending transactions and investments made with that cash must be reported as assets on the financial statements. The non-cash collateral is not reported because the securities received as collateral are unable to be pledged or sold unless the borrower defaults. In accordance with GASB *No. 28*, KRS classifies certain other investments, not related to the securities lending program, as short-term. Cash and short-term investments consist of the following:

Cash, Short-Term Investments, & Securities Lending Collateral

As of June 30, 2024 (\$ in Thousands)

KERS Nonhazardous	Pension	Insurance
Cash	\$268	\$100
Short-Term Investments	254,633	68,261
Securities Lending Collateral Invested	109,246	33,811
Total	\$364,147	\$102,172

KERS Hazardous	Pension	Insurance
Cash	\$27	\$24
Short-Term Investments	49,952	20,702
Securities Lending Collateral Invested	26,629	13,516
Total	\$76,608	\$34,242

SPRS	Pension	Insurance
Cash	\$29	\$18
Short-Term Investments	38,006	9,876
Securities Lending Collateral Invested	16,923	5,449
Total	\$54,958	\$15,343

Note D. Investments

Kentucky Revised Statutes 61.650 specifically state that the KRS Board of Trustees for the respective retirement Plan(s) shall have the full and exclusive power to invest and reinvest the funds of the Plan(s) they govern. In addition, Kentucky Revised Statutes 61.645 require three (3) members of the Board to have at least ten (10) years of investment experience as defined by the statutes. The KRS Board of Trustees are required to establish an Investment Committee who is specifically charged with implementing the investment policies adopted by the KRS Board of Trustees and to act on behalf of the KRS Board of Trustees on all investment-related matters. The KRS Board of Trustees and the Investment Committee members are required to discharge their duty to invest the funds of the Plans in accordance with the “Prudent Person Rule” as set forth in Kentucky Revised Statutes 61.650 and to manage those funds consistent with the long-term nature of the trusts and solely in the interest of the members and beneficiaries. All internal investment staff, and investment consultants must adhere to the Code of Ethics and Standards of Professional Conduct of the CFA Institute and all board trustees must adhere to the Code of Conduct for Members of a Pension Scheme Governing Body of the CFA Institute. The KRS Board of Trustees are authorized to adopt policies. The KRS Board of Trustees have adopted Investment Policy Statements (IPS) which define the framework for investing the assets of the Plans. The IPS is intended to provide general principles for establishing the investment goals of the Plans, the allocation of assets, employment of outside asset management, and monitoring the results of the respective Plans. A copy of each KRS Board’s IPS can be found on the KPPA website. By statutes, the KRS Board, through adopted written policies, shall maintain ownership and control over its assets held in its unitized managed custodial account. Additionally, the Investment Committee establishes specific investment guidelines that are summarized below and are included in the Investment Management Agreement (IMA) for each investment management firm.

Equity

Public Equity

Investments may be made in common stock; securities convertible into common stock; preferred stock of publicly traded companies on stock markets; asset class relevant Exchange Traded Funds (ETFs); or any other type of security contained in a manager’s benchmark. Each individual equity account has a comprehensive set of investment guidelines, which contains a listing of permissible investments, portfolio restrictions, and standards of performance.

Private Equity

Subject to the specific approval of the Investment Committee, Private Equity investments may be made for the purpose of creating a diversified portfolio of alternative investments under the Equity umbrella. Private equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from private equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments.

Fixed Income

Core Fixed Income

The Core Fixed Income accounts may include, but are not limited to, the following securities: U.S. government and agency bonds; investment grade U.S. corporate credit; investment grade non-U.S. corporate credit; mortgages, including residential mortgage-backed securities; commercial mortgage-backed securities and whole loans; asset-backed securities; and, asset class relevant ETFs.

Specialty Credit

The Specialty Credit accounts may include, but are not limited to, the following types of securities and investments: non-investment grade U.S. corporate credit including both bonds and bank loans; non-investment grade non-U.S. corporate credit including bonds and bank loans; private debt; municipal bonds; non-U.S. sovereign debt; mortgages, including residential mortgage-backed securities; commercial mortgage backed securities and whole loans; asset-backed securities and emerging market debt (EMD), including both sovereign EMD and corporate EMD; and asset class relevant ETFs. Each individual Specialty Credit account shall have a comprehensive set of investment guidelines which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

Cash and Cash Equivalent Securities

The following short-term investment vehicles are considered acceptable: Publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages, municipal bonds, and collective short-term investment funds (STIFs), money market funds or instruments (including, but not limited to certificates of deposit, bank notes, deposit notes, bankers' acceptance and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed 397 days.

Fixed income managers, who utilize cash equivalent securities as an integral part of their investment strategy, are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for Fixed Income managers shall be included in the investment manager's investment guidelines.

Inflation Protected

Real Estate and Real Return

Subject to the specific approval of the corresponding Investment Committee, investments may be made to create a diversified portfolio of alternative investments. Investments are made in equity and debt real estate for the purpose of achieving the highest total rate of return possible consistent with a prudent level of risk. The purpose of the Real Return investments are to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of hedging inflation for the broader plans.

Investment Expenses

In accordance with GASB *Statement No. 67 and No. 74, Financial Reporting for Pension Plans and Other Postemployment Benefit Plans other than Pension Plans*, Management has exercised professional judgment to report investment expenses. It is not cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses. In fiscal year 2015, Management changed Private Equity investment fees from a gross basis to a net basis. The Board made the decision to enhance transparency reporting. Prior to 2015, the majority of the trusts' Private Equity investment fees were netted against investment activity which is the standard used within the Private Equity sector. Trusts' net investment income has always included these fees regardless of the reporting method used. During the 2017 Regular Session of the Kentucky General Assembly, legislators passed SB 2 which requires the reporting of all investment fees and expenses. Management continues to work with managers to enhance fee and expense reporting.

Derivatives

Derivative instruments are financial contracts that have various effective dates and maturity dates and whose values depend on the values of one or more underlying assets, reference rates, or financial indices. External managers and Investment Staff are permitted to invest in derivative securities, or strategies which make use of derivative investments, for exposure, cost efficiency and risk management purposes, if such investments do not cause the portfolio to be leveraged beyond a 100% invested position. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price. Examples of such derivatives include, but are not limited to the following securities: foreign currency forward contracts; futures; options; and swaps.

For accounting and financial reporting purposes, all derivative instruments are considered investment derivative instruments. The derivatives have been segregated on the Combining Statement of Fiduciary Net Position for both the Pension and Insurance Funds.

In accordance with GASB *Statement No. 53, Accounting and Financial Reporting for Derivative Instruments*, KRS provides additional disclosure regarding its derivatives. The charts included represent the derivatives by types as of June 30, 2024. The chart shows the change in fair value of derivative types as well as the current fair value and notional value. The notional value is the reference amount of the underlying asset times its current spot price. The trusts hold investments in options, commitments, futures, and forward foreign exchange contracts.

KRS DRAFT RAN 11-13-2024**KERS Pension and Insurance Derivative Instruments - GASB 53****As of June 30, 2024 (\$ in Thousands)**

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value	Classification	Fair Value	Notional
KERS Nonhazardous - Pension				
FX Spots and Forwards	\$48	Investment	\$45	-
Futures	1,924	Investment	(118)	29,760
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Nonhazardous - Insurance				
FX Spots and Forwards	\$30	Investment	\$28	-
Futures	458	Investment	(18)	5,132
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Hazardous - Pension				
FX Spots and Forwards	\$24	Investment	\$22	-
Futures	291	Investment	(13)	2,576
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Hazardous - Insurance				
FX Spots and Forwards	\$-	Investment	\$1	-
Futures	198	Investment	(4)	2,679
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-

SPRS Pension and Insurance Derivative Instruments - GASB 53**As of June 30, 2024 (\$ in Thousands)**

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value	Classification	Fair Value	Notional
SPRS Pension				
FX Spots and Forwards	\$10	Investment	\$9	-
Futures	323	Investment	(18)	4,453
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
SPRS Insurance				
FX Spots and Forwards	\$7	Investment	\$6	-
Futures	74	Investment	(3)	701
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-

Derivative Instruments Subject to Counterparty Credit Risk - GASB 53
As of June 30, 2024

Counterparty	S & P Ratings	KERS	KERS INS	KERS Haz	KERS Haz INS	SPRS	SPRS INS
		Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure
Australia & New Zealand Banking Group Ltd	AA-	0.66%	1.21%	0.33%	0.05%	0.14%	0.27%
The Bank of America	A-	0.11%	0.14%	0.04%	0.05%	0.02%	0.02%
The Bank of New York Mellon Corp	A	0.30%	0.60%	0.14%	0.07%	0.06%	0.13%
Barclays PLC	BBB+	1.04%	1.91%	0.50%	0.10%	0.21%	0.43%
Brown Brothers Harriman & Co	NR	0.09%	0.15%	0.03%	0.05%	0.01%	0.02%
Canadian Imperial Bank of Commerce	A+	1.45%	2.65%	0.70%	0.12%	0.30%	0.60%
Citigroup Inc	BBB+	1.04%	1.89%	0.51%	0.08%	0.21%	0.43%
The Goldman Sachs Group Inc	BBB+	0.75%	1.38%	0.37%	0.07%	0.15%	0.31%
HSBS Holding PLC	A-	1.52%	3.40%	0.74%	0.16%	0.31%	0.77%
JPMorgan Chase & Co	A-	0.54%	1.02%	0.25%	0.11%	0.11%	0.22%
Morgan Stanley	A-	0.93%	1.70%	0.46%	0.07%	0.19%	0.39%
Royal Bank of Canada	AA-	1.00%	1.96%	0.49%	0.09%	0.21%	0.44%
State Street Corp	A	1.12%	2.06%	0.54%	0.11%	0.23%	0.46%
The Toronto-Dominion Bank	AA-	0.04%	0.09%	0.01%	0.03%	0.01%	0.01%
UBS Group AG	A-	0.87%	2.19%	0.41%	0.18%	0.17%	0.48%
Westpac Banking Corp	AA-	0.03%	0.05%	0.01%	0.02%	0.00%	0.01%
TOTAL		11.49%	22.40%	5.53%	1.36%	2.33%	4.99%

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that may occur as a result of a financial institution's failure, whereby KRS deposits may not be returned. All non-investment related bank balances are held by JP Morgan Chase and each individual account is insured by the Federal Deposit Insurance Corporation (FDIC). None of these balances were exposed to custodial credit risk as they were either insured or collateralized at required levels.

Custodial Credit Risk for Deposits - GASB 40	
As of June 30, 2024 (\$ in Thousands)	
KERS Nonhazardous Pension	\$982
KERS Nonhazardous Insurance	100
KERS Hazardous Pension	26
KERS Hazardous Insurance	24
SPRS Pension	41
SPRS Insurance	19
Clearing	246
Excess Benefit	\$-
<i>Note: All the above balances are held at JPM Chase</i>	

Custodial Credit Risk for Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, KRS will not be able to recover the value of an investment or collateral securities that are in the possession of an outside party. As of June 30, 2024, the currencies in the chart below were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent but not in Trust's name. Below are total cash and securities held by Global Managers and consist of various currencies.

Custodial Credit Risk for Investments - GASB 40	
As of June 30, 2024 (\$ in Thousands)	
KERS	
KERS Nonhazardous Pension Fund Foreign Currency	\$354,935
KERS Nonhazardous Insurance Fund Foreign Currency	204,865
KERS Hazardous Pension Fund Foreign Currency	119,039
KERS Hazardous Insurance Fund Foreign Currency	79,906
SPRS	
SPRS Pension Fund Foreign Currency	59,555
SPRS Insurance Fund Foreign Currency	\$34,374

KRS DRAFT RAN 11-13-2024**Investment Summary - GASB 40 As of June 30, 2024 (\$ in Thousands)**

Type	Pension			Insurance		
	KERS	KERS	SPRS	KERS	KERS	SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
	Fair Value			Fair Value		
Core Fixed Income	\$1,096,029	\$115,245	\$166,303	\$189,154	\$75,625	\$29,762
Public Equities	1,347,282	431,605	205,635	708,372	284,692	114,446
Private Equities	194,862	66,044	31,411	111,418	48,804	21,728
Specialty Credit	785,092	229,560	123,774	375,074	151,347	61,598
Derivatives	(73)	9	(9)	10	(3)	3
Real Return	349,425	79,738	56,205	135,580	45,489	18,475
Real Estate	217,911	58,902	35,155	95,993	42,344	16,169
Short-Term Investments	254,633	49,952	38,006	68,261	20,702	9,876
Accounts Receivable (Payable), Net	(36,760)	(5,138)	(5,678)	(6,162)	(1,566)	(901)
Total	\$4,208,401	\$1,025,917	\$650,802	\$1,677,700	\$667,434	\$271,156

Credit Risk Debt Securities

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The debt security portfolios are managed by the Investment staff and by external investment management firms. All portfolio managers are required by the KRS IPS to maintain diversified portfolios. Each portfolio is also required to be in compliance with risk management guidelines that are assigned to them based upon the portfolio's specific mandate. In total, the Pension and Insurance Funds' debt securities portfolios are managed using the following guidelines adopted by the Board:

- Bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies or instrumentalities are permissible investments and may be held without restrictions.
- The duration of the core fixed income portfolios combined shall not vary from that of the system's Fixed Income Index by more than +/- 25% duration as measured by effective duration, modified duration or dollar duration except when the system's Investment Committee has determined a target duration to be used for an interim basis.
- The amount invested in the debt of a single corporation shall not exceed 5% of the total fair value of KRS' assets.
- No public Fixed Income manager shall invest more than 5% of the fair value of assets held in any single issue Short-Term instrument with the exception of U.S. Government issued, guaranteed or agency obligations.

KRS DRAFT RAN 11-13-2024

As of June 30, 2024, the portfolio had \$559.5 million in debt securities rated below BBB- which does not include not rated (NR) or withdrawn (WD) securities.

Debt Securities - GASB 40						
As of June 30, 2024 (\$ in Thousands)						
Type	Pension			Insurance		
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS
AAA	\$59,615	\$7,367	\$9,189	\$12,282	\$4,295	\$2,011
AA+	2,945	504	474	651	154	123
AA	3,776	735	620	1,108	242	214
AA-	5,006	729	788	1,126	331	200
A+	17,622	1,923	2,680	3,241	1,253	503
A	19,049	2,165	2,913	3,536	1,314	576
A-	41,692	4,458	6,336	7,168	2,817	1,137
BBB+	52,907	6,052	8,097	9,693	3,621	1,557
BBB	38,273	5,233	5,961	8,884	2,805	1,419
BBB-	46,334	10,425	7,787	16,803	3,683	2,467
BB+	31,438	9,490	6,042	15,826	3,246	2,002
BB	45,057	13,652	8,740	24,088	5,440	2,562
BB-	45,881	13,780	8,877	24,407	5,541	2,569
B+	32,362	9,864	6,103	18,090	3,970	1,893
B	43,960	13,236	8,046	24,893	5,546	2,418
B-	34,468	10,197	6,424	19,013	4,371	1,829
CCC+	15,030	4,358	2,977	7,817	1,885	794
CCC	4,165	1,235	832	2,209	514	238
CCC-	827	235	167	438	109	44
D	134	41	22	95	20	9
NR	861,190	175,299	123,788	274,974	142,639	52,586
Total Credit Risk Debt Securities	1,401,731	290,978	216,863	476,342	193,796	77,151
Government Agencies	9,360	1,283	1,462	2,268	718	393
Government Mortgage-Backed Securities	196,411	21,114	29,866	35,246	13,832	5,596
Government Issued Commercial Mortgage Backed	2,315	243	351	499	199	78
Government Collateralized Mortgage Obligations	5,222	934	846	1,403	340	264
Government Bonds	266,082	30,253	40,689	48,470	18,087	7,878
Total	\$1,881,121	\$344,805	\$290,077	\$564,228	\$226,972	\$91,360

Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Moody's Ratings are used as proxies.

Differences due to rounding.

Government Agencies, Government Mortgage-Backed Securities, Government Issued Commercial Mortgage Backed and Government Bonds are highly rated securities since they are backed by the US Government.

The NR reported indicates a rating has not been assigned.

The WD reported are ratings which have been withdrawn.

Concentration of Credit Risk Debt Securities

Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer. The total debt securities portfolio is managed using the following general guidelines adopted by the KRS Board: bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies, or instrumentalities are permissible investments and may be held without restrictions. The amount invested in the debt of a single issuer shall not exceed 5% of the total fair value of the Plans' fixed income assets.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration measures the sensitivity of the market prices of fixed income securities to changes in the yield curve and can be measured using two methodologies: effective or modified duration. Effective duration uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price, and makes adjustments for any bond features that would retire the bonds prior to maturity. The modified duration, similar to effective duration, measures the sensitivity of the market prices to changes in the yield curve, but does not assume the securities will be called prior to maturity.

Below are the fair values and modified durations for the combined fixed income securities.

Interest Rate Risk - Modified Duration - GASB 40										
As of June 30, 2024 (\$ in Thousands)										
TYPE	Pension				Insurance					
	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration
KERS										
Asset Backed Securities	\$57,829	2.71	\$7,819	2.62	\$13,749	2.40	\$4,517	2.51		
Financial Institutions	113,300	3.96	22,977	3.06	40,455	2.99	10,375	3.54		
Collateralized Mortgage Obligations	12,346	4.69	1,982	3.27	2,898	3.31	765	4.69		
Commercial Mortgage Backed Securities	8,840	4.12	1,367	3.85	2,216	3.90	635	4.15		
Corporate Bonds - Industrial	305,027	4.37	75,630	3.66	132,021	3.56	31,606	3.94		
Corporate Bonds - Utilities	52,742	5.12	7,496	4.75	13,167	4.68	4,294	4.91		
Agencies	9,360	4.85	1,283	4.61	2,268	4.56	718	4.75		
Government Bonds - Sovereign Debt	2,652	10.64	410	8.98	674	9.95	191	11.45		
Mortgage Back Securities Pass-through - Not CMO's	196,411	6.12	21,114	6.11	35,246	6.08	13,832	6.08		
Local Authorities - Municipal Bonds	12,258	7.42	2,219	8.48	3,304	8.31	800	7.14		
Supranational - Multi-National Bonds	590	2.51	289	2.51	378	2.60	16	2.60		
Treasuries	266,082	6.93	30,253	6.81	48,470	6.93	18,087	7.04		
Unclassified	843,684	0.08	171,966	0.13	269,382	0.15	141,136	0.05		
Total	\$1,881,121	2.97	\$344,805	2.32	\$564,228	2.50	\$226,972	1.96		

Interest Rate Risk - Modified Duration - GASB 40				
As of June 30, 2024 (\$ in Thousands)				
TYPE	Pension		Insurance	
	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration
SPRS				
Asset Backed Securities	\$8,904	2.71	\$1,901	2.55
Financial Institutions	18,725	3.88	4,743	3.43
Collateralized Mortgage Obligations	1,968	4.49	533	2.93
Commercial Mortgage Backed Securities	1,402	4.09	398	3.83
Corporate Bonds - Industrial	55,109	4.27	15,276	3.88
Corporate Bonds - Utilities	8,427	5.07	1,867	4.82
Agencies	1,462	4.82	393	4.49
Government Bonds - Sovereign Debt	421	10.41	121	9.49
Mortgage Back Securities Pass-through - Not CMO's	29,866	6.12	5,596	6.08
Local Authorities - Municipal Bonds	1,989	7.59	621	8.61
Supranational - Multi-National Bonds	121	2.51	86	2.60
Treasuries	40,689	6.92	7,877	6.88
Unclassified	120,994	0.09	51,948	0.08
Total	\$290,077	3.07	\$91,360	2.21

Foreign Currency Risk

Foreign currency risk is the risk that occurs if exchange rates adversely affect the value of a non-U.S. dollar based investment or deposit within the portfolios. Currency risk exposure, or exchange rate risk, primarily resides with the portfolios Non-U.S. equity holdings, but also affects other asset classes. KRS doesn't have a formal policy to limit foreign currency risk; however, some individual managers are given the latitude to hedge some currency exposures. All foreign currency transactions are classified as Short-Term Investments. All gains and losses associated with these transactions are recorded in the Net Appreciation (Depreciation) in Fair Value of Investments on the combining financial statements.

Foreign Currency Risk - GASB 40						
As of June 30, 2024 (\$ in Thousands)						
	Pension			Insurance		
	KERS	KERS	SPRS	KERS	KERS	SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
Australian Dollar	\$11,788	\$4,002	\$2,008	\$7,040	\$2,460	\$1,138
Brazilian Real	6,103	2,088	1,043	3,708	1,282	602
Canadian Dollar	14,075	4,683	2,375	8,192	2,984	1,298
Czech Koruna	5	2	1	4	2	1
Danish Krone	13,996	4,598	2,348	8,312	3,103	1,301
Egyptian Pound	141	46	24	64	24	10
Euro	108,691	37,343	18,054	58,201	26,169	11,205
Hong Kong Dollar	24,431	8,026	4,099	14,390	5,372	2,252
Hungarian Forint	1,737	571	291	981	366	153
Indian Rupee	11,488	3,836	1,942	6,539	2,364	1,040
Indonesian Rupiah	6,146	2,178	1,068	3,572	1,130	602
Israeli Shekel	1,232	405	207	730	272	114
Japanese Yen	44,722	14,799	7,528	26,684	9,826	4,205
Malaysian Ringgit	383	188	79	236	10	53
Mexican Peso	1,596	551	274	969	329	159
New Taiwan Dollar	17,081	5,612	2,866	9,873	3,687	1,545
New Zealand Dollar	(708)	(348)	(145)	(454)	(20)	(103)
Norwegian Krone	1,154	532	229	708	70	152
Philippine Peso	539	264	110	345	15	78
Pound Sterling	38,318	12,590	6,430	22,909	8,549	3,586
Singapore Dollar	1,084	242	156	681	400	76
South African Rand	2,046	672	343	1,225	457	192
South Korean Won	12,361	4,162	2,098	7,759	2,769	1,241
Swedish Krona	5,928	1,947	994	3,666	1,369	574
Swiss Franc	25,319	8,317	4,248	15,410	5,753	2,412
Thai Baht	3,319	1,090	557	1,930	721	302
Turkish Lira	1,437	472	241	860	321	135
UAE Dirham	521	171	87	331	123	52
Total Foreign Investment Securities	354,933	119,039	59,555	204,865	79,907	34,375
U.S. Dollar	3,853,468	906,878	591,247	1,472,835	587,527	236,781
Total Investment Securities	\$4,208,401	\$1,025,917	\$650,802	\$1,677,700	\$667,434	\$271,156

Fair Value Measurement and Applications (GASB 72)

In accordance with GASB *Statement No. 72, Fair Value Measurement and Application*, KRS provides this additional disclosure regarding the fair value of its Pension and Insurance investments. KRS categorizes its fair value measurements within the fair value hierarchy established by GAAP.

KRS defined the Fair Value Hierarchy and Levels as follows:

Level 1

Quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date (e.g., prices derived from NYSE, NASDAQ, Chicago Board of Trade, and Pink Sheets). Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date.

Level 2

Inputs (other than quoted prices included within Level 1) that are observable for an asset or liability, either directly or indirectly. These inputs can include matrix pricing, market corroborated pricing and inputs such as yield curves and indices.

Level 3

Unobservable inputs for an asset or liability, which generally results in using the best information available for the valuation of the assets or liabilities being reported.

Net Asset Value (NAV)

The remaining investments not categorized under the fair value hierarchy are shown at net asset value (NAV). These are investments in non-governmental entities for which a readily determinable fair value is not available, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed.

Fair Value Measurements and Application (GASB 72) Pension As of June 30, 2024 (\$ in Thousands)

Asset Type	KERS Nonhazardous			Total	KERS Hazardous			Total	SPRS			Total
	Level			Fair Value	Level			Fair Value	Level			Fair Value
	1	2	3		1	2	3		1	2	3	
Public Equity												
Emerging Markets	\$55,743	\$-	\$-	\$55,743	\$18,312	\$-	\$-	\$18,312	\$9,353	\$-	\$-	\$9,353
US Equity	828,448	-	-	828,448	264,683	-	-	264,683	126,498	-	-	126,498
Non-US Equity	336,028	-	-	336,028	110,388	-	-	110,388	56,380	-	-	56,380
Total Public Equity	1,220,219	-	-	1,220,219	393,383	-	-	393,383	192,231	-	-	192,231
Fixed Income												
Agencies	-	2,557	-	2,557	-	269	-	269	-	388	-	388
Asset-Backed	-	48,854	-	48,854	-	6,877	-	6,877	-	7,541	-	7,541
Bank & Finance	-	57,226	84,838	142,064	-	7,829	27,120	34,949	-	9,026	14,210	23,236
Cash & Cash Equivalent	4,049	(149)	-	3,900	426	(18)	-	408	615	(23)	-	592
Corporate	359,667	361,956	248	721,871	38,218	80,070	89	118,377	54,606	64,477	44	119,127
Healthcare	-	18,381	-	18,381	-	2,931	-	2,931	-	2,985	-	2,985
Insurance	-	4,337	-	4,337	-	587	-	587	-	684	-	684
Municipals	-	10,439	-	10,439	-	1,619	-	1,619	-	1,656	-	1,656
Sovereign Debt	-	13,055	-	13,055	-	4,203	-	4,203	-	2,374	-	2,374
US Government	262,723	203,148	-	465,871	28,024	21,824	-	49,848	39,919	30,888	-	70,807
Total Fixed Income	626,439	719,804	85,086	1,431,329	66,668	126,191	27,209	220,068	95,140	119,996	14,254	229,390
Derivatives												
Futures	(118)	-	-	(118)	(13)	-	-	(13)	(18)	-	-	(18)
Foreign Exchange	-	-	-	44	-	-	-	22	-	-	-	9
Total Derivatives	(118)	-	-	(74)	(13)	-	-	9	(18)	-	-	(9)
Real Return												
Real Return	275,294	-	11	275,305	62,494	-	3	62,497	41,291	-	1	41,292
Total Real Return	275,294	-	11	275,305	62,494	-	3	62,497	41,291	-	1	41,292
Total Investments at Fair Value	2,121,834	719,804	85,097	2,926,779	522,532	126,191	27,212	675,957	328,644	119,996	14,255	462,904
Investments Measured at NAV												
Specialty Credit	-	-	-	475,127	-	-	-	130,638	-	-	-	65,060
Private Equity	-	-	-	195,286	-	-	-	66,130	-	-	-	31,552
Real Estate	-	-	-	218,209	-	-	-	59,021	-	-	-	35,195
Real Return	-	-	-	76,480	-	-	-	17,755	-	-	-	15,266
Fixed Income	-	-	-	41,214	-	-	-	4,334	-	-	-	6,254
Non US Equity	-	-	-	134,559	-	-	-	40,684	-	-	-	14,657
Emerging Markets	-	-	-	897	-	-	-	295	-	-	-	150
US Equity	-	-	-	6,972	-	-	-	2,517	-	-	-	1,291
Total Investments Measured at NAV	-	-	-	1,148,744	-	-	-	321,374	-	-	-	169,425
Cash and Accruals	-	-	-	132,878	-	-	-	28,586	-	-	-	18,473
Total Investments	\$2,121,834	\$719,804	\$85,097	\$4,208,401	\$522,532	\$126,191	\$27,212	\$1,025,917	\$328,644	\$119,996	\$14,255	\$650,802

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: Cash Equivalents include publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; Short Term Investment Funds (STIF); money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper); and repurchase agreements.

The investments measured at net asset value (NAV) are presented in the chart below:

**Fair Value Measurements and Application (GASB 72) Pension
As of June 30, 2024 (\$ in Thousands)**

Asset Type	KERS Nonhazardous				KERS Hazardous				SPRS			
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Specialty Credit ⁽¹⁾	\$475,127	\$118,104	Quarterly	90 Days	\$130,638	\$30,951	Quarterly	90 Days	\$65,060	\$11,938	Quarterly	90 Days
Real Estate ⁽²⁾	218,209	35,507			59,021	10,262			35,195	4,285		
Real Return ⁽³⁾	76,480	41,533	Daily	30 - 60 Days	17,755	3,858	Daily	30 - 60 Days	15,266	10,741	Daily	30 - 60 Days
Private Equity ⁽⁴⁾	195,286	32,500			66,130	13,965			31,552	3,950		
Fixed Income ⁽⁵⁾	41,214	-	Daily		4,334	-	Daily		6,254	-	Daily	
Non US Equity ⁽⁵⁾	134,559	-	Daily		40,684	-	Daily		14,657	-	Daily	
Emerging Markets ⁽⁵⁾	897	-	Daily		295	-	Daily		150	-	Daily	
US Equity ⁽⁵⁾	6,972	-	Daily		2,517	-	Daily		1,291	-	Daily	
Total Investments Measured at NAV	\$1,148,744	\$227,644			\$321,374	\$59,036			\$169,425	\$30,914		

⁽¹⁾ This type includes 12 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.

⁽²⁾ This type includes 12 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.

⁽³⁾ This type includes 15 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.

⁽⁴⁾ This type includes 30 managers with multiple strategies. These investments cannot be redeemed. Instead, the investments are redeemed throughout the life of the investment. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.

⁽⁵⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.

Fair Value Measurements and Application (GASB 72) Insurance As of June 30, 2024 (\$ in Thousands)

Asset Type	KERS Nonhazardous			Total	KERS Hazardous			Total	SPRS			Total
	Level			Fair Value	Level			Fair Value	Level			Fair Value
	1	2	3		1	2	3		1	2	3	
Public Equity												
Emerging Markets	\$33,046	\$-	\$-	\$33,046	\$12,338	\$-	\$-	\$12,338	\$5,172	\$-	\$-	\$5,172
US Equity	430,420	-	-	430,420	173,241	-	-	173,241	69,627	-	-	69,627
Non-US Equity	199,688	-	-	199,688	74,552	-	-	74,552	31,251	-	-	31,251
Total Public Equity	663,154	-	-	663,154	260,131	-	-	260,131	106,050	-	-	106,050
Fixed Income												
Agencies	-	517	-	517	-	207	-	207	-	82	-	82
Asset-Backed	-	12,121	-	12,121	-	3,864	-	3,864	-	1,639	-	1,639
Bank & Finance	-	12,185	51,729	63,914	-	3,939	10,328	14,267	-	1,916	5,037	6,953
Cash & Cash Equivalent	775	36	-	811	310	1	-	311	122	8	-	130
Corporate	60,364	137,861	120	198,345	23,965	35,309	18	59,292	9,472	16,824	16	26,312
Healthcare	-	4,818	-	4,818	-	1,433	-	1,433	-	692	-	692
Insurance	-	945	-	945	-	316	-	316	-	148	-	148
Municipals	-	2,524	-	2,524	-	710	-	710	-	455	-	455
Sovereign Debt	-	5,627	-	5,627	-	631	-	631	-	1,200	-	1,200
US Government	45,739	36,645	-	82,384	18,062	14,390	-	32,452	7,240	5,817	-	13,057
Total Fixed Income	106,878	213,279	51,849	372,006	42,337	60,800	10,346	113,483	16,834	28,781	5,053	50,668
Derivatives												
Futures	(18)	-	-	(18)	(4)	-	-	(4)	(3)	-	-	(3)
Foreign Exchange	-	-	-	27	-	-	-	1	-	-	-	6
Total Derivatives	(18)	-	-	9	(4)	-	-	(3)	(3)	-	-	3
Real Return												
Real Return	96,994	-	3	96,997	31,070	-	2	31,072	12,614	-	1	12,615
Total Real Return	96,994	-	3	96,997	31,070	-	2	31,072	12,614	-	1	12,615
Total Investments at Fair Value	867,008	213,279	51,852	1,132,166	333,534	60,800	10,348	404,683	135,495	28,781	5,054	169,336
Investments Measured at NAV												
Specialty Credit	-	-	-	202,578	-	-	-	116,054	-	-	-	41,860
Private Equity	-	-	-	111,770	-	-	-	48,804	-	-	-	21,728
Real Estate	-	-	-	96,199	-	-	-	42,344	-	-	-	16,169
Real Return	-	-	-	39,456	-	-	-	14,727	-	-	-	5,976
Fixed Income	-	-	-	5,778	-	-	-	2,310	-	-	-	909
Non US Equity	-	-	-	49,280	-	-	-	26,088	-	-	-	9,035
Emerging Markets	-	-	-	513	-	-	-	192	-	-	-	80
US Equity	-	-	-	4,271	-	-	-	1,754	-	-	-	709
Total Investments Measured at NAV	-	-	-	509,845	-	-	-	252,273	-	-	-	96,466
Cash and Accruals	-	-	-	35,689	-	-	-	10,478	-	-	-	5,354
Total Investments	\$867,008	\$213,279	\$51,852	\$1,677,700	\$333,534	\$60,800	\$10,348	\$667,434	\$135,495	\$28,781	\$5,054	\$271,156

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: Cash Equivalents include publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; Short Term Investment Funds (STIF); money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper); and repurchase agreements.

The investments measured at net asset value (NAV) are presented in the chart below:

Fair Value Measurements and Application (GASB 72) Insurance												
As of June 30, 2024 (\$ in Thousands)												
Asset Type	KERS Nonhazardous						KERS Hazardous					
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Specialty Credit ⁽¹⁾	\$202,578	\$49,943	Daily - Quarterly	90 Days	\$116,054	\$14,100	Daily - Quarterly	90 Days	\$41,860	\$7,062	Daily - Quarterly	90 Days
Real Estate ⁽²⁾	96,199	11,870			42,344	8,868			16,169	3,389		
Real Return ⁽³⁾	39,456	23,861	Daily	30 - 60 Days	14,727	2,969	Daily	30 - 60 Days	5,976	1,767	Daily	30 - 60 Days
Private Equity ⁽⁴⁾	111,770	17,996			48,804	11,132			21,728	5,232		
Fixed Income ⁽⁵⁾	5,778	-	Daily		2,310	-	Daily		909	-	Daily	
Non US Equity ⁽⁵⁾	49,280	-	Daily		26,088	-	Daily		9,034	-	Daily	
Emerging Markets ⁽⁵⁾	513	-	Daily		192	-	Daily		80	-	Daily	
US Equity ⁽⁵⁾	4,271	-	Daily		1,754	-	Daily		709	-	Daily	
Total Investments Measured at NAV	\$509,845	\$103,670			\$252,273	\$37,069			\$96,465	\$17,450		
<p>⁽¹⁾ This type includes 12 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.</p> <p>⁽²⁾ This type includes 12 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.</p> <p>⁽³⁾ This type includes 15 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.</p> <p>⁽⁴⁾ This type includes 33 managers with multiple strategies. These investments cannot be redeemed. Instead, the investments are redeemed throughout the life of the investment. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.</p> <p>⁽⁵⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.</p>												

Money-Weighted Rates of Return

In accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, and GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other than Pension Plans*, KRS provides this additional disclosure regarding its money-weighted rate of return for the period of June 30, 2024. The money-weighted rate of return is a method of calculating period-by-period returns on the Pension and Insurance Funds' investments that adjusts for the changing amounts actually invested. For the purposes of this Statement, money-weighted rate of return is calculated as the internal rate of return on investments, net of investment expenses, then adjusted for the changing amounts actually invested.

Money-Weighted Rates of Return As of June 30, 2024						
	Pension			Insurance		
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS
2024	9.58%	11.17%	9.64%	1.14%	11.12%	11.01%

Note E. Securities Lending Transactions

Kentucky Revised Statutes 61.650 and 386.020(2) permit the Pension and Insurance Trust Funds to lend their securities to broker-dealers and other entities. KRS utilizes a securities lending program to temporarily lend securities to qualified agents in exchange for either cash collateral or other securities with an initial fair value of 102% or 105% of the value of the borrowed securities. The borrowers of the securities simultaneously agree to return the borrowed securities in exchange for the collateral. The types of securities lent include U.S. Treasuries, U.S. Agencies, U.S. Corporate Bonds, U.S. Equities, Global Fixed Income Securities, and Global Equities Securities. Securities Lending transactions are accounted for in accordance with GASB 28. The net earnings for the Pension and Insurance Trust Funds was \$0.6 million and \$0.3 million, respectively.

The IPS does not address any restrictions on the amount of loans that can be made. As of June 30, 2024, KRS had no credit risk exposure to borrowers because the collateral amounts received exceeded the amounts out on loan. The contracts with the custodial bank require them to indemnify KRS if the borrowers fail to return the securities and one or both of the custodial banks have failed to live up to their contractual responsibilities relating to the lending of securities.

All securities loans can be terminated on demand by either party to the transaction. BNY Mellon invests cash collateral as permitted by state statute and Board policy. The agent, BNY Mellon, of the Funds cannot pledge or sell collateral securities received unless the borrower defaults. KRS maintains a conservative approach to investing the cash collateral with BNY Mellon, emphasizing capital preservation, liquidity, and credit quality.

Cash collateral is invested in guaranteed, short-term obligations of the U.S. government, select government agencies and repurchase agreements with qualified agents. KRS cannot pledge or sell collateral securities received unless the borrower defaults. BNY Mellon as the lending agent also indemnifies KRS from any financial loss associated with a borrower's default and collateral inadequacy.

As of June 30, 2024, the average days to maturity for loans was one day, and the weighted average investment maturity of cash collateral investments was one day. The trusts had no credit risk exposure to borrowers because the amounts owed to borrowers exceeded the amounts the borrowers owed the trust, and no losses resulted during the period.

Security lending programs can entail interest rate risk and credit risk. KRS minimizes interest rate risk by limiting the term of cash collateral investments to several days. The credit risk is controlled by investing cash collateral in securities with qualities similar to the credit worthiness of lent securities.

As of June 30, 2024, the cash collateral received for the securities on loan for the Pension and Insurance Trust Funds was \$152.8 million and \$52.8 million, respectively. The securities non-cash collateral received a total of \$63.5 million and \$24.5 million, respectively. The collateral volume of the total underlying securities was \$216.3 million for Pension and \$77.3 million for the Insurance Trust Funds, respectively.

Securities Lending Cash Collateral As of June 30, 2024 (\$ in Thousands)

KERS Nonhazardous		KERS Hazardous		SPRS		KRS Total 2023
Pension	Insurance	Pension	Insurance	Pension	Insurance	
\$109,246	\$33,811	\$26,629	\$13,516	\$16,923	\$5,449	\$205,574

Note F. Risk of Loss

KRS is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes the Office of Claims and Appeals is vested with full power and authority to investigate, hear proof, and compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to \$250,000 for a single claim and \$400,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Office of Claims and Appeals are paid from the fund of the agency having a claim or claims before the Office of Claims and Appeals.

Claims against the KRS Board and KPPA, or any of its staff as a result of an actual or alleged breach of fiduciary duty, are self-insured effective May 26, 2019.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. All medical expenses related to a work injury or illness are paid based upon appropriate statutory and regulatory reductions, and up to 66.67% of wages for temporary disability. Each agency pays premiums based on fund reserves and payroll. Settlements did not exceed insurance coverage in any of the past three fiscal years. Thus, no secondary insurance had to be utilized. There were no claims which were appealed to the Kentucky Workers' Compensation Board.

Note G. Contingencies

In the normal course of business, KRS is involved in litigation concerning the right of participants, or their beneficiaries, to receive benefits. KRS does not anticipate any material losses for KERS, SPRS or the Insurance Fund as a result of the contingent liabilities. KRS is involved in other litigation; therefore, please see Note O. Litigation, for further information.

Note H. Income Tax Status

The Internal Revenue Service (IRS) has ruled that KERS and SPRS qualify under Section 401(a) of the Internal Revenue Code are, generally, not subject to tax. KERS and SPRS are subject to income tax on any unrelated business income (UBI).

Note I. Financial Report for (GASB 67) Pension

Plans and (GASB 74) Postemployment Benefit Plans

The following details actuarial information and assumptions utilized in determining the unfunded (overfunded) actuarial accrued liabilities for KERS, SPRS and the Insurance Fund. Please note that calculations for TPL, net fiduciary position, NPL, total OPEB liability, net OPEB fiduciary position, and net OPEB liability are reported in the Plans' Required Supplementary Information (RSI) on pages 72-### are based on June 30, 2023, actuarial valuations, rolled forward to June 30, 2024. The prior year valuations are used as the basis for the roll forward method and are applied to complete the current year pension and OPEB valuations as of the measurement date, June 30, 2024, in accordance with GASB *Statement No. 67*, paragraph 37, and GASB *Statement No. 74*, paragraph 41.

Financial Report for Pension Plan (GASB 67)

Basis of Calculations

GRS completed reports by plan in compliance with GASB *Statement No. 67 Financial Reporting for Pension Plans*. The TPL, NPL, and sensitivity information are based on an actuarial valuation date of June 30, 2023. The TPL was rolled forward from the valuation date to the Plans' fiscal year ended June 30, 2024, using generally accepted actuarial principles. Information disclosed for years prior to June 30, 2017, were prepared by the prior actuary. GRS will provide separate reports at a later date with additional accounting information determined in accordance with GASB *Statement No. 68, Accounting and Financial Reporting for Pensions*.

Assumptions

Based on the June 30, 2021, actuarial valuation report, the actuarial methods and assumptions used to calculate these contributions rates are:

- Investment Return - 6.25% for KERS Hazardous, 5.25% for KERS Nonhazardous and SPRS.
- Inflation - 2.30% for all plans.
- Salary Increases - 3.30% to 15.30% for KERS Nonhazardous, 3.55% to 20.05% for KERS Hazardous, and 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 0% for KERS Nonhazardous, Hazardous, and SPRS.
- Mortality - System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.

Plan Provisions

There have been no assumption, method or plan provision changes that would materially impact the total pension liability since June 30, 2023. It is our opinion that these procedures for determining the information contained in these reports are reasonable, appropriate, and comply with applicable requirements under GASB No. 67.

Discount Rate

Single discount rates of 5.25% for the KERS Nonhazardous plan, 6.25% for the KERS Hazardous plan, and 5.25% for SPRS were used to measure the total pension liability for the fiscal year ending June 30, 2024. These single discount rates were based on the expected rate of return on pension plan investments for each plan. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plans' fiduciary net position and future contributions were projected to be sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability for each plan.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that the entire actuarially determined employer contribution is received by each plan each future year, calculated in accordance with the current funding policy.

Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net positions as of June 30, 2017, and later are net of the 401(h) asset balance.

Additional Disclosures

These reports are based upon information furnished to us by the Kentucky Public Pensions Authority (KPPA), which includes benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2023," for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for the fiscal year ending June 30, 2024.

Financial Reporting for Postemployment Benefit Plans (GASB 74)

GRS completed reports by plan in compliance with GASB *Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans* for the fiscal year ended June 30, 2024. GRS will provide separate reports at a later date with additional accounting information determined in accordance with GASB *Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Basis of Calculations

The total OPEB liability, net OPEB liability (NOL), and sensitivity information are based on an actuarial valuation date of June 30, 2023. The total OPEB liability was rolled forward from the valuation date to the plan's fiscal year ended June 30, 2024, using generally accepted actuarial principles.

Assumptions

The discount rates used to calculate the total OPEB liability increased for each fund since the prior year (see further discussion on the calculation of the single discount rates later in this section). The assumed increase in future health care cost, or trend assumption, was reviewed during the June 30, 2023, valuation process and was updated to better reflect the plan's anticipated long-term healthcare costs increases. In general, the updated assumption is assuming higher future increases in pre-Medicare healthcare costs.

The Total OPEB Liability as of June 30, 2024, is determined using these updated assumptions. It is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

The actuarially determined contribution rates effective for fiscal year ended 2024 that are documented in the schedules were calculated as of June 30, 2021. Based on the June 30, 2021, actuarial valuation reports the actuarial methods and assumptions used to calculate the required contributions are:

- Investment Return - 6.25%.
- Inflation - 2.30%.
- Salary Increases - 3.30% to 15.30% for KERS Nonhazardous, 3.55% to 20.05% for KERS Hazardous, 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 0.00% for KERS Nonhazardous, KERS Hazardous, and SPRS.
- Mortality - System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.
- Health Care Trend Rates:
 - Pre-65 - Initial trend starting at 6.30% on January 1, 2023, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.
 - Post-65 - Initial trend starting at 6.30% on January 1, 2023, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.

Plan Provisions

There have been no plan provision changes that would materially impact the total OPEB liability since June 30, 2023.

Implicit Employer Subsidy for non-Medicare retirees

The fully-insured premiums paid for the Kentucky Employees' Health Plan are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit employer subsidy for the non-Medicare eligible retirees. GASB No. 74 requires that the liability associated with this implicit subsidy be included in the calculation of the Total OPEB Liability.

Discount Rates

The following single discount rates were used to measure the total OPEB liability for the fiscal year ending June 30, 2024.

PLAN	FISCAL YEAR 2024	FISCAL YEAR 2023	CHANGE IN RATE
KERS Nonhazardous	6.00%	5.94%	0.06%
KERS Hazardous	5.99%	5.94%	0.05%
SPRS	6.08%	6.02%	0.06%

The single discount rates are based on the expected rate of return on OPEB plan investments of 6.50% and a municipal bond rate of 3.97%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2024.

Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the plan's fiduciary net position and future contributions were projected to be sufficient to finance the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on insurance plan investments was applied to all periods of the projected benefit payments paid from the retirement system. However, the cost associated with the implicit employer subsidy is not currently being included in the calculation of the plan's actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the plan's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that the entire actuarially determined employer contribution is received by each plan each future year, calculated in accordance with the current funding policy.

Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income and administrative expenses are included in the reconciliation of the fiduciary net position.

Additional Disclosures¹

The reports are based upon information furnished to GRS by the KPPA, which includes benefit provisions, membership information, and financial data. GRS did not audit this data and information, but GRS applied a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2023," for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for fiscal year ending June 30, 2024.

Target Asset Allocation

The long-term (10-year) expected rates of return were determined by using a building block method in which best estimated ranges of expected future real rates of return were developed for each asset class. The ranges were combined by weighting the expected future real rate of return by the target asset allocation percentage. The target

¹ Note: Data and information regarding GASB 67 and GASB 74 reporting was provided by GRS Retirement Consulting.

KRS DRAFT RAN 11-13-2024

allocation and best estimates of arithmetic real rate of return for each major asset class are summarized in the tables on the following page.

KRS DRAFT RAN 11-13-2024**Target Asset Allocation - Pension
As of June 30, 2024**

Allocations apply to KERS Nonhazardous and SPRS Pension Funds

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Equity		
Public Equity	32.50%	4.15%
Private Equity	7.00%	9.10%
Fixed Income		
Core Fixed Income	20.50%	2.85%
Specialty Credit	15.00%	3.82%
Cash	5.00%	1.70%
Inflation Protected		
Real Estate	10.00%	4.90%
Real Return	10.00%	5.35%
Total	100.00%	

**Target Asset Allocation - Pension and Insurance
As of June 30, 2024**

Allocations apply to KERS Hazardous Pension and all KRS Insurance Funds

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Equity		
Public Equity	43.50%	4.15%
Private Equity	10.00%	9.10%
Fixed Income		
Core Fixed Income	10.00%	2.85%
Specialty Credit	15.00%	3.82%
Cash	1.50%	1.70%
Inflation Protected		
Real Estate	10.00%	4.90%
Real Return	10.00%	5.35%
Total	100.00%	

NOTE: Minor deviations are expected between the actuarial assumed rate of return and the expected rate of return reported in the above charts. The actuarial assumed rates of return are based on a review of economic assumptions completed periodically as warranted but not longer than every 2 years; whereas, the expected rate of return is calculated annually for GASB purposes by taking the current asset allocation and applying the most relevant long term market expectations (March 2024) for each asset class.

Sensitivity of the NPL to Changes in the Discount Rate Fiscal Year 2024 As of June 30, 2024 (\$ in Thousands)

	KERS		SPRS
	Nonhazardous	Hazardous	
	Current 5.25%	Current 6.25%	Current 5.25%
1% Decrease	\$13,948,313	\$541,741	\$587,581
Current Discount Rate	12,049,666	373,761	449,842
1% Increase	\$10,476,712	\$238,565	\$336,576

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate

As of June 30, 2024 (\$ in Thousands)

	KERS		SPRS
	Nonhazardous	Hazardous	
	Single 6.00%	Single 5.99%	Single 6.08%
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate			
1% Decrease	\$999,036	\$(181,350)	\$34,067
Single Discount Rate	723,049	(235,131)	3,642
1% Increase	\$489,746	\$(279,694)	\$(21,916)
Sensitivity of the Net OPEB Liability to Changes in the Current Healthcare Cost Trend Rate			
1% Decrease	\$536,314	\$(266,478)	\$(18,176)
Current Healthcare Cost Trend Rate	723,049	(235,131)	3,642
1% Increase	\$939,316	\$(198,505)	\$29,059

Development of Single Discount Rate for OPEB

As of June 30, 2024

	KERS		SPRS
	Nonhazardous	Hazardous	
2024			
Single Discount Rate	6.00%	5.99%	6.08%
Long-Term Expected Rate of Return	6.50%	6.50%	6.50%
Long-Term Municipal Bond Rate ⁽¹⁾	3.97%	3.97%	3.97%

Note: 1. Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2024.

Schedule of Employers' NPL - KERS Nonhazardous

As of June 30, 2024 (\$ in Thousands)

Total Pension Liability (TPL)	\$16,273,602
Plan Fiduciary Net Position	\$4,223,936
Net Pension Liability	\$12,049,666
Ratio of Plan Fiduciary Net Position to TPL	25.96%
Covered Payroll ⁽¹⁾	\$1,912,421
Net Pension Liability as a Percentage of Covered Payroll	630.07%

Schedule of Employers' NPL - KERS Hazardous

As of June 30, 2024 (\$ in Thousands)

Total Pension Liability (TPL)	\$1,393,651
Plan Fiduciary Net Position	\$1,019,890
Net Pension Liability	\$373,761
Ratio of Plan Fiduciary Net Position to TPL	73.18%

Covered Payroll ⁽¹⁾	\$279,218
Net Pension Liability as a Percentage of Covered Payroll	133.86%

Schedule of Employer's NPL - SPRS As of June 30, 2024 (\$ in Thousands)

Total Pension Liability (TPL)	\$1,101,632
Plan Fiduciary Net Position	\$651,790
Net Pension Liability	\$449,842
Ratio of Plan Fiduciary Net Position to TPL	59.17%
Covered Payroll ⁽¹⁾	\$71,964
Net Pension Liability as a Percentage of Covered Payroll	625.09%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

Schedule of the Employers' Net OPEB Liability As of June 30, 2024 (\$ in Thousands)

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll	Net OPEB Liability as a Percentage of Covered Payroll
KERS Nonhazardous ⁽¹⁾	\$2,488,778	\$1,765,729	\$723,049	70.95%	\$1,923,825	37.58%
KERS Hazardous ⁽²⁾	442,817	677,948	(235,131)	153.10%	279,218	(84.21)%
SPRS Plan ⁽¹⁾	\$277,159	\$273,517	\$3,642	98.69%	\$71,992	5.06%

⁽¹⁾ Covered Payroll is based on derived compensation using the provided employer contribution information.

⁽²⁾ Covered Payroll is based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

Note J. Legislation

2024 Regular Session

The 2024 Regular Session of the Kentucky General Assembly adjourned on Monday, April 15, 2024. Highlights from the Session include the following:

BILLS OF DIRECT INTEREST TO KRS MEMBERS AND RETIREES

House Bill 99: The KPPA Housekeeping bill

House Bill 99 amends various sections of KRS Chapters 16, 61, and 78 to make technical and housekeeping changes relating to KPPA's administration of the systems, including renaming the position of internal auditor to Chief Auditor; providing that the death benefit of \$5,000 is payable to a beneficiary of the member, not the member, and is not subject to garnishment, unless the beneficiary is the member's estate or there is an overpayment of benefits or outstanding balance owed to the system; and other technical changes. "Housekeeping bill" is a slang term for typically noncontroversial legislation that "cleans up" statutes by clarifying their language or otherwise updating their content to align with changes in relevant federal or state law.

House Bill 1: The "Rainy Day Fund" Appropriations bill

House Bill 1 allocates money from the Budget Reserve Trust Fund Account, commonly known as the state's "Rainy Day Fund," to be applied to the unfunded liability of the Kentucky Employees Retirement System (KERS) Nonhazardous pension fund and the State Police Retirement System (SPRS) pension fund (\$50 million and \$25 million each fiscal year, 2025 and 2026 respectively).

House Bill 6: The State Executive Branch Budget bill

House Bill 6 is the State/Executive Branch budget bill for the biennium beginning July 1, 2024, through June 30, 2026. The budget includes the full actuarially determined employer contribution for the KERS and SPRS plans, and it allocates an additional \$250 million in each fiscal year to be paid toward the unfunded liability of the KERS Nonhazardous pension fund.

Neither House Bill 1 nor House Bill 6 contain a cost-of-living adjustment (COLA) or other form of supplemental payment (such as a "13th check") for retirees. This means there were no budget bills that contained a COLA or other form of supplemental payment for retirees in any of the KRS systems administered by KPPA.

Senate Bill 299: Move the Horse Racing Commission to a quasi-governmental agency called the Kentucky Horse Racing and Gaming Corporation (HRGC) and abolish the Charitable Gaming Commission and merge it under the HRGC

Senate Bill 299 moves the Horse Racing Commission to a quasi-agency called the Kentucky Horse Racing and Gaming Corporation (HRGC), effective July 1, 2024. The following year, on July 1, 2025, the Charitable Gaming Commission will be abolished and merged under the HRGC. All eligible employees of the corporation will participate in the Kentucky Employees Retirement System (KERS) effective July 1, 2024. Current Horse Racing Commission employees will continue to participate in KERS under the new KHRGC, without interruption.

House Bill 635: Actuarial analysis assumptions and methods

House Bill 635 implements additional reporting requirements for actuarial analyses and expands the required supporting documentation and explanations of findings for fiscal and corrections impact statements.

State Senate Confirms Gubernatorial Appointments to KRS Board

State law requires that gubernatorial appointments to the KRS Board of Trustees receive Senate approval. On April 15, three (3) Senate Resolutions confirming Governor Andy Beshear's recent appointments to the KRS board were unanimously adopted by a vote of 38-0:

1. **Senate Resolution 309**, sponsored by Senator Julie Raque Adams, confirmed the appointment of Mary G. Eaves to the KRS Board of Trustees for a term expiring June 21, 2027;
2. **Senate Resolution 310**, sponsored by Senator Julie Raque Adams, confirmed the reappointment of Caswell Prewitt Lane to the KRS Board of Trustees for a term expiring June 17, 2027; and
3. **Senate Resolution 313**, sponsored by Senator Julie Raque Adams, confirmed the reappointment of Pamela Fettig Thompson to the KRS Board of Trustees for a term expiring June 17, 2027.

The Resolutions only required Senate confirmation and did not need to be adopted in the House.

Note K. Litigation

Seven Counties

Seven Counties Services, Inc. (Seven Counties) filed for Chapter 11 bankruptcy in the United States Bankruptcy Court for the Western District of Kentucky (the Bankruptcy Court) in April 2013. Seven Counties provides mental health services for the Cabinet for Health and Family Services for the greater Louisville, Kentucky area and surrounding counties. Seven Counties participated in KERS for approximately twenty-five years. Seven Counties identified KERS as a creditor with a primary objective of discharging its continuing obligation to remit retirement contributions for approximately 1,300 employees and to terminate its participation in KERS. If Seven Counties is successful in discharging its obligations to KERS, the estimated member pension and insurance actuarial accrued liability is in the range of \$145 to \$150 million.

KERS opposed Seven Counties' attempt to discharge its obligations and terminate its participation. KERS asserted that Seven Counties is a Governmental Unit properly participating in KERS by Executive Order issued in 1978 and thus ineligible for Chapter 11 relief. Consequently, Seven Counties would remain statutorily obligated to continue participation and remit contributions. On May 30, 2014, the Bankruptcy Court held that Seven Counties was not a Governmental Unit and could move forward with its Chapter 11 bankruptcy case. The Bankruptcy Court further held that Seven Counties' statutory obligation to participate in and remit contributions to KERS was a "contract" eligible for rejection. KRS appealed this decision.

On August 24, 2018, the U.S. Court of Appeals for the Sixth Circuit (the Sixth Circuit) issued a two to one Opinion affirming the decision that Seven Counties is eligible to file for bankruptcy under Chapter 11. However, the Sixth Circuit went on to state, "lacking state court precedent characterizing the nature of the relationship between Seven Counties and KERS, we certify that question to the Kentucky Supreme Court." KERS filed a petition to have the Opinion Reheard En Banc by the entire Sixth Circuit. On October 5, 2018, the Sixth Circuit issued an order holding the petition in abeyance pending a response from the Kentucky Supreme Court on the certified question of law. On November 1, 2018, the Supreme Court of Kentucky issued an Order granting certification of the question. The certified question of law was briefed by the parties and oral arguments were held before the Supreme Court of Kentucky on March 6, 2019. On August 29, 2019, the Supreme Court of Kentucky ruled that Seven Counties' participation in and its contributions to KERS are based on a statutory obligation. The Supreme Court of Kentucky's ruling was forwarded to the Sixth Circuit for further consideration.

On July 20, 2020, the Sixth Circuit Court of Appeals issued an Opinion stating that they affirmed their previous determination that Seven Counties was eligible to file a Chapter 11 bankruptcy case. The Sixth Circuit also reversed the conclusion that Seven Counties can reject its obligation to participate as an executory contract and that Seven Counties need not maintain its statutory contribution obligation during the pendency of the bankruptcy. The Sixth Circuit dismissed Seven Counties' cross appeal and remanded the case for further proceedings consistent with the opinion. KERS again filed a petition to have the Opinion regarding Seven Counties' ability to file a Chapter 11 bankruptcy Reheard En Banc by the entire Sixth Circuit. This petition was denied in an Order dated September 11, 2020. The case was remanded back to the Bankruptcy Court.

The parties were able to stipulate to the principal amount of Seven Counties unpaid employer contributions for the post-petition time-frame of April 6, 2014, through February 5, 2015. A limited hearing occurred in February 2022 regarding whether interest is applicable to the stipulated amount. The Bankruptcy Court entered an order that set the amount of the contributions, but did not order Seven Counties to pay that amount. The order was silent regarding the application of interest. Both Seven Counties and KERS appealed the Bankruptcy Court's order to the United States District Court where it will be joined with the pending appeal of the confirmation of Seven Counties' reorganization plan.

The United States District Court refused to hear the appeals stating that the Bankruptcy Court's order was not final and appealable. That left KERS in a position where no relief was possible; the Bankruptcy Court would not enter an order requiring payment, and the District Court would not hear an appeal. This forced KERS to once again appeal the United States Court of Appeals for the Sixth Circuit. The matter is now fully briefed before that court and parties are awaiting oral arguments.

The Sixth Circuit Court of Appeals agreed with the District Court, ruling that the Bankruptcy Court order was not final and appealable. The Sixth Circuit did however instruct the Bankruptcy Court that it had construed the 2020 ruling too narrowly and returned the case to the Bankruptcy Court for "expeditious resolution of the remaining issues." KRS has moved the Bankruptcy Court to resolve the issue of ordering Seven Counties to pay the stipulated amount and to allow KRS to pursue collecting contributions from February 2015 forward outside of the Bankruptcy Court. These motions are pending.

Mayberry

In December 2017, certain members and beneficiaries of the Kentucky Retirement Systems filed litigation (Mayberry et al v. KKR et al) against certain Hedge Fund Sellers, Investment, Actuarial and Fiduciary Advisors, Annual Report Certifiers, and certain (past and present) Kentucky Retirement Systems' Trustees and Officers in Franklin Circuit Court. The litigation alleges (in summary) that actuarial assumptions, fees, statements and disclosures harmed the financial status of the Retirement Systems. While Kentucky Retirement Systems is designated a "Defendant," that designation is a technical formality in so much as Kentucky Retirement Systems is a "nominal defendant." On April 20, 2018, the Kentucky Retirement Systems and the plaintiffs filed a joint notice with the Court advising that Kentucky Retirement Systems does not intend to challenge its status as a "nominal defendant." Since then, the Franklin Circuit Court ruled on various Defendants' Motions to Dismiss, denying nearly all of them. On January 10, 2019, KKR, Henry Kravis and George Roberts (collectively, "KKR Parties") amended their Answer to assert cross claims against Kentucky Retirement Systems. Certain Officer and Trustee Defendants appealed the denial of their Motion to Dismiss on immunity grounds to the Court of Appeals, and that appeal was transferred to the Kentucky Supreme Court. The hedge fund defendants filed a Petition for Writ of Prohibition in the Court of Appeals, arguing the Plaintiffs lacked standing to bring the action. That Petition was granted on April 23, 2019. Plaintiffs promptly appealed the Court of Appeals' decision to the Supreme Court of Kentucky. On July 9, 2020, the Supreme Court of Kentucky issued an Opinion stating that the plaintiffs, as beneficiaries of a defined-benefit plan who have received all of their vested benefits so far and are legally entitled to receive their benefits for the rest of their lives, do not have a concrete stake in this case and therefore lack standing to bring this claim. The case was remanded to the circuit court with directions to dismiss the complaint. Thereafter, plaintiffs filed a motion seeking to amend their complaint to add parties (Tier 3 members of the Retirement Systems) and claims that would purportedly correct the standing defect identified by the Supreme Court of Kentucky. Furthermore, the Attorney General of the Commonwealth of Kentucky sought leave to intervene in this action through a motion filed July 20, 2020, and an Intervening Complaint on July 22, 2020. The Defendants filed motions seeking to have the case dismissed. On December 28, 2020, Franklin Circuit Court issued an Order dismissing the Complaint filed by the Plaintiffs, denied Plaintiffs' Motion to file a Second Amended Complaint, and granted the Office of the Attorney General's Motion to Intervene. A variety of additional motions and pleadings were filed, including an original action by the Tier 3 Group. This original action is still in the initial stages and is pending with Franklin Circuit Court. (Tia Taylor, et al. v KKR & Co. L.P., et al.) On January 12, 2021, Franklin Circuit Court issued a scheduling Order granting the Attorney General until February 1, 2021 to file an Amended Intervening Complaint, granting the Tier 3 Group until February 11, 2021 to file a Motion to Intervene in this action. Additional extension orders were granted for the Attorney General intervention. The Attorney General filed an Amended Complaint on May 24, 2021. On June 14, 2021, the Tier 3 Group's Motion to Intervene in the Attorney General action was denied. In the spring of 2022, Franklin Circuit Judge Phillip Shepherd recused and this matter was assigned to Judge Thomas Wingate.

Following the Attorney General's intervention, the Defendant's challenged the intervention as beyond the scope of the remand from the Supreme Court in July of 2020. Franklin Circuit Court denied that motion and the matter was on appeal when this case was assigned to Judge Thomas Wingate. Judge Wingate placed the matter in abeyance pending a decision on whether the Attorney General's intervention was proper. The Court of Appeals held that the Attorney General should not have been allowed to intervene and the Attorney General is currently seeking Discretionary Review by the Supreme Court.

Simultaneously with his intervention, the Attorney General filed a separate, stand-alone case with an identical complaint to protect against the possibility that his intervention would be deemed improper. The Defendants filed motions to dismiss the Attorney General's stand-alone case based on various legal theories. Franklin Circuit Court denied the majority of these motions but granted the motions to dismiss on behalf of R.V. Kuhns and Cavanaugh Macdonald, KRS' actuary and investment consultant during the relevant timeframe. This case is still proceeding.

A number of related cases have also developed based on issues raised in the above referenced Mayberry action. There has been an action filed by a number of the Trustees and Officers named in Mayberry seeking reimbursement by Kentucky Retirement Systems of legal fees. Kentucky Retirement Systems has also filed an action against Hallmark Specialty Insurance seeking a declaratory judgment that Hallmark has a duty to defend and indemnify Kentucky Retirement Systems in the Mayberry action. Two of the hedge fund Defendants in the Mayberry action have also filed an action in the United States District Court for the Eastern District of Kentucky naming individual members of the former KRS Board of Trustees as Defendants. This action is seeking a judgment declaring that the Trustees violated Plaintiffs' right to due process as well as an award of costs and attorneys' fees. Three actions have also been filed in Delaware regarding the Mayberry action. One filed by Prisma Capital Partners and one filed by Blackstone Alternative Asset Management allege breaches of warranties, representations and more relating to the Subscription Agreements signed by the Kentucky Retirement Systems. The third was filed by Prisma Capital Partners against the Daniel Boone Fund, LLC. Additionally, an action has been filed by PAAMCO against Kentucky Retirement Systems in California also alleging breaches of warranties, representations and more relating to the Subscription Agreements signed by the Kentucky Retirement Systems. Finally, on August 2, 2021, Blackstone Alternative Asset Management, L.P. (BAAM) filed an action against the Kentucky Public Pensions Authority, the Board of Trustees of the Kentucky Retirement Systems, the Board of Trustees of the County Employees Retirement System, the Kentucky Retirement Systems Insurance Fund, and the Kentucky Retirement Systems Pension Fund

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(collectively “Defendants”) for breach of contract. The Defendants filed a Motion to Dismiss on September 8, 2021. The last of these additional actions, the suit filed by BAAM, was dismissed by Franklin Circuit Court. The Court of Appeals upheld the dismissal, and BAAM is seeking Discretionary Review by the Supreme Court. The rest of these cases remain active in various stages of litigation.

Bayhills

In 2018, Kentucky Retirement Systems sued Bayhills for breach of contract seeking to terminate Bayhills as investment managers. Kentucky Retirement Systems filed the suit in Franklin Circuit Court, but Bayhills removed it to federal district court. Kentucky Retirement Systems successfully had the case remanded back to state court. The case is now pending before Franklin Circuit Court. The Court entered an injunction preventing Bayhills from paying themselves management and other fees during the litigation. Bayhills has appealed this ruling to the Court of Appeals. The Court of Appeals and the Kentucky Supreme Court denied Bayhills their requested relief on appeal. Litigation is still ongoing.

Mountain Comprehensive Care Center & Adanta

In 2022, Mountain Comprehensive Care Center and Adanta filed separate suits challenging the actuarially accrued liability assigned these two entities via the process outlined in KRS 61.565, known as House Bill 8 from the 2021 Regular Session of the Kentucky General Assembly. The suits challenge not only the liability assigned to them, but they challenge the constitutionality of the statutory scheme. This litigation is ongoing.

James Redwine, David Campbell, & Michael Steward

Three complaints were filed against the Kentucky Retirement Systems (KRS) on behalf of specific named plaintiffs and others similarly situated based on the same facts that gave rise to the former River City Fraternal Order of Police (FOP) complaint. KPPA was aware that the River City FOP case impacted more individuals than the named plaintiffs and had been working on legislative and regulatory solutions. Legislation passed by the 2022 General Assembly allows individuals negatively impacted by the Medicare Secondary Payer Act to receive their health insurance through the Kentucky Employees Health Plan, and KPPA has promulgated a regulation to reimburse those individuals who had to pay for health insurance consistent with the Sixth Circuit Opinion. In addition to the MSPA issue, these three complaints allege that requiring Medicare eligible members to pay for Medicare Part B violates their right to “free” health insurance under their inviolable contract.

These suits are identical to two suits filed against the County Employees Retirement System (CERS). The cases against KRS are being held in abeyance pending the outcome of the class certification issue in the CERS cases.

Note L. Reciprocity Agreement

In accordance with Kentucky Revised Statutes 61.702, KRS has reciprocity agreements with Teachers’ Retirement System of Kentucky (TRS) and Judicial Form Retirement System (JFRS) for the payment of insurance benefits for those members who have creditable service in KERS, SPRS and TRS and/or JFRS systems.

Note M. Reimbursement of Retired Re-Employed Health Insurance, Active Member Health Insurance Contributions, and Retired Re-Employed Employer Contributions

Reimbursement of Retired Re-Employed Health Insurance

If a retiree is re-employed in a regular full-time position and has chosen health insurance coverage through KRS, the employer is required to reimburse KRS for the health insurance premium paid on the retiree's behalf, not to exceed the cost of the single premium rate. Exceptions for retired members who re-employ as a police officer, sheriff or school resource officer exist which may exempt employers from paying employer contributions and health insurance reimbursements if certain requirements are met. For the fiscal year ended June 30, 2024, the reimbursement totaled \$9.4 million.

Active Member Health Insurance Contributions

For new plan participants after August 31, 2008, an active member contribution of 1% in addition to the member pension contribution is required. This 1% is applicable to all Nonhazardous and Hazardous funds, and reported in the Insurance Fund. For the fiscal year ended June 30, 2024, members paid into the Insurance Fund \$13.1 million.

Retired Re-Employed Employer Contributions

Employers are required to report employer contributions on retired members who are employed in a regular full-time position. These members are referred to as retired re-employed members. These are reported within the employer contributions on the financial statements. Please see the chart below for the breakdown.

Retired Reemployed Healthcare Contributions As of June 30, 2024 (\$ in Thousands)	KERS		SPRS	KRS Total
	Nonhazardous	Hazardous		
Amount	\$7,484	\$1,865	\$5	\$9,354

Member Health Insurance Contributions As of June 30, 2024 (\$ in Thousands)	KERS		SPRS	KRS Total
	Nonhazardous	Hazardous		
Amount	\$10,585	\$2,086	\$396	\$13,067

Note N. General Fund Appropriations

During the 2022 Regular Session of the Kentucky General Assembly, HB1 allocated an additional \$485 million in general fund dollars to the KERS Nonhazardous plan and the SPRS plan. This amount included \$215 million in FY 2021-2022 for the SPRS pension fund to be applied to the unfunded liability, which immediately lowered the SPRS contribution rate from 146.06% to 99.43% for the 2022-2023 fiscal year. The rest of the \$485 million consisted of \$135 million in each fiscal year of the biennium (2023 and 2024) for the KERS Nonhazardous pension fund to be applied to the unfunded liability. Also, House Bill 604 allocated \$105 million in fiscal year 2023 and fiscal year 2024 to be applied to the unfunded liability of the KERS Nonhazardous pension plan.

General Fund Appropriations (\$ in Thousands)			
Fiscal Year	KERS		KRS Total
	Nonhazardous	SPRS	
2021-2022	\$-	\$215,000	\$215,000
2022-2023	\$240,000	\$-	\$240,000
2023-2024	\$240,000	\$-	\$240,000
Total	\$480,000	\$215,000	\$695,000

Note O. Prisma Daniel Boone Fund

The funds invested with Prisma Daniel Boone Fund continue to be held in a contingency reserve to cover potential obligations arising from the Mayberry Action (see Note O for details of Mayberry Case). The total reported in reserve as of June 30, 2024, is \$25.8 million for the Pension Plans and \$12.9 million for the Insurance Plan. This is based on the May 31, 2024, report because Absolute Return managers are reported on a one month lag.

Note P. Subsequent Events

Management has evaluated the period June 30, 2024 to December 5, 2024 (the date the combining financial statements were available to be issued) for items requiring recognition or disclosure in the combining financial statements.

REQUIRED SUPPLEMENTARY INFORMATION INCLUDING GASB 67 AND 74

- 72 Schedule of Employers' Net Pension Liability
- 73 Schedule of Changes in Employers' Total Pension Liability
- 77 Notes to Schedule of Employers' Contributions
- 78 Schedule of Employers' Contribution Pension
- 80 Schedule of Employers' Net OPEB Liability
- 81 Schedule of Changes in Employers' Net OPEB Liability
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- 85 Schedule of Employers' OPEB Contributions
- 87 Money Weighted Rates of Return
- 91 Report on Internal Control

Schedule of Employers' NPL - KERS Nonhazardous Pension
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2024	\$16,273,602	\$4,223,936	\$12,049,666	25.96%	\$1,912,421	630.07%
2023	15,858,669	3,539,943	12,318,726	22.32%	1,648,318	747.35%
2022	16,281,188	3,013,845	13,267,343	18.51%	1,432,960	925.87%
2021	16,335,657	3,018,660	13,316,997	18.48%	1,441,337	923.93%
2020	16,472,733	2,308,080	14,164,653	14.01%	1,476,156	959.56%
2019	16,356,674	2,233,672	14,123,002	13.66%	1,485,854	950.50%
2018	15,608,221	2,004,446	13,603,775	12.84%	1,509,955	900.94%
2017	15,445,206	2,056,870	13,388,336	13.32%	1,602,396	835.52%
2016	13,379,781	1,980,292	11,399,489	14.80%	1,631,025	698.92%
2015	\$12,359,673	\$2,327,783	\$10,031,890	18.83%	\$1,544,234	649.64%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

Schedule of Employers' NPL - KERS Hazardous Pension
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2024	\$1,393,651	\$1,019,890	\$373,761	73.18%	\$279,218	133.86%
2023	1,316,521	893,533	422,988	67.87%	223,922	188.90%
2022	1,318,494	810,978	507,516	61.51%	188,648	269.03%
2021	1,311,767	866,140	445,627	66.03%	172,725	258.00%
2020	1,251,027	690,350	560,677	55.18%	171,840	326.28%
2019	1,227,226	680,932	546,294	55.49%	160,600	340.16%
2018	1,150,610	645,485	505,125	56.10%	152,936	330.29%
2017	1,098,630	601,529	497,101	54.75%	178,511	278.47%
2016	919,517	527,879	391,638	57.41%	158,828	246.58%
2015	\$895,433	\$552,468	\$342,965	61.70%	\$128,680	266.53%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

Schedule of Employer's NPL - SPRS Pension
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2024	\$1,101,632	\$651,790	\$449,842	59.17%	\$71,964	625.09%
2023	1,039,813	591,514	448,299	56.89%	65,693	682.42%
2022	1,057,752	551,699	506,053	52.16%	48,061	1,052.94%
2021	1,055,824	356,346	699,478	33.75%	47,873	1,461.11%
2020	1,049,237	293,949	755,288	28.02%	49,019	1,540.81%
2019	1,035,000	286,165	748,835	27.65%	49,515	1,512.34%
2018	969,622	267,572	702,050	27.60%	50,346	1,394.45%
2017	943,271	255,737	687,534	27.11%	54,065	1,271.68%
2016	795,421	218,012	577,409	27.41%	46,685	1,236.82%
2015	\$734,156	\$247,228	\$486,928	33.68%	\$45,765	1,063.97%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

**Schedule of Changes in Employers' TPL - KERS Nonhazardous
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability (TPL)										
Service Cost	\$184,567	\$163,563	\$165,616	\$171,472	\$179,702	\$184,988	\$195,681	\$143,858	\$139,631	\$143,847
Interest	805,180	827,579	830,440	838,084	832,178	793,163	785,123	870,725	891,897	859,509
Benefit Changes	-	2,024	-	2,091	-	-	9,624	-	-	-
Difference between Expected and Actual Experience	469,003	310,954	(15,034)	(130,268)	115,515	70,529	153,565	(134,379)	-	30,958
Changes of Assumptions	-	(691,088)	-	-	-	700,464	-	2,145,530	923,999	694,592
Benefit Payments	(1,043,817)	(1,035,551)	(1,035,491)	(1,018,455)	(1,011,336)	(1,000,691)	(980,978)	(960,309)	(935,419)	(919,343)
Net Change in TPL	414,933	(422,519)	(54,469)	(137,076)	116,059	748,453	163,015	2,065,425	1,020,108	809,563
TPL – Beginning	15,858,669	16,281,188	16,335,657	16,472,733	16,356,674	15,608,221	15,445,206	13,379,781	12,359,673	11,550,110
TPL – Ending (a)	\$16,273,602	\$15,858,669	\$16,281,188	\$16,335,657	\$16,472,733	\$16,356,674	\$15,608,221	\$15,445,206	\$13,379,781	\$12,359,673
Plan Fiduciary Net Position ⁽¹⁾										
Contributions – Employer Other ⁽⁶⁾	1,295,695	\$1,275,007	\$1,116,869	\$1,134,232	\$948,592	\$1,035,462	\$689,143	\$757,121	\$513,084	\$521,691
Contributions – Member ⁽²⁾	96,615	84,579	89,607	90,202	96,594	93,759	104,972	100,543	106,494	104,606
Refunds of Contributions	(11,693)	(11,847)	(12,116)	(8,953)	(11,523)	(12,342)	(13,603)	(11,819)	(12,130)	(13,552)
Retirement Benefit	(1,032,124)	(1,023,704)	(1,023,375)	(1,009,502)	(999,813)	(988,349)	(967,375)	(948,490)	(923,288)	(905,791)
Net Investment Income ⁽³⁾	349,628	215,880	(162,461)	516,223	52,499	112,371	144,881	220,985	(20,663)	44,570
Administrative Expense	(14,128)	(13,817)	(13,339)	(11,622)	(11,941)	(11,712)	(10,692)	(10,957)	(10,989)	(10,474)
Other	-	-	-	-	-	37 ⁽⁶⁾	301 ⁽⁶⁾	(30,805) ⁽⁴⁾	-	8,442
Net Change in Fiduciary Net Position	683,993	526,098	(4,815)	710,580	74,408	229,226	(52,373)	76,578	(347,491)	(250,508)
Plan Fiduciary Net Position – Beginning	3,539,943	3,013,845	3,018,660	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783	2,578,291
Prior Year Adjustment	-	-	-	-	-	-	(51)	-	-	-
Plan Fiduciary Net Position – Ending (b)	4,223,936	3,539,943	3,013,845	3,018,660	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783
Net Pension Liability – Ending (a) – (b)	\$12,049,666	\$12,318,726	\$13,267,343	\$13,316,997	\$14,164,653	\$14,123,002	\$13,603,775	\$13,388,336	\$11,399,489	\$10,031,890
Plan Fiduciary Net Position as a Percentage	25.96%	22.32%	18.51%	18.48%	14.01%	13.66%	12.84%	13.32%	14.80%	18.83%
Covered Payroll ⁽³⁾	\$1,912,421	\$1,648,318	\$1,432,960	\$1,441,337	\$1,476,156	\$1,485,854	\$1,509,955	\$1,602,396	\$1,631,025	\$1,544,234
Net Pension Liability as a Percentage of Covered Payroll	630.07%	747.35%	925.87%	923.93%	959.56%	950.50%	900.94%	835.52%	698.92%	649.64%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$73,635,000 as of June 30, 2024.

⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal year 2017 and later. For fiscal year 2024 401(h) contributions equaled \$(18,000); and associated investment return equaled \$6,390,000.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

**Schedule of Changes in Employers' TPL - KERS Hazardous
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability (TPL)										
Service Cost	\$32,732	\$26,852	\$26,885	\$28,450	\$25,568	\$27,117	\$28,641	\$21,081	\$20,751	\$18,729
Interest	79,637	79,822	79,422	75,743	74,357	69,657	66,536	66,589	64,851	61,005
Benefit Changes	-	-	-	26	-	-	705	-	-	-
Difference between Expected and Actual Experience	49,423	(1,773)	(17,557)	34,789	(1,095)	1,395	24,215	26,902	-	6,067
Changes of Assumptions	-	(24,197)	-	-	-	50,658	-	127,878	-	52,165
Benefit Payments	(84,662)	(82,677)	(82,023)	(78,268)	(75,029)	(72,211)	(68,117)	(63,338)	(61,518)	(59,383)
Net Change in TPL	77,130	(1,973)	6,727	60,740	23,801	76,616	51,980	179,112	24,084	78,583
TPL – Beginning	1,316,521	1,318,494	1,311,767	1,251,027	1,227,226	1,150,610	1,098,630	919,517	895,433	816,850
TPL – Ending (a)	\$1,393,651	\$1,316,521	\$1,318,494	\$1,311,767	\$1,251,027	\$1,227,226	\$1,150,610	\$1,098,630	\$919,517	\$895,433
Plan Fiduciary Net Position ⁽¹⁾										
Contributions – Employer	\$89,899	\$72,807	\$59,055	\$62,200	\$59,115	\$55,259	\$43,661	\$52,974	\$23,759	\$28,536
Contributions – Member ⁽²⁾	21,568	17,459	20,588	19,961	19,769	17,118	17,891	17,524	15,739	13,207
Refunds of Contributions	(4,133)	(4,041)	(4,976)	(4,380)	(3,168)	(2,684)	(2,501)	(2,106)	(2,211)	(2,610)
Retirement Benefit	(80,529)	(78,636)	(77,047)	(73,888)	(71,861)	(69,527)	(65,616)	(61,231)	(59,306)	(56,773)
Net Investment Income ⁽²⁾	101,135	76,479	(51,317)	173,152	6,739	36,380	51,467	70,994	(1,653)	8,701
Administrative Expense	(1,583)	(1,513)	(1,465)	(1,255)	(1,176)	(1,103)	(975)	(919)	(916)	(844)
Other	-	-	-	-	-	4 ⁽⁶⁾	33 ⁽⁵⁾	(3,586) ⁽⁴⁾	-	767
Net Change in Plan Fiduciary Net Position	126,357	82,555	(55,162)	175,790	9,418	35,447	43,960	73,650	(24,588)	(9,016)
Plan Fiduciary Net Position – Beginning	893,533	810,978	866,140	690,350	680,932	645,485	601,529	527,879	552,468	561,484
Prior Year Adjustment	-	-	-	-	-	-	(4)	-	-	-
Fiduciary Net Position – Ending (b)	1,019,890	893,533	810,978	866,140	690,350	680,932	645,485	601,529	527,879	552,468
Net Pension Liability – Ending (a) – (b)	\$373,761	\$422,988	\$507,516	\$445,627	\$560,677	\$546,294	\$505,125	\$497,101	\$391,638	\$342,965
Plan Fiduciary Net Position as a Percentage	73.18%	67.87%	61.51%	66.03%	55.18%	55.49%	56.10%	54.75%	57.41%	61.70%
Covered Payroll ⁽³⁾	\$279,218	\$223,922	\$188,648	\$172,725	\$171,840	\$160,600	\$152,936	\$178,511	\$158,828	\$128,680
Net Pension Liability as a Percentage of Covered Payroll	133.86%	188.90%	269.03%	258.00%	326.28%	340.16%	330.29%	278.47%	246.58%	266.53%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$10,031,000 as of June 30, 2024.
⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal years 2017 and later. For fiscal years 2024, 401(h) contributions equaled \$(8,000); and associated investment return equaled \$1,005,000.
⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.
⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.
⁽⁵⁾ Northern Trust Settlement.

Schedule of Changes in Employer's TPL - SPRS											
As of June 30 (\$ in Thousands)											
	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	
Total Pension Liability (TPL)											
Service Cost	\$18,243	\$13,229	\$12,158	\$12,530	\$13,192	\$11,726	\$11,890	\$8,297	\$8,402	\$7,695	
Interest	52,909	53,853	53,740	53,417	52,697	49,301	47,978	51,769	52,951	50,661	
Benefit Changes	-	-	3,130	35	-	-	184	-	-	-	
Difference between Expected and Actual Experience	54,711	10,204	(2,700)	4,127	10,859	20,952	25,126	8,143	-	9,331	
Changes of Assumptions	-	(31,255)	-	0	-	44,510	-	136,602	56,191	40,201	
Benefit Payments	(64,044)	(63,970)	(64,400)	(63,522)	(62,511)	(61,111)	(58,827)	(56,960)	(56,279)	(54,850)	
Net Change in TPL	61,819	(17,939)	1,928	6,587	14,237	65,378	26,351	147,850	61,265	53,038	
TPL - Beginning	1,039,813	1,057,752	1,055,824	1,049,237	1,035,000	969,622	943,271	795,421	734,156	681,118	
TPL - Ending (a)	\$1,101,632	\$1,039,813	\$1,057,752	\$1,055,824	\$1,049,237	\$1,035,000	\$969,622	\$943,271	\$795,421	\$734,156	
Plan Fiduciary Net Position ⁽¹⁾											
Contributions - Employer	\$61,998	\$58,120	\$277,341	\$59,650	\$59,453	\$60,048	\$46,877	\$63,239	\$25,822	\$31,990	
Contributions - Member ⁽²⁾	5,703	5,250	4,773	4,752	4,767	5,062	5,522	5,348	5,263	5,244	
Refunds of Contributions	(221)	(166)	(280)	(273)	(88)	(162)	(22)	(26)	(11)	(85)	
Retirement Benefit	(63,823)	(63,804)	(64,120)	(63,249)	(62,423)	(60,949)	(58,805)	(56,934)	(56,268)	(54,765)	
Net Investment Income ⁽²⁾	56,933	40,708	(22,088)	61,729	6,341	14,816	18,437	26,795	(3,843)	3,426	
Administrative Expense	(314)	(293)	(273)	(212)	(266)	(225)	(194)	(181)	(178)	(201)	
Other	-	-	-	-	-	3 ⁽⁶⁾	21 ⁽⁵⁾	(517) ⁽⁴⁾	-	645	
Net Change in Plan Fiduciary Net Position	60,276	39,815	195,353	62,397	7,784	18,593	11,836	37,724	(29,215)	(13,746)	
Plan Fiduciary Net Position - Beginning	591,514	551,699	356,346	293,949	286,165	267,572	255,737	218,012	247,228	260,974	
Prior Year Adjustment	-	-	-	-	-	-	(1)	-	-	-	
Plan Fiduciary Net Position - Ending (b)	651,790	591,514	551,699	356,346	293,949	286,165	267,572	255,737	218,012	247,228	
Net Pension Liability - Ending (a) - (b)	\$449,842	\$448,299	\$506,053	\$699,478	\$755,288	\$748,835	\$702,050	\$687,534	\$577,409	\$486,928	
Plan Fiduciary Net Position as a Percentage	59.17%	56.89%	52.16%	33.75%	28.02%	27.65%	27.60%	27.11%	27.41%	33.68%	
Covered Payroll ⁽³⁾	\$71,964	\$65,693	\$48,061	\$47,873	\$49,019	\$49,515	\$50,346	\$54,065	\$46,685	\$45,765	
Net Pension Liability as a Percentage of Covered Payroll	625.09%	682.42%	1,052.94%	1,461.11%	1,540.81%	1,512.34%	1,394.45%	1,271.68%	1,236.82%	1,063.97%	
⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$1,426,000 as of June 30, 2024.											
⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal years 2017 and later. For fiscal year 2024, 401(h) contributions equaled (\$12,000); and associated investment return equaled \$126,000.											
⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.											
⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.											
⁽⁵⁾ Northern Trust Settlement.											

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The actuarially determined contributions effective for fiscal year ending 2024 that are documented in the schedules on the following pages, were calculated as of June 30, 2021. Based on the June 30, 2021, actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Notes to Schedule of Employers' Contribution			
Item	KERS Nonhazardous	KERS Hazardous	SPRS
Determined by the Actuarial Valuation as of:	June 30, 2021	June 30, 2021	June 30, 2021
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases
Payroll Growth	0.00%	0.00%	0.00%
Investment Return:	5.25%	6.25%	5.25%
Inflation:	2.30%	2.30%	2.30%
Salary Increase:	3.30% to 15.30%, varies by service	3.55% to 20.05%, varies by service	3.55% to 16.05%, varies by service
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019

Schedule of Employers' Contributions Pension - KERS Nonhazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$1,055,571	\$1,295,695	\$(240,124)	\$1,912,421	67.75%
2023	1,034,918	1,275,007	(240,089)	1,648,318	77.35%
2022	1,048,861	1,116,869	(68,008)	1,432,960	77.94%
2021	1,056,211	1,134,232	(78,021)	1,441,337	78.69%
2020	1,048,513	948,592	99,921	1,476,156	64.26%
2019	1,055,402	1,035,462	19,940	1,485,854	69.69%
2018	633,879	689,143	(55,264)	1,509,955	45.64%
2017	623,813	757,121	(133,308)	1,602,396	47.25%
2016	512,670	513,084	(414)	1,631,025	31.46%
2015	\$520,948	\$521,691	\$(743)	\$1,544,234	33.78%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employers' Contributions Pension - KERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$89,897	\$89,899	\$(2)	\$279,218	32.20%
2023	72,778	72,807	(29)	223,922	32.51%
2022	59,052	59,055	(3)	188,648	31.30%
2021	62,181	62,200	(19)	172,725	36.01%
2020	59,096	59,115	(19)	171,840	34.40%
2019	55,230	55,259	(29)	160,600	34.41%
2018	31,321	43,661	(12,340)	152,936	28.55%
2017	37,630	52,974	(15,344)	178,511	29.68%
2016	23,690	23,759	(69)	158,828	14.96%
2015	\$28,374	\$28,536	\$(162)	\$128,680	22.18%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employer's Contributions Pension - SPRS
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$61,998	\$61,998	\$-	\$71,964	86.15%
2023	58,120	58,120	-	65,693	88.47%
2022	62,341	277,341	(215,000)	48,061	577.06%
2021	59,263	59,650	(387)	47,873	124.60%
2020	58,358	59,453	(1,095)	49,019	121.29%
2019	58,948	60,048	(1,100)	49,515	121.27%
2018	36,033	46,877	(10,844)	50,346	93.11%
2017	35,937	63,240	(27,303)	54,065	116.97%
2016	25,723	25,822	(99)	46,685	55.31%
2015	\$31,444	\$31,990	\$(546)	\$45,765	69.90%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal years ended 2017, and later.

Schedule of the Employers' Net OPEB Liability - KERS Nonhazardous
As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$2,488,778	\$1,765,729	\$723,049	70.95%	\$1,923,825	37.58%
2023	2,317,344	1,532,752	784,592	66.14%	1,653,492	47.45%
2022	3,576,530	1,364,419	2,212,111	38.15%	1,437,132	153.93%
2021	3,698,804	1,419,477	2,279,327	38.38%	1,452,345	156.94%
2020	3,599,557	1,060,649	2,538,908	29.47%	1,482,431	171.27%
2019	3,217,985	995,089	2,222,896	30.92%	1,515,953	146.63%
2018	3,262,117	891,205	2,370,912	27.32%	1,573,898	150.64%
2017	\$3,353,332	\$817,370	\$2,535,962	24.37%	\$1,593,097	159.18%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employers' Net OPEB Liability - KERS Hazardous
As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$442,817	\$677,948	\$(235,131)	153.10%	\$279,218	(84.21)%
2023	417,361	625,356	(207,995)	149.84%	223,922	(92.89)%
2022	595,789	588,162	7,627	98.72%	188,648	4.04%
2021	622,152	633,677	(11,525)	101.85%	172,725	(6.67)%
2020	564,524	521,755	42,769	92.42%	182,209	23.47%
2019	507,204	534,053	(26,849)	105.29%	151,448	(17.73)%
2018	485,904	519,072	(33,168)	106.83%	190,317	(17.43)%
2017	\$494,869	\$488,838	\$6,031	98.78%	\$171,087	3.53%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024 derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021, FYE 2022, FYE 2023, and FYE 2024. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employer's Net OPEB Liability - SPRS
As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$277,159	\$273,517	\$3,642	98.69%	\$71,992	5.06%
2023	263,450	248,109	15,341	94.18%	65,830	23.30%
2022	351,453	231,242	120,211	65.80%	48,600	247.35%
2021	364,899	247,318	117,581	67.78%	47,155	249.35%
2020	339,942	201,340	138,602	59.23%	48,231	287.37%
2019	312,553	201,206	111,347	64.38%	48,780	228.26%
2018	301,012	190,847	110,165	63.40%	50,064	220.05%
2017	\$313,234	\$178,838	\$134,396	57.09%	\$48,873	274.99%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

**Schedule of Changes in Employers' Net OPEB Liability - KERS Nonhazardous
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service Cost	\$44,779	\$43,199	\$62,548	\$58,831	\$59,600	\$61,345	\$66,360	\$46,992
Interest	134,251	200,910	190,531	191,624	179,811	186,820	191,178	192,911
Benefit Changes	-	3,209	21,884	1,382	-	-	1,865	-
Difference between Expected and Actual Experience	80,456	(1,440,201)	(37,249)	(231,631)	288,235	(302,189)	(191,147)	(3,921)
Changes of Assumptions	26,413	61,925	(206,907)	220,184	13,767	158,004	(11,235)	414,835
Benefit Payments ^{(1) (2)}	(114,465)	(128,228)	(153,081)	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
Net Change in Total OPEB Liability	171,434	(1,259,186)	(122,274)	99,247	381,572	(44,132)	(91,215)	511,216
Total OPEB Liability - Beginning	2,317,344	3,576,530	3,698,804	3,599,557	3,217,985	3,262,117	3,353,332	2,842,116
Total OPEB Liability - Ending (a)	\$2,488,778	\$2,317,344	\$3,576,530	\$3,698,804	\$3,599,557	\$3,217,985	\$3,262,117	\$3,353,332
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾⁽⁵⁾	\$164,480	\$156,543	\$181,294	\$223,661	\$208,300	\$201,155	\$152,985	\$162,636
Contributions – Member	10,585	8,358	6,547	6,318	6,128	5,963	5,786	5,156
Benefit Payments ^{(1) (2)}	(114,465)	(128,228)	(153,081)	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
OPEB Plan Net Investment Income	173,104	132,431	(88,998)	270,811	11,820	45,749	64,028	94,239
OPEB Plan Administrative Expense	(727)	(771)	(820)	(819)	(847)	(875)	(760)	(861)
Other ⁽⁴⁾	-	-	-	0	-	4	32	-
Net Change in Plan Fiduciary Net Position	232,977	168,333	(55,058)	358,828	65,560	103,884	73,835	121,569
Plan Fiduciary Net Position – Beginning	1,532,752	1,364,419	1,419,477	1,060,649	995,089	891,205	817,370	695,801
Plan Fiduciary Net Position – Ending (b)	1,765,729	1,532,752	1,364,419	1,419,477	1,060,649	995,089	891,205	817,370
Net OPEB Liability – Ending (a) – (b)	\$723,049	\$784,592	\$2,212,111	\$2,279,327	\$2,538,908	\$2,222,896	\$2,370,912	\$2,535,962
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	70.95%	66.14%	38.15%	38.38%	29.47%	30.92%	27.32%	24.37%
Covered Payroll ⁽³⁾	\$1,923,825	\$1,653,492	\$1,437,132	\$1,452,345	\$1,482,431	\$1,515,953	\$1,573,898	\$1,593,097
Net OPEB Liability as a Percentage of Covered Payroll	37.58%	47.45%	153.93%	156.94%	171.27%	146.63%	150.64%	159.18%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to \$27,851,763 for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

**Schedule of Changes in Employers' Net OPEB Liability - KERS Hazardous
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service Cost	\$8,128	\$9,435	\$14,474	\$13,633	\$11,548	\$12,337	\$12,893	\$8,002
Interest on Total OPEB liability	24,181	32,737	30,599	29,254	28,101	27,990	28,500	27,591
Benefit Changes	-	-	10,289	48	-	-	167	-
Difference between Expected and Actual Experience	7,970	(198,459)	(12,515)	(6,402)	27,668	(30,947)	(31,240)	(1,029)
Assumption Changes	5,719	(1,820)	(46,406)	42,022	11,428	31,687	(581)	89,401
Benefit Payments ⁽¹⁾⁽²⁾	(20,542)	(20,321)	(22,804)	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
Net Change in Total OPEB Liability	25,456	(178,428)	(26,363)	57,628	57,320	21,300	(8,965)	107,347
Total OPEB Liability - Beginning	417,361	595,789	622,152	564,524	507,204	485,904	494,869	387,522
Total OPEB Liability - Ending (a)	\$442,817	\$417,361	\$595,789	\$622,152	\$564,524	\$507,204	\$485,904	\$494,869
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾	\$2,725	\$2,282	\$4,116	\$3,556	\$7,441	\$5,556	\$5,165	\$4,579
Contributions – Member	2,086	1,584	1,227	1,167	1,105	934	909	811
Benefit Payments ⁽¹⁾⁽²⁾	(20,542)	(20,321)	(22,804)	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
OPEB Plan Net Investment Income	68,440	53,772	(27,929)	128,244	704	28,373	42,950	59,614
OPEB Plan Administrative Expense	(117)	(123)	(125)	(118)	(123)	(117)	(104)	(105)
Other ⁽⁴⁾	-	-	-	-	0	2	18	-
Net Change in Plan Fiduciary Net Position	52,592	37,194	(45,515)	111,922	(12,298)	14,981	30,234	48,281
Plan Fiduciary Net Position – Beginning	625,356	588,162	633,677	521,755	534,053	519,072	488,838	440,557
Plan Fiduciary Net Position – Ending (b)	677,948	625,356	588,162	633,677	521,755	534,053	519,072	488,838
Net OPEB Liability – Ending (a) – (b)	\$(235,131)	\$(207,995)	\$7,627	\$(11,525)	\$42,769	\$(26,849)	\$(33,168)	\$6,031
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	153.10%	149.84%	98.72%	101.85%	92.42%	105.29%	106.83%	98.78%
Covered Payroll ⁽³⁾	\$279,218	\$223,922	\$188,648	\$172,725	\$182,209	\$151,448	\$190,317	\$171,087
Net OPEB Liability as a Percentage of Covered Employee Payroll	(84.21)%	(92.89)%	4.04%	(6.67)%	23.47%	(17.73)%	(17.43)%	3.53%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to \$814,756 for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employer's Net OPEB Liability - SPRS
As of June 30 (\$ in Thousands)

	2024	2023	2022	2021	2020	2019	2018	2017
Total OBEPL Liability								
Service Cost	\$4,115	\$4,092	\$5,605	\$5,218	\$5,389	\$4,816	\$6,087	\$4,147
Interest on Total OPEB liability	15,508	19,608	18,592	17,984	17,600	17,724	18,432	17,993
Benefit Changes	-	-	4,975	101	-	-	34	-
Difference between Expected and Actual Experience	1,360	(98,425)	(5,952)	(6,318)	13,810	(14,295)	(23,320)	(573)
Assumption Changes	4,394	404	(21,937)	21,784	4,578	16,483	(358)	57,312
Benefit Payments ^{(1) (2)}	(11,668)	(13,682)	(14,729)	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
Net Change in Total OPEB Liability	13,709	(88,003)	(13,446)	24,957	27,389	11,541	(12,222)	66,756
Total OPEB Liability - Beginning	263,450	351,453	364,899	339,942	312,553	301,012	313,234	246,478
Total OPEB Liability - Ending (a)	\$277,159	\$263,450	\$351,453	\$364,899	\$339,942	\$312,553	\$301,012	\$313,234
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾	\$9,788	\$8,755	\$9,343	\$9,381	\$12,873	\$12,623	\$8,535	\$7,862
Contributions – Member	396	348	230	209	196	176	155	131
Benefit Payments ^{(1) (2)}	(11,668)	(13,682)	(14,729)	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
OPEB Plan Net Investment Income	26,963	21,520	(10,847)	50,289	1,124	10,815	16,470	21,627
OPEB Plan Administrative Expense	(71)	(74)	(73)	(89)	(71)	(69)	(62)	(66)
Other ⁽⁴⁾	-	-	-	-	-	1	8	-
Net Change in Plan Fiduciary Net Position	25,408	16,867	(16,076)	45,978	134	10,359	12,009	17,431
Plan Fiduciary Net Position – Beginning	248,109	231,242	247,318	201,340	201,206	190,847	178,838	161,407
Plan Fiduciary Net Position – Ending (b)	273,517	248,109	231,242	247,318	201,340	201,206	190,847	178,838
Net OPEB Liability – Ending (a) – (b)	\$3,642	\$15,341	\$120,211	\$117,581	\$138,602	\$111,347	\$110,165	\$134,396
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	98.69%	94.18%	65.80%	67.78%	59.23%	64.38%	63.40%	57.09%
Covered Payroll ⁽³⁾	\$71,992	\$65,830	\$48,600	\$47,155	\$48,231	\$48,780	\$50,064	\$48,873
Net OPEB Liability as a Percentage of Covered Payroll	5.06%	23.30%	247.35%	249.35%	287.37%	228.26%	220.05%	274.99%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to (\$374,879) for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

The actuarially determined contribution effective for fiscal year ending 2024 that is documented in the following schedule was calculated as of June 30, 2021. Separate contribution rates are determined for each fund based on the liabilities associated with the current active members, former inactive members, and members receiving benefits from each respective fund, as well as the separately maintained asset balances for each fund.

Based on the June 30, 2022, actuarial valuation report, the actuarial methods and assumptions used to calculate the required contributions follow.

Notes to Schedule of Employers' OPEB Contributions

Item	KERS	KERS	SPRS
	Nonhazardous	Hazardous	
Determined by the Actuarial Valuation as of:	June 30, 2021	June 30, 2021	June 30, 2021
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.
Payroll Growth Rate:	0.00%	0.00%	0.00%
Investment Return:	6.25%	6.25%	6.25%
Inflation:	2.30%	2.30%	2.30%
Salary Increase:	3.30% to 15.30%, varies by service.	3.55% to 20.05%, varies by service.	3.55% to 16.05%, varies by service.
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.
Healthcare Trend Rates:			
Pre-65	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.

Schedule of Employers' OPEB Contributions - KERS Nonhazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$129,764	\$136,628	\$(6,864)	\$1,923,825	7.10%
2023	123,952	129,108	(5,156)	1,653,492	7.81%
2022	135,809	140,694	(4,885)	1,437,132	9.79%
2021	161,936	186,676	(24,740)	1,452,345	12.85%
2020	183,821	175,007	8,814	1,482,431	11.81%
2019	187,978	178,964	9,014	1,515,953	11.81%
2018	132,365	136,419	(4,054)	1,573,898	8.67%
2017	133,024	152,356	(19,332)	1,593,097	9.56%
2016	121,899	135,816	(13,917)	1,529,249	8.88%
2015	\$130,455	\$135,940	(5,485)	\$1,544,234	8.80%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - KERS Nonhazardous.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - KERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$-	\$1,910	\$(1,910)	\$279,218	0.68%
2023	-	1,489	(1,489)	223,922	0.66%
2022	-	1,281	(1,281)	188,648	0.68%
2021	-	1,300	(1,300)	172,725	0.75%
2020	4,482	5,776	(1,294)	182,209	3.17%
2019	3,726	4,970	(1,244)	151,448	3.28%
2018	2,550	5,288	(2,738)	190,317	2.78%
2017	4,688	5,620	(932)	171,087	3.28%
2016	9,186	16,766	(7,580)	147,563	11.36%
2015	\$13,152	\$14,882	\$(1,730)	\$128,680	11.57%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - KERS Hazardous.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information as there were no required employer contributions for the insurance fund for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

Schedule of Employer's OPEB Contributions - SPRS
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$10,158	\$10,163	\$(5)	\$71,992	14.12%
2023	9,289	9,289	-	65,830	14.11%
2022	8,782	8,782	-	48,600	18.07%
2021	9,285	9,285	-	47,155	19.69%
2020	13,133	13,133	-	48,231	27.23%
2019	13,283	13,288	(5)	48,780	27.24%
2018	9,062	9,397	(335)	50,064	18.77%
2017	9,222	9,222	-	48,873	18.87%
2016	8,553	10,237	(1,684)	45,551	22.47%
2015	\$9,890	\$10,382	(492)	\$45,765	22.69%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - SPRS.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information

Money-Weighted Rates of Return

In accordance with GASB, KRS provides this additional disclosure regarding the money-weighted rate of return for the Pension Funds and Insurance Fund. The money-weighted rate of return is a method of calculating period-by-period returns on Pension Funds' and Insurance Fund's investments that adjusts for the changing amounts actually invested. For purposes of this statement, money-weighted rate of return is calculated as the internal rate of return on Pension Funds' and Insurance Fund's investments, net of Pension Funds' and Insurance Fund's investment expense, adjusted for the changing amounts actually invested.

See below for the money-weighted rates of return for multiple periods including fiscal year June 30, 2024, as calculated by the custodian bank, BNY Mellon:

Money - Weighted Rates of Return As of June 30			
	KERS Nonhazardous	KERS Hazardous	SPRS
Pension			
2024	9.58%	11.17%	9.64%
2023	7.07%	9.46%	7.53%
2022	(5.29)%	(5.94)%	(5.80)%
2021	22.53%	25.21%	21.70%
2020	2.35%	0.96%	2.21%
2019	5.77%	5.68%	5.67%
2018	7.63%	8.69%	7.68%
2017	12.08%	13.45%	12.50%
2016	(0.97)%	(0.33)%	(1.76)%
2015	2.30%	1.84%	1.80%

Note: This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Additional Supporting Schedules

Schedule of Administrative Expenses

Schedule of Direct Investment Expenses

Schedule of Professional Consultant Fees

Report on Internal Control

KRS DRAFT RAN 11-13-2024

KPPA provides administrative support for the County Employees Retirement System as well as other Systems, and Kentucky Revised Statute 61.505 11(a) requires all expenses incurred by or on behalf of KPPA to be prorated, assigned, or allocated to each system. KPPA works closely with the boards of trustees of each system to develop an allocation method that takes into consideration membership, assets under management, system specific costs, and statutory requirements. Total KPPA administrative costs for the fiscal year ended June 30, 2024 were \$47,297,000 and this schedule shows the allocation of \$16,947,000 to KRS.

Schedule of Administrative Expenses	
As of June 30 (\$ in Thousands)	
	2024
Salaries	\$6,533
Benefits	6,167
Professional Services	1,345
Information Technology	1181
Communications	282
Office & Equipment Rent	367
Travel/Conferences	43
Other Operating Expenses	107
Insurance Fund Administration	922
Total Administrative Expenses	\$16,947

Pension Fund Schedule of Direct Investment Expenses
As of June 30, 2024 (\$ in Thousands)

	Pension			Insurance		
	KERS		SPRS	KERS		SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
Security Lending Fees						
Securities Lending Fees, Expenses, and Rebates	\$3,808	\$1,059	\$671	\$1,402	\$487	\$214
Total Security Lending	3,808	1,059	671	1,402	487	214
Contractual Services						
Investment Management	18,759	5,641	2,566	8,913	4,439	1,764
Security Custody	397	97	62	234	94	38
Investment Consultant	238	59	38	96	40	16
Performance Fees	6,006	1,724	620	2,860	1,766	616
Total Contractual Services	\$25,400	\$7,521	\$3,286	\$12,103	\$6,339	\$2,434

Schedule of Professional Consultant Fees
As of June 30 (\$ in Thousands)

	2024
Actuarial Services	\$146
Medical Review Services	500
Audit Services	83
Legal Counsel	509
Human Resource Consulting	-
Miscellaneous	107
Total	\$1,345

**REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER FINANCIAL REPORTING
AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL
STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

To the Members
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Kentucky Retirement Systems (KRS), as of and for the year ended June 30, 2024, and the related notes to the financial statements, which collectively comprise the KRS basic financial statements, and have issued our report thereon dated --DATE--.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the KRS's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the KRS's internal control. Accordingly, we do not express an opinion on the effectiveness of the KRS's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the KRS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The

**REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER FINANCIAL REPORTING
AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL
STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*
(Continued)**

results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the KRS's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KRS's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Blue & Co., LLC

Lexington, Kentucky

--DATE--

DRAFT

DATE

Board of Directors
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited the financial statements of Kentucky Retirement Systems (KRS) for the year ended June 30, 2024. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and Government Auditing Standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated May 31, 2024. Professional standards also require that we communicate to you the following information related to our audit.

SIGNIFICANT AUDIT MATTERS

QUALITATIVE ASPECTS OF ACCOUNTING PRACTICES

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by KRS are described in Note A to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year. We noted no transactions entered into by KRS during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Management's estimates related to the fair value of its investments based on the net asset value (NAV) of units of the investee. The NAV, as provided by the investment manager, is used as a practical expedient. The NAV is based on the fair value of the underlying investments held by the investee less its liabilities. Due to the nature of the investments held by the investee, changes in market conditions and the economic environment may significantly impact the net asset value of the investee and, consequently, the fair value of KRS's interests in the investee. In performing our audit, we have considered the internal controls of KRS in selecting, monitoring, and valuing these investments. We have also

Board of Directors
 Kentucky Retirement Systems
 DATE
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confirmed the year end balances of alternative investments and have reviewed selected investments' underlying annual audited financial statements. We evaluated the key factors and assumptions used to develop NAV and believe that they are reasonable in relation to the financial statements taken as a whole.

- Management's disclosure of the net pension liability in Note I to the financial statements. The information presented therein was obtained from KRS's actuarial valuations and the methods and assumptions used in determining the amounts are disclosed in the footnote. We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.
- Management's disclosure of the net OPEB liability of KRS in Note I the financial statements. The information presented therein was obtained from the KRS's actuarial valuations and the methods and assumptions used in determining the amounts are disclosed in the footnote. We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.

The financial statement disclosures are neutral, consistent, and clear.

DIFFICULTIES ENCOUNTERED IN PERFORMING THE AUDIT

We encountered no significant difficulties in dealing with management in performing and completing our audit.

CORRECTED AND UNCORRECTED MISSTATEMENTS

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. The below entry summarizes uncorrected misstatements of the financial statements. Management has determined that its effect is immaterial, both individually and in the aggregate, to the financial statements taken as a whole. This entry is a common uncorrected misstatement for entities that invest in alternative investments and represents a lag in reporting of the investment value as of June 30. The investment value reported by the custodian is reported as a few months prior to June 30 and thus a lag in valuation is created. The below entry represents the value of that lag for the current year to bring the investment value to June 30. Management has determined that their effect is immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

Entry to adjust value of investments to June 30, 2024, net asset value:

DR. Net Depreciation in FV of Investments	\$XXX	
CR. Investments		\$XXX
CR. Fiduciary Net Position Restricted for Benefits		\$XXX

Board of Directors
Kentucky Retirement Systems
DATE
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DISAGREEMENTS WITH MANAGEMENT

For purposes of this letter, a disagreement with management is a disagreement on a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

MANAGEMENT REPRESENTATIONS

We have requested certain representations from management that are included in the management representation letter dated as of the date of this letter.

MANAGEMENT CONSULTATIONS WITH OTHER INDEPENDENT ACCOUNTANTS

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to KRS's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations.

OTHER AUDIT FINDINGS OR ISSUES

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as KRS's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

OTHER MATTERS

We applied certain limited procedures to the required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the additional supporting schedules of administrative expenses, direct investment expenses, and professional consultant fees which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

Board of Directors
Kentucky Retirement Systems
DATE
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This information is intended solely for the use of management, the board of directors, and others within KRS and is not intended to be, and should not be, used by anyone other than these specified parties.

We appreciate this opportunity to be of service and extend our thanks to everyone at KRS for their cooperation and assistance. We would be pleased to discuss any of the above matters with you at your convenience.

Very truly yours,

Blue & Co., LLC

DRAFT



KRS

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Kentucky Retirement Systems (KRS)

Comprising the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS), each a component unit and pension trust fund of the Commonwealth of Kentucky.

Annual Comprehensive *Financial Report*



For the fiscal year ended
June 30

2024

*Prepared by Kentucky Public Pensions
Authority's Division of Accounting.*

Available online at kyret.ky.gov

Photo, front cover: Overview of Frankfort, KY, dry brush stylized.

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KENTUCKY PUBLIC PENSIONS AUTHORITY

Ryan Barrow, Executive Director

1260 Louisville Road · Frankfort, Kentucky 40601
kyret.ky.gov · Phone: 502-696-8800 · Fax: 502-696-8822



To our Members, Benefit Recipients, Employers and the Board of Trustees

December 5, 2024

On behalf of the Kentucky Public Pensions Authority (KPPA) we are honored to present the Annual Comprehensive Financial Report (ACFR) of the Kentucky Retirement Systems (KRS), a component unit of the Commonwealth of Kentucky, for the Fiscal Year Ended (FYE) June 30, 2024.

Responsibility for the accuracy, completeness, and fairness of the information presented rests ultimately with KPPA management which, along with the Executive Director and staff, assist the KPPA Board in its responsibilities. Because the cost of internal control should not exceed anticipated benefits, KPPA relies on a comprehensive framework of internal controls to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

Blue & Co. LLC has issued an unmodified ("clean") opinion on the KRS financial statements for the FYE June 30, 2024. The Independent Auditors' report is located in the Financial Section of this report.

The Management's Discussion and Analysis (MD&A) is also located in the Financial Section of this report. The MD&A provides an analytical overview of the financial statements. MD&A complements this letter of transmittal and should be read in conjunction with it.

KPPA is the special-purpose government responsible for the day-to-day administration of the County Employees Retirement System (CERS) and the Kentucky Retirement Systems (KRS), comprising the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS).

Prior to 2021 all three systems were governed by a single Board of Trustees. This Board, management, and staff were all referred to as the Kentucky Retirement Systems (KRS). Under this single Board of Trustees, KRS issued one ACFR, including all three systems and their related pension and insurance trust plans.

Effective April 1, 2021, the KRS Board of Trustees was modified in statute to become three boards:

1. A new nine-member Board of Trustees to oversee CERS (the CERS Board).
2. A reconstituted nine-member Board of Trustees, retaining the KRS name, to oversee KERS and SPRS (the KRS Board).
3. A new eight-member Board to oversee the professional employees who provide administrative support, investment management, and conduct other activities on behalf of the CERS and KRS Boards. These employees are part of the Kentucky Public Pensions Authority (KPPA) and the board is referred to as the KPPA Board. The KPPA Board is composed of four CERS trustees and four KRS trustees, as defined by state statute.

For these past three fiscal years, KPPA has continued to issue one ACFR including all three systems and their related pension and OPEB plans.

Beginning with FYE 2024, KPPA is producing separate ACFRs for CERS and KRS. Supported by research and recommendations from KPPA management, this aligns with guidance from the Government Accounting Standards Board (GASB) and authority under state statute. After considering this information, the Boards of Trustees for CERS and KRS have chosen to present separate ACFRs.

DRAFT - KRS 2024 ACFR - DRAFT

KPPA will continue to produce a single Summary Annual Financial Report (SAFR) that provides an overview of information in the CERS and KRS ACFRs, as well as insights into the combined systems.

This approach aims to enhance transparency and reporting by providing information relevant to each system's members, the public and stakeholders. KPPA believes separating the financial reporting for CERS and KRS, while also providing a combined high-level summary best achieves that goal.

From the Desk of Ryan Barrow KPPA Executive Director

Ratings Boost

In September, Moody's Ratings upgraded Kentucky's credit rating to Aa2 from Aa3. Several factors directly influence credit ratings on state and local municipal debt, with the health of public pension systems being a significant consideration. This has improved in Kentucky in recent years due to the boards adopting actuarial assumptions that more accurately reflect the systems' conditions, the General Assembly's commitment to fully funding pension contributions and allocating additional money to pay down the unfunded liabilities of KERS Nonhazardous and SPRS, and strong investment returns.

All three major ratings agencies covering Kentucky, specifically Moody's, Standard & Poor's, and Fitch Ratings have taken note of the progress. Alongside positive economic developments across the state, a historically high rainy-day fund and improvements in public pension funding prompted all three agencies to recently raise their rating on the state's debt. In May of last year, Fitch Ratings upgraded Kentucky's credit rating to AA from AA-. In June 2023, S&P Global Ratings upgraded Kentucky's credit rating to A+ from A.

Higher credit ratings not only offer an independent assessment of the Commonwealth's financial situation, but they also lower the cost of capital, allowing the state to allocate its resources more effectively.

KPPA Strategic Plan

The strategic planning process has entered an exciting new phase. Small groups of KPPA employees and management have begun meeting to discuss specific business areas, how those areas are working now, and how they could be enhanced.

In March 2023, KPPA selected Provaliant Retirement LLC to help develop the agency's first strategic plan since 2009. In June 2024, KPPA published a strategic plan summary that identified four key areas of focus: organizational excellence, customer service delivery, infrastructure and key resources, and governance. A summary of the plan is on our website, kyret.ky.gov.

Building on those four key focus areas, KPPA has established small committees examining specific business practices. To date, KPPA has committees addressing quality assurance, process documentation, member presentations and surveys. Each committee will work for several months to compare current practices with industry standards, make recommendations for enhancements and implement the approved changes.

The strategic planning and enhancement process are expected to be completed by 2028.

An Eye to the Future

By 2049, our actuarial target is to achieve a fully funded pension system, a crucial milestone that reflects our timeline to meeting financial commitments. While we acknowledge that there is still much work ahead to reach this objective, we are making significant strides on our journey. Through diligent financial management and collaborative efforts among stakeholders, we are steadily improving our funding status. Each step we take brings us closer to ensuring the long-term stability and security of the pension system for current and future recipients.

DRAFT - KRS 2024 ACFR - DRAFT

From the Desk of John Chilton
KRS Chief Executive Officer

The effects of additional funding from the Kentucky General Assembly continued to benefit the KERS Nonhazardous and SPRS pension plans in FY 2024. The past two biennial budgets passed by the Legislature included \$1.14 billion in additional allocations to pay down the unfunded liabilities of those two pensions. In the most recent session, legislators approved House Bill 1, which allocates an additional \$100 million for the KERS Nonhazardous pension plan (\$50 million each in FYs 2025 and 2026) and an additional \$50 million for the SPRS pension plan (\$25 million each in FYs 2025 and 2026).

Another bill, House Bill 6, allocates an additional \$250 million each in FYs 2025 and 2026 to pay down the KERS Nonhazardous pension's unfunded liability.

This is all over and above the money allocated to fund the full actuarially recommended contributions for all KERS and SPRS pension plans.

The attention paid by the General Assembly to the KERS Nonhazardous and SPRS pension plans is greatly appreciated and is paying dividends. The funded ratio for the KERS Nonhazardous pension plan increased to 24.8% at the end of FY 2024, up from 21.7% at the end of FY 2023. The pension plan reached a funded ratio low of 12.8% in FY 2018.

The SPRS pension plan, meanwhile, reached a funded level of 56.8% as of FYE 2024, up from 54.2% at the end of the last fiscal year and up substantially from the low of 26.4% at the end of FY 2017.

All pension plans are on track to be fully funded by 2049.

KPPA began posting quarterly proxy voting reports to its website in FY 2024. These reports show how investment managers voted on corporate governance proposals on behalf of the systems operated by KPPA. These reports can be found in the on the Proxy Voting Reports page in the Investments section of KPPA's website kyret.ky.gov.

The KRS board continued this past fiscal year to monitor ongoing litigation in anticipation of resolving several longstanding cases.

And the KRS Investment Committee worked with the KPPA Office of Investments to monitor the KERS and SPRS investment portfolios. As always, the goal is to maximize investment returns while minimizing risk. The KRS pension and insurance portfolios returned an average of 10.6%, besting the median return of an index of large public pension funds. The median return for the Wilshire Trust Universe Comparison Service (TUUS) peer group of public pension funds with more than \$1 billion in assets was 10.5% for FY 2024. This is the second consecutive year that KRS pension and insurance portfolio returns have neared or exceeded 10%.

Acknowledgments

The preparation of this report has been a collaborative effort of KPPA Executive Management and the Accounting Division, Communications Division, Office of Investments, and the KRS CEO. The contents have been reviewed by the Internal Audit Division. KPPA is responsible for all the information in the report and confidently presents it as a basis for understanding the stewardship of the system.

Respectfully submitted,



A handwritten signature in black ink, appearing to read 'Ryan Barrow'.

Ryan Barrow
KPPA Executive Director



A handwritten signature in black ink, appearing to read 'M. Lamb'.

Michael B. Lamb, CPA
KPPA Chief Financial Officer

KRS Board Meeting - KRS Draft ACFR in its entirety to be approved and sent to KPPA for Publication

DRAFT - KRS 2024 ACFR - DRAFT

GOVERNANCE

As of December 5, 2024

The Kentucky Retirement Systems (KRS) is governed by a nine member board of trustees, consisting of three elected members and six gubernatorial appointees serving four-year terms. Two of the elected members represent the Kentucky Employees Retirement System (KERS) and one elected member represents the State Police Retirement System (SPRS). KRS has four representatives on the KPPA Board in addition to employing a Chief Executive Officer who serves as a legislative and executive advisor and a General Counsel who provides legal services.

KRS BOARD OF TRUSTEES

Lynn Hampton, Chair
C. Prewitt Lane, Vice Chair

General Counsel: Dentons Bingham Greenebaum
Three (3) Elected Trustees
Six (6) Appointed by Governor

LEADERSHIP:
Every April, the trustees elect a Chair and Vice Chair and affirm who will serve on the KPPA Board in compliance with state law.



KPPA Board Member

Lynn Hampton
Chair
Term ends June 17, 2026



KPPA Board Member

C. Prewitt Lane
Vice Chair
Term ends June 17, 2027



John E. Chilton
Chief Executive Officer

CHIEF EXECUTIVE OFFICER (CEO):
The CEO works with the trustees and KPPA staff to carry out the statutory provisions of the systems.

ELECTED BY MEMBERSHIP:
Every four years, two eligible KERS members and one eligible SPRS member are elected to serve on the Board of Trustees.



KPPA VICE-CHAIR

Keith Peercy
Term ends March 31, 2027
Elected by SPRS



Dr. Crystal Miller
Term ends March 31, 2026
Elected by KERS



David Adkins
Term ends March 31, 2026
Elected by KERS

KPPA BOARD:
By law, the KRS Board Chair and Investment Committee Chair serve on this Board. The KRS Chair also appoints one elected trustee and one appointed trustee to the KPPA Board.

APPOINTED BY GOVERNOR:
The Governor appoints six individuals to serve on the Board of Trustees.



Pamela F. Thompson
Term ends June 17, 2027



Ramsey Bova
Term ends June 17, 2026



Mary G. Eaves
Term ends June 21, 2027



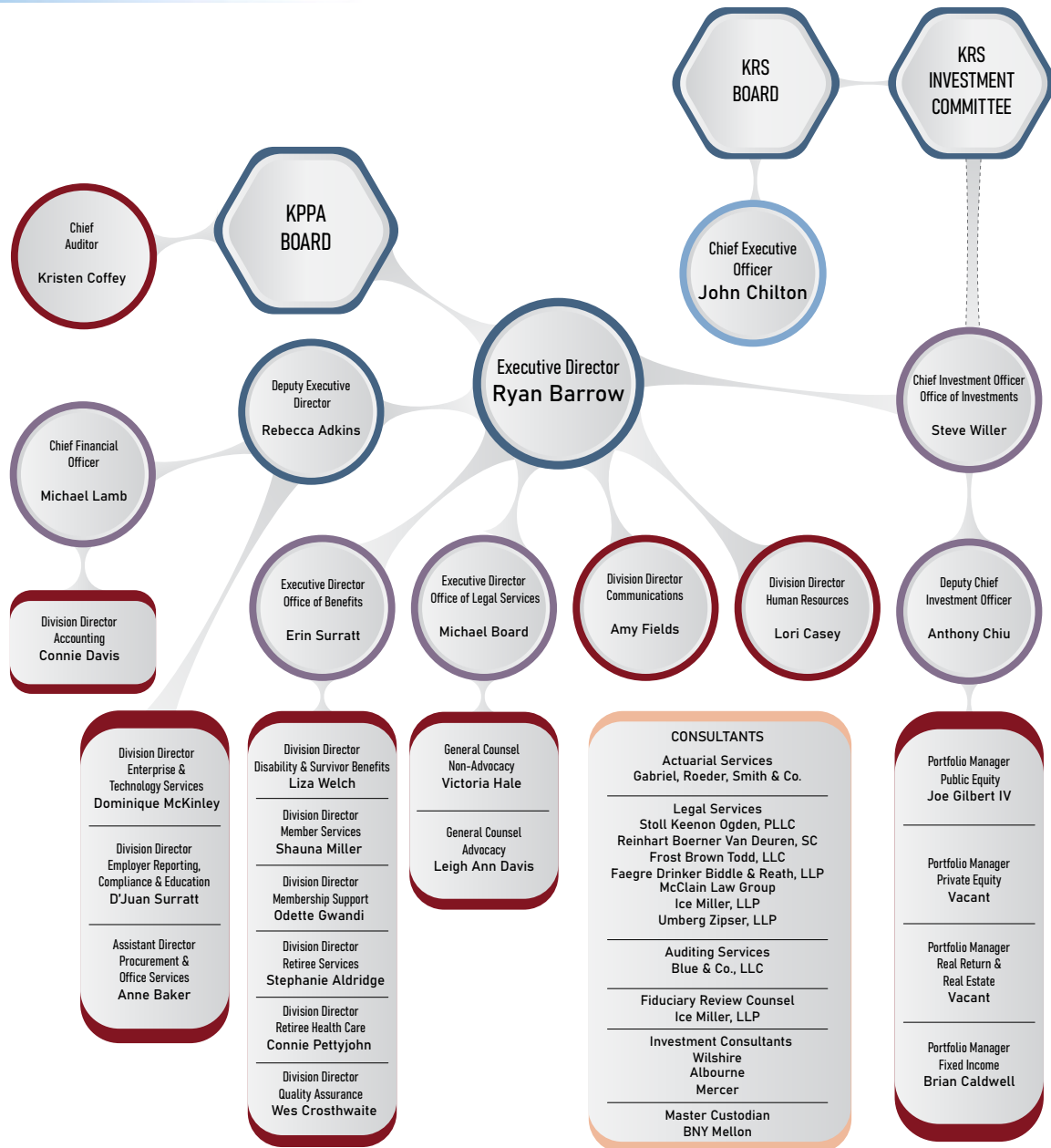
KPPA Board Member

William Summers V
Term ends June 17, 2026

AGENCY STRUCTURE

As of December 5, 2024

The Kentucky Public Pensions Authority (KPPA) oversees the operations of the Kentucky Employees Retirement System (KERS) and State Police Retirement System (SPRS) by providing administrative support, investment management, and conducting daily activities on behalf of the Kentucky Retirement Systems (KRS) Board of Trustees and KPPA Board. KPPA is led by an Executive Director who is appointed by the KPPA Board to work with the KRS Chief Executive Officer to carry out the statutory provisions of the systems.



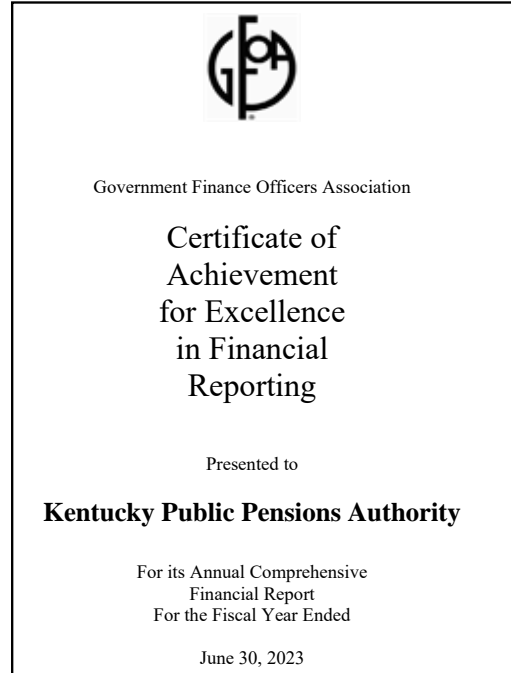
Refer to the Investments Section for additional information regarding Investment Advisors (pages 113-114) and Schedules of Fees and Expenses (pages 115-117).

DRAFT - KRS 2024 ACFR - DRAFT

Professional Awards

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Kentucky Public Pensions Authority* for its Annual Comprehensive Financial Report for the Fiscal Year ended June 30, 2023. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports and is valid for a period of one year. This is the 25th award earned by Kentucky Public Pensions Authority (formerly the Kentucky Retirement Systems). In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized document. The report must satisfy both generally accepted accounting principles and applicable legal requirements. We believe our 2024 report will continue to meet the Certificate of Achievement Program's requirements, and we will be submitting it to the GFOA for their consideration.



PUBLIC PENSIONS STANDARDS AWARD FOR FUNDING AND ADMINISTRATION

The Public Pension Coordinating Council awarded the Public Pensions Standards Award for Funding and Administration to the Kentucky Retirement Systems (KRS) for 2024. This is the second award earned by KRS.

The Public Pension Coordinating Council established the Public Pension Standards to reflect expectations for public retirement system management, administration, and funding. The Standards serve as a benchmark to measure public defined benefit plans. The Award for Funding and Administration is a distinguished national award recognizing pension programs meeting professional standards for plan design and administration as set forth in the Public Pension Standards. This award is valid for a period of one year. We believe KRS will continue to meet these standards, and we will be applying for the award next year.



**Beginning with Fiscal Year 2024, two separate financial statement audits will be conducted for the County Employees Retirement System and Kentucky Retirement Systems. As a result, KPPA will issue two separate Annual Comprehensive Financial Reports on behalf of the respective Boards of Trustees. The GFOA Award is included in both ACFRs this Fiscal Year, however, the award will be based on the individual reports prospectively.*

DRAFT - KRS 2024 ACFR - DRAFT

Pension Benefits by County

2024 Total Fiscal Year KRS Pension Benefits Paid by County (in whole \$)								
County	Payees*	Total	County	Payees*	Total	County	Payees*	Total
Adair	258	\$5,233,757	Grant	237	\$5,065,058	McLean	113	\$2,423,622
Allen	168	2,896,237	Graves	370	7,071,404	Meade	139	2,124,446
Anderson	1,106	30,163,141	Grayson	260	4,750,221	Menifee	125	2,366,828
Ballard	70	1,349,366	Green	133	2,797,976	Mercer	474	10,670,417
Barren	454	8,064,330	Greenup	219	4,026,940	Metcalfe	122	1,820,442
Bath	188	4,033,031	Hancock	52	888,974	Monroe	104	1,938,858
Bell	289	5,822,644	Hardin	864	16,284,864	Montgomery	289	6,023,948
Boone	509	10,237,281	Harlan	286	5,848,488	Morgan	470	9,206,856
Bourbon	195	3,907,805	Harrison	179	3,496,959	Muhlenberg	346	6,011,078
Boyd	273	5,970,819	Hart	140	2,841,806	Nelson	397	8,266,415
Boyle	476	9,224,119	Henderson	304	5,455,041	Nicholas	89	1,777,954
Bracken	93	1,599,099	Henry	608	15,351,750	Ohio	225	3,698,726
Breathitt	286	5,594,827	Hickman	49	883,194	Oldham	636	13,332,079
Breckinridge	189	3,288,729	Hopkins	564	10,131,863	Owen	361	9,201,676
Bullitt	380	7,383,568	Jackson	161	2,922,666	Owsley	109	1,835,968
Butler	132	2,211,789	Jefferson	4,919	100,199,030	Pendleton	127	2,450,351
Caldwell	301	5,743,674	Jessamine	474	10,110,208	Perry	355	7,159,855
Calloway	639	9,171,638	Johnson	314	5,866,476	Pike	457	9,926,423
Campbell	556	10,084,760	Kenton	628	13,287,974	Powell	160	2,649,590
Carlisle	51	979,069	Knott	240	4,993,697	Pulaski	1,360	26,350,846
Carroll	150	2,792,547	Knox	245	5,411,973	Robertson	43	656,941
Carter	386	7,000,689	LaRue	170	3,463,969	Rockcastle	193	3,936,362
Casey	150	2,915,479	Laurel	568	13,513,575	Rowan	594	11,069,094
Christian	757	14,295,707	Lawrence	125	2,377,169	Russell	286	5,148,724
Clark	363	6,779,367	Lee	112	2,091,649	Scott	651	16,602,997
Clay	265	5,606,818	Leslie	126	2,705,974	Shelby	1,109	29,746,376
Clinton	132	2,540,152	Letcher	232	4,623,963	Simpson	89	1,453,087
Crittenden	128	2,387,901	Lewis	111	1,884,334	Spencer	218	4,685,820
Cumberland	95	1,620,068	Lincoln	285	5,114,464	Taylor	244	4,757,587
Daviess	800	14,284,924	Livingston	118	2,551,088	Todd	102	1,740,586
Edmonson	86	1,210,507	Logan	212	4,104,082	Trigg	317	5,569,098
Elliott	119	2,065,762	Lyon	240	5,469,850	Trimble	161	3,049,471
Estill	209	3,688,367	Madison	1,477	25,755,941	Union	94	1,413,899
Fayette	2,970	74,815,212	Magoffin	162	3,373,750	Warren	1,518	26,744,981
Fleming	228	5,231,966	Marion	203	3,632,637	Washington	152	3,626,225
Floyd	462	9,024,187	Marshall	403	6,207,293	Wayne	276	5,109,931
Franklin	5,554	174,152,108	Martin	72	1,182,866	Webster	122	2,072,266
Fulton	61	1,114,939	Mason	143	3,016,781	Whitley	532	10,960,475
Gallatin	49	968,794	McCracken	525	11,007,269	Wolfe	189	4,246,861
Garrard	215	\$3,778,209	McCreary	173	\$2,402,326	Woodford	701	\$20,602,421

Pension Benefits paid to retirees and beneficiaries of Kentucky Retirement Systems have a wide ranging impact on the state's economic health. In fiscal year 2024, KRS paid over \$1.17 billion to its recipients. The majority, 92.97%, of these payments are issued to Kentucky residents. Each county in the Commonwealth receives at least \$656,000 annually from KRS, providing a stabilizing element for all local economies.

Total Retirement Payments For the Period ended June 30, 2024 (in Whole \$)			
	Payees	%	Payments
Kentucky	50,544	92.97%	1,093,828,507
Out of State	4,863	7.03%	82,646,494
Grand Total	55,407	100.00%	\$1,176,475,001

*This table represents all payees receiving a monthly payment, retirement eligible refund, or actuarial refund during the fiscal year.

DRAFT - KRS 2024 ACFR - DRAFT

Fiduciary Net Position Highlights

KRS Fiduciary Net Position* (\$ in Thousands)										
Year	KERS Nonhazardous			KERS Hazardous			SPRS			KRS
	Pension	Insurance	Total	Pension	Insurance	Total	Pension	Insurance	Total	Total
2015	\$2,327,782	\$665,639	\$2,993,421	\$552,468	\$439,113	\$991,581	\$247,229	\$164,714	\$411,943	\$4,396,945
2016	1,980,292	668,318	2,648,610	527,880	437,397	965,277	218,013	160,949	378,962	3,992,849
2017	2,092,781	781,406	2,874,187	605,921	484,442	1,090,363	256,383	178,191	434,574	4,399,124
2018	2,048,890	846,762	2,895,652	651,173	513,384	1,164,557	268,425	189,994	458,419	4,518,628
2019	2,286,625	942,136	3,228,761	687,877	527,108	1,214,985	287,242	200,128	487,370	4,931,116
2020	2,362,231	1,006,498	3,368,729	697,366	514,740	1,212,106	295,044	200,245	495,289	5,076,124
2021	3,085,014	1,353,123	4,438,137	874,928	624,889	1,499,817	357,660	246,004	603,664	6,541,618
2022	3,076,743	1,301,522	4,378,265	819,237	579,902	1,399,139	552,926	230,015	782,941	6,560,345
2023	3,607,206	1,465,489	5,072,695	902,567	616,322	1,518,889	592,826	246,797	839,623	7,431,207
2024	\$4,297,571	\$1,692,094	\$5,989,665	\$1,029,921	\$667,917	\$1,697,838	\$653,216	\$272,091	\$925,307	\$8,612,810

*The Fiduciary Net Positions are the resources accumulated and held in trust to pay benefits

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REPORT OF INDEPENDENT AUDITORS

To the Members
Kentucky Retirement Systems
Frankfort, Kentucky

Report on the Audit of Financial Statements

Opinion

We have audited the accompanying financial statements of Kentucky Retirement Systems (KRS), a component unit of the Commonwealth of Kentucky, as of and for the year ended June 30, 2024, and the related notes to the financial statements, which collectively comprise KRS's financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of KRS, as of June 30, 2024, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of KRS and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about KRS's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that

REPORT OF INDEPENDENT AUDITORS (Continued)

includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of KRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about KRS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages XX through XX, and the defined benefit pension plan and other post-employment benefit plan supplemental schedules on pages XX through XX, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic

DRAFT - KRS 2024 ACFR - DRAFT

REPORT OF INDEPENDENT AUDITORS (Continued)

financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinion on the financial statements that collectively comprise KRS's basic financial statements. The accompanying schedules of administrative expense, direct investment expenses, and professional consultant fees are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules of administrative expense, direct investment expenses, and professional consultant fees are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated DATE, on our consideration of KRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of KRS's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KRS's internal control over financial reporting and compliance.

Blue & Co., LLC

Lexington, Kentucky

DATE

DRAFT - KRS 2024 ACFR - DRAFT

Management's Discussion & Analysis (Unaudited, \$ in Thousands)

INTRODUCTION

Management's Discussion and Analysis (MD&A) provides insight into the financial performance of KRS for the fiscal year ended June 30, 2024. It is meant to be read in the context of the accompanying Letter of Transmittal in the Introduction, the Basic Financial Statements and the Notes to those statements, the Required Supplementary Information (RSI), and additional material following this section. Together, this information provides a comprehensive picture of KRS' financial position.

KRS comprises the Kentucky Employee Retirement System (KERS), and the State Police Retirement System (SPRS). KERS includes hazardous and nonhazardous defined benefit pension and OPEB plans for Kentucky state employees. SPRS is a single employer system providing benefits to Kentucky State Police troopers. Governance of both KERS and SPRS is vested with the nine-member KRS Board of Trustees (the KRS Board). Daily system activities, including investment management, benefits counseling, legal services, accounting, and payroll functions, are performed by a staff of professional employees of the Kentucky Public Pension Authority (KPPA), which is the special-purpose government responsible for the administration of KRS.

FINANCIAL HIGHLIGHTS AND ANALYSIS

The following are the Condensed Comparative Statements of Fiduciary Net Position and Condensed Comparative Statements of Changes in Fiduciary Net Position of KRS for the fiscal years ended June 30, 2024, and 2023:

Condensed Summary of Fiduciary Net Position				
As of June 30 (\$ in Thousands)				
	KRS TOTAL	KRS TOTAL		
	2024	2023	CHANGE	% CHANGE
ASSETS				
Cash, Short-term Investments, and Receivables	\$614,898	\$1,256,199	\$(641,301)	(51.05%)
Investments, at fair value	8,321,759	6,412,672	1,909,087	29.77%
TOTAL ASSETS	8,936,657	7,668,871	1,267,786	16.53%
TOTAL LIABILITIES				
	323,847	237,664	86,183	36.26%
FIDUCIARY NET POSITION	\$8,612,810	\$7,431,207	\$1,181,603	15.90%

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Management's Discussion & Analysis (Unaudited \$, in Thousands)

Condensed Summary of Changes in Fiduciary Net Position As of June 30 (\$ in Thousands)				
	KRS TOTAL 2024	KRS TOTAL 2023	CHANGE	% CHANGE
ADDITIONS				
Member Contributions	\$136,995	\$117,352	\$19,643	16.74%
Employer Contributions	368,848	319,601	49,247	15.41%
Actuarially Accrued Liability Contributions (AALC)	987,445	986,219	1,226	0.12%
General Fund Appropriations	240,000	240,000	-	0.00%
Total Contributions	1,733,288	1,663,172	70,116	4.22%
Net Investment Income (Loss)	776,200	540,789	235,411	43.53%
Other Additions	9,485	5,447	4,038	74.13%
TOTAL ADDITIONS	2,518,973	2,209,408	309,565	14.01%
DEDUCTIONS				
Benefits and Refunds	1,192,521	1,182,199	10,322	0.87%
Other Deductions	144,849	156,347	(11,498)	(7.35%)
TOTAL DEDUCTIONS	1,337,370	1,338,546	(1,176)	(0.09%)
NET INCREASE (DECREASE)	1,181,603	870,862	310,741	35.68%
FIDUCIARY NET POSITION				
Beginning of the Period	7,431,207	6,560,345	870,862	13.27%
End of Period	\$8,612,810	\$7,431,207	\$1,181,603	15.90%

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Management's Discussion & Analysis (Unaudited, \$ in Thousands)

Fiduciary Net Position

The Fiduciary Net Position of KRS was \$7,431.2 million at the beginning of the fiscal year and increased by 15.90% to \$8,612.8 million as of June 30, 2024. The \$1,181.6 million increase is primarily attributable to the appreciation of the fair value of investments, and continued AALC payments and additional funding from the Kentucky General Assembly.

Contributions

Total contributions reported for fiscal year 2024 were \$1,733.3 million compared to \$1,663.2 million in fiscal year 2023, an increase of 4.22% or \$70.1 million. This increase was driven by an increase in covered payroll for all plans, as the employer contribution rates remained constant from year to year.

Investments

The KRS pension and insurance portfolios investment returns averaged 10.6% for the fiscal year ended June 30, 2024, compared to 8.8% for the fiscal year ended June 30, 2023. This was due to the Core Fixed Income, Specialty Credit, and Real Return portfolios significantly outpacing their benchmarks, and sizeable returns in the Public Equity portfolio. See investment results beginning on page [87](#) of the investment section.

The fair value of investments, as of June 30, 2024, were \$8,322 million, an increase of \$1,909 million from the prior year, and net investment income was \$776 million for the current fiscal year, compared to \$540 million for the prior fiscal year.

Investment returns are reported net of fees and investment expenses, including carried interest. Investment fees and expenses totaled \$66 million for fiscal year 2024 compared to \$48 million in the prior fiscal year.

(\$ in millions)	1-year return		Fair Value of Investments			Investment fees & expenses			Net Investment Income		
	2024	2023	2024	2023	change	2024	2023	change	2024	2023	change
PENSION											
KERS Nonhazardous	9.5%	7.0%	\$4,100	\$2,964	\$1,136	\$29	\$20	\$9	\$356	\$220	\$136
KERS Hazardous	11.1%	9.5%	1,008	830	178	9	7	2	102	77	25
SPRS	9.6%	7.6%	635	469	166	4	3	1	57	41	16
INSURANCE											
KERS Nonhazardous	11.1%	9.9%	1,649	1,311	338	14	11	3	167	128	39
KERS Hazardous	11.2%	9.3%	662	599	63	7	5	2	67	53	14
SPRS	11.0%	9.5%	268	240	28	3	2	1	27	21	6
AVERAGE / TOTAL	10.6%	8.8%	\$8,322	\$6,413	\$1,909	\$66	\$48	\$18	\$776	\$540	\$236

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Management's Discussion & Analysis (Unaudited \$, in Thousands)

Asset allocation is the primary driver of long-term investment performance and is designed to achieve an optimal long-term asset mix. The investment policy statement (IPS) of the KRS board has established the following asset allocation guidelines as of June 30, 2024. See also the investment overview beginning on page [83](#) of the investment section.

Asset Class	KERS Nonhazardous Pension & SPRS Pension Plans			KERS Hazardous Pension & all KRS Insurance Plans		
	Target	Minimum	Maximum	Target	Minimum	Maximum
Public Equity	30%	20%	40%	40%	2%	50%
Private Equity	6%	3%	9%	8%	4%	12%
Core Fixed Income	27%	22%	35%	10%	8%	15%
Specialty Credit	20%	15%	25%	25%	20%	30%
Cash	2%	0%	5%	2%	0%	5%
Real Estate	5%	3%	7%	7%	4%	10%
Real Return	10%	7%	13%	8%	5%	11%
	100%			100%		

Deductions

Benefits and refunds paid for fiscal year 2024 totaled \$1,192.5 million compared to \$1,182.2 million in fiscal year 2023, a 0.87% increase, due to the slight increase in retired membership of the systems.

ACTUARIAL HIGHLIGHTS

The actuarial accrued liability (AAL) is the measure of the cost of benefits that have been earned to date, but not yet paid, and is calculated using the entry age normal cost method (EANC) as required by state statute. The difference in value between the AAL and the actuarial value of assets is defined as the unfunded actuarial accrued liability (UAAL).

The UAAL for KRS, from the June 30, 2024, actuarial valuation, is \$13,564 million for fiscal year ended June 30, 2024, compared to \$13,813 million for fiscal year ended June 30, 2023, a decrease of \$249 million. The UAAL for the Pension Plans decreased by \$261 million due to the increase in the fair value of the assets related to favorable market conditions, an increase in covered payroll, and the \$240 million in general fund appropriation during fiscal year 2024. The UAAL for the Insurance Plans increased by \$12 million, due to static contribution rates for fiscal year 2024.

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Management's Discussion & Analysis (Unaudited, \$ in Thousands)

Schedule of Unfunded Actuarial Accrued Liability (UAAL)												
As of June 30 (\$ in millions)												
	KERS Nonhazardous				KERS Hazardous				SPRS			
	Pension		Insurance		Pension		Insurance		Pension		Insurance	
	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
Actuarial Accrued Liability (AAL)	\$16,648	\$16,304	\$2,095	\$1,877	\$1,443	\$1,363	\$380	\$364	\$1,112	\$1,092	\$251	\$244
Actuarial Value of Assets	4,122	3,552	1,712	1,533	985	891	652	620	631	590	263	245
Unfunded Actuarial Accrued Liability (UAAL)	\$12,526	\$12,752	\$383	\$344	\$458	\$472	(\$272)	(\$256)	\$481	\$502	(\$12)	(\$1)
Funded Ratio	24.76%	21.79%	81.72%	81.67%	68.26%	65.37%	171.58%	170.33%	56.74%	54.03%	104.78%	100.41%

Please refer to Note I and the RSI of the Financial Section, as well as the Actuarial Section for more analysis of the funding status, asset values, actuarial assumptions, and actuarially determined employer contributions.

INFORMATION REQUESTS

This financial report is designed to provide a general overview of KRS' financial position. Questions concerning any of the information provided in this report or requests for additional information should be directed to:

ATTN: Director of Accounting

Kentucky Public Pensions Authority

1260 Louisville Road

Frankfort, KY 40601

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Combining Statement of Fiduciary Net Position							
As of June 30, 2024 (\$ in Thousands)							
	Pension			Insurance			KRS Total 2024
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	
ASSETS							
CASH AND SHORT-TERM INVESTMENTS							
Cash Deposits	\$268	\$27	\$29	\$100	\$23	\$18	\$465
Short-term Investments	254,633	49,952	38,006	68,261	20,702	9,876	441,430
Total Cash and Short-term Investments	254,901	49,979	38,035	68,361	20,725	9,894	441,895
RECEIVABLES							
Accounts Receivable	93,357	4,965	2,498	14,426	462	918	116,626
Accounts Receivable - Investments	30,542	5,671	4,925	10,444	3,303	1,492	56,377
Total Receivables	123,899	10,636	7,423	24,870	3,765	2,410	173,003
INVESTMENTS, AT FAIR VALUE							
Core Fixed Income	1,096,029	115,245	166,303	189,154	75,625	29,762	1,672,118
Public Equities	1,347,282	431,605	205,635	708,372	284,692	114,446	3,092,032
Private Equities	194,862	66,044	31,411	111,418	48,804	21,728	474,267
Specialty Credit	785,092	229,560	123,774	375,074	151,347	61,598	1,726,445
Derivatives	(73)	9	(9)	10	(3)	3	(63)
Real Return	349,425	79,738	56,205	135,580	45,489	18,475	684,912
Real Estate	217,911	58,902	35,155	95,993	42,344	16,169	466,474
Securities Lending Collateral	109,246	26,629	16,923	33,811	13,516	5,449	205,574
Total Investments, at Fair Value	4,099,774	1,007,732	635,397	1,649,412	661,814	267,630	8,321,759
Total Assets	4,478,574	1,068,347	680,855	1,742,643	686,304	279,934	8,936,657
LIABILITIES							
Accounts Payable	4,455	988	113	132	2	1	5,691
Accounts Payable - Investments	67,302	10,809	10,603	16,606	4,869	2,393	112,582
Securities Lending Collateral	109,246	26,629	16,923	33,811	13,516	5,449	205,574
Total Liabilities	181,003	38,426	27,639	50,549	18,387	7,843	323,847
Total Fiduciary Net Position Restricted for Benefits	\$4,297,571	\$1,029,921	\$653,216	\$1,692,094	\$667,917	\$272,091	\$8,612,810

See accompanying notes which are an integral part of these combining financial statements.

Note: The displayed fair values include investable assets held by each Plan and its associated contributions, payables, equipment and intangible assets; unlike those found in the Investment Section, which include only those investable assets held by each Plan.

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For the fiscal year ended June 30, 2024 (\$ in Thousands)

	Pension			Insurance			KRS Total 2024
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	
ADDITIONS							
Member Contributions	\$96,597	\$21,560	\$5,691	\$10,682	\$2,070	\$395	\$136,995
Employer Contributions	156,032	89,899	61,998	48,846	1,910	10,163	368,848
Actuarially Accrued Liability Contributions	899,663	-	-	87,782	-	-	987,445
General Fund Appropriations	240,000	-	-	-	-	-	240,000
Other	-	-	-	8,444	651	390	9,485
Total Contributions	1,392,292	111,459	67,689	155,754	4,631	10,948	1,742,773
INVESTMENT INCOME							
Net Appreciation (Depreciation) in FV of Investments	243,618	76,073	38,386	123,287	51,737	20,310	553,411
Interest/Dividends	137,373	33,477	21,885	55,349	21,973	8,932	278,989
Securities Lending Income	4,235	1,169	744	1,583	551	242	8,524
Less: Investment Expense	19,394	5,797	2,666	9,243	4,573	1,818	43,491
Less: Performance Fees	6,006	1,724	620	2,860	1,766	616	13,592
Less: Securities Lending Fees, Expenses, and Rebates	3,808	1,059	671	1,402	487	214	7,641
Net Investment Income (loss)	356,018	102,139	57,058	166,714	67,435	26,836	776,200
Total Additions	1,748,310	213,598	124,747	322,468	72,066	37,784	2,518,973
DEDUCTIONS							
Benefit Payments	1,032,124	80,528	63,823	-	-	-	1,176,475
Refunds	11,693	4,133	220	-	-	-	16,046
Administrative Expenses	14,128	1,583	314	734	117	71	16,947
Healthcare Expenses	-	-	-	95,129	20,354	12,419	127,902
Total Deductions	1,057,945	86,244	64,357	95,863	20,471	12,490	1,337,370
Net Increase (Decrease) in Fiduciary Net Position Restricted for Benefits	690,365	127,354	60,390	226,605	51,595	25,294	1,181,603
Total Fiduciary Net Position Restricted for Benefits							
Beginning of Period	3,607,206	902,567	592,826	1,465,489	616,322	246,797	7,431,207
End of Period	\$4,297,571	\$1,029,921	\$653,216	\$1,692,094	\$667,917	\$272,091	\$8,612,810
<i>See accompanying notes, which are an integral part of these combining financial statements.</i>							

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NOTE A. Summary of Significant Accounting Policies

Basis of Accounting

KRS's combining financial statements are prepared using the accrual basis of accounting. Member contributions are recognized in the period in which contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Premium payments are recognized when due and payable in accordance with the insurance terms of the plan. Administrative and investment expenses are recognized when incurred. The net position represents the assets of the system available to pay pension benefits for retirees, active and inactive members, and health care premiums for current and future retirees.

Method Used to Value Investments

Investments are reported at fair value. Fair value is the price that would be received upon selling an asset or the amount paid to transfer a liability in an orderly transaction between market participants at the measurement date. Short-term investments are reported at cost, which approximates fair value. See Investments Note D for further discussion of fair value measurements. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the dividend date. Gain (loss) on investments includes gains and losses on investments bought and sold as well as held during the fiscal year. Investment returns are recorded in all plans net of investment fees.

Investment Unitization

Within the plan accounting structure there are two primary types of accounts: Plan Accounts and Pool Accounts. Plan Accounts are the owners of the investment pool. An account is established for each plan and these accounts hold Units of Participation that represent the plan's invested value of the investment pool. Pool Accounts are accounts that hold the assets of the investment pool where all investment related activity and earnings occur. The pooled accounts are the investment strategies of the pool. Units of Participation are bought and sold as each plan contributes or withdraws cash or assets from the investment pool. The investment pool earnings are then allocated to plans utilizing a cost distribution method that allows for fluctuating prices experienced in capital markets. This involves earnings allocated to the plan accounts with an increase or decrease in cost on the Unit of Participation Holdings of the plan accounts. Correspondingly, the price of the Unit of Participation Holdings is updated to reflect change in fair value in the investment pool. Earnings are allocated based on the daily weighted average of Master Trust Units held by each plan account during each monthly earnings period. This method is commonly used when plans make multiple contributions or withdrawals from the investment pool throughout the month as it eliminates allocation distortion due to large end of month cash flows.

Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Capital/Intangible Assets

Equipment and computer software costing more than \$3,000 are valued at historical cost, capitalized when put into service, and depreciated or amortized using the straight-line method over the estimated useful life of the assets, ranging from three to ten years. Improvements, which increase the useful life of the asset, are capitalized. Maintenance and repairs are charged as an expense when incurred. As of June 30, 2023, all capital/intangible assets were fully depreciated and or amortized. No additional capital/intangible assets have been capitalized since that date.

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Accounts Receivable

Accounts Receivable consist of amounts due from employers. Management considers accounts receivable to be fully collectible; accordingly, no allowance for doubtful accounts is considered necessary. If amounts become uncollectible, they will be charged to operations when that determination is made. If amounts previously written off are collected, they will be credited to income when received.

The Investment Accounts Receivable and Investment Accounts Payable consist of investment management earnings and fee accruals, as well as all buys and sells of securities which have not closed as of the reporting date.

Benefits

Benefits are recognized when due and payable in accordance with the terms of the plan.

Expense Allocation

Administrative expenses are allocated to the system based on a hybrid allocation developed by management in conjunction with the KRS Board. The hybrid allocation is based on a combination of plan membership and direct plan expenses. All investment related expenses are allocated in proportion to the percentage of investment assets held by each plan.

Component Unit

KRS is a component unit of the Commonwealth of Kentucky (the Commonwealth) for financial reporting purposes.

KERS was created by the Kentucky General Assembly on July 1, 1956, pursuant to Kentucky Revised Statutes 61.515. SPRS was created by the Kentucky General Assembly on July 1, 1958, pursuant to Kentucky Revised Statutes 16.510. Six of the nine trustees are appointed by the Governor. The administrative budget of KPPA, which incorporates KRS administrative cost is subject to approval by the Kentucky General Assembly. KRS employer contribution rates are set by statute and subject to legislative approval. The methods used to determine the employer rates for KRS (KERS and SPRS) are specified in Kentucky Revised Statutes 61.565.

Perimeter Park West, Incorporated (PPW) is a legally separate entity functioning as a real estate holding company for the offices used by KPPA. PPW is governed by a three-member board selected by its sole shareholder, KRS.

Recent Accounting Pronouncements

GASB Statement Number 100, Accounting Changes and Error Corrections - an amendment of *GASB Statement No. 62*. The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2024. KRS had no Accounting Changes or Error Corrections for fiscal year June 30, 2024.

GASB Statement Number 101, Compensated Absences. The requirements of the Statement will take effect for financial statements starting with the fiscal year that ends December 31, 2024. Management is evaluating the impact of the Statement to the financial report.

GASB Statement Number 102, Certain Risk Disclosures. The requirements of the Statement will take effect for financial statements for fiscal years beginning after June 15, 2024. Management is evaluating the impact of the Statement to the financial report.

GASB Statement Number 103, Financial Reporting Model Improvements. The requirements of the Statement are effective for fiscal years beginning after June 15, 2025, and all reporting periods thereafter. Management is evaluating the impact of the Statement to the financial report.

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Note B. Description & Contribution Information

KRS - Kentucky Employees Retirement System

KRS comprises the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS), and for financial reporting purposes, is composed of six Plans - three defined benefit pension Plans, and three OPEB plans, as discussed below. Each of the Pension and OPEB Plans are legally separated with benefits only eligible to be paid for each of the respective membership groups.

KERS was established by Kentucky Revised Statutes 61.515, to provide retirement, disability, and death benefits to system members. KERS, for financial reporting purposes, is composed of two pension Plans - KERS Nonhazardous Plan and KERS Hazardous Plan, and two corresponding OPEB Plans. The KERS Nonhazardous Plan was established to provide retirement benefits to all regular full-time members employed in positions of any state department, board, or agency directed by Executive Order to participate in KERS. The membership of the KERS Hazardous Plan includes employees whose position is considered hazardous with principal job duties including, but are not limited to, active law enforcement, probation and parole officer, detective, pilots, paramedics, and emergency medical technicians, with duties that require frequent exposure to a high degree of danger and also require a high degree of physical condition.

SPRS is a single employer defined benefit pension Plan that was established by Kentucky Revised Statutes 16.510 to provide retirement benefits to all full-time state troopers employed in positions by the Kentucky State Police, and all positions are considered Hazardous. SPRS, for financial reporting purposes, is composed of the retirement Plan, and a corresponding OPEB Plan.

The OPEB Plans are part of the Kentucky Retirement Systems Insurance Trust Fund (Insurance Fund), established by Kentucky Revised Statutes 61.701 for eligible members receiving benefits from KERS Nonhazardous, KERS Hazardous, and SPRS. The Insurance Fund was created for the purpose of providing a trust separate from the retirement trusts, and for the purpose of providing hospital and medical insurance benefits.

The responsibility of the Plans within KRS is vested in the KRS Board. The KRS Board consists of nine 9 members. Six trustees are appointed by the governor and three are elected. Of the elected trustees, two are elected by KERS members and one is elected by SPRS members. Active, inactive and retired members of the appropriate system are invited to participate in the election of trustees. Of the six appointed trustees, three must have investment experience and three must have retirement experience as defined by statute. All appointments by the governor are subject to Senate confirmation. The two trustees elected by the KERS membership must be members of or retired from KERS. The one trustee elected by the SPRS membership must be a member of or retired from SPRS.

Employer Contributions

For the fiscal year ended June 30, 2024, there were 329 participating employers in KERS, and SPRS is a single employer plan. The Commonwealth is required to contribute at an actuarially determined rates for KERS and SPRS pensions and insurance. The KRS Board recommends the rates each year following the annual actuarial valuation, but the rates are set by the legislature within the budget bill for each biennium. The contribution rates from July 1, 2023, through June 30, 2024, were set within HB 1, passed in the 2022 Regular Legislative Session, for KERS Nonhazardous, KERS Hazardous and SPRS employers.

The KERS Nonhazardous employer contribution rate shall include, (1) the normal cost contribution and (2) the prorated amount of the actuarially accrued liability assigned to each individual nonhazardous employer in accordance with Kentucky Revised Statutes 61.565(1)(d). Each employer pays the normal cost as a percentage of reported payroll plus a flat amount to cover the employer-specific actuarially accrued liability contribution for the fiscal year as determined by the annual valuation.

Per Kentucky Revised Statutes 61.565 and 16.645(18), normal contribution and past service contribution rates shall be determined by the KRS Board on the basis of the last annual valuation preceding July 1 of a new biennium. The KRS Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the KRS Board. However, formal commitment to provide the contributions by the employer is made through the biennial budget for KERS and SPRS.

For the fiscal year ended June 30, 2024, participating employers of KERS Nonhazardous, KERS Hazardous and SPRS contributed a percentage of each employee's creditable compensation. The actuarially determined rates set

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by the KRS Board for the fiscal year is a percentage of each employee's creditable compensation. Administrative costs are financed through employer contributions and investment earnings.

Contribution Rate Breakdown by Plan							
As of June 30, 2024							
Plan	Pension		Insurance		Combined Total		
	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates	
KERS Nonhazardous *	7.82%	7.74%	2.15%	1.86%	9.97%	9.60%	
KERS Hazardous	31.82%	30.12%	0.00%	0.00%	31.82%	30.12%	
SPRS	85.32%	85.39%	14.11%	3.68%	99.43%	89.07%	

** House Bill 8 passed during the 2021 legislative session required, beginning July 1, 2021, the KERS Nonhazardous employers pay the normal cost for all employees plus a flat amount which is equal to their assigned percentage of the annual dollar amount that is sufficient to amortize the total unfunded actuarial accrued liability of the system over a closed period. The percentage is based on the liability that was attributable to the agency as of June 30, 2019.*

Benefit Tiers:

As of June 30, 2024, the date of the most recent actuarial valuation, membership consisted of:

Membership as of June 30, 2024 (in Whole \$)				
Item	KERS Nonhazardous	KERS Hazardous	SPRS	KRS Total
Members	143,975	19,448	3,357	166,780
Active Membership	33,135	4,910	872	38,917
Tier 1	11,933	1,075	310	13,318
Tier 2	4,766	720	180	5,666
Tier 3	16,436	3,115	382	19,933
Average Annual Salary	\$57,357	\$62,496	\$84,054	\$-
Average Age	45.5	39.9	37.4	-
Retired Membership	52,686	5,084	1,736	59,506
Tier 1	51,993	4,994	1,732	58,719
Tier 2	604	75	1	680
Tier 3	89	15	3	107
Average Annual Benefit	\$21,131	\$16,287	\$39,596	\$-
Average Age	71.2	66.5	65.0	-
Inactive Members	58,154	9,454	749	68,357
Tier 1	32,334	2,282	269	34,885
Tier 2	9,800	1,625	133	11,558
Tier 3	16,020	5,547	347	21,914

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TIER 1:

Tier 1 plan members who began participating prior to September 1, 2008, are required to contribute 5% (Nonhazardous) or 8% (Hazardous) of their annual creditable compensation. These members are classified in the Tier 1 structure of benefits. Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest.

TIER 2:

Tier 2 plan members, who began participating on or after September 1, 2008, and before January 1, 2014, are required to contribute 5% (Nonhazardous) or 8% (Hazardous) of their annual creditable compensation. Further, members also contribute an additional 1% which is deposited to an account created for payment of health insurance benefits under 26 USC Section 401(h) in the Insurance Fund (see Kentucky Administrative Regulation (KAR) 105 KAR 1:420). These members are classified in the Tier 2 structure of benefits. Interest is paid each June 30 on members' accounts as of the June 30 of the previous year at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% Health Insurance Contribution (HIC) to the 401(h) account is non-refundable and is forfeited.

TIER 3:

Tier 3 plan members, who began participating on or after January 1, 2014, are required to contribute to the Cash Balance Plan. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and a defined contribution plan. Members contribute 5% (Nonhazardous) or 8% (Hazardous) of their monthly creditable compensation which is deposited into their account, and an additional 1% which is deposited to an account created for payment of health insurance benefits under 26 USC Section 401(h) in the Insurance Fund (see 105 KAR 1:420), which is not refundable. Tier 3 member accounts are also credited with an employer pay credit in the amount of 4% (Non-Hazardous) or 7.5% (Hazardous) of the member's monthly creditable compensation. The employer pay credit amount is deducted from the total employer contribution rate paid on the member's monthly creditable compensation. If a vested (60 months of service) member terminates employment and applies to take a refund, the member is entitled to the members contributions (less HIC) plus employer pay credit plus interest (for both employee contributions and employer pay). If a non-vested (less than 60 months) member terminates employment and applies to take a refund, the member is entitled to receive employee contributions (less HIC) plus interest (on employee contributions only).

Interest is also paid into the Tier 3 member's account. The account currently earns 4% interest credit on the member's accumulated account balance as of June 30 of the previous year. The member's account may be credited with additional interest if the plan's five-year Geometric Average Net Investment Return (GANIR) exceeded 4%. If the member was actively employed and participating in the fiscal year, and if KRS's GANIR for the previous five years exceeds 4%, then the member's account will be credited with 75% of the amount of the returns over 4% on the account balance as of June 30 of the previous year (Upside Sharing Interest). It is possible that one plan in KRS may get an Upside Sharing Interest, while another may not.

Upside Sharing Interest

Upside Sharing Interest is credited to both the member contribution balance and employer pay credit balance. Upside Sharing Interest is an additional interest credit. Member accounts automatically earn 4% interest annually. The GANIR is calculated on an individual plan basis.

The chart that follows shows the interest calculated on the members' balances as of June 30, 2023, and credited to each member's account on June 30, 2024.

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(A-B) = C x 75% = D then B + D = Interest (\$ in Thousands)						
	A	B	C	D		
Plan	5-Year Geometric Average Return	Less Guarantee Rate of 4%	Upside Sharing Interest	Upside Sharing Interest X 75% = Upside Gain	Interest Rate Earned (4% + Upside)	Total Interest Credited to Member Accounts
KERS Nonhazardous	6.39%	4.00%	2.39%	1.79%	5.79%	\$13,424
KERS Hazardous	7.47%	4.00%	3.47%	2.60%	6.60%	\$4,668
SPRS	6.87%	4.00%	2.87%	2.15%	6.15%	\$791

Insurance Fund Description

Eligible non-Medicare retirees are covered by the Department of Employee Insurance (DEI) plans, eligible Medicare retirees are covered through contracts with Humana through a Medicare Advantage Plan. The Insurance Fund pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal year ended June 30, 2024, insurance premiums withheld from benefit payments for KRS's members were \$15.8 million and \$1.2 million for KERS Nonhazardous and Hazardous, respectively; and \$0.4 million for SPRS.

Retiree Medical Insurance Coverage (by Plan Count)						
As of June 30, 2024						
	Single	Couple/ Family	Parent	Medicare Without Prescription	Medicare With Prescription	
KERS Nonhazardous	6,334	473	395	939		22,947
KERS Hazardous	621	462	108	66		1,843
SPRS	239	415	79	16		1,019
Total	7,194	1,350	582	1,021		25,809

Note: Medical Insurance coverage is provided based on the member's initial participation date and length of service. Members receive either a percentage or dollar amount for insurance coverage. The counts are the number of medical plans contracted with the Department of Employee Insurance or Medicare vendor and are not representative of the number of persons.

The amount of benefit paid by the Insurance Fund is based on years of service. For members who began participating prior to July 1, 2003, a percentage of the contribution rate is paid based on years of service with 100% of the contribution rate being paid with 20 years of service.

For members participating prior to July 1, 2003, years of service and respective percentages of the maximum benefit are as follows:

Portion Paid by Insurance Fund	
As of June 30, 2024	
Years of Service	Paid by Insurance Fund (%)
20+ years	100.00%
15-19 years	75.00%
10-14 years	50.00%
4-9 years	25.00%
Less than 4 years	0.00%

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Since the passage of House Bill 290 (2004 Kentucky General Assembly), medical insurance benefits have been calculated differently for members who began participating on or after July 1, 2003. Once members reach a minimum vesting period of 10 years, Nonhazardous employees whose participation began on or after July 1, 2003, earn \$10 per month for insurance benefits at retirement for every year of earned service. Hazardous employees whose participation began on or after July 1, 2003, earn \$15 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Upon death of a Hazardous employee, the employee's spouse receives \$10 per month for insurance benefits for each year of the deceased employee's earned Hazardous service. This dollar amount is subject to adjustment annually, which is currently 1.5%, based upon Kentucky Revised Statutes.

House Bill 1 (2008 Kentucky General Assembly) changed the minimum vesting requirement for participation in the health insurance plan to 15 years for members whose participation began on or after September 1, 2008. This benefit is not protected under the inviolable contract provisions of Kentucky Revised Statutes 16.652, and 61.692. The Kentucky General Assembly reserves the right to suspend or reduce this benefit if, in its judgment, the welfare of the Commonwealth so demands.

The amount of benefit paid by the Insurance Fund is based on years of service. For members participating on or after July 1, 2003, the dollar amounts of the benefit per year of service are as follows:

Dollar Contribution for Fiscal Year 2024 For Member participation date on or after July 1, 2003	
	(in Whole \$)
KERS Nonhazardous	\$14.41
KERS Hazardous	\$21.62
SPRS	\$21.62

The Insurance Plan pays 100% of the contribution rate for hospital and medical insurance premiums for the spouse and dependents of members who die as a direct result of an act in the line of duty or from a duty-related injury.

Cost of Living Adjustment (COLA)

Prior to July 1, 2009, COLAs were provided to retirees annually equal to the percentage increase in the annual average of the consumer price index (CPI) for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. After July 1, 2009, the COLAs were to be limited to 1.50%.

In 2013, the General Assembly created a new law to govern how COLAs will be granted. Language included in Senate Bill 2 during the 2013 Regular Session states COLAs will only be granted in the future if the KRS Board determine that assets of the Systems are greater than 100% of the actuarial liabilities and legislation authorizes the use of surplus funds for the COLA; or the General Assembly fully prefunds the COLA or directs the payment of funds in the year the COLA is provided. The granting of COLAs for the KERS and SPRS membership is covered under Kentucky Revised Statutes 61.691. No COLA has been granted since July 1, 2011.

DRAFT - KRS 2024 ACFR - DRAFT**Note C. Cash, Short-Term Investments & Securities Lending Collateral**

The provisions of GASB *Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions* require that cash received as collateral on securities lending transactions and investments made with that cash must be reported as assets on the financial statements. The non-cash collateral is not reported because the securities received as collateral are unable to be pledged or sold unless the borrower defaults. In accordance with GASB *No. 28*, KRS classifies certain other investments, not related to the securities lending program, as short-term. Cash and short-term investments consist of the following:

Cash, Short-Term Investments, & Securities Lending Collateral**As of June 30, 2024 (\$ in Thousands)**

KERS Nonhazardous	Pension	Insurance
Cash	\$268	\$100
Short-Term Investments	254,633	68,261
Securities Lending Collateral Invested	109,246	33,811
Total	\$364,147	\$102,172

KERS Hazardous	Pension	Insurance
Cash	\$27	\$23
Short-Term Investments	49,952	20,702
Securities Lending Collateral Invested	26,629	13,516
Total	\$76,608	\$34,241

SPRS	Pension	Insurance
Cash	\$29	\$18
Short-Term Investments	38,006	9,876
Securities Lending Collateral Invested	16,923	5,449
Total	\$54,958	\$15,343

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Note D. Investments

Kentucky Revised Statutes 61.650 specifically state that the KRS Board shall have the full and exclusive power to invest and reinvest the funds of the Plan(s) they govern. In addition, Kentucky Revised Statutes 61.645 require three (3) members of the KRS Board to have at least ten (10) years of investment experience as defined by the statutes. The KRS Board is required to establish an Investment Committee who is specifically charged with implementing the investment policies adopted by the KRS Board and to act on behalf of the KRS Board of Trustees on all investment-related matters. The KRS Board and the Investment Committee members are required to discharge their duty to invest the funds of the Plans in accordance with the “Prudent Person Rule” as set forth in Kentucky Revised Statutes 61.650 and to manage those funds consistent with the long-term nature of the trusts and solely in the interest of the members and beneficiaries. All internal Investment Staff, and investment consultants must adhere to the Code of Ethics and Standards of Professional Conduct of the CFA Institute and all Board Trustees must adhere to the Code of Conduct for Members of a Pension Scheme Governing Body of the CFA Institute. The KRS Board is authorized to adopt policies. The KRS Board has adopted an Investment Policy Statement (IPS) which defines the framework for investing the assets of the Plans. The IPS is intended to provide general principles for establishing the investment goals of the Plans, the allocation of assets, employment of outside asset management, and monitoring the results of the respective Plans. A copy of the KRS Board’s IPS can be found at kyret.ky.gov. By statutes, the KRS Board, through adopted written policies, shall maintain ownership and control over its assets held in its unitized managed custodial account. Additionally, the Investment Committee establishes specific investment guidelines that are summarized below and are included in the Investment Management Agreement (IMA) for each investment management firm.

Equity

Public Equity

Investments may be made in common stock; securities convertible into common stock; preferred stock of publicly traded companies on stock markets; asset class relevant Exchange Traded Funds (ETFs); or any other type of security contained in a manager’s benchmark. Each individual equity account has a comprehensive set of investment guidelines, which contains a listing of permissible investments, portfolio restrictions, and standards of performance.

Private Equity

Subject to the specific approval of the Investment Committee, Private Equity investments may be made for the purpose of creating a diversified portfolio of alternative investments under the Equity umbrella. Private Equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from Private Equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments. Certain investments in this category are public market securities (ETFs) with the most similar risk/return characteristics as a short-term proxy for private asset classes.

Fixed Income

Core Fixed Income

The Core Fixed Income accounts may include, but are not limited to, the following securities: U.S. government and agency bonds; investment grade U.S. corporate credit; investment grade non-U.S. corporate credit; mortgages, including residential mortgage-backed securities; commercial mortgage-backed securities and whole loans; asset-backed securities; and, asset class relevant ETFs.

Specialty Credit

The Specialty Credit accounts may include, but are not limited to, the following types of securities and investments: non-investment grade U.S. corporate credit including both bonds and bank loans; non-investment grade non-U.S. corporate credit including bonds and bank loans; private debt; municipal bonds; non-U.S. sovereign debt; mortgages, including residential mortgage-backed securities; commercial mortgage backed securities and whole loans; asset-backed securities and emerging market debt (EMD), including both sovereign EMD and corporate EMD; and asset class relevant ETFs. Each individual Specialty Credit account shall have a comprehensive set of investment guidelines which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

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Cash and Cash Equivalent Securities

The following short-term investment vehicles are considered acceptable: Publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages, municipal bonds, and collective short-term investment funds (STIFs), money market funds or instruments (including, but not limited to certificates of deposit, bank notes, deposit notes, bankers' acceptance and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed 397 days.

Fixed income managers, who utilize cash equivalent securities as an integral part of their investment strategy, are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for Fixed Income managers shall be included in the investment manager's investment guidelines.

Inflation Protected

Real Estate and Real Return

Subject to the specific approval of the corresponding Investment Committee, investments may be made to create a diversified portfolio of alternative investments. Investments are made in equity and debt real estate for the purpose of achieving the highest total rate of return possible consistent with a prudent level of risk. There may also be investments in this category that are public markets securities, such as ETFs, with similar risk/return characteristics as a short-term proxy. The purpose of the Real Return investments are to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of hedging inflation for the broader plans.

Investment Expenses

In accordance with GASB *Statement No. 67 and No. 74, Financial Reporting for Pension Plans and Other Postemployment Benefit Plans other than Pension Plans*, management has exercised professional judgment to report investment expenses. It is not cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses. In fiscal year 2015, management changed Private Equity investment fees from a gross basis to a net basis. The KRS Board made the decision to enhance transparency reporting. Prior to 2015, the majority of the trusts' Private Equity investment fees were netted against investment activity which is the standard used within the Private Equity sector. Trusts' net investment income has always included these fees regardless of the reporting method used. During the 2017 Regular Session of the Kentucky General Assembly, legislators passed SB 2 which requires the reporting of all investment fees and expenses. Management continues to work with managers to enhance fee and expense reporting.

Derivatives

Derivative instruments are financial contracts that have various effective dates and maturity dates and whose values depend on the values of one or more underlying assets, reference rates, or financial indices. External managers and Investment Staff are permitted to invest in derivative securities, or strategies which make use of derivative investments, for exposure, cost efficiency and risk management purposes, if such investments do not cause the portfolio to be leveraged beyond a 100% invested position. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price. Examples of such derivatives include, but are not limited to the following securities: foreign currency forward contracts; futures; options; and swaps.

For accounting and financial reporting purposes, all derivative instruments are considered investment derivative instruments. The derivatives have been segregated on the Combining Statement of Fiduciary Net Position for all the Pension and Insurance Plans.

In accordance with GASB *Statement No. 53, Accounting and Financial Reporting for Derivative Instruments*, KRS provides additional disclosure regarding its derivatives. The charts included represent the derivatives by types as of June 30, 2024. The chart shows the change in fair value of derivative types as well as the current fair value and notional value. The notional value is the reference amount of the underlying asset times its current spot price. The Plans hold investments in options, commitments, futures, and forward foreign exchange contracts.

DRAFT - KRS 2024 ACFR - DRAFT**KERS Pension and Insurance Derivative Instruments - GASB 53****As of June 30, 2024 (\$ in Thousands)**

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value	Classification	Fair Value	Notional
KERS Nonhazardous - Pension				
FX Spots and Forwards	\$48	Investment	\$45	-
Futures	1,924	Investment	(118)	29,760
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Nonhazardous - Insurance				
FX Spots and Forwards	\$30	Investment	\$28	-
Futures	458	Investment	(18)	5,132
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Hazardous - Pension				
FX Spots and Forwards	\$24	Investment	\$22	-
Futures	291	Investment	(13)	2,576
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
KERS Hazardous - Insurance				
FX Spots and Forwards	\$-	Investment	\$1	-
Futures	198	Investment	(4)	2,679
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-

SPRS Pension and Insurance Derivative Instruments - GASB 53**As of June 30, 2024 (\$ in Thousands)**

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value	Classification	Fair Value	Notional
SPRS Pension				
FX Spots and Forwards	\$10	Investment	\$9	-
Futures	323	Investment	(18)	4,453
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-
SPRS Insurance				
FX Spots and Forwards	\$7	Investment	\$6	-
Futures	74	Investment	(3)	701
Commits and Options	-	Investment	-	-
Swaps	-	Investment	-	-

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Counterparty	S & P Ratings	KERS	KERS INS	KERS Haz	KERS Haz INS	SPRS	SPRS INS
		Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure	Percentage of Net Exposure
Australia & New Zealand Banking Group Ltd	AA-	0.66%	1.21%	0.33%	0.05%	0.14%	0.27%
The Bank of America	A-	0.11%	0.14%	0.04%	0.05%	0.02%	0.02%
The Bank of New York Mellon Corp	A	0.30%	0.60%	0.14%	0.07%	0.06%	0.13%
Barclays PLC	BBB+	1.04%	1.91%	0.50%	0.10%	0.21%	0.43%
Brown Brothers Harriman & Co	NR	0.09%	0.15%	0.03%	0.05%	0.01%	0.02%
Canadian Imperial Bank of Commerce	A+	1.45%	2.65%	0.70%	0.12%	0.30%	0.60%
Citigroup Inc	BBB+	1.04%	1.89%	0.51%	0.08%	0.21%	0.43%
The Goldman Sachs Group Inc	BBB+	0.75%	1.38%	0.37%	0.07%	0.15%	0.31%
HSBS Holding PLC	A-	1.52%	3.40%	0.74%	0.16%	0.31%	0.77%
JPMorgan Chase & Co	A-	0.54%	1.02%	0.25%	0.11%	0.11%	0.22%
Morgan Stanley	A-	0.93%	1.70%	0.46%	0.07%	0.19%	0.39%
Royal Bank of Canada	AA-	1.00%	1.96%	0.49%	0.09%	0.21%	0.44%
State Street Corp	A	1.12%	2.06%	0.54%	0.11%	0.23%	0.46%
The Toronto-Dominion Bank	AA-	0.04%	0.09%	0.01%	0.03%	0.01%	0.01%
UBS Group AG	A-	0.87%	2.19%	0.41%	0.18%	0.17%	0.48%
Westpac Banking Corp	AA-	0.03%	0.05%	0.01%	0.02%	0.00%	0.01%
TOTAL		11.49%	22.40%	5.53%	1.36%	2.33%	4.99%

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that may occur as a result of a financial institution's failure, whereby KRS deposits may not be returned. All non-investment related bank balances are held by JP Morgan Chase and each individual account is insured by the Federal Deposit Insurance Corporation (FDIC). None of these balances were exposed to custodial credit risk as they were either insured or collateralized at required levels.

Custodial Credit Risk for Deposits - GASB 40**As of June 30, 2024 (\$ in Thousands)**

KERS Nonhazardous Pension	\$982
KERS Nonhazardous Insurance	100
KERS Hazardous Pension	26
KERS Hazardous Insurance	24
SPRS Pension	41
SPRS Insurance	19
Clearing	246
Excess Benefit	\$-

Note: All the above balances are held at JPM Chase

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Custodial Credit Risk for Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, KRS will not be able to recover the value of an investment or collateral securities that are in the possession of an outside party. As of June 30, 2024, the currencies in the chart below were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent but not in KERS's or SPRS's name. Below are total cash and securities held by Global Managers and consist of various currencies.

Custodial Credit Risk for Investments - GASB 40 As of June 30, 2024 (\$ in Thousands)	
KERS	
KERS Nonhazardous Pension Foreign Currency	\$354,933
KERS Nonhazardous Insurance Foreign Currency	204,865
KERS Hazardous Pension Foreign Currency	119,039
KERS Hazardous Insurance Foreign Currency	79,907
SPRS	
SPRS Pension Foreign Currency	59,555
SPRS Insurance Foreign Currency	\$34,375

Investment Summary - GASB 40 As of June 30, 2024 (\$ in Thousands)

Investment Summary - GASB 40 As of June 30, 2024 (\$ in Thousands)	Pension			Insurance		
	KERS	KERS	SPRS	KERS	KERS	SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
Type	Fair Value			Fair Value		
Core Fixed Income	\$1,096,029	\$115,245	\$166,303	\$189,154	\$75,625	\$29,762
Public Equities	1,347,282	431,605	205,635	708,372	284,692	114,446
Private Equities	194,862	66,044	31,411	111,418	48,804	21,728
Specialty Credit	785,092	229,560	123,774	375,074	151,347	61,598
Derivatives	(73)	9	(9)	10	(3)	3
Real Return	349,425	79,738	56,205	135,580	45,489	18,475
Real Estate	217,911	58,902	35,155	95,993	42,344	16,169
Short-Term Investments	254,633	49,952	38,006	68,261	20,702	9,876
Accounts Receivable (Payable), Net	(36,760)	(5,138)	(5,678)	(6,162)	(1,566)	(901)
Total	\$4,208,401	\$1,025,917	\$650,802	\$1,677,700	\$667,434	\$271,156

Credit Risk Debt Securities

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The debt security portfolios are managed by the Investment Staff and by external investment management firms. All portfolio managers are required by the KRS IPS to maintain diversified portfolios. Each portfolio is also required to be in compliance with risk management guidelines that are assigned to them based upon the portfolio's specific mandate. In total, the Plans' debt securities portfolios are managed using the following guidelines adopted by the KRS Board:

- Bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies or instrumentalities are permissible investments and may be held without restrictions.
- The duration of the core fixed income portfolios combined shall not vary from that of the system's Fixed Income Index by more than +/- 25% duration as measured by effective duration, modified duration or dollar duration except when the system's Investment Committee has determined a target duration to be used for an interim basis.
- The amount invested in the debt of a single corporation shall not exceed 5% of the total fair value of KRS' assets.
- No public Fixed Income manager shall invest more than 5% of the fair value of assets held in any single issue Short-Term instrument with the exception of U.S. Government issued, guaranteed or agency obligations.

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As of June 30, 2024, the portfolio had \$559.5 million in debt securities rated below BBB- which does not include not rated (NR).

Debt Securities - GASB 40						
As of June 30, 2024 (\$ in Thousands)						
Type	Pension			Insurance		
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS
AAA	\$59,615	\$7,367	\$9,189	\$12,282	\$4,295	\$2,011
AA+	2,945	504	474	651	154	123
AA	3,776	735	620	1,108	242	214
AA-	5,006	729	788	1,126	331	200
A+	17,622	1,923	2,680	3,241	1,253	503
A	19,049	2,165	2,913	3,536	1,314	576
A-	41,692	4,458	6,336	7,168	2,817	1,137
BBB+	52,907	6,052	8,097	9,693	3,621	1,557
BBB	38,273	5,233	5,961	8,884	2,805	1,419
BBB-	46,334	10,425	7,787	16,803	3,683	2,467
BB+	31,438	9,490	6,042	15,826	3,246	2,002
BB	45,057	13,652	8,740	24,088	5,440	2,562
BB-	45,881	13,780	8,877	24,407	5,541	2,569
B+	32,362	9,864	6,103	18,090	3,970	1,893
B	43,960	13,236	8,046	24,893	5,546	2,418
B-	34,468	10,197	6,424	19,013	4,371	1,829
CCC+	15,030	4,358	2,977	7,817	1,885	794
CCC	4,165	1,235	832	2,209	514	238
CCC-	827	235	167	438	109	44
D	134	41	22	95	20	9
NR	861,190	175,299	123,788	274,974	142,639	52,586
Total Credit Risk Debt Securities	1,401,731	290,978	216,863	476,342	193,796	77,151
Government Agencies	9,360	1,283	1,462	2,268	718	393
Government Mortgage-Backed Securities	196,411	21,114	29,866	35,246	13,832	5,596
Government Issued Commercial Mortgage Backed	2,315	243	351	499	199	78
Government Collateralized Mortgage Obligations	5,222	934	846	1,403	340	264
Government Bonds	266,082	30,253	40,689	48,470	18,087	7,878
Total	\$1,881,121	\$344,805	\$290,077	\$564,228	\$226,972	\$91,360

Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Moody's Ratings are used as proxies.

Differences due to rounding.

Government Agencies, Government Mortgage-Backed Securities, Government Issued Commercial Mortgage Backed and Government Bonds are highly rated securities since they are backed by the US Government.

The NR reported indicates a rating has not been assigned.

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Concentration of Credit Risk Debt Securities

Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer. The total debt securities portfolio is managed using the following general guidelines adopted by the KRS Board: bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies, or instrumentalities are permissible investments and may be held without restrictions. The amount invested in the debt of a single issuer shall not exceed 5% of the total fair value of the Plans' fixed income assets.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration measures the sensitivity of the market prices of fixed income securities to changes in the yield curve and can be measured using two methodologies: effective or modified duration. Effective duration uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price, and makes adjustments for any bond features that would retire the bonds prior to maturity. The modified duration, similar to effective duration, measures the sensitivity of the market prices to changes in the yield curve, but does not assume the securities will be called prior to maturity.

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Below are the fair values and modified durations for the combined fixed income securities.

Interest Rate Risk - Modified Duration - GASB 40										
As of June 30, 2024 (\$ in Thousands)										
TYPE	Pension				Insurance					
	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration
KERS										
Asset Backed Securities	\$57,829	2.71	\$7,819	2.62	\$13,749	2.40	\$4,517	2.51		
Financial Institutions	113,300	3.96	22,977	3.06	40,455	2.99	10,375	3.54		
Collateralized Mortgage Obligations	12,346	4.69	1,982	3.27	2,898	3.31	765	4.69		
Commercial Mortgage Backed Securities	8,840	4.12	1,367	3.85	2,216	3.90	635	4.15		
Corporate Bonds - Industrial	305,027	4.37	75,630	3.66	132,021	3.56	31,606	3.94		
Corporate Bonds - Utilities	52,742	5.12	7,496	4.75	13,167	4.68	4,294	4.91		
Agencies	9,360	4.85	1,283	4.61	2,268	4.56	718	4.75		
Government Bonds - Sovereign Debt	2,652	10.64	410	8.98	674	9.95	191	11.45		
Mortgage Back Securities Pass-through - Not CMO's	196,411	6.12	21,114	6.11	35,246	6.08	13,832	6.08		
Local Authorities - Municipal Bonds	12,258	7.42	2,219	8.48	3,304	8.31	800	7.14		
Supranational - Multi-National Bonds	590	2.51	289	2.51	378	2.60	16	2.60		
Treasuries	266,082	6.93	30,253	6.81	48,470	6.93	18,087	7.04		
Unclassified	843,684	0.08	171,966	0.13	269,382	0.15	141,136	0.05		
Total	\$1,881,121	2.97	\$344,805	2.32	\$564,228	2.50	\$226,972	1.96		

Interest Rate Risk - Modified Duration - GASB 40				
As of June 30, 2024 (\$ in Thousands)				
TYPE	Pension		Insurance	
	Fair Value	Weighted Avg Modified Duration	Fair Value	Weighted Avg Modified Duration
SPRS				
Asset Backed Securities	\$8,904	2.71	\$1,901	2.55
Financial Institutions	18,725	3.88	4,743	3.43
Collateralized Mortgage Obligations	1,968	4.49	533	2.93
Commercial Mortgage Backed Securities	1,402	4.09	398	3.83
Corporate Bonds - Industrial	55,109	4.27	15,276	3.88
Corporate Bonds - Utilities	8,427	5.07	1,867	4.82
Agencies	1,462	4.82	393	4.49
Government Bonds - Sovereign Debt	421	10.41	121	9.49
Mortgage Back Securities Pass-through - Not CMO's	29,866	6.12	5,596	6.08
Local Authorities - Municipal Bonds	1,989	7.59	621	8.61
Supranational - Multi-National Bonds	121	2.51	86	2.60
Treasuries	40,689	6.92	7,877	6.88
Unclassified	120,994	0.09	51,948	0.08
Total	\$290,077	3.07	\$91,360	2.21

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Foreign Currency Risk

Foreign currency risk is the risk that occurs if exchange rates adversely affect the value of a non-U.S. dollar based investment or deposit within the portfolios. Currency risk exposure, or exchange rate risk, primarily resides with the portfolios Non-U.S. equity holdings, but also affects other asset classes. KRS doesn't have a formal policy to limit foreign currency risk; however, some individual managers are given the latitude to hedge some currency exposures. All foreign currency transactions are classified as Short-Term Investments. All gains and losses associated with these transactions are recorded in the Net Appreciation (Depreciation) in Fair Value of Investments on the combining financial statements.

Foreign Currency Risk - GASB 40						
As of June 30, 2024 (\$ in Thousands)						
	Pension			Insurance		
	KERS	KERS	SPRS	KERS	KERS	SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
Australian Dollar	\$11,788	\$4,002	\$2,008	\$7,040	\$2,460	\$1,138
Brazilian Real	6,103	2,088	1,043	3,708	1,282	602
Canadian Dollar	14,075	4,683	2,375	8,192	2,984	1,298
Czech Koruna	5	2	1	4	2	1
Danish Krone	13,996	4,598	2,348	8,312	3,103	1,301
Egyptian Pound	141	46	24	64	24	10
Euro	108,691	37,343	18,054	58,201	26,169	11,205
Hong Kong Dollar	24,431	8,026	4,099	14,390	5,372	2,252
Hungarian Forint	1,737	571	291	981	366	153
Indian Rupee	11,488	3,836	1,942	6,539	2,364	1,040
Indonesian Rupiah	6,146	2,178	1,068	3,572	1,130	602
Israeli Shekel	1,232	405	207	730	272	114
Japanese Yen	44,722	14,799	7,528	26,684	9,826	4,205
Malaysian Ringgit	383	188	79	236	10	53
Mexican Peso	1,596	551	274	969	329	159
New Taiwan Dollar	17,081	5,612	2,866	9,873	3,687	1,545
New Zealand Dollar	(708)	(348)	(145)	(454)	(20)	(103)
Norwegian Krone	1,154	532	229	708	70	152
Philippine Peso	539	264	110	345	15	78
Pound Sterling	38,318	12,590	6,430	22,909	8,549	3,586
Singapore Dollar	1,084	242	156	681	400	76
South African Rand	2,046	672	343	1,225	457	192
South Korean Won	12,361	4,162	2,098	7,759	2,769	1,241
Swedish Krona	5,928	1,947	994	3,666	1,369	574
Swiss Franc	25,319	8,317	4,248	15,410	5,753	2,412
Thai Baht	3,319	1,090	557	1,930	721	302
Turkish Lira	1,437	472	241	860	321	135
UAE Dirham	521	171	87	331	123	52
Total Foreign Investment Securities	354,933	119,039	59,555	204,865	79,907	34,375
U.S. Dollar	3,853,468	906,878	591,247	1,472,835	587,527	236,781
Total Investment Securities	\$4,208,401	\$1,025,917	\$650,802	\$1,677,700	\$667,434	\$271,156

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Fair Value Measurement and Applications (GASB 72)

In accordance with GASB *Statement No. 72, Fair Value Measurement and Application*, KRS provides this additional disclosure regarding the fair value of its Pension and Insurance investments. KRS categorizes its fair value measurements within the fair value hierarchy established by GAAP.

KRS defined the Fair Value Hierarchy and Levels as follows:

Level 1

Quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date (e.g., prices derived from NYSE, NASDAQ, Chicago Board of Trade, and Pink Sheets). Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date.

Level 2

Inputs (other than quoted prices included within Level 1) that are observable for an asset or liability, either directly or indirectly. These inputs can include matrix pricing, market corroborated pricing and inputs such as yield curves and indices.

Level 3

Unobservable inputs for an asset or liability, which generally results in using the best information available for the valuation of the assets or liabilities being reported.

Net Asset Value (NAV)

The remaining investments not categorized under the fair value hierarchy are shown at net asset value (NAV). These are investments in non-governmental entities for which a readily determinable fair value is not available, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed.

DRAFT - KRS 2024 ACFR - DRAFT**Fair Value Measurements and Application (GASB 72) Pension
As of June 30, 2024 (\$ in Thousands)**

Asset Type	KERS Nonhazardous			Total	KERS Hazardous			Total	SPRS			Total
	Level				Level				Level			
	1	2	3	Fair Value	1	2	3	Fair Value	1	2	3	Fair Value
Public Equity												
Emerging Markets	\$55,743	\$-	\$-	\$55,743	\$18,312	\$-	\$-	\$18,312	\$9,353	\$-	\$-	\$9,353
US Equity	828,448	-	-	828,448	264,683	-	-	264,683	126,498	-	-	126,498
Non-US Equity	336,028	-	-	336,028	110,388	-	-	110,388	56,380	-	-	56,380
Total Public Equity	1,220,219	-	-	1,220,219	393,383	-	-	393,383	192,231	-	-	192,231
Fixed Income												
Agencies	-	2,557	-	2,557	-	269	-	269	-	388	-	388
Asset-Backed	-	48,854	-	48,854	-	6,877	-	6,877	-	7,541	-	7,541
Bank & Finance	-	57,226	84,838	142,064	-	7,829	27,120	34,949	-	9,026	14,210	23,236
Cash & Cash Equivalent	4,049	(149)	-	3,900	426	(18)	-	408	615	(23)	-	592
Corporate	359,667	361,956	248	721,871	38,218	80,070	89	118,377	54,606	64,477	44	119,127
Healthcare	-	18,381	-	18,381	-	2,931	-	2,931	-	2,985	-	2,985
Insurance	-	4,337	-	4,337	-	587	-	587	-	684	-	684
Municipals	-	10,439	-	10,439	-	1,619	-	1,619	-	1,656	-	1,656
Sovereign Debt	-	13,055	-	13,055	-	4,203	-	4,203	-	2,374	-	2,374
US Government	262,723	203,148	-	465,871	28,024	21,824	-	49,848	39,919	30,888	-	70,807
Total Fixed Income	626,439	719,804	85,086	1,431,329	66,668	126,191	27,209	220,068	95,140	119,996	14,254	229,390
Derivatives												
Futures	(118)	-	-	(118)	(13)	-	-	(13)	(18)	-	-	(18)
Foreign Exchange	44	-	-	44	22	-	-	22	9	-	-	9
Total Derivatives	(74)	-	-	(74)	9	-	-	9	(9)	-	-	(9)
Private Equity ETFs	45,337	-	-	45,337	9,331	-	-	9,331	15,583	-	-	15,583
Real Estate ETFs	29,277	-	-	29,277	11,711	-	-	11,711	3,904	-	-	3,904
Real Return	275,294	-	11	275,305	62,494	-	3	62,497	41,291	-	1	41,292
Total Investments at Fair Value	2,196,492	719,804	85,097	3,001,393	543,596	126,191	27,212	696,999	348,140	119,996	14,255	482,391
Investments Measured at NAV												
Specialty Credit	-	-	-	475,127	-	-	-	130,638	-	-	-	65,060
Private Equity	-	-	-	149,949	-	-	-	56,799	-	-	-	15,969
Real Estate	-	-	-	188,932	-	-	-	47,310	-	-	-	31,291
Real Return	-	-	-	76,480	-	-	-	17,755	-	-	-	15,266
Fixed Income	-	-	-	41,214	-	-	-	4,334	-	-	-	6,254
Non US Equity	-	-	-	134,559	-	-	-	40,684	-	-	-	14,657
Emerging Markets	-	-	-	897	-	-	-	295	-	-	-	150
US Equity	-	-	-	6,972	-	-	-	2,517	-	-	-	1,291
Total Investments Measured at NAV	-	-	-	1,074,130	-	-	-	300,332	-	-	-	149,938
Cash and Accruals	-	-	-	132,878	-	-	-	28,586	-	-	-	18,473
Total Investments	\$2,196,492	\$719,804	\$85,097	\$4,208,401	\$543,596	\$126,191	\$27,212	\$1,025,917	\$348,140	\$119,996	\$14,255	\$650,802

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: Cash Equivalents include publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; Short Term Investment Funds (STIF); money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper); and repurchase agreements.

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The investments measured at net asset value (NAV) are presented in the chart below:

Fair Value Measurements and Application (GASB 72) Pension													
As of June 30, 2024 (\$ in Thousands)													
Asset Type	KERS Nonhazardous				KERS Hazardous				SPRS				
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	
Specialty Credit ⁽¹⁾	\$475,127	\$118,104	Daily - Quarterly	90 Days	\$130,638	\$30,951	Daily - Quarterly	90 Days	\$65,060	\$11,938	Daily - Quarterly	90 Days	
Real Estate ⁽²⁾	188,932	35,507			47,310	10,262			31,291	4,285			
Real Return ⁽³⁾	76,480	41,533	Daily	30 - 60 Days	17,755	3,858	Daily	30 - 60 Days	15,266	10,741	Daily	30 - 60 Days	
Private Equity ⁽⁴⁾	149,949	32,500			56,799	13,965			15,969	3,950			
Fixed Income ⁽⁵⁾	41,214	-	Daily		4,334	-	Daily		6,254	-	Daily		
Non US Equity ⁽⁵⁾	134,559	-	Daily		40,684	-	Daily		14,657	-	Daily		
Emerging Markets ⁽⁵⁾	897	-	Daily		295	-	Daily		150	-	Daily		
US Equity ⁽⁵⁾	6,972	-	Daily		2,517	-	Daily		1,291	-	Daily		
Total Investments Measured at NAV	\$1,074,130	\$227,644			\$300,332	\$59,036			\$149,938	\$30,914			

⁽¹⁾ This type includes 12 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.

⁽²⁾ This type includes 12 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.

⁽³⁾ This type includes 15 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.

⁽⁴⁾ This type includes 30 managers with multiple strategies. These investments cannot be redeemed. Instead, the investments are distributed throughout the life of the investment. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.

⁽⁵⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.

DRAFT - KRS 2024 ACFR - DRAFT**Fair Value Measurements and Application (GASB 72) Insurance
As of June 30, 2024 (\$ in Thousands)**

Asset Type	KERS Nonhazardous			Total	KERS Hazardous			Total	SPRS			Total
	Level			Fair Value	Level			Fair Value	Level			Fair Value
	1	2	3		1	2	3		1	2	3	
Public Equity												
Emerging Markets	\$33,046	\$-	\$-	\$33,046	\$12,338	\$-	\$-	\$12,338	\$5,172	\$-	\$-	\$5,172
US Equity	430,420	-	-	430,420	173,241	-	-	173,241	69,627	-	-	69,627
Non-US Equity	199,688	-	-	199,688	74,552	-	-	74,552	31,251	-	-	31,251
Total Public Equity	663,154	-	-	663,154	260,131	-	-	260,131	106,050	-	-	106,050
Fixed Income												
Agencies	-	517	-	517	-	207	-	207	-	82	-	82
Asset-Backed	-	12,121	-	12,121	-	3,864	-	3,864	-	1,639	-	1,639
Bank & Finance	-	12,185	51,729	63,914	-	3,939	10,328	14,267	-	1,916	5,037	6,953
Cash & Cash Equivalent	775	36	-	811	310	1	-	311	122	8	-	130
Corporate	60,364	137,861	120	198,345	23,965	35,309	18	59,292	9,472	16,824	16	26,312
Healthcare	-	4,818	-	4,818	-	1,433	-	1,433	-	692	-	692
Insurance	-	945	-	945	-	316	-	316	-	148	-	148
Municipals	-	2,524	-	2,524	-	710	-	710	-	455	-	455
Sovereign Debt	-	5,627	-	5,627	-	631	-	631	-	1,200	-	1,200
US Government	45,739	36,645	-	82,384	18,062	14,390	-	32,452	7,240	5,817	-	13,057
Total Fixed Income	106,878	213,279	51,849	372,006	42,337	60,800	10,346	113,483	16,834	28,781	5,053	50,668
Derivatives												
Futures	(18)	-	-	(18)	(4)	-	-	(4)	(3)	-	-	(3)
Foreign Exchange	27	-	-	27	1	-	-	1	6	-	-	6
Total Derivatives	9	-	-	9	(3)	-	-	(3)	3	-	-	3
Private Equity												
ETFs	35,412			35,412				-				-
Real Estate ETFs	19,511			19,511				-				-
Real Return	96,994	-	3	96,997	31,070	-	2	31,072	12,614	-	1	12,615
Total Investments at Fair Value	921,958	213,279	51,852	1,187,089	333,535	60,800	10,348	404,683	135,501	28,781	5,054	169,336
Investments Measured at NAV												
Specialty Credit	-	-	-	202,578	-	-	-	116,054	-	-	-	41,860
Private Equity	-	-	-	76,358	-	-	-	48,804	-	-	-	21,728
Real Estate	-	-	-	76,688	-	-	-	42,344	-	-	-	16,169
Real Return	-	-	-	39,456	-	-	-	14,727	-	-	-	5,976
Fixed Income	-	-	-	5,778	-	-	-	2,310	-	-	-	909
Non US Equity	-	-	-	49,280	-	-	-	26,088	-	-	-	9,035
Emerging Markets	-	-	-	513	-	-	-	192	-	-	-	80
US Equity	-	-	-	4,271	-	-	-	1,754	-	-	-	709
Total Investments Measured at NAV	-	-	-	454,922	-	-	-	252,273	-	-	-	96,466
Cash and Accruals	-	-	-	35,689	-	-	-	10,478	-	-	-	5,354
Total Investments	\$921,958	\$213,279	\$51,852	\$1,677,700	\$333,535	\$60,800	\$10,348	\$667,434	\$135,501	\$28,781	\$5,054	\$271,156

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: Cash Equivalents include publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; Short Term Investment Funds (STIF); money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper); and repurchase agreements.

KRS Board Meeting - KRS Draft ACFR in its entirety to be approved and sent to KPPA for Publication
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The investments measured at net asset value (NAV) are presented in the chart below:

Fair Value Measurements and Application (GASB 72) Insurance													
As of June 30, 2024 (\$ in Thousands)													
Asset Type	KERS Nonhazardous				KERS Hazardous				SPRS				
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Redemption Notice Period
Specialty Credit ⁽¹⁾	\$202,578	\$49,943	Daily - Quarterly	90 Days	\$116,054	\$14,100	Daily - Quarterly	90 Days	\$41,860	\$7,062	Daily - Quarterly	90 Days	90 Days
Real Estate ⁽²⁾	76,688	11,870			42,344	8,868			16,169	3,389			
Real Return ⁽³⁾	39,456	23,861	Daily	30 - 60 Days	14,727	2,969	Daily	30 - 60 Days	5,976	1,767	Daily	30 - 60 Days	30 - 60 Days
Private Equity ⁽⁴⁾	76,358	17,996			48,804	11,132			21,728	5,232			
Fixed Income ⁽⁵⁾	5,778	-	Daily		2,310	-	Daily		909	-	Daily		
Non US Equity ⁽⁵⁾	49,280	-	Daily		26,088	-	Daily		9,035	-	Daily		
Emerging Markets ⁽⁵⁾	513	-	Daily		192	-	Daily		80	-	Daily		
US Equity ⁽⁵⁾	4,271	-	Daily		1,754	-	Daily		709	-	Daily		
Total Investments Measured at NAV	\$454,922	\$103,670			\$252,273	\$37,069			\$96,466	\$17,450			

⁽¹⁾ This type includes 12 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.

⁽²⁾ This type includes 12 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.

⁽³⁾ This type includes 15 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.

⁽⁴⁾ This type includes 33 managers with multiple strategies. These investments cannot be redeemed. Instead, the investments are distributed throughout the life of the investment. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.

⁽⁵⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.

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Money-Weighted Rates of Return

In accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, and GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other than Pension Plans*, KRS provides this additional disclosure regarding its money-weighted rate of return for the period of June 30, 2024. The money-weighted rate of return is a method of calculating period-by-period returns on the Pension and Insurance Plans' investments that adjusts for the changing amounts actually invested. For the purposes of this statement, money-weighted rate of return is calculated as the internal rate of return on investments, net of investment expenses, then adjusted for the changing amounts actually invested.

Money-Weighted Rates of Return As of June 30, 2024							
	Pension			Insurance			
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	
2024	9.58%	11.17%	9.64%	11.14%	11.12%	11.01%	

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Note E. Securities Lending Transactions

Kentucky Revised Statutes 61.650 and 386.020(2) permit the Systems to lend their securities to broker-dealers and other entities. KRS utilizes a securities lending program to temporarily lend securities to qualified agents in exchange for either cash collateral or other securities with an initial fair value of 102% or 105% of the value of the borrowed securities. The borrowers of the securities simultaneously agree to return the borrowed securities in exchange for the collateral. The types of securities lent include U.S. Treasuries, U.S. Agencies, U.S. Corporate Bonds, U.S. Equities, Global Fixed Income Securities, and Global Equities Securities. Securities Lending transactions are accounted for in accordance with GASB 28. The net earnings for KERS (Pension and Insurance combined) and SPRS (Pension and Insurance combined) was \$0.8 million and \$0.1 million, respectively.

The IPS does not address any restrictions on the amount of loans that can be made. As of June 30, 2024, KRS had no credit risk exposure to borrowers because the collateral amounts received exceeded the amounts out on loan. The contracts with the custodial bank require them to indemnify KRS if the borrowers fail to return the securities and one or both of the custodial banks have failed to live up to their contractual responsibilities relating to the lending of securities.

All securities loans can be terminated on demand by either party to the transaction. BNY Mellon invests cash collateral as permitted by state statute and KRS Board policy. The agent, BNY Mellon, of the Funds cannot pledge or sell collateral securities received unless the borrower defaults. KRS maintains a conservative approach to investing the cash collateral with BNY Mellon, emphasizing capital preservation, liquidity, and credit quality.

Cash collateral is invested in guaranteed, short-term obligations of the U.S. government, select government agencies and repurchase agreements with qualified agents. KRS cannot pledge or sell collateral securities received unless the borrower defaults. BNY Mellon as the lending agent also indemnifies KRS from any financial loss associated with a borrower's default and collateral inadequacy.

As of June 30, 2024, the average days to maturity for loans was one day, and the weighted average investment maturity of cash collateral investments was one day. The trusts had no credit risk exposure to borrowers because the amounts owed to borrowers exceeded the amounts the borrowers owed the trust, and no losses resulted during the period.

Security lending programs can entail interest rate risk and credit risk. KRS minimizes interest rate risk by limiting the term of cash collateral investments to several days. The credit risk is controlled by investing cash collateral in securities with qualities similar to the credit worthiness of lent securities.

As of June 30, 2024, the cash collateral received for the securities on loan for the KERS and SPRS Plans was \$183.2 million and \$22.4 million, respectively. The securities non-cash collateral received a total of \$78.5 million and \$9.6 million, respectively. The collateral volume of the total underlying securities was \$261.7 million for KERS and \$32.0 million for SPRS.

Securities Lending Cash Collateral As of June 30, 2024 (\$ in Thousands)

KERS Nonhazardous		KERS Hazardous		SPRS		KRS Total 2023
Pension	Insurance	Pension	Insurance	Pension	Insurance	
\$109,246	\$33,811	\$26,629	\$13,516	\$16,923	\$5,449	\$205,574

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Note F. Risk of Loss

KRS and KPPA are exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes, the Office of Claims and Appeals is vested with full power and authority to investigate, hear proof, and compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to \$250,000 for a single claim and \$400,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Office of Claims and Appeals are paid from the fund of the agency having a claim or claims before the Office of Claims and Appeals.

Claims against the KRS Board and the KPPA Board, or any of its staff as a result of an actual or alleged breach of fiduciary duty, are self-insured effective May 26, 2019.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. All medical expenses related to a work injury or illness are paid based upon appropriate statutory and regulatory reductions, and up to 66.67% of wages for temporary disability. Each agency pays premiums based on fund reserves and payroll. Settlements did not exceed insurance coverage in any of the past three fiscal years. Thus, no secondary insurance had to be utilized. There were no claims which were appealed to the Kentucky Workers' Compensation Board.

Note G. Contingencies

In the normal course of business, KRS is involved in litigation concerning the right of participants, or their beneficiaries, to receive benefits. KRS does not anticipate any material losses for the Systems as a result of the contingent liabilities. KRS is involved in other litigation; therefore, please see Note K. Litigation, for further information.

Note H. Income Tax Status

The Internal Revenue Service (IRS) has ruled that KERS and SPRS qualify under Section 401(a) of the Internal Revenue Code are, generally, not subject to tax. KERS and SPRS are subject to income tax on any unrelated business income (UBI).

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Note I. Financial Report for (GASB 67) Pension

Plans and (GASB 74) Postemployment Benefit Plans

The following details actuarial information and assumptions utilized in determining the unfunded (overfunded) actuarial accrued liabilities for KRS. Please note that calculations for Total Pension Liability (TPL), net fiduciary position, Net Pension Liability (NPL), total OPEB liability, net OPEB fiduciary position, and Net OPEB Liability (NOL) are reported in the Plans' Required Supplementary Information (RSI) beginning on page 64 are based on June 30, 2023, actuarial valuations, rolled forward to June 30, 2024. The prior year valuations are used as the basis for the roll forward method and are applied to complete the current year pension and OPEB valuations as of the measurement date, June 30, 2024, in accordance with GASB *Statement No. 67*, paragraph 37, and GASB *Statement No. 74*, paragraph 41.

Financial Report for Pension Plan (GASB 67)

Basis of Calculations

The Systems' actuary Gabriel, Roeder, Smith & Co. (GRS) completed reports by plan in compliance with GASB *Statement No. 67 Financial Reporting for Pension Plans*. The TPL, NPL, and sensitivity information are based on an actuarial valuation date of June 30, 2023. The TPL was rolled forward from the valuation date to the Plans' fiscal year ended June 30, 2024, using generally accepted actuarial principles. Information disclosed for years prior to June 30, 2017, were prepared by the prior actuary. GRS will provide separate reports at a later date with additional accounting information determined in accordance with GASB *Statement No. 68, Accounting and Financial Reporting for Pensions*.

Assumptions

Below is a summary of the principal assumptions used for the June 30, 2023, actuarial valuation:

- Investment Return - 6.25% for KERS Hazardous, 5.25% for KERS Nonhazardous and SPRS.
- Inflation - 2.50% for all plans.
- Salary Increases - 3.30% to 15.30% for KERS Nonhazardous, 3.55% to 20.05% for KERS Hazardous, and 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 0% for all plans.
- Mortality - System-specific mortality table based on mortality experience from 2013-2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.

Plan Provisions

There have been no assumption, method or plan provision changes that would materially impact the total pension liability since June 30, 2023. It is our opinion that these procedures for determining the information contained in these reports are reasonable, appropriate, and comply with applicable requirements under GASB No. 67.

Discount Rate

Single discount rates of 5.25% for the KERS Nonhazardous plan, 6.25% for the KERS Hazardous plan, and 5.25% for SPRS were used to measure the total pension liability for the fiscal year ended June 30, 2024. These single discount rates were based on the expected rate of return on pension plan investments for each plan. Based on the stated assumptions and the projection of cash flows as of each fiscal year ended, the pension plans' fiduciary net position and future contributions were projected to be sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability for each plan.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that the entire actuarially determined employer contribution is received by each plan each future year, calculated in accordance with the current funding policy.

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Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net positions as of June 30, 2017, and later are net of the 401(h) asset balance.

Additional Disclosures

These reports are based upon information furnished to us by the Kentucky Public Pensions Authority (KPPA), which includes benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2023," for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for the fiscal year ended June 30, 2024.

Financial Reporting for Postemployment Benefit Plans (GASB 74)

GRS completed reports by plan in compliance with GASB *Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans* for the fiscal year ended June 30, 2024. GRS will provide separate reports at a later date with additional accounting information determined in accordance with GASB *Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Basis of Calculations

The total OPEB liability, net OPEB liability (NOL), and sensitivity information are based on an actuarial valuation date of June 30, 2023. The total OPEB liability was rolled forward from the valuation date to the plan's fiscal year ended June 30, 2024, using generally accepted actuarial principles.

Assumptions

The discount rates used to calculate the total OPEB liability increased for each plan since the prior year (see further discussion on the calculation of the single discount rates later in this section). The assumed increase in future health care cost, or trend assumption, was reviewed during the June 30, 2023, valuation process and was updated to better reflect the plan's anticipated long-term healthcare costs increases. In general, the updated assumption is assuming higher future increases in pre-Medicare healthcare costs.

The Total OPEB Liability as of June 30, 2024, is determined using these updated assumptions. It is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

Below is a summary of the principal assumptions used for the June 30, 2023, actuarial valuation:

- Investment Return - 6.50% for all plans.
- Inflation - 2.50% for all plans.
- Salary Increases - 3.30% to 15.30% for KERS Nonhazardous, 3.55% to 20.05% for KERS Hazardous, 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 0.00% for all plans.
- Mortality - System-specific mortality table based on mortality experience from 2013-2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.
- Health Care Trend Rates:
 - Pre-65 - Initial trend starting at 6.80% on January 1, 2025, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2024 premiums were known at the time of the valuation and were incorporated into the liability measurement.
 - Post-65 - Initial trend starting at 8.50% on January 1, 2025, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 11 years. The 2024 premiums were known at the time of the valuation and were incorporated into the liability measurement.

Plan Provisions

There have been no plan provision changes that would materially impact the total OPEB liability since June 30, 2023.

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Implicit Employer Subsidy for non-Medicare retirees

The fully-insured premiums paid for the Kentucky Employees' Health Plan are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit employer subsidy for the non-Medicare eligible retirees. GASB No. 74 requires that the liability associated with this implicit subsidy be included in the calculation of the Total OPEB Liability.

Discount Rates

The following single discount rates were used to measure the total OPEB liability for the fiscal year ended June 30, 2024.

PLAN	FISCAL YEAR 2024	FISCAL YEAR 2023	CHANGE IN RATE
KERS Nonhazardous	6.00%	5.94%	0.06%
KERS Hazardous	5.99%	5.94%	0.05%
SPRS	6.08%	6.02%	0.06%

The single discount rates are based on the expected rate of return on OPEB plan investments of 6.50% and a municipal bond rate of 3.97%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2024.

Based on the stated assumptions and the projection of cash flows as of each fiscal year ended, the plan's fiduciary net position and future contributions were projected to be sufficient to finance the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on insurance plan investments was applied to all periods of the projected benefit payments paid from the retirement system. However, the cost associated with the implicit employer subsidy is not currently being included in the calculation of the plan's actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the plan's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that the entire actuarially determined employer contribution is received by each plan each future year, calculated in accordance with the current funding policy.

Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income and administrative expenses are included in the reconciliation of the fiduciary net position.

Additional Disclosures¹

The reports are based upon information furnished to GRS by the KPPA, which includes benefit provisions, membership information, and financial data. GRS did not audit this data and information, but GRS applied a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2023," for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for fiscal year ended June 30, 2024.

¹ Note: Data and information regarding GASB 67 and GASB 74 reporting was provided by GRS Retirement Consulting.

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Target Asset Allocation

The long-term (10-year) expected rates of return were determined by using a building block method in which best estimated ranges of expected future real rates of return were developed for each asset class. The ranges were combined by weighting the expected future real rate of return by the target asset allocation percentage. The target allocation and best estimates of arithmetic real rate of return for each major asset class are summarized in the tables on the following page.

Target Asset Allocation - Pension As of June 30, 2024			
Asset Class	KERS Nonhazardous and SPRS Pension Plans Target Allocation	KERS Hazardous and KRS Insurance Plans Target Allocation	Long-Term Expected Real Rate of Return
Equity			
Public Equity	40.00%	30.00%	4.15%
Private Equity	8.00%	6.00%	9.10%
Fixed Income			
Core Fixed Income	10.00%	27.00%	2.85%
Specialty Credit	25.00%	20.00%	3.82%
Cash	2.00%	2.00%	1.70%
Inflation Protected			
Real Estate	7.00%	5.00%	4.90%
Real Return	8.00%	10.00%	5.35%
Total	100.00%	100.00%	

NOTE: Minor deviations are expected between the actuarial assumed rate of return and the expected rate of return reported in the above charts. The actuarial assumed rates of return are based on a review of economic assumptions completed periodically as warranted but not longer than every 2 years; whereas, the expected rate of return is calculated annually for GASB purposes by taking the current asset allocation and applying the most relevant long term market expectations (March 2024) for each asset class.

DRAFT - KRS 2024 ACFR - DRAFT**Sensitivity of the NPL to Changes in the Discount Rate Fiscal Year 2024
As of June 30, 2024 (\$ in Thousands)**

	KERS		SPRS
	Nonhazardous	Hazardous	
	Current 5.25%	Current 6.25%	Current 5.25%
1% Decrease	\$13,948,313	\$541,741	\$587,581
Current Discount Rate	12,049,666	373,761	449,842
1% Increase	\$10,476,712	\$238,565	\$336,576

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate

As of June 30, 2024 (\$ in Thousands)

	KERS		SPRS
	Nonhazardous	Hazardous	
	Single 6.00%	Single 5.99%	Single 6.08%
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate			
1% Decrease	\$999,036	\$(181,350)	\$34,067
Single Discount Rate	723,049	(235,131)	3,642
1% Increase	\$489,746	\$(279,694)	\$(21,916)
Sensitivity of the Net OPEB Liability to Changes in the Current Healthcare Cost Trend Rate			
1% Decrease	\$536,314	\$(266,478)	\$(18,176)
Current Healthcare Cost Trend Rate	723,049	(235,131)	3,642
1% Increase	\$939,316	\$(198,505)	\$29,059

Development of Single Discount Rate for OPEB

As of June 30, 2024

	KERS		SPRS
	Nonhazardous	Hazardous	
2024			
Single Discount Rate	6.00%	5.99%	6.08%
Long-Term Expected Rate of Return	6.50%	6.50%	6.50%
Long-Term Municipal Bond Rate ⁽¹⁾	3.97%	3.97%	3.97%

Note: 1. Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2024.

Schedule of Employers' NPL - KERS Nonhazardous

As of June 30, 2024 (\$ in Thousands)

Total Pension Liability (TPL)	\$16,273,602
Plan Fiduciary Net Position	\$4,223,936
Net Pension Liability	\$12,049,666
Ratio of Plan Fiduciary Net Position to TPL	25.96%
Covered Payroll ⁽¹⁾	\$1,912,421
Net Pension Liability as a Percentage of Covered Payroll	630.07%

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employers' NPL - KERS Hazardous
As of June 30, 2024 (\$ in Thousands)**

Total Pension Liability (TPL)	\$1,393,651
Plan Fiduciary Net Position	\$1,019,890
Net Pension Liability	\$373,761
Ratio of Plan Fiduciary Net Position to TPL	73.18%
Covered Payroll ⁽¹⁾	\$279,218
Net Pension Liability as a Percentage of Covered Payroll	133.86%

**Schedule of Employer's NPL - SPRS
As of June 30, 2024 (\$ in Thousands)**

Total Pension Liability (TPL)	\$1,101,632
Plan Fiduciary Net Position	\$651,790
Net Pension Liability	\$449,842
Ratio of Plan Fiduciary Net Position to TPL	59.17%
Covered Payroll ⁽¹⁾	\$71,964
Net Pension Liability as a Percentage of Covered Payroll	625.09%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

**Schedule of the Employers' Net OPEB Liability
As of June 30, 2024 (\$ in Thousands)**

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll	Net OPEB Liability as a Percentage of Covered Payroll
KERS Nonhazardous ⁽¹⁾	\$2,488,778	\$1,765,729	\$723,049	70.95%	\$1,923,825	37.58%
KERS Hazardous ⁽²⁾	442,817	677,948	(235,131)	153.10%	279,218	(84.21)%
SPRS Plan ⁽¹⁾	\$277,159	\$273,517	\$3,642	98.69%	\$71,992	5.06%

⁽¹⁾ Covered Payroll is based on derived compensation using the provided employer contribution information.

⁽²⁾ Covered Payroll is based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

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Note J. Legislation

2024 Regular Session

The 2024 Regular Session of the Kentucky General Assembly adjourned on Monday, April 15, 2024. Highlights from the Session include the following:

BILLS OF DIRECT INTEREST TO KRS MEMBERS AND RETIREES

House Bill 99: The KPPA Housekeeping bill

House Bill 99 amends various sections of Kentucky Revised Statutes Chapters 16, 61, and 78 to make technical and housekeeping changes relating to administration of the systems, including renaming the position of internal auditor to Chief Auditor, providing that the death benefit of \$5,000 payable to a beneficiary of the member is not subject to garnishment, unless the beneficiary is the member's estate or there is an overpayment of benefits or outstanding balance owed to the system, makes modifications to the initial disability application review process, and other technical changes. "Housekeeping bill" is a slang term for typically noncontroversial legislation that "cleans up" statutes by clarifying their language or otherwise updating their content to align with changes in relevant federal or state law.

House Bill 1: The "Rainy Day Fund" Appropriations bill

House Bill 1 allocates money from the Budget Reserve Trust Fund Account, commonly known as the state's "Rainy Day Fund," to be applied to the unfunded liability of the Kentucky Employees Retirement System (KERS) Nonhazardous Pension Plan and the State Police Retirement System (SPRS) (\$50 million and \$25 million each fiscal year, 2025 and 2026 respectively).

House Bill 6: The State Executive Branch Budget bill

House Bill 6 is the State/Executive Branch budget bill for the biennium beginning July 1, 2024, through June 30, 2026. The budget includes the full actuarially determined employer contribution for the KERS and SPRS plans, and it allocates an additional \$250 million in each fiscal year to be paid toward the unfunded liability of the KERS Nonhazardous Pension Plan.

Neither House Bill 1 nor House Bill 6 contain a cost-of-living adjustment (COLA) or other form of supplemental payment (such as a "13th check") for retirees. This means there were no budget bills that contained a COLA or other form of supplemental payment for retirees in any of the KRS systems administered by KPPA.

House Bill 277: Transfer Louisville and Jefferson County Public Defender Corporation employees to KERS

House Bill 277: transfers employees of the Louisville and Jefferson County Public Defender Corporation to the Department of Public Advocacy (DPA) in the state personnel system, effective July 1, 2024. Employees that transfer to DPA will participate in KERS and their retirement tier will be determined based on the earlier of the membership date in a state-administered retirement system or the employment begin date with the Corporation.

Senate Bill 299: Move the Horse Racing Commission to a quasi-governmental agency called the Kentucky Horse Racing and Gaming Corporation (HRGC) and abolish the Charitable Gaming Commission and merge it under the HRGC

Senate Bill 299 moves the Horse Racing Commission to a quasi-agency called the Kentucky Horse Racing and Gaming Corporation (HRGC), effective July 1, 2024. The following year, on July 1, 2025, the Charitable Gaming Commission will be abolished and merged under the HRGC. All eligible employees of the corporation will participate in the Kentucky Employees Retirement System (KERS) effective July 1, 2024. Current Horse Racing Commission employees will continue to participate in KERS under the new KHRGC, without interruption.

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House Bill 635: Actuarial analysis assumptions and methods

House Bill 635 implements additional reporting requirements for actuarial analyses and expands the required supporting documentation and explanations of findings for fiscal and corrections impact statements.

State Senate Confirms Gubernatorial Appointments to the KRS Board

State law requires that gubernatorial appointments to the KRS Board of Trustees receive Senate approval. On April 15, three (3) Senate Resolutions confirming Governor Andy Beshear's recent appointments to the KRS Board were unanimously adopted by a vote of 38-0:

1. **Senate Resolution 309**, sponsored by Senator Julie Raque Adams, confirmed the appointment of Mary G. Eaves to the KRS Board of Trustees for a term expiring June 21, 2027;
2. **Senate Resolution 310**, sponsored by Senator Julie Raque Adams, confirmed the reappointment of Caswell Prewitt Lane to the KRS Board of Trustees for a term expiring June 17, 2027; and
3. **Senate Resolution 313**, sponsored by Senator Julie Raque Adams, confirmed the reappointment of Pamela Fettig Thompson to the KRS Board of Trustees for a term expiring June 17, 2027.

The Resolutions only required Senate confirmation and did not need to be adopted in the House.

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Note K. Litigation

Seven Counties

Seven Counties Services, Inc. (Seven Counties) filed for Chapter 11 bankruptcy in the United States Bankruptcy Court for the Western District of Kentucky (the Bankruptcy Court) in April 2013. Seven Counties provides mental health services for the Cabinet for Health and Family Services for the greater Louisville, Kentucky area and surrounding counties. Seven Counties participated in KERS for approximately twenty-five years. Seven Counties identified KERS as a creditor with a primary objective of discharging its continuing obligation to remit retirement contributions for approximately 1,300 employees and to terminate its participation in KERS. If Seven Counties is successful in discharging its obligations to KERS, the estimated member pension and insurance actuarial accrued liability is in the range of \$145 to \$150 million.

KERS opposed Seven Counties' attempt to discharge its obligations and terminate its participation. KERS asserted that Seven Counties is a Governmental Unit properly participating in KERS by Executive Order issued in 1978 and thus ineligible for Chapter 11 relief. Consequently, Seven Counties would remain statutorily obligated to continue participation and remit contributions. On May 30, 2014, the Bankruptcy Court held that Seven Counties was not a Governmental Unit and could move forward with its Chapter 11 bankruptcy case. The Bankruptcy Court further held that Seven Counties' statutory obligation to participate in and remit contributions to KERS was a "contract" eligible for rejection. KRS appealed this decision.

On August 24, 2018, the U.S. Court of Appeals for the Sixth Circuit (the Sixth Circuit) issued a two to one Opinion affirming the decision that Seven Counties is eligible to file for bankruptcy under Chapter 11. However, the Sixth Circuit went on to state, "lacking state court precedent characterizing the nature of the relationship between Seven Counties and KERS, we certify that question to the Kentucky Supreme Court." KERS filed a petition to have the Opinion Reheard En Banc by the entire Sixth Circuit. On October 5, 2018, the Sixth Circuit issued an order holding the petition in abeyance pending a response from the Kentucky Supreme Court on the certified question of law. On November 1, 2018, the Supreme Court of Kentucky issued an Order granting certification of the question. The certified question of law was briefed by the parties and oral arguments were held before the Supreme Court of Kentucky on March 6, 2019. On August 29, 2019, the Supreme Court of Kentucky ruled that Seven Counties' participation in and its contributions to KERS are based on a statutory obligation. The Supreme Court of Kentucky's ruling was forwarded to the Sixth Circuit for further consideration.

On July 20, 2020, the Sixth Circuit Court of Appeals issued an Opinion stating that they affirmed their previous determination that Seven Counties was eligible to file a Chapter 11 bankruptcy case. The Sixth Circuit also reversed the conclusion that Seven Counties can reject its obligation to participate as an executory contract and that Seven Counties need not maintain its statutory contribution obligation during the pendency of the bankruptcy. The Sixth Circuit dismissed Seven Counties' cross appeal and remanded the case for further proceedings consistent with the opinion. KERS again filed a petition to have the Opinion regarding Seven Counties' ability to file a Chapter 11 bankruptcy Reheard En Banc by the entire Sixth Circuit. This petition was denied in an Order dated September 11, 2020. The case was remanded back to the Bankruptcy Court.

The parties were able to stipulate to the principal amount of Seven Counties unpaid employer contributions for the post-petition time-frame of April 6, 2014, through February 5, 2015. A limited hearing occurred in February 2022 regarding whether interest is applicable to the stipulated amount. The Bankruptcy Court entered an order that set the amount of the contributions, but did not order Seven Counties to pay that amount. The order was silent regarding the application of interest. Both Seven Counties and KERS appealed the Bankruptcy Court's order to the United States District Court where it will be joined with the pending appeal of the confirmation of Seven Counties' reorganization plan.

The United States District Court refused to hear the appeals stating that the Bankruptcy Court's order was not final and appealable. That left KERS in a position where no relief was possible; the Bankruptcy Court would not enter an order requiring payment, and the District Court would not hear an appeal. This forced KERS to once again appeal the United States Court of Appeals for the Sixth Circuit. The matter is now fully briefed before that court and parties are awaiting oral arguments.

The Sixth Circuit Court of Appeals agreed with the District Court, ruling that the Bankruptcy Court order was not final and appealable. The Sixth Circuit did however instruct the Bankruptcy Court that it had construed the 2020 ruling too narrowly and returned the case to the Bankruptcy Court for "expeditious resolution of the remaining issues." KRS has moved the Bankruptcy Court to resolve the issue of ordering Seven Counties to pay the stipulated amount and to allow KRS to pursue collecting contributions from February 2015 forward outside of the Bankruptcy Court. These motions are pending.

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Mayberry

In December 2017, certain members and beneficiaries of the Kentucky Retirement Systems filed litigation (Mayberry et al v. KKR et al) against certain Hedge Fund Sellers, Investment, Actuarial and Fiduciary Advisors, Annual Report Certifiers, and certain (past and present) Kentucky Retirement Systems' Trustees and Officers in Franklin Circuit Court. The litigation alleges (in summary) that actuarial assumptions, fees, statements and disclosures harmed the financial status of the Retirement Systems. While Kentucky Retirement Systems is designated a "Defendant," that designation is a technical formality in so much as Kentucky Retirement Systems is a "nominal defendant." On April 20, 2018, the Kentucky Retirement Systems and the plaintiffs filed a joint notice with the Court advising that Kentucky Retirement Systems does not intend to challenge its status as a "nominal defendant." Since then, the Franklin Circuit Court ruled on various Defendants' Motions to Dismiss, denying nearly all of them. On January 10, 2019, KKR, Henry Kravis and George Roberts (collectively, "KKR Parties") amended their Answer to assert cross claims against Kentucky Retirement Systems. Certain Officer and Trustee Defendants appealed the denial of their Motion to Dismiss on immunity grounds to the Court of Appeals, and that appeal was transferred to the Kentucky Supreme Court. The hedge fund defendants filed a Petition for Writ of Prohibition in the Court of Appeals, arguing the Plaintiffs lacked standing to bring the action. That Petition was granted on April 23, 2019. Plaintiffs promptly appealed the Court of Appeals' decision to the Supreme Court of Kentucky. On July 9, 2020, the Supreme Court of Kentucky issued an Opinion stating that the plaintiffs, as beneficiaries of a defined-benefit plan who have received all of their vested benefits so far and are legally entitled to receive their benefits for the rest of their lives, do not have a concrete stake in this case and therefore lack standing to bring this claim. The case was remanded to the circuit court with directions to dismiss the complaint. Thereafter, plaintiffs filed a motion seeking to amend their complaint to add parties (Tier 3 members of the Retirement Systems) and claims that would purportedly correct the standing defect identified by the Supreme Court of Kentucky. Furthermore, the Attorney General of the Commonwealth of Kentucky sought leave to intervene in this action through a motion filed July 20, 2020, and an Intervening Complaint on July 22, 2020. The Defendants filed motions seeking to have the case dismissed. On December 28, 2020, Franklin Circuit Court issued an Order dismissing the Complaint filed by the Plaintiffs, denied Plaintiffs' Motion to file a Second Amended Complaint, and granted the Office of the Attorney General's Motion to Intervene. A variety of additional motions and pleadings were filed, including an original action by the Tier 3 Group. This original action is still in the initial stages and is pending with Franklin Circuit Court. (Tia Taylor, et al. v KKR & Co. L.P., et al.) On January 12, 2021, Franklin Circuit Court issued a scheduling Order granting the Attorney General until February 1, 2021 to file an Amended Intervening Complaint, granting the Tier 3 Group until February 11, 2021 to file a Motion to Intervene in this action. Additional extension orders were granted for the Attorney General intervention. The Attorney General filed an Amended Complaint on May 24, 2021. On June 14, 2021, the Tier 3 Group's Motion to Intervene in the Attorney General action was denied. In the spring of 2022, Franklin Circuit Judge Phillip Shepherd recused and this matter was assigned to Judge Thomas Wingate.

Following the Attorney General's intervention, the Defendant's challenged the intervention as beyond the scope of the remand from the Supreme Court in July of 2020. Franklin Circuit Court denied that motion and the matter was on appeal when this case was assigned to Judge Thomas Wingate. Judge Wingate placed the matter in abeyance pending a decision on whether the Attorney General's intervention was proper. The Court of Appeals held that the Attorney General should not have been allowed to intervene and the Attorney General is currently seeking Discretionary Review by the Supreme Court.

Simultaneously with his intervention, the Attorney General filed a separate, stand-alone case with an identical complaint to protect against the possibility that his intervention would be deemed improper. The Defendants filed motions to dismiss the Attorney General's stand-alone case based on various legal theories. Franklin Circuit Court denied the majority of these motions but granted the motions to dismiss on behalf of R.V. Kuhns and Cavanaugh Macdonald, KRS' actuary and investment consultant during the relevant timeframe. This case is still proceeding.

A number of related cases have also developed based on issues raised in the above referenced Mayberry action. There has been an action filed by a number of the Trustees and Officers named in Mayberry seeking reimbursement by Kentucky Retirement Systems of legal fees. Kentucky Retirement Systems has also filed an action against Hallmark Specialty Insurance seeking a declaratory judgment that Hallmark has a duty to defend and indemnify Kentucky Retirement Systems in the Mayberry action. Two of the hedge fund Defendants in the Mayberry action have also filed an action in the United States District Court for the Eastern District of Kentucky naming individual members of the former KRS Board of Trustees as Defendants. This action is seeking a judgment declaring that the Trustees violated Plaintiffs' right to due process as well as an award of costs and attorneys' fees. Three actions have also been filed in Delaware regarding the Mayberry action. One filed by Prisma Capital Partners and one filed by Blackstone Alternative Asset Management allege breaches of warranties, representations and more relating to the Subscription Agreements signed by the Kentucky Retirement Systems. The third was filed by Prisma Capital Partners against the Daniel Boone Fund, LLC. Additionally, an action has been filed by PAAMCO against Kentucky Retirement Systems in California also alleging breaches of warranties, representations and more relating to the Subscription Agreements signed by the Kentucky Retirement Systems. Finally, on August 2, 2021, Blackstone Alternative Asset Management, L.P. (BAAM) filed an action against the Kentucky Public Pensions Authority, the Board of Trustees of the Kentucky Retirement Systems, the Board of Trustees of the County Employees Retirement System, the Kentucky Retirement Systems Insurance Fund, and the Kentucky Retirement Systems Pension Fund

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(collectively “Defendants”) for breach of contract. The Defendants filed a Motion to Dismiss on September 8, 2021. The last of these additional actions, the suit filed by BAAM, was dismissed by Franklin Circuit Court. The Court of Appeals upheld the dismissal, and BAAM is seeking Discretionary Review by the Supreme Court. The rest of these cases remain active in various stages of litigation.

Bayhills

In 2018, Kentucky Retirement Systems sued Bayhills for breach of contract seeking to terminate Bayhills as investment managers. Kentucky Retirement Systems filed the suit in Franklin Circuit Court, but Bayhills removed it to federal district court. Kentucky Retirement Systems successfully had the case remanded back to state court. The case is now pending before Franklin Circuit Court. The Court entered an injunction preventing Bayhills from paying themselves management and other fees during the litigation. Bayhills has appealed this ruling to the Court of Appeals. The Court of Appeals and the Kentucky Supreme Court denied Bayhills their requested relief on appeal. Litigation is still ongoing.

Mountain Comprehensive Care Center & Adanta

In 2022, Mountain Comprehensive Care Center and Adanta filed separate suits challenging the actuarially accrued liability assigned these two entities via the process outlined in KRS 61.565, known as House Bill 8 from the 2021 Regular Session of the Kentucky General Assembly. The suits challenge not only the liability assigned to them, but they challenge the constitutionality of the statutory scheme. This litigation is ongoing.

James Redwine, David Campbell, & Michael Steward

Three complaints were filed against the Kentucky Retirement Systems (KRS) on behalf of specific named plaintiffs and others similarly situated based on the same facts that gave rise to the former River City Fraternal Order of Police (FOP) complaint. KPPA was aware that the River City FOP case impacted more individuals than the named plaintiffs and had been working on legislative and regulatory solutions. Legislation passed by the 2022 General Assembly allows individuals negatively impacted by the Medicare Secondary Payer Act to receive their health insurance through the Kentucky Employees Health Plan, and KPPA has promulgated a regulation to reimburse those individuals who had to pay for health insurance consistent with the Sixth Circuit Opinion. In addition to the MSPA issue, these three complaints allege that requiring Medicare eligible members to pay for Medicare Part B violates their right to “free” health insurance under their inviolable contract.

These suits are identical to two suits filed against the County Employees Retirement System (CERS). The cases against KRS are being held in abeyance pending the outcome of the class certification issue in the CERS cases.

Note L. Reciprocity Agreement

In accordance with Kentucky Revised Statutes 61.702, KRS has reciprocity agreements with County Employees Retirement System (CERS), Teachers' Retirement System of Kentucky (TRS) and Judicial Form Retirement System (JFRS) for the payment of insurance benefits for those members who have creditable service in KERS, SPRS and CERS, TRS and/or JFRS systems.

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Note M. Reimbursement of Retired Re-Employed Health Insurance, Active Member Health Insurance Contributions, and Retired Re-Employed Employer Contributions

Reimbursement of Retired Re-Employed Health Insurance

If a retiree is re-employed in a regular full-time position and has chosen health insurance coverage through KRS, the employer is required to reimburse KRS for the health insurance premium paid on the retiree's behalf, not to exceed the cost of the single premium rate. Exceptions for retired members who re-employ as a police officer, sheriff or school resource officer exist which may exempt employers from paying employer contributions and health insurance reimbursements if certain requirements are met. For the fiscal year ended June 30, 2024, the reimbursement totaled \$9.4 million. Please see the chart below for the breakdown.

Active Member Health Insurance Contributions

For new plan participants after August 31, 2008, an active member contribution of 1% in addition to the member pension contribution is required. This 1% is applicable to all Nonhazardous and Hazardous Plans, and reported in the Insurance Plans. For the fiscal year ended June 30, 2024, members paid into the Insurance Plans \$13.1 million. Please see the chart below for the breakdown.

Retired Re-Employed Employer Contributions

Employers are required to report employer contributions on retired members who are employed in a regular full-time position. These members are referred to as retired re-employed members. These are reported within the employer contributions on the financial statements. Exceptions for retired members who re-employ as a police officer, sheriff or school resource officer exist which may exempt employers from paying employer contributions and health insurance reimbursements if certain requirements are met.

Retired Reemployed Healthcare Contributions As of June 30, 2024 (\$ in Thousands)	KERS		SPRS	KRS Total
	Nonhazardous	Hazardous		
Amount	\$7,484	\$1,865	\$5	\$9,354

Member Health Insurance Contributions As of June 30, 2024 (\$ in Thousands)	KERS		SPRS	KRS Total
	Nonhazardous	Hazardous		
Amount	\$10,585	\$2,086	\$396	\$13,067

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Note N. General Fund Appropriations

During the 2022 Regular Session of the Kentucky General Assembly, HB1 allocated an additional \$485 million in general fund dollars to the KERS Nonhazardous Plan and the SPRS Plan. This amount included \$215 million in FY 2021-2022 for the SPRS Pension Plan to be applied to the unfunded liability, which immediately lowered the SPRS contribution rate from 146.06% to 99.43% for the 2022-2023 fiscal year. The rest of the \$485 million consisted of \$135 million in each fiscal year of the biennium (2023 and 2024) for the KERS Nonhazardous Pension Plan to be applied to the unfunded liability. Also, House Bill 604 allocated \$105 million in fiscal year 2023 and fiscal year 2024 to be applied to the unfunded liability of the KERS Nonhazardous Pension Plan.

General Fund Appropriations (\$ in Thousands)			
Fiscal Year	KERS		KRS Total
	Nonhazardous	SPRS	
2021-2022	\$-	\$215,000	\$215,000
2022-2023	\$240,000	\$-	\$240,000
2023-2024	\$240,000	\$-	\$240,000
Total	\$480,000	\$215,000	\$695,000

Note O. Prisma Daniel Boone Fund

The funds invested with Prisma Daniel Boone Fund continue to be held in a contingency reserve to cover potential obligations arising from the Mayberry Action (see Note K for details of Mayberry Case). The total reported in reserve as of June 30, 2024, is \$25.8 million for the Pension Plans and \$12.9 million for the Insurance Plan. This is based on the May 31, 2024, report because Absolute Return managers are reported on a one month lag.

Note P. Subsequent Events

Management has evaluated the period June 30, 2024 to December 5, 2024 (the date the combining financial statements were available to be issued) for items requiring recognition or disclosure in the combining financial statements.

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Note Q. Related Party

KPPA is the special-purpose government responsible for the day-to-day administration of KRS and the County Employees Retirement System (CERS).

Kentucky Revised Statute 61.505 11(a) requires all expenses incurred by or on behalf of KPPA to be prorated, assigned, or allocated to the Systems that KPPA administers. KPPA works closely with the KRS and CERS Boards of Trustees to develop an allocation method that takes into consideration membership, assets under management, system specific costs, and statutory requirements.

The expenses incurred by KPPA on behalf of Systems are administrative costs which include salaries and benefits of professional employees providing investment management, benefits counseling, legal services, information technology services, accounting, and payroll functions. In addition, administrative costs include operational payments for hardware, software, utilities, rent, as well as contract and consulting costs with legal, audit and actuarial service providers. The administrative budget of KPPA is funded with restricted funds of KRS and CERS and is subject to approval by the Kentucky General Assembly through the biennial budget process.

Total Administrative costs incurred by KPPA for the fiscal year ended June 30, 2024, were \$47.3 million, of which \$16.9 million was allocated to KRS based on the hybrid allocation developed by the KPPA Board, the KRS Board, and the CERS Board.

DRAFT - KRS 2024 ACFR - DRAFT **REQUIRED SUPPLEMENTARY INFORMATION** **INCLUDING GASB 67 AND 74**

- [64 Schedule of Employers' Net Pension Liability](#)
- [65 Schedule of Changes in Employers' Total Pension Liability](#)
- [68 Notes to Schedule of Employers' Contributions](#)
- [69 Schedule of Employers' Contribution Pension](#)
- [71 Schedule of Employers' Net OPEB Liability](#)
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- [80 Report on Internal Control](#)

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employers' NPL - KERS Nonhazardous Pension**
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of
						Covered Payroll
2024	\$16,273,602	\$4,223,936	\$12,049,666	25.96%	\$1,912,421	630.07%
2023	15,858,669	3,539,943	12,318,726	22.32%	1,648,318	747.35%
2022	16,281,188	3,013,845	13,267,343	18.51%	1,432,960	925.87%
2021	16,335,657	3,018,660	13,316,997	18.48%	1,441,337	923.93%
2020	16,472,733	2,308,080	14,164,653	14.01%	1,476,156	959.56%
2019	16,356,674	2,233,672	14,123,002	13.66%	1,485,854	950.50%
2018	15,608,221	2,004,446	13,603,775	12.84%	1,509,955	900.94%
2017	15,445,206	2,056,870	13,388,336	13.32%	1,602,396	835.52%
2016	13,379,781	1,980,292	11,399,489	14.80%	1,631,025	698.92%
2015	\$12,359,673	\$2,327,783	\$10,031,890	18.83%	\$1,544,234	649.64%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.**Schedule of Employers' NPL - KERS Hazardous Pension**
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of
						Covered Payroll
2024	\$1,393,651	\$1,019,890	\$373,761	73.18%	\$279,218	133.86%
2023	1,316,521	893,533	422,988	67.87%	223,922	188.90%
2022	1,318,494	810,978	507,516	61.51%	188,648	269.03%
2021	1,311,767	866,140	445,627	66.03%	172,725	258.00%
2020	1,251,027	690,350	560,677	55.18%	171,840	326.28%
2019	1,227,226	680,932	546,294	55.49%	160,600	340.16%
2018	1,150,610	645,485	505,125	56.10%	152,936	330.29%
2017	1,098,630	601,529	497,101	54.75%	178,511	278.47%
2016	919,517	527,879	391,638	57.41%	158,828	246.58%
2015	\$895,433	\$552,468	\$342,965	61.70%	\$128,680	266.53%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.**Schedule of Employer's NPL - SPRS Pension**
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of
						Covered Payroll
2024	\$1,101,632	\$651,790	\$449,842	59.17%	\$71,964	625.09%
2023	1,039,813	591,514	448,299	56.89%	65,693	682.42%
2022	1,057,752	551,699	506,053	52.16%	48,061	1,052.94%
2021	1,055,824	356,346	699,478	33.75%	47,873	1,461.11%
2020	1,049,237	293,949	755,288	28.02%	49,019	1,540.81%
2019	1,035,000	286,165	748,835	27.65%	49,515	1,512.34%
2018	969,622	267,572	702,050	27.60%	50,346	1,394.45%
2017	943,271	255,737	687,534	27.11%	54,065	1,271.68%
2016	795,421	218,012	577,409	27.41%	46,685	1,236.82%
2015	\$734,156	\$247,228	\$486,928	33.68%	\$45,765	1,063.97%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Employers' TPL - KERS Nonhazardous
As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Service Cost	\$184,567	\$163,563	\$165,616	\$171,472	\$179,702	\$184,988	\$195,681	\$143,858	\$139,631	\$143,847
Interest	805,180	827,579	830,440	838,084	832,178	793,163	785,123	870,725	891,897	859,509
Benefit Changes	-	2,024	-	2,091	-	-	9,624	-	-	-
Difference between Expected and Actual Experience	469,003	310,954	(15,034)	(130,268)	115,515	70,529	153,565	(134,379)	-	30,958
Changes of Assumptions	-	(691,088)	-	-	-	700,464	-	2,145,530	923,999	694,592
Benefit Payments	(1,043,817)	(1,035,551)	(1,035,491)	(1,018,455)	(1,011,336)	(1,000,691)	(980,978)	(960,309)	(935,419)	(919,343)
Net Change in TPL	414,933	(422,519)	(54,469)	(137,076)	116,059	748,453	163,015	2,065,425	1,020,108	809,563
TPL – Beginning	15,858,669	16,281,188	16,335,657	16,472,733	16,356,674	15,608,221	15,445,206	13,379,781	12,359,673	11,550,110
TPL – Ending (a)	\$16,273,602	\$15,858,669	\$16,281,188	\$16,335,657	\$16,472,733	\$16,356,674	\$15,608,221	\$15,445,206	\$13,379,781	\$12,359,673
Plan Fiduciary Net Position ⁽¹⁾										
Contributions – Employer Other ⁽⁶⁾	1,295,695	\$1,275,007	\$1,116,869	\$1,134,232	\$948,592	\$1,035,462	\$689,143	\$757,121	\$513,084	\$521,691
Contributions – Member ⁽²⁾	96,615	84,579	89,607	90,202	96,594	93,759	104,972	100,543	106,494	104,606
Refunds of Contributions	(11,693)	(11,847)	(12,116)	(8,953)	(11,523)	(12,342)	(13,603)	(11,819)	(12,130)	(13,552)
Retirement Benefit	(1,032,124)	(1,023,704)	(1,023,375)	(1,009,502)	(999,813)	(988,349)	(967,375)	(948,490)	(923,288)	(905,791)
Net Investment Income ⁽²⁾	349,628	215,880	(162,461)	516,223	52,499	112,371	144,881	220,985	(20,663)	44,570
Administrative Expense	(14,128)	(13,817)	(13,339)	(11,622)	(11,941)	(11,712)	(10,692)	(10,957)	(10,989)	(10,474)
Other	-	-	-	-	-	37 ⁽⁵⁾	301 ⁽⁵⁾	(30,805) ⁽⁴⁾	-	8,442
Net Change in Fiduciary Net Position	683,993	526,098	(4,815)	710,580	74,408	229,226	(52,373)	76,578	(347,491)	(250,508)
Plan Fiduciary Net Position – Beginning	3,539,943	3,013,845	3,018,660	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783	2,578,291
Prior Year Adjustment	-	-	-	-	-	-	(51)	-	-	-
Plan Fiduciary Net Position – Ending (b)	4,223,936	3,539,943	3,013,845	3,018,660	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783
Net Pension Liability – Ending (a) – (b)	\$12,049,666	\$12,318,726	\$13,267,343	\$13,316,997	\$14,164,653	\$14,123,002	\$13,603,775	\$13,388,336	\$11,399,489	\$10,031,890
Plan Fiduciary Net Position as a Percentage	25.96%	22.32%	18.51%	18.48%	14.01%	13.66%	12.84%	13.32%	14.80%	18.83%
Covered Payroll ⁽³⁾	\$1,912,421	\$1,648,318	\$1,432,960	\$1,441,337	\$1,476,156	\$1,485,854	\$1,509,955	\$1,602,396	\$1,631,025	\$1,544,234
Net Pension Liability as a Percentage of Covered Payroll	630.07%	747.35%	925.87%	923.93%	959.56%	950.50%	900.94%	835.52%	698.92%	649.64%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$73,635,000 as of June 30, 2024.

⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal year 2017 and later. For fiscal year 2024 401(h) contributions equaled \$(18,000); and associated investment return equaled \$6,390,000.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Employers' TPL - KERS Hazardous
As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Service Cost	\$32,732	\$26,852	\$26,885	\$28,450	\$25,568	\$27,117	\$28,641	\$21,081	\$20,751	\$18,729
Interest	79,637	79,822	79,422	75,743	74,357	69,657	66,536	66,589	64,851	61,005
Benefit Changes	-	-	-	26	-	-	705	-	-	-
Difference between Expected and Actual Experience	49,423	(1,773)	(17,557)	34,789	(1,095)	1,395	24,215	26,902	-	6,067
Changes of Assumptions	-	(24,197)	-	-	-	50,658	-	127,878	-	52,165
Benefit Payments	(84,662)	(82,677)	(82,023)	(78,268)	(75,029)	(72,211)	(68,117)	(63,338)	(61,518)	(59,383)
Net Change in TPL	77,130	(1,973)	6,727	60,740	23,801	76,616	51,980	179,112	24,084	78,583
TPL – Beginning	1,316,521	1,318,494	1,311,767	1,251,027	1,227,226	1,150,610	1,098,630	919,517	895,433	816,850
TPL – Ending (a)	\$1,393,651	\$1,316,521	\$1,318,494	\$1,311,767	\$1,251,027	\$1,227,226	\$1,150,610	\$1,098,630	\$919,517	\$895,433
Plan Fiduciary Net Position ⁽¹⁾										
Contributions – Employer	\$89,899	\$72,807	\$59,055	\$62,200	\$59,115	\$55,259	\$43,661	\$52,974	\$23,759	\$28,536
Contributions - Member ⁽²⁾	21,568	17,459	20,588	19,961	19,769	17,118	17,891	17,524	15,739	13,207
Refunds of Contributions	(4,133)	(4,041)	(4,976)	(4,380)	(3,168)	(2,684)	(2,501)	(2,106)	(2,211)	(2,610)
Retirement Benefit	(80,529)	(78,636)	(77,047)	(73,888)	(71,861)	(69,527)	(65,616)	(61,231)	(59,306)	(56,773)
Net Investment Income ⁽²⁾	101,135	76,479	(51,317)	173,152	6,739	36,380	51,467	70,994	(1,653)	8,701
Administrative Expense	(1,583)	(1,513)	(1,465)	(1,255)	(1,176)	(1,103)	(975)	(919)	(916)	(844)
Other	-	-	-	-	-	4 ⁽⁵⁾	33 ⁽⁵⁾	(3,586) ⁽⁴⁾	-	767
Net Change in Plan Fiduciary Net Position	126,357	82,555	(55,162)	175,790	9,418	35,447	43,960	73,650	(24,588)	(9,016)
Plan Fiduciary Net Position – Beginning	893,533	810,978	866,140	690,350	680,932	645,485	601,529	527,879	552,468	561,484
Prior Year Adjustment	-	-	-	-	-	-	(4)	-	-	-
Fiduciary Net Position – Ending (b)	1,019,890	893,533	810,978	866,140	690,350	680,932	645,485	601,529	527,879	552,468
Net Pension Liability – Ending (a) – (b)	\$373,761	\$422,988	\$507,516	\$445,627	\$560,677	\$546,294	\$505,125	\$497,101	\$391,638	\$342,965
Plan Fiduciary Net Position as a Percentage	73.18%	67.87%	61.51%	66.03%	55.18%	55.49%	56.10%	54.75%	57.41%	61.70%
Covered Payroll ⁽³⁾	\$279,218	\$223,922	\$188,648	\$172,725	\$171,840	\$160,600	\$152,936	\$178,511	\$158,828	\$128,680
Net Pension Liability as a Percentage of Covered Payroll	133.86%	188.90%	269.03%	258.00%	326.28%	340.16%	330.29%	278.47%	246.58%	266.53%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$10,031,000 as of June 30, 2024.

⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal years 2017 and later. For fiscal years 2024, 401(h) contributions equaled \$(8,000); and associated investment return equaled \$1,005,000.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Employer's TPL - SPRS
As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Service Cost	\$18,243	\$13,229	\$12,158	\$12,530	\$13,192	\$11,726	\$11,890	\$8,297	\$8,402	\$7,695
Interest	52,909	53,853	53,740	53,417	52,697	49,301	47,978	51,769	52,951	50,661
Benefit Changes	-	-	3,130	35	-	-	184	-	-	-
Difference between Expected and Actual Experience	54,711	10,204	(2,700)	4,127	10,859	20,952	25,126	8,143	-	9,331
Changes of Assumptions	-	(31,255)	-	0	-	44,510	-	136,602	56,191	40,201
Benefit Payments	(64,044)	(63,970)	(64,400)	(63,522)	(62,511)	(61,111)	(58,827)	(56,960)	(56,279)	(54,850)
Net Change in TPL	61,819	(17,939)	1,928	6,587	14,237	65,378	26,351	147,850	61,265	53,038
TPL - Beginning	1,039,813	1,057,752	1,055,824	1,049,237	1,035,000	969,622	943,271	795,421	734,156	681,118
TPL - Ending (a)	\$1,101,632	\$1,039,813	\$1,057,752	\$1,055,824	\$1,049,237	\$1,035,000	\$969,622	\$943,271	\$795,421	\$734,156
Plan Fiduciary Net Position ⁽¹⁾										
Contributions - Employer	\$61,998	\$58,120	\$277,341	\$59,650	\$59,453	\$60,048	\$46,877	\$63,239	\$25,822	\$31,990
Contributions - Member ⁽²⁾	5,703	5,250	4,773	4,752	4,767	5,062	5,522	5,348	5,263	5,244
Refunds of Contributions	(221)	(166)	(280)	(273)	(88)	(162)	(22)	(26)	(11)	(85)
Retirement Benefit	(63,823)	(63,804)	(64,120)	(63,249)	(62,423)	(60,949)	(58,805)	(56,934)	(56,268)	(54,765)
Net Investment Income ⁽²⁾	56,933	40,708	(22,088)	61,729	6,341	14,816	18,437	26,795	(3,843)	3,426
Administrative Expense	(314)	(293)	(273)	(212)	(266)	(225)	(194)	(181)	(178)	(201)
Other	-	-	-	-	-	3 ⁽⁵⁾	21 ⁽⁵⁾	(517) ⁽⁴⁾	-	645
Net Change in Plan Fiduciary Net Position	60,276	39,815	195,353	62,397	7,784	18,593	11,836	37,724	(29,215)	(13,746)
Plan Fiduciary Net Position - Beginning	591,514	551,699	356,346	293,949	286,165	267,572	255,737	218,012	247,228	260,974
Prior Year Adjustment	-	-	-	-	-	-	(1)	-	-	-
Plan Fiduciary Net Position - Ending (b)	651,790	591,514	551,699	356,346	293,949	286,165	267,572	255,737	218,012	247,228
Net Pension Liability - Ending (a) - (b)	\$449,842	\$448,299	\$506,053	\$699,478	\$755,288	\$748,835	\$702,050	\$687,534	\$577,409	\$486,928
Plan Fiduciary Net Position as a Percentage	59.17%	56.89%	52.16%	33.75%	28.02%	27.65%	27.60%	27.11%	27.41%	33.68%
Covered Payroll ⁽³⁾	\$71,964	\$65,693	\$48,061	\$47,873	\$49,019	\$49,515	\$50,346	\$54,065	\$46,685	\$45,765
Net Pension Liability as a Percentage of Covered Payroll	625.09%	682.42%	1,052.94%	1,461.11%	1,540.81%	1,512.34%	1,394.45%	1,271.68%	1,236.82%	1,063.97%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$1,426,000 as of June 30, 2024.

⁽²⁾ Does not include 401(h) contributions or associated investment income for fiscal years 2017 and later. For fiscal year 2024, 401(h) contributions equaled (\$12,000); and associated investment return equaled \$126,000.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

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Notes to Schedule of Employers' Contributions

The actuarially determined contributions effective for fiscal year ended June 30, 2024 that are documented in the schedules on the following pages, were calculated as of June 30, 2021. Based on the June 30, 2021, actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Notes to Schedule of Employers' Contribution			
Item	KERS Nonhazardous	KERS Hazardous	SPRS
Determined by the Actuarial Valuation as of:	June 30, 2021	June 30, 2021	June 30, 2021
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases
Payroll Growth	0.00%	0.00%	0.00%
Investment Return:	5.25%	6.25%	5.25%
Inflation:	2.30%	2.30%	2.30%
Salary Increase:	3.30% to 15.30%, varies by service	3.55% to 20.05%, varies by service	3.55% to 16.05%, varies by service
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employers' Contribution****Schedule of Employers' Contributions Pension - KERS Nonhazardous
As of June 30 (\$ in Thousands)**

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$1,055,571	\$1,295,695	\$(240,124)	\$1,912,421	67.75%
2023	1,034,918	1,275,007	(240,089)	1,648,318	77.35%
2022	1,048,861	1,116,869	(68,008)	1,432,960	77.94%
2021	1,056,211	1,134,232	(78,021)	1,441,337	78.69%
2020	1,048,513	948,592	99,921	1,476,156	64.26%
2019	1,055,402	1,035,462	19,940	1,485,854	69.69%
2018	633,879	689,143	(55,264)	1,509,955	45.64%
2017	623,813	757,121	(133,308)	1,602,396	47.25%
2016	512,670	513,084	(414)	1,631,025	31.46%
2015	\$520,948	\$521,691	\$(743)	\$1,544,234	33.78%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

**Schedule of Employers' Contributions Pension - KERS Hazardous
As of June 30 (\$ in Thousands)**

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$89,897	\$89,899	\$(2)	\$279,218	32.20%
2023	72,778	72,807	(29)	223,922	32.51%
2022	59,052	59,055	(3)	188,648	31.30%
2021	62,181	62,200	(19)	172,725	36.01%
2020	59,096	59,115	(19)	171,840	34.40%
2019	55,230	55,259	(29)	160,600	34.41%
2018	31,321	43,661	(12,340)	152,936	28.55%
2017	37,630	52,974	(15,344)	178,511	29.68%
2016	23,690	23,759	(69)	158,828	14.96%
2015	\$28,374	\$28,536	\$(162)	\$128,680	22.18%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employer's Contributions Pension - SPRS
As of June 30 (\$ in Thousands)**

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$61,998	\$61,998	\$-	\$71,964	86.15%
2023	58,120	58,120	-	65,693	88.47%
2022	62,341	277,341	(215,000)	48,061	577.06%
2021	59,263	59,650	(387)	47,873	124.60%
2020	58,358	59,453	(1,095)	49,019	121.29%
2019	58,948	60,048	(1,100)	49,515	121.27%
2018	36,033	46,877	(10,844)	50,346	93.11%
2017	35,937	63,240	(27,303)	54,065	116.97%
2016	25,723	25,822	(99)	46,685	55.31%
2015	\$31,444	\$31,990	\$(546)	\$45,765	69.90%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal years ended 2017, and later.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employers' Net OPEB Liability****Schedule of the Employers' Net OPEB Liability - KERS Nonhazardous
As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$2,488,778	\$1,765,729	\$723,049	70.95%	\$1,923,825	37.58%
2023	2,317,344	1,532,752	784,592	66.14%	1,653,492	47.45%
2022	3,576,530	1,364,419	2,212,111	38.15%	1,437,132	153.93%
2021	3,698,804	1,419,477	2,279,327	38.38%	1,452,345	156.94%
2020	3,599,557	1,060,649	2,538,908	29.47%	1,482,431	171.27%
2019	3,217,985	995,089	2,222,896	30.92%	1,515,953	146.63%
2018	3,262,117	891,205	2,370,912	27.32%	1,573,898	150.64%
2017	\$3,353,332	\$817,370	\$2,535,962	24.37%	\$1,593,097	159.18%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

**Schedule of the Employers' Net OPEB Liability - KERS Hazardous
As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$442,817	\$677,948	\$(235,131)	153.10%	\$279,218	(84.21)%
2023	417,361	625,356	(207,995)	149.84%	223,922	(92.89)%
2022	595,789	588,162	7,627	98.72%	188,648	4.04%
2021	622,152	633,677	(11,525)	101.85%	172,725	(6.67)%
2020	564,524	521,755	42,769	92.42%	182,209	23.47%
2019	507,204	534,053	(26,849)	105.29%	151,448	(17.73)%
2018	485,904	519,072	(33,168)	106.83%	190,317	(17.43)%
2017	\$494,869	\$488,838	\$6,031	98.78%	\$171,087	3.53%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024 derived compensation based on pension contribution information, as there were no required employer contributions for the Insurance Plan for FYE 2021, FYE 2022, FYE 2023, and FYE 2024. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

**Schedule of the Employer's Net OPEB Liability - SPRS
As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2024	\$277,159	\$273,517	\$3,642	98.69%	\$71,992	5.06%
2023	263,450	248,109	15,341	94.18%	65,830	23.30%
2022	351,453	231,242	120,211	65.80%	48,600	247.35%
2021	364,899	247,318	117,581	67.78%	47,155	249.35%
2020	339,942	201,340	138,602	59.23%	48,231	287.37%
2019	312,553	201,206	111,347	64.38%	48,780	228.26%
2018	301,012	190,847	110,165	63.40%	50,064	220.05%
2017	\$313,234	\$178,838	\$134,396	57.09%	\$48,873	274.99%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Net OPEB Liability**

Schedule of Changes in Employers' Net OPEB Liability - KERS Nonhazardous								
As of June 30 (\$ in Thousands)								
	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service Cost	\$44,779	\$43,199	\$62,548	\$58,831	\$59,600	\$61,345	\$66,360	\$46,992
Interest	134,251	200,910	190,531	191,624	179,811	186,820	191,178	192,911
Benefit Changes	-	3,209	21,884	1,382	-	-	1,865	-
Difference between Expected and Actual Experience	80,456	(1,440,201)	(37,249)	(231,631)	288,235	(302,189)	(191,147)	(3,921)
Changes of Assumptions	26,413	61,925	(206,907)	220,184	13,767	158,004	(11,235)	414,835
Benefit Payments ^{(1) (2)}	(114,465)	(128,228)	(153,081)	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
Net Change in Total OPEB Liability	171,434	(1,259,186)	(122,274)	99,247	381,572	(44,132)	(91,215)	511,216
Total OPEB Liability - Beginning	2,317,344	3,576,530	3,698,804	3,599,557	3,217,985	3,262,117	3,353,332	2,842,116
Total OPEB Liability - Ending (a)	\$2,488,778	\$2,317,344	\$3,576,530	\$3,698,804	\$3,599,557	\$3,217,985	\$3,262,117	\$3,353,332
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾⁽⁵⁾	\$164,480	\$156,543	\$181,294	\$223,661	\$208,300	\$201,155	\$152,985	\$162,636
Contributions – Member	10,585	8,358	6,547	6,318	6,128	5,963	5,786	5,156
Benefit Payments ^{(1) (2)}	(114,465)	(128,228)	(153,081)	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
OPEB Plan Net Investment Income	173,104	132,431	(88,998)	270,811	11,820	45,749	64,028	94,239
OPEB Plan Administrative Expense	(727)	(771)	(820)	(819)	(847)	(875)	(760)	(861)
Other ⁽⁴⁾	-	-	-	0	-	4	32	-
Net Change in Plan Fiduciary Net Position	232,977	168,333	(55,058)	358,828	65,560	103,884	73,835	121,569
Plan Fiduciary Net Position – Beginning	1,532,752	1,364,419	1,419,477	1,060,649	995,089	891,205	817,370	695,801
Plan Fiduciary Net Position – Ending (b)	1,765,729	1,532,752	1,364,419	1,419,477	1,060,649	995,089	891,205	817,370
Net OPEB Liability – Ending (a) – (b)	\$723,049	\$784,592	\$2,212,111	\$2,279,327	\$2,538,908	\$2,222,896	\$2,370,912	\$2,535,962
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	70.95%	66.14%	38.15%	38.38%	29.47%	30.92%	27.32%	24.37%
Covered Payroll ⁽³⁾	\$1,923,825	\$1,653,492	\$1,437,132	\$1,452,345	\$1,482,431	\$1,515,953	\$1,573,898	\$1,593,097
Net OPEB Liability as a Percentage of Covered Payroll	37.58%	47.45%	153.93%	156.94%	171.27%	146.63%	150.64%	159.18%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to \$27,851,763 for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Employers' Net OPEB Liability - KERS Hazardous
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service Cost	\$8,128	\$9,435	\$14,474	\$13,633	\$11,548	\$12,337	\$12,893	\$8,002
Interest on Total OPEB liability	24,181	32,737	30,599	29,254	28,101	27,990	28,500	27,591
Benefit Changes	-	-	10,289	48	-	-	167	-
Difference between Expected and Actual Experience	7,970	(198,459)	(12,515)	(6,402)	27,668	(30,947)	(31,240)	(1,029)
Assumption Changes	5,719	(1,820)	(46,406)	42,022	11,428	31,687	(581)	89,401
Benefit Payments ^{(1) (2)}	(20,542)	(20,321)	(22,804)	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
Net Change in Total OPEB Liability	25,456	(178,428)	(26,363)	57,628	57,320	21,300	(8,965)	107,347
Total OPEB Liability - Beginning	417,361	595,789	622,152	564,524	507,204	485,904	494,869	387,522
Total OPEB Liability - Ending (a)	\$442,817	\$417,361	\$595,789	\$622,152	\$564,524	\$507,204	\$485,904	\$494,869
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾	\$2,725	\$2,282	\$4,116	\$3,556	\$7,441	\$5,556	\$5,165	\$4,579
Contributions – Member	2,086	1,584	1,227	1,167	1,105	934	909	811
Benefit Payments ^{(1) (2)}	(20,542)	(20,321)	(22,804)	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
OPEB Plan Net Investment Income	68,440	53,772	(27,929)	128,244	704	28,373	42,950	59,614
OPEB Plan Administrative Expense	(117)	(123)	(125)	(118)	(123)	(117)	(104)	(105)
Other ⁽⁴⁾	-	-	-	-	0	2	18	-
Net Change in Plan Fiduciary Net Position	52,592	37,194	(45,515)	111,922	(12,298)	14,981	30,234	48,281
Plan Fiduciary Net Position – Beginning	625,356	588,162	633,677	521,755	534,053	519,072	488,838	440,557
Plan Fiduciary Net Position – Ending (b)	677,948	625,356	588,162	633,677	521,755	534,053	519,072	488,838
Net OPEB Liability – Ending (a) – (b)	\$(235,131)	\$(207,995)	\$7,627	\$(11,525)	\$42,769	\$(26,849)	\$(33,168)	\$6,031
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	153.10%	149.84%	98.72%	101.85%	92.42%	105.29%	106.83%	98.78%
Covered Payroll ⁽³⁾	\$279,218	\$223,922	\$188,648	\$172,725	\$182,209	\$151,448	\$190,317	\$171,087
Net OPEB Liability as a Percentage of Covered Employee Payroll	(84.21)%	(92.89)%	4.04%	(6.67)%	23.47%	(17.73)%	(17.43)%	3.53%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to \$814,756 for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information, as there were no required employer contributions for the Insurance Plan for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Changes in Employer's Net OPEB Liability - SPRS
As of June 30 (\$ in Thousands)**

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service Cost	\$4,115	\$4,092	\$5,605	\$5,218	\$5,389	\$4,816	\$6,087	\$4,147
Interest on Total OPEB liability	15,508	19,608	18,592	17,984	17,600	17,724	18,432	17,993
Benefit Changes	-	-	4,975	101	-	-	34	-
Difference between Expected and Actual Experience	1,360	(98,425)	(5,952)	(6,318)	13,810	(14,295)	(23,320)	(573)
Assumption Changes	4,394	404	(21,937)	21,784	4,578	16,483	(358)	57,312
Benefit Payments ^{(1) (2)}	(11,668)	(13,682)	(14,729)	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
Net Change in Total OPEB Liability	13,709	(88,003)	(13,446)	24,957	27,389	11,541	(12,222)	66,756
Total OPEB Liability - Beginning	263,450	351,453	364,899	339,942	312,553	301,012	313,234	246,478
Total OPEB Liability - Ending (a)	\$277,159	\$263,450	\$351,453	\$364,899	\$339,942	\$312,553	\$301,012	\$313,234
Plan Fiduciary Net Position								
Contributions – Employer ⁽²⁾	\$9,788	\$8,755	\$9,343	\$9,381	\$12,873	\$12,623	\$8,535	\$7,862
Contributions – Member	396	348	230	209	196	176	155	131
Benefit Payments ^{(1) (2)}	(11,668)	(13,682)	(14,729)	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
OPEB Plan Net Investment Income	26,963	21,520	(10,847)	50,289	1,124	10,815	16,470	21,627
OPEB Plan Administrative Expense	(71)	(74)	(73)	(89)	(71)	(69)	(62)	(66)
Other ⁽⁴⁾	-	-	-	-	-	1	8	-
Net Change in Plan Fiduciary Net Position	25,408	16,867	(16,076)	45,978	134	10,359	12,009	17,431
Plan Fiduciary Net Position – Beginning	248,109	231,242	247,318	201,340	201,206	190,847	178,838	161,407
Plan Fiduciary Net Position – Ending (b)	273,517	248,109	231,242	247,318	201,340	201,206	190,847	178,838
Net OPEB Liability – Ending (a) – (b)	\$3,642	\$15,341	\$120,211	\$117,581	\$138,602	\$111,347	\$110,165	\$134,396
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	98.69%	94.18%	65.80%	67.78%	59.23%	64.38%	63.40%	57.09%
Covered Payroll ⁽³⁾	\$71,992	\$65,830	\$48,600	\$47,155	\$48,231	\$48,780	\$50,064	\$48,873
Net OPEB Liability as a Percentage of Covered Payroll	5.06%	23.30%	247.35%	249.35%	287.37%	228.26%	220.05%	274.99%

⁽¹⁾ Benefit payments are offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions and benefit payments include expected benefits due to the implicit subsidy for members under age 65, equal to (\$374,879) for fiscal year 2024.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

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Notes to Schedule of Employers' Contributions

The actuarially determined contributions effective for fiscal year ended June 30, 2024, that is documented in the following schedule was calculated as of June 30, 2021. Based on the June 30, 2021, actuarial valuation report, the actuarial methods and assumptions used to calculate the required contributions follow.

Notes to Schedule of Employers' OPEB Contributions			
Item	KERS	KERS	SPRS
	Nonhazardous	Hazardous	
Determined by the Actuarial Valuation as of:	June 30, 2021	June 30, 2021	June 30, 2021
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized.
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.
Payroll Growth Rate:	0.00%	0.00%	0.00%
Investment Return:	6.25%	6.25%	6.25%
Inflation:	2.30%	2.30%	2.30%
Salary Increase:	3.30% to 15.30%, varies by service.	3.55% to 20.05%, varies by service.	3.55% to 16.05%, varies by service.
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.
Healthcare Trend Rates:			
Pre-65	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2022 premiums were known at the time of the valuation and were incorporated into the liability measurement.

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Schedule of Employers' OPEB Contributions

Schedule of Employers' OPEB Contributions - KERS Nonhazardous As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$129,764	\$136,628	\$(6,864)	\$1,923,825	7.10%
2023	123,952	129,108	(5,156)	1,653,492	7.81%
2022	135,809	140,694	(4,885)	1,437,132	9.79%
2021	161,936	186,676	(24,740)	1,452,345	12.85%
2020	183,821	175,007	8,814	1,482,431	11.81%
2019	187,978	178,964	9,014	1,515,953	11.81%
2018	132,365	136,419	(4,054)	1,573,898	8.67%
2017	133,024	152,356	(19,332)	1,593,097	9.56%
2016	121,899	135,816	(13,917)	1,529,249	8.88%
2015	\$130,455	\$135,940	(5,485)	\$1,544,234	8.80%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - KERS Nonhazardous.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - KERS Hazardous As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$-	\$1,910	\$(1,910)	\$279,218	0.68%
2023	-	1,489	(1,489)	223,922	0.66%
2022	-	1,281	(1,281)	188,648	0.68%
2021	-	1,300	(1,300)	172,725	0.75%
2020	4,482	5,776	(1,294)	182,209	3.17%
2019	3,726	4,970	(1,244)	151,448	3.28%
2018	2,550	5,288	(2,738)	190,317	2.78%
2017	4,688	5,620	(932)	171,087	3.28%
2016	9,186	16,766	(7,580)	147,563	11.36%
2015	\$13,152	\$14,882	\$(1,730)	\$128,680	11.57%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - KERS Hazardous.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information. For 2021, 2022, 2023, and 2024, derived compensation based on pension contribution information as there were no required employer contributions for the Insurance Plan for FYE 2021, FYE 2022, FYE 2023, and FYE 2024.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Employer's OPEB Contributions - SPRS
As of June 30 (\$ in Thousands)**

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2024	\$10,158	\$10,163	\$(5)	\$71,992	14.12%
2023	9,289	9,289	-	65,830	14.11%
2022	8,782	8,782	-	48,600	18.07%
2021	9,285	9,285	-	47,155	19.69%
2020	13,133	13,133	-	48,231	27.23%
2019	13,283	13,288	(5)	48,780	27.24%
2018	9,062	9,397	(335)	50,064	18.77%
2017	9,222	9,222	-	48,873	18.87%
2016	8,553	10,237	(1,684)	45,551	22.47%
2015	\$9,890	\$10,382	(492)	\$45,765	22.69%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 ACFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2024 is based on the contribution rate calculated with the June 30, 2021, actuarial valuation.

⁽³⁾ Employer contributions do not include the expected implicit subsidy included in the Schedule of Changes in Employer's Net OPEB Liability - SPRS.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information

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Money-Weighted Rates of Return

In accordance with GASB, KRS provides this additional disclosure regarding the money-weighted rate of return for the Pension and Insurance Plans. The money-weighted rate of return is a method of calculating period-by-period returns on investments that adjusts for the changing amounts actually invested. For purposes of this statement, money-weighted rate of return is calculated as the internal rate of return, net of investment expenses, adjusted for the changing amounts actually invested.

See below for the money-weighted rates of return for multiple periods including fiscal year June 30, 2024, as calculated by the custodian bank, BNY Mellon:

Money - Weighted Rates of Return As of June 30						
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS
	Pension			Insurance		
2024	9.58%	11.17%	9.64%	11.14%	11.12%	11.01%
2023	7.07%	9.46%	7.53%	9.89%	9.26%	9.44%
2022	(5.29)%	(5.94)%	(5.80)%	(6.22)%	(4.43)%	(4.43)%
2021	22.53%	25.21%	21.70%	25.16%	24.99%	25.36%
2020	2.35%	0.96%	2.21%	0.98%	0.21%	0.64%
2019	5.77%	5.68%	5.67%	5.04%	5.56%	5.73%
2018	7.63%	8.69%	7.68%	7.95%	8.93%	9.39%
2017	12.08%	13.45%	12.50%	13.77%	13.75%	13.69%
2016	(0.97)%	(0.33)%	(1.76)%	N/A	N/A	N/A
2015	2.30%	1.84%	1.80%	N/A	N/A	N/A

Note: This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

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Schedule of Administrative Expenses

KPPA provides administrative support for KRS, and the County Employees Retirement System (CERS). Kentucky Revised Statute 61.505 11(a) requires all expenses incurred by KPPA on behalf of the Systems be prorated, assigned, or allocated to the Systems. KPPA works closely with the KRS and CERS Boards of Trustees to develop an allocation method that takes into consideration membership, assets under management, system specific costs, and statutory requirements. Total administrative costs incurred by KPPA for the fiscal year ended June 30, 2024, were \$47.3 million, of which \$16.9 million was allocated to KRS based on the hybrid allocation developed by the KPPA Board, the KRS Board, and the CERS Board.

Schedule of Administrative Expenses As of June 30, 2024 (\$ in Thousands)	
	2024
Salaries	\$6,533
Benefits	6,167
Professional Services	1,345
Information Technology	1181
Communications	282
Office & Equipment Rent	367
Travel/Conferences	43
Other Operating Expenses	107
Insurance Plans' Administration	922
Total Administrative Expenses	\$16,947

Schedule of Direct Investment Expenses

Schedule of Direct Investment Expenses As of June 30, 2024 (\$ in Thousands)						
	Pension			Insurance		
	KERS		SPRS	KERS		SPRS
	Nonhazardous	Hazardous		Nonhazardous	Hazardous	
Security Lending Fees						
Securities Lending Fees, Expenses, and Rebates	\$3,808	\$1,059	\$671	\$1,402	\$487	\$214
Total Security Lending	3,808	1,059	671	1,402	487	214
Contractual Services						
Investment Management	18,759	5,641	2,566	8,913	4,439	1,764
Security Custody	397	97	62	234	94	38
Investment Consultant	238	59	38	96	40	16
Performance Fees	6,006	1,724	620	2,860	1,766	616
Total Contractual Services	\$25,400	\$7,521	\$3,286	\$12,103	\$6,339	\$2,434

Schedule of Professional Consultant Fees

Schedule of Professional Consultant Fees As of June 30, 2024 (\$ in Thousands)	
	2024
Actuarial Services	\$146
Medical Review Services	500
Audit Services	83
Legal Counsel	509
Miscellaneous	107
Total	\$1,345

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REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Members
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Kentucky Retirement Systems (KRS), as of and for the year ended June 30, 2024, and the related notes to the financial statements, which collectively comprise the KRS basic financial statements, and have issued our report thereon dated --DATE--.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the KRS's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the KRS's internal control. Accordingly, we do not express an opinion on the effectiveness of the KRS's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the KRS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The

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**REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER FINANCIAL REPORTING
AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL
STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*
(Continued)**

results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the KRS's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KRS's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Blue & Co., LLC

Lexington, Kentucky

--DATE--

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INVESTMENTS

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Investment Overview

This section of the report was compiled by Investment Staff using information provided by Wilshire Associates and the Bank of New York Mellon. Except otherwise noted, investment returns are based on investment asset fair value and calculated using time-weighted return calculation methodologies.

Investment returns play an important role in terms of funding status of the Plans and continued funding of operations. The Investment Committee and the Board of Trustees are committed to maximizing the long-term total rate of return on investments, given the appropriate level of risk, for the sole benefit of the members in the Plans. The overall investment performance goal is to achieve an annualized rate of return which, when combined with employee and employer contributions, will meet or exceed the benefits and administrative funding requirements (see Investment Objectives later in this section).

Investments are managed by professional investment management firms and the Investment Staff based upon statutory investment authority and the investment policies adopted by the KRS Investment Committee and ratified by the KRS Board of Trustees. The Investment Staff is responsible for the administration of the investment assets of KRS and assists the Investment Committee in the formulation and implementation of investment policies and long-term investment strategy.

Asset Allocation and Diversification

The Trustees recognize that asset allocation is the primary driver of long-term investment performance and therefore review asset allocation on a regular basis. Asset allocation is a process designed to construct an optimal long-term asset mix that achieves a specific set of investment objectives. The Investment Policy Statement (IPS) establishes the Plans' asset allocation policies which are designed to meet those objectives.

The asset allocation policies are adopted to provide for diversification of assets in an effort to maximize the long-term returns on investments consistent with prudent levels of market and economic risks. Of all the components of investment strategy formulation, the determination of asset allocation policies are the most important decision.

Risk is further diversified through active and passive management using multiple investment management firms and Investment Staff with a variety of investment styles. The total investment performance is not dependent upon the outcome of just one particular investment style or manager.

Investment Staff develops specific contractual investment guidelines for each external manager and each internally managed account that control the risk of high concentrations in a particular sector, industry, or security.

Diversification of the assets among various asset classes, investment management styles, and individual securities mitigates risks and enhances the potential of the investment portfolios to achieve their respective long-term objectives.

The following tables show each Plans' asset allocation targets as specified in the Investment Policy Statement and the actual asset allocation of the Plans as of June 30, 2024.

DRAFT - KRS 2024 ACFR - DRAFT**IPS Target Allocation vs. Actual Asset Allocation
As of June 30, 2024**

Pension	Public Equity	Private Equity	Core Fixed Income	Specialty Credit	Cash	Real Estate	Real Return	Total Plan
KERS Nonhazardous Policy Target Asset Allocation	30.00%	6.00%	27.00%	20.00%	2.00%	5.00%	10.00%	100.00%
KERS Nonhazardous Actual Asset Allocation	32.44%	4.64%	26.33%	18.84%	4.20%	5.19%	8.36%	100.00%
KERS Hazardous Policy Target Asset Allocation	40.00%	8.00%	10.00%	25.00%	2.00%	7.00%	8.00%	100.00%
KERS Hazardous Actual Asset Allocation	42.66%	6.44%	11.36%	22.57%	3.39%	5.75%	7.83%	100.00%
SPRS Policy Target Asset Allocation	30.00%	6.00%	27.00%	20.00%	2.00%	5.00%	10.00%	100.00%
SPRS Actual Asset Allocation	32.07%	4.85%	25.83%	19.25%	3.90%	5.41%	8.69%	100.00%

Insurance	Public Equity	Private Equity	Core Fixed Income	Specialty Credit	Cash	Real Estate	Real Return	Total Plan
KERS Nonhazardous Policy Target Asset Allocation	40.00%	8.00%	10.00%	25.00%	2.00%	7.00%	8.00%	100.00%
KERS Nonhazardous Actual Asset Allocation	42.85%	6.66%	11.44%	22.60%	2.58%	5.73%	8.14%	100.00%
KERS Hazardous Policy Target Asset Allocation	40.00%	8.00%	10.00%	25.00%	2.00%	7.00%	8.00%	100.00%
KERS Hazardous Actual Asset Allocation	43.27%	7.31%	11.50%	22.85%	1.86%	6.34%	6.87%	100.00%
SPRS Policy Target Asset Allocation	40.00%	8.00%	10.00%	25.00%	2.00%	7.00%	8.00%	100.00%
SPRS Actual Asset Allocation	42.83%	8.01%	11.14%	22.83%	2.37%	5.96%	6.86%	100.00%

NOTE: The actual asset allocations are calculated by taking the fair value of each asset class as a percentage of total portfolio for the plans combined.

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Investment Strategies

Diversification

The Pension and Insurance portfolios are diversified on several levels, including by asset class. Asset allocations are evaluated on a periodic basis and represent an efficient allocation to maximize returns and minimize risks at a level appropriate for each Plan. The individual asset classes are diversified through the use of multiple portfolios that are managed by the Investment Staff and external Investment Managers. Each Investment Manager is afforded discretion to diversify its portfolio(s) within the parameters established by their contractual guidelines and in accordance with the KRS IPS.

Rebalancing

Proper implementation of the investment policy requires that a periodic adjustment, or rebalancing, of assets be made to ensure conformance with the IPS target levels. Such rebalancing is necessary to reflect sizable cash flows and performance imbalances among asset classes and individual investment portfolios. Should the actual portfolio rate fall outside of the IPS indicated range for a particular asset class, Investment Staff will direct rebalancing transactions to reallocate assets from the over-allocated asset class to the under-allocated asset class.

Performance Review

At least quarterly, the Investment Committee, reviews the performance of the portfolios to determine compliance with the IPS. The Investment Committee also reviews a report created and presented by the Compliance Officer. The Compliance Officer performs tests daily, monthly, and quarterly to assure compliance with the restrictions imposed by the IPS.

Investment Consulting

The Board employs qualified independent industry leading external consultants to assist in asset allocation studies, asset allocation recommendations, manager searches and other investment related consulting functions. Consultants also provide performance reports covering both the internally and externally managed assets.

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Investment Objectives

The Trustees recognize that as long-term investors, the primary aim is that the portfolios meet their performance objectives in the long-term while understanding that this may not necessarily occur in the short-term. The overall investment performance goal is to achieve an annualized rate of return which, when combined with employee and employer contributions, will meet or exceed the benefits and administrative funding requirements. The following descriptions represent general standards of measurement that will be used as guidelines for the various classes of investments and managers of the Plans.

Public Asset Class Allocations

Short-term: For periods less than five years or a full market cycle, the Asset Class Allocation should exceed the returns of the appropriate Index.

Intermediate & Long-term: For periods greater than five years or a full market cycle, the Asset Class Allocation should exceed the appropriate Index, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the Index.

Individual Public Security Portfolios

Short-term: For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market goal or benchmark.

Intermediate & Long-term: For periods greater than five years or a full market cycle, individual portfolios should exceed the return of their market goal or benchmark, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the benchmark.

Alternative Assets

Private Equity

The Private Equity portfolio seeks long-term annualized net returns that exceed public equity investments (as represented by the Russell 3000 Index lagged 1 calendar quarter) by three percent.

Real Estate

The Real Estate portfolio seeks long-term annualized net returns that exceed the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index lagged 1 calendar quarter.

Real Return

The Real Return portfolio seeks long term annualized net returns that exceed CPI + 300 basis points.

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Investment Results

For this report, total return information has been reported net of fees and expenses with audited data. All rates of return are calculated using time-weighted rates of return.

Fiscal Year 2024 Results

Please see the tables below for the net returns reported for the fiscal year ended June 30, 2024.

Net Returns As of June 30, 2024 (\$ in Thousands)										
Pension	Fair Value	% of Total	1 Year		3 Years		5 Years		10 Years	
			Plan	Index	Plan	Index	Plan	Index	Plan	Index
KERS Nonhazardous	4,208,402	71.51%	9.50%	10.11%	3.55%	3.91%	6.86%	6.48%	6.08%	5.98%
KERS Hazardous	1,025,916	17.43%	11.12%	12.40%	4.58%	5.01%	7.65%	7.84%	6.71%	6.70%
SPRS	650,802	11.06%	9.62%	10.11%	3.99%	3.91%	6.95%	6.48%	6.04%	5.92%
Total	\$5,885,120	100.00%	9.80%	10.51%	3.79%	4.03%	7.02%	6.56%	6.21%	6.02%

Insurance		Plan	Index	Plan	Index	Plan	Index	Plan	Index	
KERS Nonhazardous	1,677,700	64.13%	11.07%	12.40%	4.63%	5.15%	7.68%	7.72%	6.54%	6.70%
KERS Hazardous	667,434	25.51%	11.15%	12.40%	5.06%	5.15%	7.75%	7.63%	6.79%	6.68%
SPRS	271,156	10.36%	11.02%	12.40%	5.09%	5.15%	7.92%	7.63%	6.97%	6.70%
Total	\$2,616,290	100.00%	11.08%	12.40%	4.80%	5.15%	7.72%	7.72%	6.67%	6.70%

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Benchmarks

KRS overall performance is measured relative to asset class benchmarks. The benchmark is calculated using a weighted average methodology that is consistent with the CFA Institute Global Investment Performance Standards (GIPS®). It is the product of the various component weights (i.e., asset classes' percentages) by their respective performance (returns). The various asset class benchmarks are shown below:

Benchmarks and Allocation Guidelines As of June 30, 2024

Index	Asset Class	KRS Nonhazardous/SPRS Pension	KRS Hazardous Pension/All Insurance
Equity			
MSCI ACWI	Public Equity	30.00%	40.00%
Russell 3000 + 300 bps (lagged one quarter)	Private Equity	6.00%	8.00%
Fixed Income			
Bloomberg US Aggregate	Core Fixed Income	27.00%	10.00%
50% Bloomberg US Corporate High Yield/50% Morningstar LSTA Leveraged Loan	Specialty Credit	20.00%	25.00%
FTSE 3-mos Treasury Bill	Cash	2.00%	2.00%
Inflation Protected			
NCREIF ODCE (one quarter lagged)	Real Estate	5.00%	7.00%
US CPI + 3%	Real Return	10.00%	8.00%

Note: These benchmarks are intended to be objective, measurable, investable/replicable, and representative of the investment mandates. The benchmarks are developed from publicly available information and accepted by the investment advisor and Investment Staff as the neutral position consistent with the investment mandate and status. Investment Staff and our Consultant recommend the indices and benchmarks, which are reviewed and approved by the Investment Committee and ratified by the KRS Board.

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Long-Term Results

The chart below displays the growth of \$1,000 over the course of 10 years given the performance of the portfolios compared to the benchmark and the actuarial assumed rate of return. As of June 30, 2024, the actuarial assumed rate of return for KERS Nonhazardous and SPRS Pension Plans was 5.25% and 6.25% for all other Plans.

Since June 30, 2015, fiscal year returns have ranged from minimum returns of (5.19)%, (5.95)%, and (4.63)% in KERS Nonhazardous, KERS Hazardous, and SPRS, respectively in fiscal year 2022 to maximum returns of 22.56%, 25.21%, and 21.70%, respectively, in fiscal year 2021. For fiscal year 2024, the annualized total net returns of each Plan exceeded their respective actuarially assumed rates of return. Translating these returns into dollars, a beginning balance of \$1,000 in fiscal year 2015 would have a balance of \$1,805 for the KERS Nonhazardous Pension Plan in fiscal year 2024. The KERS Nonhazardous annualized benchmark would have a balance of \$1,797.

Pension Plan Growth											
As of June 30 (in Whole \$)											
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
KERS Nonhazardous Plan	2.38%	(0.68)%	12.09%	7.50%	5.73%	2.36%	22.56%	(5.19)%	6.96%	9.50%	
Performance BM	2.73%	0.71%	11.92%	6.84%	6.13%	1.18%	20.60%	(4.79)%	7.02%	10.11%	
Actuarial Assumed ROR	7.75%	7.50%	6.75%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	
Actual Performance	\$ 1,000	\$ 1,024	\$ 1,017	\$ 1,140	\$ 1,225	\$ 1,295	\$ 1,326	\$ 1,625	\$ 1,541	\$ 1,648	\$ 1,805
Performance Benchmark	1,000	1,024	1,035	1,158	1,237	1,313	1,328	1,602	1,525	1,632	1,797
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,236	\$ 1,301	\$ 1,370	\$ 1,442	\$ 1,517	\$ 1,597	\$ 1,681	\$ 1,769
KERS Hazardous Plan	1.87%	(0.24)%	13.44%	8.68%	5.68%	0.95%	25.21%	(5.95)%	9.46%	11.12%	
Performance BM	2.38%	(0.61)%	13.58%	7.04%	6.37%	0.16%	25.74%	(5.22)%	8.70%	12.40%	
Actuarial Assumed ROR	7.75%	7.50%	7.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
Actual Performance	\$ 1,000	\$ 1,019	\$ 1,016	\$ 1,153	\$ 1,253	\$ 1,324	\$ 1,337	\$ 1,674	\$ 1,574	\$ 1,723	\$ 1,915
Performance Benchmark	1,000	1,024	1,018	1,156	1,237	1,316	1,318	1,657	1,571	1,707	1,919
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,245	\$ 1,323	\$ 1,406	\$ 1,494	\$ 1,587	\$ 1,686	\$ 1,791	\$ 1,903
SPRS Plan	1.87%	(1.49)%	12.50%	7.65%	5.71%	2.21%	21.70%	(4.63)%	7.58%	9.62%	
Performance BM	2.35%	(0.31)%	12.61%	6.84%	6.13%	1.18%	20.60%	(4.79)%	7.02%	10.11%	
Actuarial Assumed ROR	7.75%	7.50%	6.75%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	
Actual Performance	\$ 1,000	\$ 1,019	\$ 1,004	\$ 1,129	\$ 1,215	\$ 1,285	\$ 1,313	\$ 1,598	\$ 1,524	\$ 1,640	\$ 1,797
Performance Benchmark	1,000	1,024	1,020	1,149	1,228	1,303	1,318	1,590	1,514	1,620	1,784
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,236	\$ 1,301	\$ 1,370	\$ 1,442	\$ 1,517	\$ 1,597	\$ 1,681	\$ 1,769

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The chart below shows theoretical annual returns for the Insurance portfolio since June 30, 2015, fiscal year returns have ranged from minimum returns of (6.15)%, (4.53)%, and (4.50)% in KERS Nonhazardous, KERS Hazardous, and SPRS, respectfully in fiscal year 2022 to maximum returns of 25.16%, 24.97%, and 25.34%, respectfully, in fiscal year 2021. As of June 30, 2024, the KERS Insurance portfolio earned 11.07% versus the KERS annualized benchmark return of 12.40%. The chart below indicates that with a beginning balance of \$1,000 in fiscal year 2015, the KERS Insurance portfolio would have a balance of \$1,883 compared to the actuarially assumed rate of return balance of \$1,905 and the annualized benchmark return would have a balance of \$1,939 at the end of the 10-year period.

Insurance Plan Growth											
As of June 30 (in Whole \$)											
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
KERS Nonhazardous Plan	1.44%	(0.50)%	13.78%	7.96%	4.95%	0.97%	25.16%	(6.15)%	9.87%	11.07%	
Performance BM	2.40%	(0.56)%	13.89%	7.04%	6.10%	0.35%	24.35%	(3.44)%	8.70%	12.40%	
Actuarial Assumed ROR	7.75%	7.50%	7.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.35%	
Actual Performance	\$ 1,000	\$ 1,014	\$ 1,009	\$ 1,148	\$ 1,240	\$ 1,301	\$ 1,314	\$ 1,644	\$ 1,543	\$ 1,696	\$ 1,883
Performance Benchmark	1,000	1,024	1,018	1,160	1,241	1,317	1,322	1,644	1,587	1,725	1,939
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,245	\$ 1,323	\$ 1,406	\$ 1,494	\$ 1,587	\$ 1,686	\$ 1,791	\$ 1,905
KERS Hazardous Plan	1.82%	(0.25)%	13.76%	8.88%	5.61%	0.20%	24.97%	(4.53)%	9.29%	11.15%	
Performance BM	2.56%	(0.38)%	13.73%	7.04%	6.25%	(0.40)%	24.76%	(4.85)%	8.70%	12.40%	
Actuarial Assumed ROR	7.75%	7.50%	7.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.35%	
Actual Performance	\$ 1,000	\$ 1,018	\$ 1,016	\$ 1,155	\$ 1,258	\$ 1,329	\$ 1,331	\$ 1,664	\$ 1,588	\$ 1,736	\$ 1,929
Performance Benchmark	1,000	1,026	1,022	1,162	1,244	1,322	1,316	1,642	1,562	1,698	1,909
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,245	\$ 1,323	\$ 1,406	\$ 1,494	\$ 1,587	\$ 1,686	\$ 1,791	\$ 1,905
SPRS Plan	1.90%	0.01%	13.70%	9.34%	5.74%	0.65%	25.34%	(4.50)%	9.46%	11.02%	
Performance BM	2.75%	(0.22)%	13.61%	7.04%	6.25%	(0.40)%	24.76%	(3.44)%	8.70%	12.40%	
Actuarial Assumed ROR	7.75%	7.50%	7.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.35%	
Actual Performance	\$ 1,000	\$ 1,019	\$ 1,019	\$ 1,159	\$ 1,267	\$ 1,340	\$ 1,348	\$ 1,690	\$ 1,614	\$ 1,767	\$ 1,961
Performance Benchmark	1,000	1,028	1,025	1,165	1,247	1,325	1,319	1,646	1,589	1,728	1,942
Actuarial Assumed ROR	\$ 1,000	\$ 1,078	\$ 1,158	\$ 1,245	\$ 1,323	\$ 1,406	\$ 1,494	\$ 1,587	\$ 1,686	\$ 1,791	\$ 1,905

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Public Equity

For the fiscal year, the KERS Pension Nonhazardous and Hazardous, and SPRS Pension Public Equity portfolios returned 17.22%, 17.05%, and 16.89%, respectively. The plans underperformed the benchmark return of 19.38%. The KERS Insurance Nonhazardous and Hazardous, and SPRS Insurance Public Equity portfolios also underperformed the benchmark, returning 16.95%, 16.94%, and 16.97%, respectively. Relative underperformance was primarily a result of positioning. Given the market fundamentals, the portfolios were allocated more heavily towards international markets during the beginning of the fiscal year than the benchmark. Further, during the period, markets were exceptionally narrow, especially within the domestic marketplace, creating a headwind for diversified investors.

During the 12 months ended June 30, 2024, the KERS Pension Nonhazardous and Hazardous U.S. equity portfolios returned 22.13% and 21.87%, versus the Russell 3000 return of 23.12%. The SPRS U.S. equity portion of the portfolio trailed the benchmark by 139bps, gaining 21.73%. During the same period, the KERS Nonhazardous, KERS Hazardous, and SPRS Insurance U.S. equity portfolios returned 21.86%, 21.83%, and 21.85%, respectively. Most individual investment mandates provided both solid absolute and relative performance. However, positioning slightly smaller in terms of market cap and anchoring more core in nature created headwinds for the portfolios, as both large caps and growth outperformed.

For the fiscal year, the KERS Pension Nonhazardous Non-U.S. equity mandates combined to underperform the MSCI ACWI Ex-US Index by 166bps (9.91% versus 11.57%), while the KERS Hazardous Non-U.S. equity portion of the portfolio returned 9.97%. The KERS Insurance Non-Hazardous and Hazardous international portfolios returned 9.97% and 9.87%, respectively. Both the SPRS Pension and Insurance Non-U.S. equity portfolios returned 9.83%, underperforming the benchmark by 174bps. Within the international book, individual strategies struggled in relative terms. The correlation breakdown between earnings and stock prices made it difficult for active managers to distinguish themselves from the benchmark. Also, allocation created difficulties as growth style biased strategies faced a headwind, the opposite of their domestic counterparts.

Return on Public Equity As of June 30, 2024

	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	4/1/1984								
KERS Nonhazardous		17.22%	19.38%	4.23%	4.91%	10.23%	10.39%	8.19%	8.14%
KERS Hazardous		17.05%	19.38%	4.21%	4.91%	10.19%	10.39%	8.05%	8.14%
SPRS		16.89%	19.38%	4.17%	4.91%	10.21%	10.39%	7.90%	8.14%
Insurance	7/1/1992								
KERS Nonhazardous		16.95%	19.38%	4.22%	4.90%	10.23%	10.36%	8.24%	8.14%
KERS Hazardous		16.94%	19.38%	4.16%	4.90%	10.19%	10.36%	8.16%	8.14%
SPRS		16.97%	19.38%	4.09%	4.90%	10.16%	10.36%	8.14%	8.14%

Note: Current Pension and Insurance benchmarks are MSCI ACWI. Plan returns are reported gross of fees.

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Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Nonhazardous Pension		
Company	Shares	Fair Value
MSCI WORLD EX-US INDEX FUND A	4,399,032	\$128,341
MICROSOFT CORP	103,799	46,393
NVIDIA CORP	352,207	43,512
APPLE INC	205,488	43,280
ISHARES CORE S&P MIDCAP ETF	560,980	32,828
ALPHABET INC	159,877	29,198
AMAZON.COM INC	138,436	26,753
LAZARD EMERG MKT EQY-INST	1,138,900	21,172
META PLATFORMS INC	33,374	16,828
BERKSHIRE HATHAWAY INC	30,226	12,296
Total	7,122,319	\$400,601

Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Nonhazardous Insurance		
Company	Shares	Fair Value
MSCI WORLD EX-US INDEX FUND B	1,432,874	\$45,957
MICROSOFT CORP	44,820	20,032
ISHARES CORE S&P MIDCAP ETF	340,602	19,932
NVIDIA CORP	148,339	18,326
APPLE INC	86,923	18,308
LAZARD EMERG MKT EQY-INST	674,625	12,541
AMAZON.COM INC	55,226	10,673
META PLATFORMS INC	13,215	6,664
ALPHABET INC	35,423	6,452
ALPHABET INC	29,469	5,405
Total	2,861,516	\$164,290

Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Hazardous Pension		
Company	Shares	Fair Value
MICROSOFT CORP	27,696	\$12,379
ISHARES CORE S&P MIDCAP ETF	211,034	12,350
NVIDIA CORP	91,664	11,324
APPLE INC	53,713	11,313
LAZARD EMERG MKT EQY-INST	374,138	6,955
AMAZON.COM INC	34,126	6,595
META PLATFORMS INC	8,166	4,118
ALPHABET INC	21,889	3,987
ALPHABET INC	18,211	3,340
BERKSHIRE HATHAWAY INC	6,746	2,744
Total	847,383	\$75,105

Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Hazardous Insurance		
Company	Shares	Fair Value
ISHARES CORE S&P MIDCAP ETF	140,725	\$8,235
MICROSOFT CORP	17,842	7,974
NVIDIA CORP	59,051	7,295
APPLE INC	34,602	7,288
LAZARD EMERG MKT EQY-INST	251,868	4,682
AMAZON.COM INC	21,984	4,248
META PLATFORMS INC	5,261	2,653
ALPHABET INC	14,101	2,569
ALPHABET INC	11,732	2,152
BERKSHIRE HATHAWAY INC	4,346	1,768
Total	561,512	\$48,864

Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
SPRS Pension		
Company	Shares	Fair Value
ISHARES CORE S&P MIDCAP ETF	110,556	\$6,470
MICROSOFT CORP	12,724	5,687
NVIDIA CORP	42,112	5,202
APPLE INC	24,676	5,197
LAZARD EMERG MKT EQY-INST	191,090	3,552
AMAZON.COM INC	15,678	3,030
META PLATFORMS INC	3,752	1,892
ALPHABET INC	10,056	1,832
ALPHABET INC	8,366	1,534
BERKSHIRE HATHAWAY INC	3,099	1,261
Total	422,109	\$35,657

Top 10 Public Equity Holdings As of June 30, 2024 (\$ in Thousands)		
SPRS Insurance		
Company	Shares	Fair Value
ISHARES CORE S&P MIDCAP ETF	56,965	\$3,334
MICROSOFT CORP	7,149	3,195
NVIDIA CORP	23,660	2,923
APPLE INC	13,864	2,920
LAZARD EMERG MKT EQY-INST	105,578	1,963
AMAZON.COM INC	8,808	1,702
META PLATFORMS INC	2,108	1,063
ALPHABET INC	5,650	1,029
ALPHABET INC	4,700	862
BERKSHIRE HATHAWAY INC	1,741	708
Total	230,223	\$19,699

A complete list of holdings is located at <https://kyret.ky.gov/Investments/Investments-Library/Pages/Investments-Holdings.aspx>.

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Core Fixed Income

For the fiscal year, the Pension Core Fixed Income KERS Nonhazardous, Hazardous and SPRS portfolios returned 5.14%, 5.00% and 5.11%, respectively, outperforming the Bloomberg U.S. Aggregate benchmark with a return of 2.63%. For the Insurance Core Fixed Income, KERS Nonhazardous, Hazardous and SPRS portfolios returned 4.86%, 4.99% and 4.99%, respectively, also outperforming the benchmark. Relative outperformance was driven by the shorter duration profile and tactical allocation to front end investment grade credit as rates rose and credit spreads tightened during the first six months of the fiscal year.

Return on Core Fixed Income									
As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	7/1/2013								
KERS Nonhazardous		5.14%	2.63%	0.24%	-3.02%	1.93%	-0.23%	N/A	1.35
KERS Hazardous		5.00%	2.63%	0.21%	-3.02%	1.89%	-0.23%	N/A	1.35
SPRS		5.11%	2.63%	0.30%	-3.02%	1.96%	-0.23%	N/A	1.35
Insurance	7/1/2013								
KERS Nonhazardous		4.86%	2.63%	0.05%	-3.02%	1.71%	-0.23%	N/A	1.35
KERS Hazardous		4.99%	2.63%	0.09%	-3.02%	1.71%	-0.23%	N/A	1.35
SPRS		4.99%	2.63%	0.09%	-3.02%	1.72%	-0.23%	N/A	1.35

Note: Current Pension and Insurance benchmark is Bloomberg US Aggregate. Current Pension and Insurance benchmark is Bloomberg US Aggregate.

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Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Nonhazardous Pension		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	3,683,180	\$357,526
U S TREASURY NOTE	186,834,016	182,054
U S TREASURY BOND	84,745,231	75,981
JPMORGAN CHASE & CO	6,505,064	6,282
FHLMC POOL #SD-5297	4,584,404	4,657
NEXTERA ENERGY CAPITAL HOLDING	4,480,391	4,490
COMMIT TO PUR GNMA II JUMBOS	4,532,116	4,279
FHLMC POOL #SI-2096	5,004,519	4,124
U S TREASURY BILL	4,051,810	4,050
SOUTHERN CALIFORNIA EDISON CO	3,940,149	3,757
Total	308,360,880	\$647,200

Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Nonhazardous Insurance		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	612,711	\$59,476
U S TREASURY NOTE	2,194,682	1,942
U S TREASURY NOTE	1,357,560	1,386
U S TREASURY BOND	1,275,827	1,286
U S TREASURY NOTE	1,286,072	1,284
U S TREASURY NOTE	1,408,788	1,270
U S TREASURY BOND	1,232,049	1,200
U S TREASURY NOTE	1,155,206	1,162
U S TREASURY NOTE	1,124,469	1,133
U S TREASURY NOTE	1,193,395	1,101
Total	12,840,759	\$71,240

Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Hazardous Pension		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	387,277	\$37,593
U S TREASURY BOND	931,497	939
U S TREASURY NOTE	898,735	904
U S TREASURY NOTE	838,305	856
U S TREASURY BOND	842,966	821
U S TREASURY NOTE	738,119	746
U S TREASURY NOTE	732,810	732
U S TREASURY NOTE	686,148	690
U S TREASURY NOTE	699,486	631
U S TREASURY NOTE	669,487	617
Total	7,424,830	\$44,529

Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
KERS Hazardous Insurance		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	244,965	\$23,779
U S TREASURY NOTE	877,446	775
U S TREASURY NOTE	542,760	552
U S TREASURY NOTE	514,178	513
U S TREASURY BOND	510,082	511
U S TREASURY NOTE	563,241	502
U S TREASURY BOND	492,580	472
U S TREASURY NOTE	461,858	463
U S TREASURY NOTE	449,569	445
U S TREASURY NOTE	477,126	439
Total	5,133,805	\$28,451

Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
SPRS Pension		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	558,856	\$54,248
U S TREASURY BOND	1,344,189	1,355
U S TREASURY NOTE	1,296,912	1,305
U S TREASURY NOTE	1,209,708	1,236
U S TREASURY BOND	1,216,435	1,185
U S TREASURY NOTE	1,065,136	1,077
U S TREASURY NOTE	1,057,475	1,056
U S TREASURY NOTE	990,140	995
U S TREASURY NOTE	1,009,388	910
U S TREASURY NOTE	966,097	891
Total	10,714,336	\$64,258

Top 10 Core Fixed Income Holdings As of June 30, 2024 (\$ in Thousands)		
SPRS Insurance		
Issuer	Shares	Fair Value
ISHARES CORE U.S. AGGREGATE	96,406	\$9,358
U S TREASURY NOTE	345,318	306
U S TREASURY NOTE	213,602	218
U S TREASURY BOND	200,742	202
U S TREASURY NOTE	202,354	202
U S TREASURY NOTE	221,663	200
U S TREASURY BOND	193,854	189
U S TREASURY NOTE	181,764	183
U S TREASURY NOTE	176,927	178
U S TREASURY NOTE	187,772	173
Total	2,020,402	\$11,209

Note: A complete list of holdings is located at <https://kyret.ky.gov/Investments/Investments-Library/Pages/Investments-Holdings.aspx>.

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Specialty Credit

For the fiscal year, the Pension Specialty Credit KERS Nonhazardous, Hazardous and SPRS portfolios returned 12.98%, 12.96% and 12.83%, respectively, outperforming the custom benchmark which returned 10.81%. For the Insurance Specialty Credit, KERS Nonhazardous, Hazardous and SPRS portfolios returned 12.89%, 14.37% and 13.60%, respectively, also outperforming the benchmark. Outperformance was a result of credit spreads continuing to tighten as well as an increase in interest rates as the majority of holdings in the private sector is floating rate.

Return on Specialty Credit									
As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	7/1/2017								
KERS Nonhazardous		12.98%	10.81%	7.38%	3.92%	7.74%	4.76%	6.40%	N/A
KERS Hazardous		12.96%	10.81%	7.70%	3.92%	7.64%	4.76%	6.31%	N/A
SPRS		12.83%	10.81%	7.06%	3.92%	7.26%	4.76%	6.17%	N/A
Insurance	7/1/2017								
KERS Nonhazardous		12.89%	10.81%	7.77%	3.92%	7.47%	4.76%	6.21%	N/A
KERS Hazardous		14.37%	10.81%	8.90%	3.92%	8.26%	4.76%	6.61%	N/A
SPRS		13.60%	10.81%	8.32%	3.92%	7.91%	4.76%	6.43%	N/A

Note: Current Pension and Insurance benchmark is 50% Bloomberg US Corporate High Yield/50% Morningstar LSTA Leveraged Loan. Plan returns are reported gross of fees.

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Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
KERS Nonhazardous Pension	
Issuer	Fair Value
CCO HOLDINGS LLC / CCO HO 144A	\$3,450
CAESARS ENTERTAINMENT INC 144A	3,388
TENET HEALTHCARE CORP	2,749
TRANSDIGM INC 144A	2,672
CLOUD SOFTWARE GROUP INC 144A	2,645
ALLIANT HOLDINGS INTERMED 144A	2,535
OLYMPUS WATER US HOLDING 144A	2,113
CLEAR CHANNEL OUTDOOR HOL 144A	1,921
EQM MIDSTREAM PARTNERS LP 144A	1,914
VISTRA OPERATIONS CO LLC 144A	1,884
Total	\$25,271

Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
KERS Nonhazardous Insurance	
Issuer	Fair Value
CLOUD SOFTWARE GROUP INC 144A	\$610
SPDR BLOOMBERG SHORT TERM HI	556
MEDLINE BORROWER LP 144A	521
ASURION 12/20 B8 COV-LITE TL	504
TRANSDIGM INC 144A	471
INTERNATIONAL GAME TECHNO 144A	468
ARDAGH METAL PACKAGING FI 144A	467
CLEARWAY ENERGY OPERATING 144A	466
LADDER CAPITAL FINANCE HO 144A	454
VISTRA OPERATIONS CO LLC 144A	448
Total	\$4,965

Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
KERS Hazardous Pension	
Issuer	Fair Value
SPDR BLOOMBERG SHORT TERM HI	\$443
CLOUD SOFTWARE GROUP INC 144A	338
MEDLINE BORROWER LP 144A	290
ARAMARK 3/24 B8 TL	289
ARDAGH METAL PACKAGING FI 144A	255
CLEARWAY ENERGY OPERATING 144A	255
HUBBAY MINERALS INC 144A	253
TRANSDIGM INC 144A	249
AECOM 4/24 TLB	246
SELECT MEDICAL CORP 144A	237
Total	\$2,855

Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
KERS Hazardous Insurance	
Issuer	Fair Value
CLOUD SOFTWARE GROUP INC 144A	\$149
MEDLINE BORROWER LP 144A	129
SPDR BLOOMBERG SHORT TERM HI	117
ARDAGH METAL PACKAGING FI 144A	116
TRANSDIGM INC 144A	115
CLEARWAY ENERGY OPERATING 144A	115
LADDER CAPITAL FINANCE HO 144A	114
VISTRA OPERATIONS CO LLC 144A	110
SELECT MEDICAL CORP 144A	108
HUBBAY MINERALS INC 144A	108
Total	\$1,181

Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
SPRS Pension	
Issuer	Fair Value
CLOUD SOFTWARE GROUP INC 144A	\$248
SPDR BLOOMBERG SHORT TERM HI	235
MEDLINE BORROWER LP 144A	211
CLEARWAY ENERGY OPERATING 144A	186
ARDAGH METAL PACKAGING FI 144A	184
HUBBAY MINERALS INC 144A	184
TRANSDIGM INC 144A	183
SELECT MEDICAL CORP 144A	174
ZOOMINFO TECHNOLOGIES LLC 144A	170
DISH NETWORK CORP 144A	169
Total	\$1,944

Top 10 Specialty Credit Holdings As of June 30, 2024 (\$ in Thousands)	
SPRS Insurance	
Issuer	Fair Value
ARAMARK 3/24 B8 TL	\$84
AECOM 4/24 TLB	67
BURGER KING/RESTAURANT BRANDS	66
CLOUD SOFTWARE GROUP INC 144A	62
HERTZ 6/21 TLB	55
MEDLINE INDUSTRIES/MOZART 6/24	54
MEDLINE BORROWER LP 144A	53
HCA INC	50
SPDR BLOOMBERG SHORT TERM HI	49
U S TREASURY NOTE	48
Total	\$588

Note: A complete list of holdings is located at <https://kyret.ky.gov/Investments/Investments-Library/Pages/Investments-Holdings.aspx>.

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Private Equity

For the fiscal year, the Pension Private Equity portfolio posted gross returns ranging from 2.06% for KERS Nonhazardous to 7.83% for SPRS, while the Insurance Private Equity portfolio gross returns ranged from 7.09% for SPRS to 8.45% for KERS Nonhazardous. The comparative benchmark for all plans was 3.77% for the fiscal year. The Investment Committee acknowledges the difficulty in assessing short-term performance for Private Equity. Performance is typically based on quarterly estimates of each underlying business's value and managers are often slow to mark valuations up or down. This can distort relative performance against a public market benchmark during periods when the index moves dramatically. A better indication of program performance would be the mid- to longer-term time periods because more underlying company holdings have likely transacted at a specific (rather than estimated) valuation. The below chart provides the gross returns for the longer term time periods.

Return on Private Equity As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	7/1/2002								
KERS Nonhazardous		2.06%	3.77%	1.34%	7.82%	11.56%	12.28%	10.17%	15.46%
KERS Hazardous		5.68%	3.77%	11.23%	7.82%	15.08%	12.28%	12.99%	15.46%
SPRS		7.83%	3.77%	7.92%	7.82%	15.34%	12.28%	12.30%	15.46%
Insurance	7/1/2002								
KERS Nonhazardous		8.45%	3.77%	18.09%	7.82%	17.41%	12.28%	13.65%	15.46%
KERS Hazardous		7.63%	3.77%	14.34%	7.82%	14.69%	12.28%	13.88%	15.46%
SPRS		7.09%	3.77%	14.59%	7.82%	15.31%	12.28%	14.16%	15.46%

Note: Current Pension and Insurance benchmark is Russell 3000 + 3%, lagged 1 quarter. Current Pension and Insurance benchmark is Russell 3000 + 3%, lagged 1 quarter.

Real Estate

For the fiscal year, the Pension and Insurance Real Estate portfolios saw gross returns ranging from (9.80)% in the KERS Hazardous insurance plan to (8.40)% in the KERS Nonhazardous pension plan, exceeding the benchmark return of (12.0)% by all plans.

Return on Real Estate As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	7/1/1984								
KERS Nonhazardous		(8.40)%	(12.00)%	5.75%	2.47%	7.51%	2.56%	7.59%	5.82%
KERS Hazardous		(9.24)%	(12.00)%	4.85%	2.47%	6.66%	2.56%	7.77%	5.82%
SPRS		(9.07)%	(12.00)%	5.01%	2.47%	6.79%	2.56%	7.75%	5.82%
Insurance	5/1/2009								
KERS Nonhazardous		(8.61)%	(12.00)%	4.57%	2.47%	6.56%	2.56%	7.72%	5.82%
KERS Hazardous		(9.80)%	(12.00)%	4.03%	2.47%	6.22%	2.56%	7.55%	5.82%
SPRS		(9.78)%	(12.00)%	4.05%	2.47%	6.24%	2.56%	7.55%	5.82%

Note: Current Pension and Insurance benchmark is the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity (NCREIFODCE) Index, lagged 1 quarter. Plan returns are reported gross of fees.

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Real Return

For the fiscal year, the Pension and Insurance Real Return portfolio returns ranged from 13.71% (gross) in the SPRS insurance plan to 17.56% (gross) in the KERS Nonhazardous pension plan. All plan returns exceeded the benchmark return of 6.27%. The below chart provides returns for longer time periods for each plan.

Return on Real Return As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	7/1/2011								
KERS Nonhazardous		17.56%	6.27%	11.70%	7.11%	10.36%	6.70%	6.17%	4.12%
KERS Hazardous		15.72%	6.27%	10.45%	7.11%	9.00%	6.70%	5.58%	4.12%
SPRS		14.54%	6.27%	10.86%	7.11%	9.16%	6.70%	5.58%	4.12%
Insurance	7/1/2011								
KERS Nonhazardous		14.52%	6.27%	10.29%	6.77%	9.61%	6.72%	5.75%	4.18%
KERS Hazardous		14.04%	6.27%	8.92%	6.77%	8.30%	6.72%	5.12%	4.18%
SPRS		13.71%	6.27%	9.02%	6.77%	8.26%	6.72%	5.11%	4.18%

Note: Current Pension and Insurance benchmark is US CPI + 3%. Plan returns are reported gross of fees.

Cash

For the fiscal year, the Pension Cash KERS Nonhazardous, Hazardous and SPRS portfolios each returned 5.33% underperforming the FTSE 3-Month US Treasury Bill benchmark which returned 5.64%. For the Insurance Cash, KERS Nonhazardous, Hazardous and SPRS portfolios each returned 5.35% also underperforming the benchmark by 0.29%.

As of June 30, 2024									
	Inception Date	1 Year		3 Years		5 Years		10 Years	
		Plan	Index	Plan	Index	Plan	Index	Plan	Index
Pension	1/1/1988								
KERS Nonhazardous		5.33%	5.64%	2.96%	3.17%	2.18%	2.22%	1.66%	1.53%
KERS Hazardous		5.33%	5.64%	2.96%	3.17%	2.18%	2.22%	1.66%	1.53%
SPRS		5.33%	5.64%	2.96%	3.17%	2.18%	2.22%	1.66%	1.53%
Insurance	7/1/1992								
KERS Nonhazardous		5.35%	5.64%	2.96%	3.17%	2.08%	2.22%	1.54%	1.53%
KERS Hazardous		5.35%	5.64%	2.96%	3.17%	2.08%	2.22%	1.54%	1.53%
SPRS		5.35%	5.64%	2.96%	3.17%	2.08%	2.22%	1.54%	1.53%

Note: Current Pension and Insurance benchmarks are Global Equity: MSCI ACWI; US Equity: Russell 3000; Non-US Equity: MSCI ACWI Ex-US. Plan returns are reported gross of fees.

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The following schedules contain information on the assets under management for each firm KRS employs and assets managed by Investment Staff, external investment-related expenses, commissions paid, and portfolio summaries for each of the Pension and Insurance Plans for the fiscal year ended June 30, 2024.

Investment Managers & Assets Under Management by Plan and Asset Class							
As of June 30, 2024 (\$ in Thousands)							
Advisor/Asset Class	Pension			Insurance			KRS Total
	KRS Non-Hazardous	KRS Hazardous	SPRS	KRS Non-Hazardous	KRS Hazardous	SPRS	
Core Fixed Income	\$1,285,074	\$151,279	\$193,483	\$235,110	\$89,150	\$36,610	\$1,990,706
Lord Abbett & Co.	550	58	84	119	48	19	878
Loomis, Sayles & Company Core	357,744	37,616	54,281	60,389	24,144	9,502	543,676
NISA Investment Advisors	392,157	41,234	59,503	71,908	28,749	11,314	604,865
Internally Managed by KPPA	534,623	72,371	79,615	102,694	36,209	15,775	841,287
Private Equity	\$181,975	\$63,224	\$30,418	\$107,909	\$45,408	\$20,455	\$449,389
Ares	-	1,225	386	-	784	488	2,883
Bay Hills	55,121	9,981	4,577	3,818	4,944	2,754	81,195
Black Diamond	-	3,609	1,138	-	3,006	1,871	9,624
Blackstone	7	845	-	1	860	410	2,123
Crestview	9,194	2,989	1,181	637	1,497	878	16,376
CVC	-	1,359	429	-	855	532	3,175
DAG Ventures	9,096	1,151	599	630	302	134	11,912
Harvest Partners	-	1,811	36	4,690	2,990	1,189	10,716
H.I.G.	1,004	916	197	69	784	411	3,381
Horsley Bridge	28,443	3,597	1,872	1,970	938	417	37,237
Kayne Anderson	-	1,721	-	5,136	3,133	1,214	11,204
Keyhaven	3,023	1,285	483	209	851	512	6,363
Leonard Green	304	2,971	20	3,442	4,483	1,949	13,169
Levine Leichtman	-	2,751	36	7,863	4,869	1,903	17,422
Middle Ground	17,354	7,711	1,997	24,967	5,257	2,069	59,355
New State	1,508	434	174	647	305	119	3,187
Strategic Value Partners	10,414	5,687	1,198	13,327	4,609	1,411	36,646
Triton	-	1,019	321	-	652	406	2,398
Vista	762	2,747	50	4,741	4,289	1,788	14,377
Internally Managed by KPPA	45,745	9,415	15,724	35,762	-	-	106,646
Public Equity	\$1,365,158	\$437,656	\$208,715	\$718,838	\$288,762	\$116,124	\$3,135,253
American Century Investments	77,532	25,470	13,009	45,712	17,066	7,154	185,943
Axiom	18,586	6,106	3,119	11,138	4,158	1,743	44,850
BlackRock	128,328	38,638	13,612	45,951	24,843	8,513	259,885
Franklin Templeton	61,516	20,209	10,322	36,708	13,705	5,745	148,205
JP Morgan Emerging Markets	25,040	8,226	4,201	14,886	5,558	2,330	60,241
Lazard Asset Management	91,631	30,102	15,374	54,306	20,275	8,499	220,187
LSV Asset Management	95,600	31,405	16,040	56,773	21,196	8,885	229,899
Next Century	18,583	6,991	3,662	11,187	4,622	1,871	46,916
Northern Trust	47,098	17,717	9,282	28,133	11,624	4,705	118,559
Pzena Emerging Markets	31,553	10,365	5,294	18,645	6,961	2,918	75,736
River Road Asset Management	47,420	17,839	9,345	30,251	12,499	5,059	122,413
Westfield Capital	60,761	22,857	11,975	39,560	16,345	6,616	158,114
Internally Managed by KPPA	661,510	201,731	93,480	325,588	129,910	52,086	1,464,305
Real Estate	\$218,209	\$58,871	\$35,140	\$96,043	\$42,227	\$16,125	\$466,615
Barings Real Estate	14,200	3,884	1,642	4,626	3,460	1,323	29,135

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Fundamental Partners	9,753	2,668	1,128	3,177	2,376	908	20,010
Harrison Street	67,681	12,037	16,927	35,634	11,624	4,452	148,355
Lubert-Adler	1,607	1,206	461	1,321	989	375	5,959
Mesa West	8,158	3,821	1,240	820	613	234	14,886
Patron	2,774	759	321	5,990	5,033	1,891	16,768
Prologis	53,416	14,612	6,176	16,059	12,010	4,591	106,864
Rubenstein	0	323	116	339	254	96	1,128
Stockbridge	24,959	4,969	2,407	7,728	5,451	2,089	47,603
Walton Street	4,206	1,221	413	632	417	166	7,055
Internally Managed by KPPA	31,455	13,371	4,309	19,717	-	-	68,852
Real Return	\$351,337	\$79,593	\$56,449	\$135,281	\$45,320	\$18,428	\$686,408
AMERRA	0	2,964	1,500	3,144	2,549	958	11,115
Arctos	13,082	335	3,354	7,715	336	335	25,157
BTG Pactual	0	1,426	660	1,657	1,123	426	5,292
IFM	12,201	3,758	1,457	5,338	3,003	1,012	26,769
Maritime Partners	29,823	3,242	5,835	12,893	2,482	1,297	55,572
Prisma	18,812	4,908	2,037	6,740	4,475	1,678	38,650
Saba Capital	47,949	7,992	7,991	9,590	5,328	1,066	79,916
Tortoise	57,403	14,378	5,741	16,969	7,760	3,029	105,280
Internally Managed by KPPA	172,067	40,590	27,874	71,235	18,264	8,627	338,657
Specialty Credit	\$792,754	\$231,540	\$125,292	\$379,231	\$152,514	\$61,910	\$1,743,241
Adams Street	54,925	16,056	6,699	22,765	11,561	4,557	116,563
Arrowmark	101,710	31,533	12,563	50,213	31,215	11,527	238,761
Blue Torch	28,404	8,534	3,521	12,015	6,316	2,447	61,237
Benefit Street Partners	18,726	6,726	1,739	10,461	6,317	2,274	46,243
CapitalSpring	16,062	5,769	1,491	7,884	4,761	1,714	37,681
Cerberus	29,513	10,600	2,740	14,485	8,747	3,149	69,234
Columbia Threadneedle Investments	170,117	48,243	34,585	85,062	21,323	8,672	368,002
Manulife Investment Management	38,825	19,021	7,965	24,032	1,035	5,447	96,325
Marathon Asset Management	139,745	23,610	12,617	37,253	22,291	7,696	243,212
Shenkman Capital Management	120,702	37,346	19,855	74,034	15,504	6,571	274,012
Waterfall Asset Management	51,012	15,836	19,381	28,623	15,954	5,159	135,965
White Oak Global Advisors	23,013	8,266	2,136	12,404	7,490	2,697	56,006
Other	\$13,894	\$3,754	\$1,305	\$5,288	\$4,053	\$1,504	\$29,798
Total Assets Under Management	\$4,208,401	\$1,025,917	\$650,802	\$1,677,700	\$667,434	\$271,156	\$8,501,410

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For the fiscal year ended June 30, 2024 (\$ in Thousands)

KERS Nonhazardous	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$2,137	\$387	\$625	\$3,881	\$-	\$873	\$1,417	\$9,320
Performance/Incentive Fees	-	492	34	6,526	-	(66)	(979)	6,007
Securities Lending Fees	27	-	25	17	-	6	-	75
Securities Lending Fee Rebate	1,804	-	952	786	-	191	-	3,733
Miscellaneous Fees & Expenses	40	506	52	7,233	-	392	854	9,077
Administration	-	-	-	-	361	-	-	361
Consultant Fees	-	-	-	-	238	-	-	238
Custodial Fees	-	-	-	-	397	-	-	397
	\$4,008	\$1,385	\$1,688	\$18,443	\$996	\$1,396	\$1,292	\$29,208

KERS Hazardous	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$731	\$306	\$83	\$1,110	\$-	\$202	\$380	\$2,812
Performance/Incentive Fees	-	191	4	1,807	-	(9)	(269)	1,724
Securities Lending Fees	9	-	3	5	-	2	-	19
Securities Lending Fee Rebate	636	-	117	239	-	48	-	1,040
Miscellaneous	13	240	6	2,174	-	65	238	2,736
Administration	-	-	-	-	93	-	-	93
Consultant Fees	-	-	-	-	59	-	-	59
Custodial Fees	-	-	-	-	97	-	-	97
	\$1,389	\$737	\$213	\$5,335	\$249	\$308	\$348	\$8,580

SPRS	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$382	\$68	\$101	\$525	\$-	\$209	\$223	\$1,508
Performance/Incentive Fees	-	26	5	739	-	(36)	(114)	620
Securities Lending Fees	5	-	4	3	-	1	-	13
Securities Lending Fee Rebate	329	-	151	159	-	19	-	658
Miscellaneous Fees & Expenses	6	68	8	834	-	80	100	1,096
Administration	-	-	-	-	(38)	-	-	(38)
Consultant Fees	-	-	-	-	38	-	-	38
Custodial Fees	-	-	-	-	62	-	-	62
	\$722	\$162	\$269	\$2,260	\$62	\$273	\$209	\$3,957

NOTE: Miscellaneous expenses include Partnership Expenses, Commissions on Future Contracts, Fee for Long balance, and etc. The Governmental Accounting Standards Board recognizes that it may not be possible or cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses of the Plan. KRS has displayed all investment related fees and expenses identifiable and captured by our custodial bank, BNY Mellon and Investment staff.

DRAFT - KRS 2024 ACFR - DRAFT**External Investment Expenses - Insurance Asset Class/Type Breakdown**

For the fiscal year ended June 30, 2024 (\$ in Thousands)

KERS Nonhazardous	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$1,286	\$478	\$132	\$1,734	\$-	\$505	\$580	\$4,715
Performance/Incentive Fees	-	448	8	2,753	-	(53)	(296)	2,860
Securities Lending Fees	14	-	6	10	-	2	-	32
Securities Lending Fee Rebate	678	-	189	440	-	63	-	1,370
Miscellaneous Fees & Expenses	21	438	11	3,197	-	192	282	4,141
Administration	-	-	-	-	57	-	-	57
Consultant Fees	-	-	-	-	96	-	-	96
Custodial Fees	-	-	-	-	234	-	-	234
	\$1,999	\$1,364	\$346	\$8,134	\$387	\$709	\$566	\$13,505

KERS Hazardous	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$501	\$314	\$54	\$828	\$-	\$155	\$356	\$2,208
Performance/Incentive Fees	-	349	3	1,641	-	(6)	(221)	1,766
Securities Lending Fees	6	-	2	2	-	1	-	11
Securities Lending Fee Rebate	275	-	76	96	-	29	-	476
Miscellaneous Fees & Expenses	8	210	4	1,612	-	53	211	2,098
Administration	-	-	-	-	133	-	-	133
Consultant Fees	-	-	-	-	40	-	-	40
Custodial Fees	-	-	-	-	94	-	-	94
	\$790	\$873	\$139	\$4,179	\$267	\$232	\$346	\$6,826

SPRS	Public Equity	Private Equity	Fixed Income	Specialty Credit	Cash	Real Return	Real Estate	Total
Investment Advisory Fees	\$207	\$135	\$21	\$313	\$-	\$66	\$135	\$877
Performance/Incentive Fees	-	109	1	595	-	(5)	(84)	616
Securities Lending Fees	3	-	1	1	-	0	-	5
Securities Lending Fee Rebate	112	-	30	56	-	11	-	209
Miscellaneous	3	99	2	631	-	24	81	840
Administration	-	-	-	-	47	-	-	47
Consultant Fees	-	-	-	-	16	-	-	16
Custodial Fees	-	-	-	-	38	-	-	38
	\$325	\$343	\$55	\$1,596	\$101	\$96	\$132	\$2,648

NOTE: Miscellaneous expenses include Partnership Expenses, Commissions on Future Contracts, Fee for Long balance, and etc. The Governmental Accounting Standards Board recognizes that it may not be possible or cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses of the Plan. KRS has displayed all investment related fees and expenses identifiable and captured by our custodial bank, BNY Mellon and Investment Staff.

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External Expenses						
For the fiscal year ended June 30, 2024 (\$ in Thousands)						
Expense	KERS Nonhazardous		KERS Hazardous		SPRS	
	Fees Paid	Share of Total	Fees Paid	Share of Total	Fees Paid	Share of Total
Portfolio Management						
Pension Plans	\$24,765	57.98%	\$7,365	47.81%	\$3,186	48.24%
Insurance Plans	11,773	27.56%	6,205	40.28%	2,380	36.03%
Securities Lending						
Pension Plans	3,808	8.92%	1,059	6.87%	671	10.16%
Insurance Plans	1,402	3.28%	487	3.16%	214	3.24%
Custody						
Pension Plans	397	0.93%	97	0.63%	62	0.94%
Insurance Plans	234	0.55%	94	0.61%	38	0.58%
Consultant						
Pension Plans	238	0.56%	59	0.38%	38	0.57%
Insurance Plans	96	0.22%	40	0.26%	16	0.24%
Total Pension Plans	29,208	68.38%	8,580	55.69%	3,957	59.91%
Total Insurance Plans	13,505	31.62%	6,826	44.31%	2,648	40.09%
Total Expenses	\$42,713	100.00%	\$15,406	100.00%	\$6,605	100.00%

Schedule of Commissions Paid (in whole \$)			
For the fiscal year ended June 30, 2024			
KERS Nonhazardous			
Assets	Total Shares	Commissions Paid	Price per Share
U.S. Equities	7,722,670	\$146,262	0.0189
Non U.S. Equities	65,155,947	\$312,594	0.0048
Total	72,878,617	\$458,857	0.0063
KERS Hazardous			
Assets	Total Shares	Commissions Paid	Price per Share
U.S. Equities	2,841,637	\$52,825	0.0186
Non U.S. Equities	22,257,495	\$107,030	0.0048
Total	25,099,133	\$159,855	0.0064
SPRS			
Assets	Total Shares	Commissions Paid	Price per Share
U.S. Equities	1,335,111	\$25,991	0.0195
Non U.S. Equities	10,672,576	\$51,151	0.0048
Total	12,007,687	\$77,142	0.0064

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As of June 30, 2024 (\$ in Thousands)

Pension Plans	KERS Nonhazardous		KERS Hazardous		SPRS		Total	
	Fair Value	% of Total FV	Fair Value	% of Total FV	Fair Value	% of Total FV	Fair Value	% of Total FV
Equity								
Public Equity	\$1,365,159	32.44%	437,656	42.66%	208,715	32.07%	\$2,011,530	34.18%
Private Equity	195,286	4.64%	66,130	6.44%	31,552	4.85%	\$292,968	4.98%
Fixed Income								
Core Fixed Income	1,108,019	26.33%	116,505	11.36%	168,122	25.83%	\$1,392,646	23.66%
Specialty Credit	792,754	18.84%	231,541	22.57%	125,292	19.25%	\$1,149,587	19.53%
Cash	176,951	4.20%	34,749	3.39%	25,345	3.90%	\$237,045	4.03%
Inflation Protected								
Real Estate	218,209	5.19%	59,021	5.75%	35,194	5.41%	\$312,424	5.31%
Real Return	352,023	8.36%	80,315	7.83%	56,582	8.69%	\$488,920	8.31%
TOTAL PORTFOLIO	\$4,208,401		\$1,025,917		\$650,802		\$5,885,120	

Insurance Plans	KERS Nonhazardous		KERS Hazardous		SPRS		Total	
	Fair Value	% of Total FV	Fair Value	% of Total FV	Fair Value	% of Total FV	Fair Value	% of Total FV
Equity								
Public Equity	\$718,838	42.85%	\$288,762	43.27%	\$116,124	42.83%	\$1,123,724	42.95%
Private Equity	\$111,770	6.66%	\$48,804	7.31%	\$21,728	8.01%	\$182,302	6.97%
Fixed Income								
Core Fixed Income	\$191,909	11.44%	\$76,727	11.50%	\$30,196	11.14%	\$298,832	11.42%
Specialty Credit	\$379,231	22.60%	\$152,514	22.85%	\$61,910	22.83%	\$593,655	22.69%
Cash	\$43,201	2.58%	\$12,423	1.86%	\$6,414	2.37%	\$62,038	2.37%
Inflation Protected								
Real Estate	\$96,199	5.73%	\$42,344	6.34%	\$16,169	5.96%	\$154,712	5.91%
Real Return	\$136,552	8.14%	\$45,860	6.87%	\$18,615	6.86%	\$201,027	7.69%
TOTAL PORTFOLIO	\$1,677,700		\$667,434		\$271,156		\$2,616,290	

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ACTUARIAL

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Certification of Actuarial Results

Re: Certification for the Actuarial Results as of June 30, 2024.

Dear Board of Trustees:

Actuarial valuations are prepared annually as of June 30, for the Kentucky Employees Retirement System (KERS) and the State Police Retirement System (SPRS). These reports describe the current actuarial condition of the Systems and document the calculated employer contribution requirements as well as the changes in the financial condition since the prior actuarial valuation.

The results of the actuarial valuation for KERS and SPRS, including the calculated employer contribution requirement, will be used by the Board of Trustees of the Kentucky Retirement Systems (KRS) and stakeholders for informational purposes only as the employer contribution rate for the fiscal years ended June 30, 2025 and June 30, 2026 were certified in the June 30, 2023 actuarial valuation, which was adopted by the Board and incorporated in the Commonwealth's budget for the biennium period.

These contributions are calculated based on the membership data and plan assets as of June 30, 2024. These calculations are also based on the benefit provisions in effect as of June 30, 2024.

FINANCING OBJECTIVES AND FUNDING POLICY

The Kentucky Public Pensions Authority (KPPA) administers pension and health insurance funds to provide for monthly retirement income and retiree health insurance benefits. The total employer contribution requirement is composed of a contribution to each respective fund.

The employer contribution for KERS and SPRS is determined in accordance with Section 61.565 of Kentucky Statute. As specified by the Statute, the employer contribution is composed of a normal cost contribution and an actuarial accrued liability contribution. The actuarial accrued liability contribution is calculated by amortizing the unfunded accrued liability as of June 30, 2019 over a closed 30-year amortization period (25 years remaining as of June 30, 2024). Gains and losses incurring in years after June 30, 2019 are amortized as separate, closed 20-year amortization bases.

If the contributions made are equal to the Actuarially Determined Contribution (ADC), and if all actuarial assumptions are met, there will not be an unfunded accrued liability at the end of the 25-year period remaining from the original closed 30-year amortization base. Accordingly, the ADC under the funding policy can be considered a "Reasonable Actuarially Determined Contribution" as required by the Actuarial Standards of Practice.

House Bill 8 passed during the 2021 legislative session and changed how employer contributions are allocated and collected from the participating employers in the KERS non-hazardous fund. Each employer will pay a normal cost contribution on the payroll of their covered employees and contribute to the fund an allocated share of the cost required to amortize the unfunded liability.

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HB 1 and HB 604 were enacted in the 2022 legislative session and provided an additional \$240 million in appropriations to finance the unfunded actuarial accrued liability of the KERS non-hazardous retirement fund in FY 2024. The previous year's valuation reflected the appropriations for FY 2024 in the calculated contribution requirement.

HB 1 and HB 6 were enacted in the 2024 legislative session and provided an additional \$300 million in appropriations to finance the unfunded actuarial accrued liability of the KERS non-hazardous retirement fund in FY 2025 and FY 2026. HB 1 also provided an additional \$25 million to finance the unfunded actuarial accrued liability of the SPRS retirement fund in FY 2025 and FY 2026. The appropriations for FY 2025 have been reflected in the contribution requirement in this year's valuation. The appropriations for FY 2026 will be reflected in the contribution requirement in next year's valuation.

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, assumption changes, or actuarial losses, it should increase over time, until it reaches at least 100%. As of June 30, 2024, the funded ratios for the pension and health insurance plans are as follows:

Funding Level As of June 30												
System	2024		2023		2022		2021		2020		2019	
	Pension	Insurance	Pension	Insurance	Pension	Insurance	Pension	Insurance	Pension	Insurance	Pension	Insurance
KERS Nonhazardous	24.8%	81.7%	21.8%	81.7%	18.5%	79.1%	16.8%	50.2%	14.2%	42.7%	13.4%	36.3%
KERS Hazardous	68.3%	171.9%	65.4%	170.4%	63.2%	172.2%	60.4%	135.5%	55.3%	126.0%	54.8%	123.1%
SPRS	56.7%	104.9%	54.0%	100.5%	52.5%	100.6%	30.7%	82.0%	28.1%	75.0%	27.0%	71.3%

ASSUMPTIONS AND METHODS

The Boards of Trustees, in consultation with the actuary, set the actuarial assumptions and methods used in the actuarial valuation. In general, the assumptions used in the June 30, 2024 actuarial valuations were adopted for first use in the June 30, 2023 actuarial valuations and are based on the experience study conducted through June 30, 2022.

In our opinion, all the assumptions and methods used for funding purposes adopted by the Board's Trustees satisfy the requirements in the Actuarial Standards of Practice that are applicable for actuarial valuations of public retirement systems.

It is also our opinion that the actuarial assumptions used to perform these valuations are internally consistent and reasonably reflect the anticipated future experience of the Systems. The results of the actuarial valuation

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are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution requirements, and funding periods. The actuarial calculations are intended to provide information for rational decision making.

ADDITIONAL DISCLOSURES

The benefit structure is outlined in this section of the annual report. GRS prepared the following schedules in the actuarial section: *Summary of Actuarial Valuation Results, Recommended Employer Contribution Rates, Summary of Actuarial Unfunded Liabilities, the Solvency Test, the Summary of Active Member Valuation Data, the Summary of Retired Member Valuation Data, Summary of the Assumptions and Methods, and the Summary of the Benefit Provisions.*

In addition, GRS prepared the following schedules in the financial section in accordance with GASB Statement No. 67: *Net Pension Liability Schedule, Discount Rate Sensitivity Analysis, Schedule of Changes in the Employers' Net Pension Liability, Schedule of Employers' Net Pension Liability, and the Schedule of Employers' Contributions.*

DATA

Member data for retired, active and inactive members was supplied as of June 30, 2024, by KPPA staff. The staff also supplied asset information as of June 30, 2024. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by KPPA.

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Retirement Systems as of June 30, 2024. All of our work conforms with generally accepted actuarial principles and practices, and in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Kentucky Code of Laws and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

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Gabriel, Roeder, Smith & Co.

A handwritten signature in black ink that reads "Daniel J. White".

Daniel J. White, FSA, EA, MAAA
Senior Consultant

A handwritten signature in black ink that reads "Janie Shaw".

Janie Shaw, ASA, EA, MAAA
Consultant

A handwritten signature in black ink that reads "Krysti Kiesel".

Krysti Kiesel, ASA, MAAA
Consultant

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Summary of Actuarial Assumptions

The results of the actuarial valuation are based upon the assumptions and funding policies adopted by the Boards and statutory funding requirements. Assumptions and funding policies are reviewed against actual plan experience at least once every five years through the completion of the Actuarial Experience Study. In general, the assumptions and methods used in the June 30, 2024 valuation are based on the most recent actuarial experience study performed as of June 30, 2022, submitted, and adopted by the Board in June 2023.

1. Actuarial Cost Method: The actuarial valuation was prepared using the entry age normal cost (EANC) method as required by state statute. Under this method, the present value of future benefits is determined for each member and allocated equitably as a level percentage of payroll from the member's entry age into the plan to the assumed age of exit from the plan. The portion of the present value of future benefits allocated to the current valuation year is called the normal cost. The portion of the present value of future benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. Relative to the pension fund and the insurance fund, an employer contribution has been established to pay for both the normal cost and the amount needed to amortize the unfunded actuarial accrued liability (UAAL).

2. UAAL Amortization Method: Effective for the June 30, 2019 valuation, the actuarial accrued liability contribution is calculated by amortizing the unfunded accrued liability as of June 30, 2019 over a closed 30-year amortization period. Gains and losses incurring in future years are amortized as separated closed 20-year amortization bases. This amortization cost is calculated using a 0.00% payroll growth assumption for the KERS and SPRS Funds. Effective for fiscal years ended June 30, 2022 and later, the amortization cost for the KERS Nonhazardous funds is allocated amongst employers as a dollar amount based on the employers' actuarial accrued liability as of June 30, 2019. The amortization cost for the remaining funds is divided by covered payroll and included in the contribution rate, payable by employers as a percentage of pay.

3. Asset Valuation Method: The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the investment return assumption. The amount recognized each year is 20% of the difference between market value and expected market value.

4. Retiree Insurance Funding Policy: Effective for the June 30, 2019 valuation, the actuarial accrued liability contribution is calculated by amortizing the unfunded accrued liability as of June 30, 2019, over a closed 30-year amortization period. Gains and losses incurring in future years are amortized as separated closed 20-year amortization bases. This amortization cost is calculated using a 0.00% payroll growth assumption for the KERS and SPRS Funds. Effective for fiscal years ended June 30, 2022 and later, the amortization cost for the KERS Nonhazardous funds is allocated amongst employers as a dollar amount based on the employers' actuarial accrued liability as of June 30, 2019. The amortization cost for the remaining funds is divided by covered payroll and included in the contribution rate, payable by employers as a percentage of pay.

5. Investment Return Assumption: The future investment earnings of plan assets are assumed to accumulate at a rate of 6.50% per annum for all Insurance Systems. This rate consists of a 2.50% price inflation component and a 4.00% real rate of return component. The assumed rate of return for the KERS Hazardous pension fund is 6.25% and consists of a 2.50% inflationary component and a 3.75% real rate of return component. The assumed rate of return for the KERS Nonhazardous pension fund and the SPRS pension fund is 5.25% and consist of a 2.50% inflationary component and a 2.75% real rate of return component. This assumption was adopted in 2023.

6. Salary Increase Assumptions: Active member salaries are assumed to increase at the rates provided in Table 1. The rates include a price inflation and productivity component, and an additional increase due to promotion based upon plan experience. The price inflation component is 2.50% for all plans and the productivity component is 0.80% for the nonhazardous system and 1.05% for the hazardous system. This assumption was adopted in 2023.

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Table 1. Salary Increase Assumptions

Service	KERS		SPRS
	Nonhazardous	KERS Hazardous	
0	15.30%	20.05%	16.05%
1	6.80%	7.55%	8.55%
2	6.05%	6.55%	7.55%
3	5.80%	6.55%	5.55%
4	5.30%	5.55%	5.55%
5	4.80%	5.05%	5.55%
6	4.55%	4.55%	5.55%
7	4.30%	4.05%	4.55%
8	4.05%	4.05%	4.55%
9	3.80%	3.55%	3.55%
10	3.80%	3.55%	3.55%
11	3.30%	3.55%	3.55%
12	3.30%	3.55%	3.55%
13	3.30%	3.55%	3.55%
14	3.30%	3.55%	3.55%
15	3.30%	3.55%	3.55%
16+	3.30%	3.55%	3.55%

7. Payroll Growth Assumption: For purposes of determining the amortization cost to finance the unfunded actuarial accrued liability, the active member payroll (or amortization payments for the KERS Nonhazardous fund) is assumed to increase at a rate of 0.00% per annum. This assumption was adopted in 2017.

8. Retiree Cost of Living Adjustments (COLA): SB2 only allows the Cost of Living Adjustments (COLAs) to be awarded on a biennial basis if the State Legislature so authorizes and either (i) the system is over 100% funded or (ii) the Legislature appropriates sufficient funds to pay the increased liability for the COLA.

9. Health Care Cost Trend Rate:

The costs for retiree medical premiums are assumed to increase according to the assumptions provided in Table 2.

Table 2: Health Care Cost Trend Rate (See footnotes 1-2)

Year	Non-Medicare Plans ⁽¹⁾	Medicare Plans ⁽¹⁾	Dollar Contribution ⁽²⁾
2026	7.10%	8.00%	1.50%
2027	7.00%	8.00%	1.50%
2028	6.80%	8.00%	1.50%
2029	6.60%	7.50%	1.50%
2030	6.40%	7.00%	1.50%
2031	6.20%	6.50%	1.50%
2032	6.00%	6.00%	1.50%
2033	5.80%	5.50%	1.50%
2034	5.60%	5.00%	1.50%
2035	5.40%	4.50%	1.50%
2036	5.20%	4.25%	1.50%
2037	5.00%	4.25%	1.50%
2038	4.75%	4.25%	1.50%
2039	4.50%	4.25%	1.50%
2040+	4.25%	4.25%	1.50%

⁽¹⁾ All increases are assumed to occur on January 1. The 2025 premiums were known at the time of the June 30, 2024, valuation and were incorporated into the liability measurement.

⁽²⁾ Applies to members participating on or after July 1, 2003. All increases are assumed to occur on July 1.

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10. Retirement Rate Assumptions:

The probability, or the likelihood, that a member will retire at a specified age or level of service is provided in Table 3. These assumptions were adopted in 2023.

Table 3b: Retirement Rate Assumptions KERS (See footnotes 1 - 3)

Age	Non-Hazardous					Hazardous			
	Normal Retirement		Early Retirement ⁽¹⁾		Service	Members participating before 9/1/2008 ⁽²⁾		Members participating between 9/1/2008 and 1/1/2014 ⁽³⁾	Members participating after 1/1/2014 ⁽³⁾
	Male	Female	Male	Female		Age 55-61	Age 62+		
Under 45	20.00%	33.00%			5	10.00%	35.00%		
45	21.00%	33.00%			6	10.00%	35.00%		
46	22.00%	33.00%			7	10.00%	35.00%		
47	23.00%	33.00%			8	10.00%	35.00%		
48	24.00%	33.00%			9	10.00%	35.00%		
49	25.00%	33.00%			10	10.00%	35.00%		
50	26.00%	33.00%			11	10.00%	35.00%		
51	27.00%	33.00%			12	10.00%	35.00%		
52	28.00%	33.00%			13	10.00%	35.00%		
53	29.00%	33.00%			14	10.00%	35.00%		
54	30.00%	33.00%			15	10.00%	35.00%		
55	30.00%	33.00%	5.00%	5.00%	16	10.00%	35.00%		
56	30.00%	33.00%	5.00%	5.00%	17	10.00%	35.00%		
57	30.00%	33.00%	5.00%	5.00%	18	10.00%	35.00%		
58	30.00%	33.00%	5.00%	5.00%	19	10.00%	35.00%		
59	30.00%	33.00%	5.00%	5.00%	20	50.00%	50.00%		
60	30.00%	33.00%	5.00%	8.00%	21	32.00%	32.00%		
61	30.00%	33.00%	8.00%	9.00%	22	32.00%	32.00%		
62	35.00%	35.00%	15.00%	20.00%	23	32.00%	32.00%		
63	30.00%	33.00%	15.00%	18.00%	24	32.00%	32.00%		
64	30.00%	33.00%	15.00%	16.00%	25	32.00%	32.00%	25.60%	16.00%
65	30.00%	33.00%			26	32.00%	32.00%	25.60%	16.00%
66	30.00%	33.00%			27	32.00%	32.00%	25.60%	16.00%
67	30.00%	33.00%			28	32.00%	32.00%	25.60%	16.00%
68	30.00%	33.00%			29	32.00%	32.00%	25.60%	16.00%
69	30.00%	33.00%			30+	32.00%	32.00%	25.60%	100.00%
70	30.00%	33.00%							
71	30.00%	33.00%							
72	30.00%	33.00%							
73	30.00%	33.00%							
74	30.00%	33.00%							
75	100.00%	100.00%							

(1) The annual rate of retirement is 12% for male members and 14% for female members with 25-26 years of service.

(2) The annual rate of retirement is 100% at age 65.

(3) The annual rate of retirement is 100% at age 60.

Nonhazardous System: There is a 1% increase in the first two years a member becomes eligible under the age of 65. For members hired after 7/1/2003, the rates shown above are multiplied by 80% if the member is under age 65 to reflect the different retiree health insurance benefit.

Hazardous System: For members hired after 7/1/2003 and prior to 9/1/2008, the rates shown above are multiplied by 80% if the member is under age 65 to reflect the different retiree health insurance benefit.

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Table 3c: Retirement Rate Assumptions SPRS (See footnotes 1 - 2)

Service	Hazardous		
	Members Participating before 9/1/2008 ⁽¹⁾	Members participating between 9/1/2008 and 1/1/2014 ⁽²⁾	Members participating after 1/1/2014 ⁽²⁾
20	22.00%		
21	22.00%		
22	22.00%		
23	28.00%		
24	28.00%		
25	28.00%	17.60%	16.00%
26	28.00%	17.60%	16.00%
27	28.00%	17.60%	16.00%
28	44.00%	22.40%	16.00%
29	44.00%	22.40%	16.00%
30	44.00%	22.40%	100.00%
31	58.00%	22.40%	
32	58.00%	22.40%	
33	58.00%	35.20%	
34	58.00%	35.20%	
35	58.00%	35.20%	
36	58.00%	46.40%	
37	58.00%	46.40%	
38	58.00%	46.40%	
39	58.00%	46.40%	
40+	58.00%	46.40%	

(1) The annual rate of service retirement is 100% at age 55.

(2) The annual rate of service retirement is 100% at age 60.

For members hired after 7/1/2003 and prior to 9/1/2008, the rates shown above are multiplied by 80% if the member is under age 55 to reflect the different retiree health insurance benefit.

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11. Mortality Assumptions: Pre-retirement mortality: PUB-2010 General Mortality table, for the Nonhazardous Systems, and the PUB-2010 Public Safety Mortality table for the Hazardous Systems, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

Post-retirement mortality (non-disabled): System-specific mortality table based on mortality experience from 2013-2022, projected with the ultimate rates from MP-2020 mortality improvement scale using a base year of 2023.

Table 4a provides the life expectancy for a non-disabled retiree in future years based on the assumption with full generational projection.

Post-retirement mortality (disabled): PUB-2010 Disabled Mortality table, with rates multiplied by 150% for both male and female rates, projected with the ultimate rates from the MP-2020 mortality improvement scale using a base year of 2010.

These mortality assumptions were adopted in 2023. Table 4b provides sample annual rates of mortality in the base year of each table (2023 for the retired member mortality rates and 2010 for the active member and disabled member mortality rates).

Table 4a: Life Expectancy for an Age 65 Retiree in Years

Gender	Year of Retirement				
	2025	2030	2035	2040	2045
Male	19.8	20.2	20.6	21.0	21.3
Female	22.4	22.7	23.1	23.4	23.7

Table 4b: Sample Annual Rate of Mortality

Age	Active Member Mortality		Active Member Mortality		Retired Member Mortality		Disabled Member Mortality	
	Nonhazardous		Hazardous		Males	Females	Males	Females
	Males	Females	Males	Females				
20	0.04%	0.01%	0.04%	0.02%	0.03%	0.01%	0.62%	0.35%
22	0.03%	0.01%	0.04%	0.02%	0.03%	0.01%	0.53%	0.29%
32	0.04%	0.02%	0.04%	0.03%	0.04%	0.02%	0.59%	0.46%
42	0.08%	0.04%	0.07%	0.06%	0.07%	0.04%	1.14%	1.13%
52	0.18%	0.10%	0.14%	0.10%	0.32%	0.21%	2.73%	2.38%
62	0.37%	0.22%	0.32%	0.19%	0.94%	0.55%	4.02%	3.08%
72	0.84%	0.60%	0.98%	0.60%	2.38%	1.48%	6.52%	4.86%

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12. Withdrawal Rates: The probability, or likelihood, of active members terminating employment prior to retirement is provided in Table 5. The rates below include the pre-retirement mortality rates described in item #11. These assumptions were adopted in 2023.

Table 5: Selected Rates of Termination Prior to Retirement				
KERS Nonhazardous		KERS Hazardous	SPRS	
Years of Service			Years of Service	
1	22.00%	32.50%	1	15.00%
2	18.10%	25.58%	2	5.30%
3	14.73%	19.66%	3	4.14%
4	12.77%	16.19%	4	3.47%
5	11.37%	13.73%	5	2.98%
6	10.29%	11.82%	6	2.61%
7	9.41%	10.26%	7	2.30%
8	8.66%	8.93%	8	2.05%
9	8.01%	7.79%	9	1.83%
10	7.44%	6.79%	10	1.63%
11	6.93%	5.89%	11	1.45%
12	6.47%	5.07%	12	1.29%
13	6.04%	4.33%	13	1.14%
14	5.65%	3.64%	14	1.01%
15	5.29%	3.00%	15	0.88%
16	4.96%	2.42%	16	0.77%
17	4.64%	1.86%	17	0.66%
18	4.36%	1.34%	18	0.56%
19	4.07%	0.86%	19	0.46%
20	3.82%	0.39%	20	0.37%
21	3.56%	0.00%	21	0.00%
22	3.32%	0.00%	22	0.00%
23	3.10%	0.00%	23	0.00%
24	2.88%	0.00%	24	0.00%
25	2.67%	0.00%	25	0.00%
26+	0.00%	0.00%	26+	0.00%

13. Rates of Disablement: KERS/SPRS provide disability benefits for those individuals meeting specific qualifications established by state law. This assumption provides the probability, or likelihood, that a member will become disabled during the course of employment for various age levels. These assumptions were adopted in 2023.

Table 6: Sample Rates of Disablement			
Nearest Age	KERS Nonhazardous	KERS Hazardous	SPRS
	Probability	Probability	Probability
20	0.03%	0.05%	0.05%
30	0.05%	0.08%	0.09%
40	0.11%	0.18%	0.20%
50	0.31%	0.50%	0.56%
60	0.80%	1.32%	1.46%

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14. Assumption Changes Since Prior Valuation: In conjunction with the review of the healthcare per capita claims cost, the assumed increase in future healthcare costs, or trend assumption, is reviewed on an annual basis. The trend assumption for the non-Medicare Plans was increased during the select period and the ultimate trend assumption was increased for all plans as a result of this review.

Summary of Actuarial Valuation Results

Summary of Actuarial Valuation Results			
	KERS Nonhazardous	KERS Hazardous	SPRS
Recommended Contribution Rate (FY 2026)			
Pension Fund Contribution	6.85%	20.68%	57.91%
Insurance Fund Contribution	1.14%	0.00%	1.46%
Actuarially Determined Employer Contributions Rate ⁽¹⁾ , payable as a percentage of payroll	7.99%	20.68%	59.37%
Amortization Cost to be Allocated, if applicable	\$865,810,060	N/A	N/A
Funded Status as of Valuation Date As of June 30, 2024 (in Whole \$)			
Pension Fund			
Actuarial Liability	\$16,647,892,788	\$1,442,618,733	\$1,112,310,302
Actuarial Value of Assets	4,122,268,538	985,075,014	631,185,635
Unfunded Liability on Actuarial Value of Assets	12,525,624,250	457,543,719	481,124,667
Funding Ratio on Actuarial Value of Assets	24.76%	68.28%	56.75%
Market Value of Assets	4,223,935,798	1,019,889,950	651,789,660
Unfunded Liability on Market Value of Assets	\$12,423,956,990	\$422,728,783	\$460,520,642
Funding Ratio on Market Value of Assets	25.37%	70.70%	58.60%
Insurance Fund			
Actuarial Liability	\$2,094,743,197	\$379,567,892	\$251,177,950
Actuarial Value of Assets	1,712,043,266	652,348,960	263,368,832
Unfunded Liability on Actuarial Value of Assets	382,699,931	(272,781,068)	(12,190,882)
Funding Ratio on Actuarial Value of Assets	81.73%	171.87%	104.85%
Market Value of Assets	1,765,729,242	677,948,093	273,516,528
Unfunded Liability on Market Value of Assets	\$329,013,955	\$(298,380,201)	\$(22,338,578)
Funding Ratio on Market Value of Assets	84.29%	178.61%	108.89%
Member Data (See Footnotes)			
Number of Active Members	32,455	4,154	872
Total Annual Payroll (Active Members) ⁽²⁾	\$1,861,521,817	\$259,606,371	\$73,294,873
Average Annual Pay (Active Members)	\$57,357	\$62,496	\$84,054
Number of Retired Members & Beneficiaries	48,474	4,934	1,676
Average Annual Retirement Allowance	\$20,305	\$15,451	\$37,364
Number of Vested Inactive Members	30,641	2,343	345
Number of Inactive Members Due a Refund	26,113	6,637	402
⁽¹⁾ For the KERS Nonhazardous fund, contribution rate includes the normal cost portion of the contribution requirement only. Amortization cost will be allocated to employers as a dollar amount.			
⁽²⁾ Annual payroll included in the Summary of Actuarial Valuation Results is based upon the annualized monthly payroll for active members as of the valuation date. The annual payroll recorded in the financial section is based upon the sum of the monthly payroll for active members recorded for each month of fiscal year ended June 30, 2024.			

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Recommended Employer Contribution Rates

KERS Plans

The contribution rates for KERS Nonhazardous and KERS Hazardous shown in the tables below are the full funding rates presented by the actuary for 2014 through 2023 annual valuations. However, actual employer contributions were less than the recommended rates for years 2009 through 2014. SB 2 (2013 Legislative Regular Session) required full funding starting in fiscal year 2015. HB 265 from the 2018 legislative session reduced the employer contribution rate for KERS quasi-governmental agencies to the fiscal year 2018 rate for fiscal year 2019, which was 49.47%. The 2019 Special Legislative Session HB 1 sets the employer contribution rate at 49.47%, retroactive to July 1, 2019, for fiscal year 2020 for KERS quasi-governmental agencies. House Bill 8 passed during the 2021 legislative session and changed how employer contributions are allocated and collected from the participating employers in the KERS Nonhazardous Fund. Each employer will pay a normal cost contribution on the payroll of their covered employees and contribute to the fund an allocated share of the cost required to amortize the unfunded liability.

Recommended Employer Contribution Rates

As of June 30

KERS Nonhazardous Employers

Valuation Date	Applicable Fiscal Year	Pension Fund Normal Cost	Pension Fund: Payment on Unfunded Liability	Pension Fund Contribution	Insurance Fund Contribution	Recommended Employer Contribution
2015	2016-2017	3.60%	35.33%	38.93%	8.35%	47.28%
2016	2017-2018	4.93%	37.05%	41.98%	8.41%	50.39%
2017	2018-2019	8.17%	62.86%	71.03%	12.40%	83.43%
2018	2019-2020	7.98%	66.56%	74.54%	10.65%	85.19%
2019	2020-2021	7.99%	65.29%	73.28%	11.15%	84.43%
Valuation Date	Applicable Fiscal Year	Pension Fund Normal Cost	Insurance Fund: Normal Cost	Normal Cost Contribution	Amortization Cost to be Allocated	
2020	2021-2022	7.90%	2.20%	10.10%	\$1,039,849,248	
2021	2022-2023	7.82%	2.15%	9.97%	\$994,421,476	
2022	2023-2024	7.74%	1.86%	9.60%	\$905,892,818	
2023	2024-2025	6.99%	1.45%	8.44%	\$856,561,041	
2024	2025-2026	6.85%	1.14%	7.99%	\$865,810,060	

KERS Hazardous Employers

Valuation Date	Applicable Fiscal Year	Pension Fund Normal Cost	Pension Fund: Payment on Unfunded Liability	Pension Fund Contribution	Insurance Fund Contribution	Recommended Employer Contribution
2015	2016-2017	6.93%	14.15%	21.08%	2.74%	23.82%
2016	2017-2018	6.44%	14.04%	20.48%	1.34%	21.82%
2017	2018-2019	9.67%	24.72%	34.39%	2.46%	36.85%
2018	2019-2020	9.24%	25.18%	34.42%	0.00%	34.42%
2019	2020-2021	9.21%	26.79%	36.00%	0.00%	36.00%
2020	2021-2022	8.84%	24.59%	33.43%	0.00%	33.43%
2021	2022-2023	8.78%	23.04%	31.82%	0.00%	31.82%
2022	2023-2024	8.60%	21.52%	30.12%	0.00%	30.12%
2023	2024-2025	7.71%	16.03%	23.74%	0.00%	23.74%
2024	2025-2026	7.57%	13.11%	20.68%	0.00%	20.68%

The contribution rates for KERS Nonhazardous and KERS Hazardous shown in the above tables are the full funding rates presented by the actuary in the 2015 through 2024 annual valuations. HB 265 (passed during the 2018 legislative session), HB 1 (passed during the 2019 special legislative session), and HB 352 (passed during the 2020 legislative session) reduced the FYE 2019-2021 employer contribution rate to 49.47% for Regional Mental Health/Mental Retardation Boards, Local and District Health Departments, State Universities, Community Colleges and any other agencies eligible to voluntarily cease participating in the KERS Nonhazardous fund. HB 8 (passed during the 2021 legislative session) changed how employer contributions are allocated and collected amongst employers in the KERS Nonhazardous fund effective for FYE2022. The normal cost is collected as a percentage of covered payroll and the amortization cost is allocated to employers as a dollar amount based on their accrued liability as of June 30, 2019. Amortization cost shown above reflects the amortization required as of the valuation date and does not reflect any adjustment for the cessation of any employers after the valuation date.

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SPRS Plans

The contribution rates for SPRS shown in the below tables are the full funding rates presented by the actuary in the 2014 through 2023 annual valuations. However, the actual employer contribution rates have been less than those shown below. As a result of HB1 passed in 2008 the statute called for an employer contribution rate at an increasing percentage of the full funding rates. SB2 (2013 Regular Legislative Session) eliminated this phase-in beginning with the June 30, 2013, actuarial valuation.

Recommended Employer Contribution Rates

As of June 30

SPRS Employers

Valuation Date	Applicable Fiscal Year	Pension Fund Normal Cost	Pension Fund: Payment on Unfunded Liability	Pension Fund Contribution	Insurance Fund Contribution	Recommended Employer Contribution
2015	2016-2017	8.77%	57.70%	66.47%	18.87%	85.34%
2016	2017-2018	11.16%	60.41%	71.57%	18.10%	89.67%
2017	2018-2019	16.21%	102.84%	119.05%	27.23%	146.28%
2018	2019-2020	15.81%	104.73%	120.54%	19.50%	140.04%
2019	2020-2021	19.39%	104.40%	123.79%	19.69%	143.48%
2020	2021-2022	19.04%	108.95%	127.99%	18.07%	146.06%
2021	2022-2023	18.60%	66.72%	85.32%	14.11%	99.43%
2022	2023-2024	19.49%	65.90%	85.39%	3.68%	89.07%
2023	2024-2025	19.41%	46.38%	65.79%	2.31%	68.10%
2024	2025-2026	19.76%	38.15%	57.91%	1.46%	59.37%

The contribution rates for SPRS shown in the above tables are the full funding rates presented by the actuary in the 2015 through 2024 annual valuations.

DRAFT - KRS 2024 ACFR - DRAFT**Summary of Actuarial Unfunded Liabilities****Summary of Actuarial Unfunded Liabilities****As of June 30 (\$ in Thousands)****KERS Nonhazardous Pension Plan**

Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liabilities		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
2015	\$12,359,673	\$2,350,990	\$2,307,858	\$10,008,683	\$10,051,815	19.02%	18.67%
2016	13,224,698	2,112,287	1,953,422	11,112,412	11,271,276	15.97%	14.77%
2017	15,591,641	2,123,623	2,056,870	13,468,018	13,534,771	13.62%	13.19%
2018	15,675,232	2,019,278	2,004,446	13,655,954	13,670,786	12.88%	12.79%
2019	16,466,427	2,206,280	2,233,672	14,260,147	14,232,755	13.40%	13.57%
2020	16,348,962	2,323,298	2,308,080	14,025,663	14,040,882	14.21%	14.12%
2021	16,321,373	2,735,876	3,018,660	13,585,497	13,302,713	16.76%	18.50%
2022	16,576,631	3,065,263	3,013,845	13,511,368	13,562,786	18.49%	18.18%
2023	16,304,277	3,552,471	3,539,942	12,751,806	12,764,335	21.79%	21.71%
2024	\$16,647,893	\$4,122,269	\$4,223,936	\$12,525,624	\$12,423,957	24.76%	25.37%

KERS Nonhazardous Insurance Plan

Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liabilities		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
2015	\$2,413,705	\$695,018	\$687,684	\$1,718,687	\$1,726,021	28.79%	28.49%
2016	2,456,678	743,270	695,189	1,713,408	1,761,489	30.26%	28.30%
2017	2,683,496	823,918	817,370	1,859,578	1,866,126	30.70%	30.46%
2018	2,435,506	887,121	891,205	1,548,385	1,544,301	36.42%	36.59%
2019	2,733,065	991,427	995,089	1,741,639	1,737,977	36.28%	36.41%
2020	2,564,788	1,095,959	1,060,649	1,468,829	1,504,139	42.73%	41.35%
2021	2,574,112	1,291,472	1,419,477	1,282,640	1,154,634	50.17%	55.14%
2022	1,782,386	1,409,553	1,364,419	372,833	417,967	79.08%	76.55%
2023	1,877,109	1,532,895	1,532,752	344,214	344,357	81.66%	81.65%
2024	\$2,094,743	\$1,712,043	\$1,765,729	\$382,700	\$329,014	81.73%	84.29%

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Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liabilities		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
		2015	\$895,433	\$556,688	\$550,120	\$338,746	\$345,313
2016	936,706	559,487	524,679	377,219	412,027	59.73%	56.01%
2017	1,121,420	607,159	601,529	514,261	519,891	54.14%	53.64%
2018	1,151,923	639,262	645,485	512,661	506,438	55.50%	56.04%
2019	1,226,195	671,647	680,932	554,548	545,262	54.77%	55.53%
2020	1,283,770	709,587	690,350	574,183	593,420	55.27%	53.78%
2021	1,295,243	782,496	866,141	512,747	429,102	60.41%	66.87%
2022	1,316,825	832,436	810,978	484,389	505,847	63.22%	61.59%
2023	1,363,037	891,460	893,534	471,577	469,503	65.40%	65.55%
2024	\$1,442,619	\$985,075	\$1,019,890	\$457,544	\$422,729	68.28%	70.70%

KERS Hazardous Insurance Plan

Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liabilities		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
		2015	\$374,904	\$451,514	\$441,626	(76,610)	(66,722)
2016	377,745	473,160	440,596	(95,415)	(62,851)	125.26%	116.64%
2017	419,440	493,458	488,838	(74,019)	(69,399)	117.65%	116.55%
2018	393,481	511,441	519,072	(117,961)	(125,592)	129.98%	131.92%
2019	426,705	525,315	534,053	(98,610)	(107,348)	123.11%	125.16%
2020	427,977	539,251	521,755	(111,275)	(93,778)	126.00%	121.91%
2021	424,456	575,025	633,677	(150,569)	(209,221)	135.47%	149.29%
2022	347,044	597,701	588,162	(250,657)	(241,118)	172.23%	169.48%
2023	363,512	619,519	625,356	(256,007)	(261,844)	170.43%	172.03%
2024	\$379,568	\$652,349	\$677,948	\$(272,781)	\$(298,380)	171.87%	178.61%

DRAFT - KRS 2024 ACFR - DRAFT**Summary of Actuarial Unfunded Liabilities****As of June 30 (\$ in Thousands)****SPRS Pension Plan**

Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liability		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
2015	\$734,156	\$248,388	\$246,968	\$485,769	\$487,188	33.83%	33.64%
2016	775,160	234,568	217,594	540,593	557,566	30.26%	28.07%
2017	967,145	261,320	255,737	705,824	711,408	27.02%	26.44%
2018	989,528	268,259	267,572	721,269	721,956	27.11%	27.04%
2019	1,045,318	282,162	286,165	763,156	759,153	26.99%	27.38%
2020	1,053,157	296,126	293,949	757,031	759,208	28.12%	27.91%
2021	1,053,260	323,250	356,346	730,009	696,914	30.69%	33.83%
2022	1,067,447	559,973	551,699	507,474	515,748	52.46%	51.68%
2023	1,091,795	589,848	591,514	501,947	500,281	54.03%	54.18%
2024	\$1,112,310	\$631,186	\$651,790	\$481,125	\$460,521	56.75%	58.60%

SPRS Insurance Plan

Valuation Date	Actuarial Liability	Value of Assets		Unfunded Actuarial Liability		Funding Level	
		Actuarial	Market	Actuarial	Market	Actuarial	Market
2015	\$254,839	\$167,775	\$165,018	\$87,064	\$89,821	65.84%	64.75%
2016	257,197	172,704	161,366	84,494	95,831	67.15%	62.74%
2017	276,641	180,464	178,838	96,178	97,803	65.23%	64.65%
2018	262,088	187,535	190,847	74,553	71,242	71.55%	72.82%
2019	276,809	197,395	201,206	79,415	75,604	71.31%	72.69%
2020	276,143	207,018	201,340	69,126	74,803	74.97%	72.91%
2021	272,406	223,251	247,318	49,154	25,088	81.96%	90.79%
2022	232,798	234,239	231,242	(1,441)	1,556	100.62%	99.33%
2023	244,058	245,172	248,109	(1,114)	(4,051)	100.46%	101.66%
2024	\$251,178	\$263,369	\$273,517	\$(12,191)	\$(22,339)	104.85%	108.89%

DRAFT - KRS 2024 ACFR - DRAFT**Solvency Test****Solvency Test****As of June 30 (\$ in Thousands)****KERS Nonhazardous Pension Plan**

Actuarial Liabilities							
Valuation Date	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets		
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)
2015	\$925,934	\$9,437,468	\$1,996,271	\$2,350,990	100.00%	15.10%	0.00%
2016	920,120	10,010,168	2,294,410	2,112,286	100.00%	11.90%	0.00%
2017	934,559	11,608,346	3,048,736	2,123,623	100.00%	10.20%	0.00%
2018	892,033	11,929,018	2,854,180	2,019,278	100.00%	9.40%	0.00%
2019	881,020	12,513,230	3,072,176	2,206,280	100.00%	10.60%	0.00%
2020	869,196	12,467,523	3,012,243	2,323,298	100.00%	11.70%	0.00%
2021	877,142	12,425,951	3,018,279	2,735,876	100.00%	15.00%	0.00%
2022	859,591	12,700,595	3,016,445	3,065,263	100.00%	17.40%	0.00%
2023	889,146	12,013,685	3,401,447	3,552,471	100.00%	22.20%	0.00%
2024	\$935,186	\$11,876,221	\$3,836,485	\$4,122,268	100.00%	26.80%	0.00%

KERS Nonhazardous Insurance Plan

Actuarial Liabilities							
Valuation Date	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets		
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)
2015	\$-	\$1,428,350	\$985,355	\$695,018	100.00%	48.70%	0.00%
2016	-	1,483,636	973,042	743,270	100.00%	50.10%	0.00%
2017	-	1,575,294	1,108,202	823,918	100.00%	52.30%	0.00%
2018	-	1,475,954	959,552	887,121	100.00%	60.10%	0.00%
2019	-	1,686,605	1,046,461	991,427	100.00%	58.80%	0.00%
2020	-	1,589,742	975,045	1,095,959	100.00%	68.90%	0.00%
2021	-	1,609,775	964,337	1,291,472	100.00%	80.20%	0.00%
2022	-	967,051	815,335	1,409,553	100.00%	100.00%	54.30%
2023	-	1,040,344	836,765	1,532,895	100.00%	100.00%	58.90%
2024	\$-	\$1,189,231	\$905,513	\$1,712,043	100.00%	100.00%	57.70%

DRAFT - KRS 2024 ACFR - DRAFT**KERS Hazardous Pension Plan**

Actuarial Liabilities								
Valuation Date	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets			
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)	
2015	\$83,606	\$633,189	\$178,638	\$556,688	100.00%	74.70%	0.00%	
2016	86,705	648,482	201,519	559,487	100.00%	72.90%	0.00%	
2017	93,350	746,350	281,720	607,159	100.00%	68.80%	0.00%	
2018	89,106	810,311	252,506	639,262	100.00%	67.90%	0.00%	
2019	86,663	879,818	259,713	671,647	100.00%	66.50%	0.00%	
2020	95,528	898,128	290,114	709,587	100.00%	68.40%	0.00%	
2021	97,559	916,431	281,254	782,496	100.00%	74.70%	0.00%	
2022	94,538	946,328	275,959	832,436	100.00%	78.00%	0.00%	
2023	103,310	929,321	330,406	891,460	100.00%	84.80%	0.00%	
2024	\$116,828	\$943,102	\$382,689	\$985,075	100.00%	92.10%	0.00%	

KERS Hazardous Insurance Fund

Actuarial Liabilities								
Valuation Date	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets			
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)	
2015	\$-	\$221,115	\$153,789	\$451,514	100.00%	100.00%	100.00%	
2016	-	228,361	149,384	473,160	100.00%	100.00%	100.00%	
2017	-	243,816	175,623	493,458	100.00%	100.00%	100.00%	
2018	-	248,775	144,706	511,441	100.00%	100.00%	100.00%	
2019	-	282,070	144,635	525,315	100.00%	100.00%	100.00%	
2020	-	281,924	146,053	539,251	100.00%	100.00%	100.00%	
2021	-	288,015	136,441	575,025	100.00%	100.00%	100.00%	
2022	-	232,585	114,459	597,701	100.00%	100.00%	100.00%	
2023	-	250,189	113,323	619,519	100.00%	100.00%	100.00%	
2024	\$-	\$263,737	\$115,831	\$652,349	100.00%	100.00%	100.00%	

DRAFT - KRS 2024 ACFR - DRAFT**Solvency Test**

As of June 30 (\$ in Thousands)

SPRS Pension Plan

Valuation Date	Actuarial Liabilities							
	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets			
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)	
2015	\$41,567	\$605,855	\$86,734	\$248,388	100.00%	34.10%	0.00%	
2016	41,871	636,499	96,791	234,568	100.00%	30.30%	0.00%	
2017	44,798	773,982	148,365	261,320	100.00%	28.00%	0.00%	
2018	43,835	800,788	144,905	268,259	100.00%	28.00%	0.00%	
2019	41,948	848,396	154,974	282,162	100.00%	28.30%	0.00%	
2020	40,831	863,579	148,747	296,126	100.00%	29.60%	0.00%	
2021	42,035	860,801	150,423	323,250	100.00%	32.70%	0.00%	
2022	42,027	870,200	155,220	559,973	100.00%	59.50%	0.00%	
2023	47,394	825,683	218,717	589,848	100.00%	65.70%	0.00%	
2024	\$52,957	\$808,935	\$250,418	\$631,186	100.00%	71.50%	0.00%	

SPRS Insurance Plan

Valuation Date	Actuarial Liabilities							
	(1)	(2)	(3)	Actuarial Value of Assets	% of Actuarial Liabilities Covered by Actuarial Assets			
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Portion)		(1)	(2)	(3)	
2015	\$-	\$170,447	\$84,392	\$167,775	100.00%	98.40%	0.00%	
2016	-	177,094	80,103	172,704	100.00%	97.50%	0.00%	
2017	-	186,390	90,251	180,464	100.00%	96.80%	0.00%	
2018	-	183,151	78,937	187,535	100.00%	100.00%	5.60%	
2019	-	199,959	76,850	197,395	100.00%	98.70%	0.00%	
2020	-	207,638	68,506	207,018	100.00%	99.70%	0.00%	
2021	-	206,707	65,699	223,251	100.00%	100.00%	25.20%	
2022	-	172,664	60,134	234,239	100.00%	100.00%	100.00%	
2023	-	176,587	67,471	245,172	100.00%	100.00%	100.00%	
2024	\$-	\$179,898	\$71,280	\$263,369	100.00%	100.00%	100.00%	

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Summary of Active Member Valuation

Summary of Active Member Valuation Data

As of June 30 (\$ in Thousands)

KERS Nonhazardous Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Total Active Members	Annual Covered Payroll ⁽¹⁾	Annual Average Pay	% Increase In Average Pay	Average Age	Average Years of Service Credit
2015	348	39,056	\$1,544,234	\$40	1.20%	45.0	10.6
2016	349	37,779	1,529,249	40	2.40%	45.1	10.7
2017	342	37,234	1,531,535	41	1.62%	45.4	10.9
2018	338	35,139	1,471,477	42	1.81%	45.2	10.8
2019	331	33,696	1,437,647	43	1.88%	45.4	11.0
2020	313	31,703	1,387,761	44	2.60%	45.7	11.2
2021	321	30,186	1,349,330	45	2.12%	46.0	11.6
2022	319	29,551	1,355,267	46	2.60%	46.0	11.4
2023	320	31,383	1,615,868	51	12.27%	45.7	10.9
2024	320	32,455	\$1,861,522	\$57	11.40%	45.5	10.7

KERS Hazardous Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Total Active Members	Annual Covered Payroll ⁽¹⁾	Annual Average Pay	% Increase In Average Pay	Average Age	Average Years of Service Credit
2015	17	3,886	\$128,680	\$33	3.20%	40.7	7.5
2016	17	3,959	147,563	37	12.60%	40.4	7.5
2017	18	4,047	162,418	40	7.67%	40.3	7.6
2018	18	3,929	158,213	40	0.34%	39.8	7.3
2019	18	3,705	150,446	41	0.84%	39.8	7.3
2020	19	4,094	170,826	42	2.76%	39.8	7.3
2021	19	3,827	162,836	43	1.97%	40.1	7.7
2022	19	3,617	165,637	46	7.63%	40.0	7.6
2023	19	3,886	211,602	54	18.91%	39.7	7.2
2024	19	4,154	\$259,606	\$62	14.77%	39.9	7.1

SPRS Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Total Active Members	Annual Covered Payroll ⁽¹⁾	Annual Average Pay	% Increase In Average Pay	Average Age	Average Years of Service Credit
2015	1	937	\$45,765	\$49	(6.40)%	36.8	9.8
2016	1	908	45,551	50	2.71%	37.0	10.0
2017	1	903	48,598	54	7.28%	37.5	10.6
2018	1	886	48,808	55	2.36%	37.3	10.5
2019	1	883	47,752	54	(1.83)%	36.7	10.0
2020	1	798	46,145	58	6.93%	37.5	10.7
2021	1	775	45,338	59	1.17%	37.7	11.1
2022	1	844	47,885	57	(3.02)%	36.5	10.1
2023	1	868	65,913	76	33.84%	36.9	10.5
2024	1	872	\$73,295	\$84	10.69%	37.4	11.1

⁽¹⁾ Annual payroll included in the Schedule of Active Member Valuation Data is based upon the annualized monthly payroll for active members as of the valuation date. The annual payroll recorded in the financial section is based upon the sum of the monthly payroll for active members recorded for each month of fiscal year ended June 30, 2024.

DRAFT - KRS 2024 ACFR - DRAFT**Summary of Retired Member Valuation Data
As of June 30 (\$ in Thousands)****KERS Nonhazardous**

Valuation Date	Number Added	Number Removed	Total Retirees & Beneficiaries	Annualized Retirement Allowances Added	Annualized Retirement Allowances Removed	Annualized Retirement Allowances ⁽¹⁾	% Increase In Allowances	Average Annual Allowance
2015	2,140	1,094	42,269	\$32,433	\$14,902	\$883,576	2.02%	\$21
2016	2,441	706	44,004	61,294	9,942	934,930	5.81%	21
2017	2,181	1,269	44,916	35,150	48,778	921,302	(1.46)%	21
2018	2,853	1,243	46,526	50,360	18,711	952,951	3.44%	20
2019	2,226	1,342	47,410	36,115	20,359	968,706	1.65%	20
2020	1,806	1,883	47,333	29,576	30,319	967,963	(0.08)%	20
2021	2,026	1,659	47,700	32,264	27,794	972,434	0.46%	20
2022	2,471	1,976	48,195	42,661	33,726	981,369	0.92%	20
2023	2,115	1,901	48,409	35,508	32,596	984,280	0.30%	20
2024	2,031	1,966	48,474	\$34,573	\$34,595	\$984,257	0.00%	\$20

KERS Hazardous

Valuation Date	Number Added	Number Removed	Total Retirees & Beneficiaries	Annualized Retirement Allowances Added	Annualized Retirement Allowances Removed	Annualized Retirement Allowances ⁽¹⁾	% Increase In Allowances	Average Annual Allowance
2015	203	65	3,758	\$3,144	\$985	\$56,431	3.98%	\$15
2016	237	29	3,966	3,028	458	59,001	4.55%	15
2017	206	79	4,093	2,771	2,609	59,162	0.27%	14
2018	321	44	4,370	5,394	507	64,050	8.26%	15
2019	227	60	4,537	4,242	769	67,523	5.42%	15
2020	214	123	4,628	3,102	1,543	69,081	2.31%	15
2021	263	165	4,726	3,681	1,959	70,803	2.49%	15
2022	300	176	4,850	4,978	2,093	73,689	4.08%	15
2023	210	173	4,887	3,101	1,924	74,867	1.60%	15
2024	207	160	4,934	\$3,281	\$1,911	\$76,237	1.83%	\$15

SPRS State Police Retirement System

Valuation Date	Number Added	Number Removed	Total Retirees & Beneficiaries	Annualized Retirement Allowances Added	Annualized Retirement Allowances Removed	Annualized Retirement Allowances ⁽¹⁾	% Increase In Allowances	Average Annual Allowance
2015	62	15	1,460	\$1,947	\$449	\$54,930	2.80%	\$38
2016	65	10	1,515	2,004	285	56,650	3.13%	37
2017	30	9	1,536	1,046	443	57,253	1.06%	37
2018	81	17	1,600	2,837	464	59,626	4.14%	37
2019	74	27	1,647	2,735	957	61,404	2.98%	37
2020	61	39	1,669	2,411	1,382	62,432	1.68%	37
2021	55	51	1,673	1,967	1,699	62,700	0.43%	37
2022	76	47	1,702	2,948	1,868	63,780	1.72%	37
2023	43	48	1,697	1,308	1,793	63,294	(0.76)%	37
2024	41	62	1,676	\$1,399	\$2,070	\$62,623	(1.06)%	\$37

⁽¹⁾ The Annualized Retirement Allowance is the annualized value of the monthly retirement allowance for retired members and beneficiaries as of the valuation date. Consequently, the values will not match the fiscal year total benefit payments recorded in the financial section. Headcounts and hazardous benefits for members receiving benefits in both the nonhazardous and hazardous fund have been included in the hazardous funds' summaries above. Additional \$25,136,000 in KERS Nonhazardous annual benefits are not included in the summary above for June 30, 2024.

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Summary of Benefit Provisions KERS, and SPRS Plans

Plan Funding

State statute requires active members to contribute 5% of creditable compensation for nonhazardous members and 8% of creditable compensation for hazardous members. For members participating on or after September 1, 2008, an additional 1% of creditable compensation is required. This amount is credited to the Insurance Fund and is non-refundable to the member. Employers contribute at the rate determined by the Boards to be necessary for the actuarial soundness of the systems, as required by KRS 61.565. KERS rates are subject to state budget approval.

Membership Eligibility

For all regular full-time non-school board employees to be eligible for membership, they must average 100 or more hours of work per month over a fiscal or calendar year. For all regular full-time school board employees to be eligible for membership, they must average 80 hours of work per month over the actual days worked during the school year.

Retirement Eligibility for Nonhazardous Employees

Age	Years of Service	Allowance Reduction
Tier 1 Members Whose Participation Began Before 9/1/2008		
65	1 month	None
Any	27	None
55	5	6.5% per year for first five years, and 4.5% for next five years before age 65 or 27 years of service.
Any	25	6.5% per year for first five years, and 4.5% for next five years before age 65 or 27 years of service.
Tier 2 Members Whose Participation Began On or After 9/1/2008 but before 1/1/2014		
65	5	None
57	Rule of 87	None
60	10	6.5% per year for first five years, and 4.5% for next five years before age 65 or Rule of 87 (age plus years of service)
Tier 3 Members Whose Participation Began On or After 1/1/2014		
65	5	None
57	Rule of 87	None

Retirement Eligibility for Hazardous

Age	Years of Service	Allowance Reduction
Tier 1 Members Whose Participation Began Before 9/1/2008		
55	1 month	None
Any	20	None
50	15	6.5% per year for first five years, and 4.5% for next five years before age 55 or 20 years of service.
Tier 2 Members Whose Participation Began On or After 9/1/2008 but before 1/1/2014		
60	5	None
Any	25	None
50	15	6.5% per year for first five years, and 4.5% for next five years before age 60 or 25 years of service.
Tier 3 Members Whose Participation Began On or After 1/1/2014		
60	5	None
Any	25	None

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**Benefit Formula for Nonhazardous
Tier 1: Members whose participation began before 9/1/2008**

Final Compensation	Benefit Factor	Years of Service
Average of the five highest years of compensation	KERS 1.97% if:	Member does not have 13 months of service credit for 1/1/1998-1/1/1999.
	KERS 2.00% if:	Member has 13 months of service credit from 1/1/1998-1/1/1999.
	KERS 2.20% if:	Member has 20 or more years of service, including 13 months from 1/1/1998-1/1/1999 and retires by 1/1/2009.
Includes earned service, purchased service, prior service, and sick leave service (if the member's employer participates in an approved sick leave program).		

If a member retires with less than four years of service credit, the member's benefit is equal to the actuarially equivalent of two times their member contribution balance with interest.

**Benefit Formula Nonhazardous
Tier 2: Members whose participation began on or after 9/1/2008 but before 1/1/2014**

Final Compensation	Benefit Factor	Years of Service
Average of the last five years of compensation	KERS increasing percent based on service at retirement up to 30 years* plus 2.00% for each year of service over 30 years	
	*Service	Multiplier
	10 years or less	1.10%
	10-20 years	1.30%
	20-26 years	1.50%
	26-30 years	1.75%
Includes earned service, purchased service, prior service, and sick leave service (if the member's employer participates in an approved sick leave program).		

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Benefit Formula for Hazardous for Tier 1: Members whose participation began before 9/1/2008

Final Compensation	Benefit Factor	Years of Service
Average of the three highest years of compensation	KERS 2.49% if: _____ SPRS 2.50% if: _____	Includes earned service, purchased service, prior service, and sick leave service (if the member's employer participates in an approved sick leave program).
If a member retires with less than four years of service, the member's benefit is equal to the actuarially equivalent of two times their member contribution balance with interest.		

Benefit Formula for Hazardous for Tier 2: Members whose participation began on or after 9/1/2008 but before 1/1/2014

Final Compensation	Benefit Factor	Years of Service										
Average of the three highest complete years of compensation	KERS, & SPRS increasing percent based on service at retirement* <table style="width: 100%; border-collapse: collapse;"> <tr style="border-bottom: 1px solid black;"> <th style="width: 50%;">*Service</th> <th style="width: 50%;">Multiplier</th> </tr> <tr> <td>10 years or less</td> <td>1.30%</td> </tr> <tr> <td>10-20 years</td> <td>1.50%</td> </tr> <tr> <td>20-25 years</td> <td>2.25%</td> </tr> <tr> <td>25+ years</td> <td>2.50%</td> </tr> </table>	*Service	Multiplier	10 years or less	1.30%	10-20 years	1.50%	20-25 years	2.25%	25+ years	2.50%	Includes earned service, purchased service, prior service, and sick leave service (if the member's employer participates in an approved sick leave program).
*Service	Multiplier											
10 years or less	1.30%											
10-20 years	1.50%											
20-25 years	2.25%											
25+ years	2.50%											

Benefit Formula for Hazardous for Tier 3: Members whose participation began on or after 1/1/2014

Each year that the member is active, a 7.50% employer pay credit and the employee's 8.00% contribution will be credited to each member's hypothetical cash balance account. The hypothetical account will earn interest at a minimum rate of 4%, annually. If the geometric average net investment return for the previous five years exceeds 4%, then the hypothetical account will be credited with an additional amount of interest in that year equal to 75% of the amount of the return which exceeds 4%. All interest credits will be applied to the hypothetical account balance on June 30 based on the account balance as of June 30 of the previous year. At retirement, the member's hypothetical account balance may be converted into an annuity based on an actuarial factor.

Benefit Formula Tier 3: Members whose participation began on or after 1/1/2014 Accumulated Account Balance / Actuarial Factor = Monthly Life Annuity

Accumulated Account Balance					
	Member	Employer	Base Annual	Upside Sharing	Actuarial
	Contributions	Contributions	Interest	Interest (FY 2023)	Factor
KERS Nonhazardous	5.00%	4.00%	4.00%	5.79%	
KERS Hazardous	8.00%	7.50%	4.00%	6.60%	
SPRS	8.00%	7.50%	4.00%	6.15%	

Note: Accumulated Account Balance is composed of member contributions, employer contributions, annual interest and annual upside sharing interest. For additional information on the calculation of the annual interest for Tier 3 see Upside Sharing Interest in Note B.

Note: Please see Plan Provisions for additional details.

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Summary of Benefit Provisions KERS, and SPRS Plans

Post-Retirement Death Benefits

If the member is receiving a monthly benefit based on at least four (4) years of creditable service, the retirement system will pay a \$5,000 death benefit payment to the beneficiary named by the member specifically for this benefit.

Disability Benefits

Members participating before 8/1/2004 may qualify for disability retirement provided the member has at least 60 months of service credit* and is not eligible for an unreduced benefit. Additional service credit may be added for computation of benefits under the benefit formula.

Members participating on or after 8/1/2004 but before 1/1/2014 may qualify for disability retirement provided the member has at least 60 months of service credit. Nonhazardous benefits are computed as the higher of 20% of the member's monthly final rate of pay or the amount calculated under the Benefit Formula based upon actual service. Hazardous benefits are computed as the higher of 25% of the member's monthly final rate of pay or the amount calculated under the Benefit Formula based upon actual service.

Members participating on or after 1/1/2014 may qualify for disability retirement provided the member has at least 60 months of service credit. The benefit to the member is the higher of 20% or 25% of the member's monthly final rate of pay for nonhazardous and hazardous, respectively or the Annuity amount using the factor at the member's normal retirement age.

Members disabled as a result of a single duty-related injury or act of violence related to their job may be eligible for additional benefits.

* Service requirements may be waived if line of duty or duty related.

Pre-Retirement Death Benefits

The beneficiary of a deceased member is eligible for a monthly benefit if the member died while in the line of duty or a duty related death. The beneficiary of a deceased member who did not die in the line of duty is eligible for a monthly benefit if the member was: (1) eligible for retirement at the time of death or, (2) under the age of 55 with at least 60 months of service credit and currently working for a participating agency at the time of death or (3) no longer working for a participating agency but at the time of death had at least 144 months of service credit. If the beneficiary of a deceased member is not eligible for a monthly benefit, the beneficiary will receive a lump-sum payment of the member's accumulated account balance.

Cost of Living Adjustment (COLA)

SB2 of 2013 eliminated all future COLAs unless the State Legislature so authorizes on a biennial basis and either (i) the system is over 100% funded or (ii) the Legislature appropriates sufficient funds to pay the increased liability for the COLA.

Insurance Benefits

For members participating prior to July 1, 2003, the system pays a percentage of the monthly premium for single coverage based on the service credit accrued at retirement. Hazardous members also receive a percentage paid for eligible spouse or dependent coverage based on the accrued hazardous service at retirement.

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For members participating on or after July 1, 2003, a dollar contribution amount is paid toward insurance coverage. Any portion paid toward eligible spouse and dependent coverage is based on the member's hazardous service credit. The member must have a minimum of 10 years of service to be eligible for insurance benefits if the participation date is between July 1, 2003 and August 31, 2008, and a 15 years of service if the participation date is on or after September 1, 2008. A nonhazardous member will receive \$10 for each year of service and hazardous members receive \$15 for each year of service. Since July 2004, the dollar amount increases annually on July 1 by 1.5%. Members can earn an additional dollar contribution amount if they surpass the career threshold defined in Kentucky Revised Statute 61.702.

Refunds

Upon termination of employment, a refund of member contributions and accumulated interest is available to the member.

Interest on Accounts

For employees participating prior to September 1, 2008, the interest paid is set by the Board of Trustees and will not be less than 2.0%, for employees participating on or after September 1, 2008 but before January 1, 2014, interest will be credited at a rate of 2.5%. For employees participating on or after January 1, 2014, interest will be credited at a minimum rate of 4.0%.

Benefit Changes since the Prior Valuation

There have been no benefit changes since the prior valuation.

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Plan Statistics

Definitions

Active members are those members who are currently employed by a participating agency and contributing to KRS as a condition of employment.

Inactive members are those members who are no longer employed with a participating agency but have not yet retired or taken a refund of contributions.

Retired members include both members and beneficiaries who are receiving a monthly benefit from KRS.

A single member may have multiple accounts. For these tables, persons who participate in two or more of the KRS plans; SPRS, KERS Hazardous or KERS Nonhazardous, will appear in each plan in which they have service credit.

These tables do not include individuals receiving payments under dependent child accounts, Qualified Domestic Relations Orders (QDRO), or multiple beneficiary accounts.

DRAFT - KRS 2024 ACFR - DRAFT**KERS Nonhazardous Membership As of June 30**

Fiscal Year	Active	Inactive	Retired	Total
2015	40,835	46,867	44,515	132,217
2016	39,561	48,506	46,366	134,433
2017	38,128	49,693	47,317	135,138
2018	36,160	50,772	48,985	135,917
2019	34,700	51,944	49,886	136,530
2020	32,688	54,234	50,518	137,440
2021	31,066	55,437	51,783	138,286
2022	30,293	56,636	52,429	139,358
2023	32,093	57,247	52,524	141,864
2024	33,135	58,154	52,686	143,975

KERS Hazardous Membership As of June 30

Fiscal Year	Active	Inactive	Retired	Total
2015	4,559	4,643	3,761	12,963
2016	4,585	5,054	3,992	13,631
2017	4,660	5,453	4,120	14,233
2018	4,551	5,889	4,397	14,837
2019	4,402	6,414	4,563	15,379
2020	4,667	7,263	4,696	16,626
2021	4,412	8,022	4,890	17,324
2022	4,295	8,568	5,013	17,876
2023	4,581	9,031	5,048	18,660
2024	4,910	9,454	5,084	19,448

SPRS Membership As of June 30

Fiscal Year	Active	Inactive	Retired	Total
2015	946	418	1,461	2,825
2016	934	430	1,539	2,903
2017	934	453	1,557	2,944
2018	917	470	1,623	3,010
2019	932	511	1,666	3,109
2020	798	592	1,698	3,088
2021	775	638	1,734	3,147
2022	844	670	1,748	3,262
2023	868	718	1,749	3,335
2024	872	749	1,736	3,357

KRS Membership As of June 30

Fiscal Year	Active	Inactive	Retired	Total
2015	46,340	51,928	49,737	148,005
2016	45,080	53,990	51,897	150,967
2017	43,722	55,599	52,994	152,315
2018	41,628	57,131	55,005	153,764
2019	40,034	58,869	56,115	155,018
2020	38,153	62,089	56,912	157,154
2021	36,253	64,097	58,407	158,757
2022	35,432	65,874	59,190	160,496
2023	37,542	66,996	59,321	163,859
2024	38,917	68,357	59,506	166,780

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Participating Employers

Principal Participating Employers in KERS As of June 30, 2024

Participating Employer	Rank	Covered Employees	% of Total System
DEPARTMENT FOR COMMUNITY BASED SERVICES	1	4,566	12.46%
DEPARTMENT OF HIGHWAYS	2	3,611	9.86%
DEPARTMENT OF CORRECTIONS	3	3,572	9.75%
JUDICIAL DEPARTMENT ADMINISTRATIVE OFFICE OF THE COURTS	4	1,469	4.01%
DEPARTMENT OF JUVENILE JUSTICE	5	1,137	3.10%
UNIFIED PROSECUTORIAL SYSTEM	6	896	2.45%
KENTUCKY STATE POLICE	7	885	2.42%
DEPARTMENT OF REVENUE	8	692	1.89%
DEPARTMENT OF PARKS	9	683	1.86%
DEPARTMENT OF VETERANS AFFAIRS	10	672	1.83%
ALL OTHERS		18,454	50.37%
Total		36,637	100.00%

Schedule of Participating Employers in KERS As of June 30, 2024

Agency Classification	Number of Agencies	Covered Employees
County Attorneys	57	277
Health Departments	60	2205
Master Commissioner	30	56
Non-P1 State Agencies	32	603
Other Retirement Systems	1	20
P1 State Agencies	132	29,417
Regional Mental Health Units	10	2,679
Universities	7	1,380
Total	329	36,637

Total Employees By Tier Levels

Tier 1	12,434
Tier 2	5,203
Tier 3	19,000

Schedule of Participating Employers in SPRS As of June 30, 2024

Agency Classification	Number of Agencies	Covered Employees
Kentucky State Police - Uniformed Police Officers	1	872

Total Employees By Tier Levels

Tier 1	310
Tier 2	180
Tier 3	382

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Member Monthly Benefit

Average Monthly Benefit by Length of Service in KRS As of June 30, 2024 (in Whole \$)						
Service Credit Range	KERS Nonhazardous		KERS Hazardous		SPRS	
	Number of Accounts	Average Monthly Benefit	Number of Accounts	Average Monthly Benefit	Number of Accounts	Average Monthly Benefit
Under 5 years	7,258	\$227	997	\$220	160	\$766
5 or more but less than 10	6,238	442	876	576	56	918
10 or more but less than 15	5,843	738	821	1,047	71	1,454
15 or more but less than 20	5,095	1,094	761	1,578	130	2,139
20 or more but less than 25	5,500	1,449	1,349	2,074	555	2,770
25 or more but less than 30	13,699	2,310	214	2,982	492	3,796
30 or more but less than 35	6,611	3,248	60	3,764	216	4,811
35 or more	2,442	4,603	6	4,405	56	6,304
Total	52,686	\$1,644	5,084	\$1,273	1,736	\$3,083

Note: These tables reflect the Average Monthly Pension Benefit. A single member may have multiple accounts, which contribute to one pension. These tables do not reflect dependent child accounts, Qualified Domestic Relations Order (QDRO) accounts or multiple beneficiary accounts.

DRAFT - KRS 2024 ACFR - DRAFT**Fiduciary Net Position****Fiduciary Net Position - KERS**

As of June 30 (\$ in Thousands)

Fiscal Year	Nonhazardous			Hazardous		
	Pension	Insurance	Total	Pension	Insurance	Total
2015	\$2,327,782	\$665,639	\$2,993,421	\$552,468	\$439,113	\$991,581
2016	1,980,292	668,318	2,648,610	527,880	437,397	965,277
2017	2,092,781	781,406	2,874,187	605,921	484,442	1,090,363
2018	2,048,890	846,762	2,895,652	651,173	513,384	1,164,557
2019	2,286,625	942,136	3,228,761	687,877	527,108	1,214,985
2020	2,362,231	1,006,498	3,368,729	697,366	514,740	1,212,106
2021	3,085,014	1,353,123	4,438,137	874,928	624,889	1,499,817
2022	3,076,743	1,301,522	4,378,265	819,237	579,902	1,399,139
2023	3,607,206	1,465,489	5,072,695	902,567	616,322	1,518,889
2024	\$4,297,571	\$1,692,094	\$5,989,665	\$1,029,921	\$667,917	\$1,697,838

Fiduciary Net Position - SPRS

As of June 30 (\$ in Thousands)

Fiscal Year	Pension	Insurance	Total
2015	\$247,229	\$164,714	\$411,943
2016	218,013	160,949	378,962
2017	256,383	178,191	434,574
2018	268,425	189,994	458,419
2019	287,242	200,128	487,370
2020	295,044	200,245	495,289
2021	357,660	246,004	603,664
2022	552,926	230,015	782,941
2023	592,826	246,797	839,623
2024	\$653,216	\$272,091	\$925,307

Fiduciary Net Position - KRS

As of June 30 (\$ in Thousands)

Fiscal Year	Pension	Insurance	Total
2015	\$3,127,479	\$1,269,466	\$4,396,945
2016	2,726,185	1,266,664	3,992,849
2017	2,955,085	1,444,039	4,399,124
2018	2,968,488	1,550,140	4,518,628
2019	3,261,744	1,669,372	4,931,116
2020	3,354,641	1,721,483	5,076,124
2021	4,317,602	2,224,016	6,541,618
2022	4,448,906	2,111,439	6,560,345
2023	5,102,599	2,328,608	7,431,207
2024	\$5,980,708	\$2,632,102	\$8,612,810

Note: For additional historical data for all charts presented, please visit our website for previous annual reports at <https://kyret.ky.gov/Publications/Pages/Annual-Reports.aspx>

DRAFT - KRS 2024 ACFR - DRAFT**Changes in Fiduciary Net Position****Changes in Fiduciary Net Position - KERS Nonhazardous Pension Plan**

As of June 30 (\$ in Thousands)

Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Members' Contributions	\$100,424	\$101,677	\$100,544	\$104,972	\$93,759	\$96,594	\$90,202	\$89,607	\$84,579	\$96,615
Employers' Contributions	520,948	512,670	644,803	619,988	948,866	948,578	1,134,180	141,027	136,445	156,007
General Fund Appropriations	-	-	58,193	67,574	75,858	-	-	912,705	240,000	240,000
Health Insurance Contributions (HB1)	4,181	4,817	5,156	5,786	5,963	1	(8)	(13)	(12)	(18)
Actuarially Accrued Liability Contributions	-	-	-	-	-	-	-	-	898,545	899,663
Employer Cessation	-	-	53,215	17	10,643	20	-	63,113	-	-
Net Investment Income (Loss)	44,570	(20,662)	220,985	147,577	114,918	53,696	528,439	(165,904)	220,258	356,018
Bank of America Settlement	8,442	-	-	-	-	-	-	-	-	-
Northern Trust Settlement	-	-	-	301	37	-	-	-	-	-
Pension Spiking	743	414	909	1,564	95	(6)	52	24	16	25
Total Additions	679,308	598,916	1,083,805	947,779	1,250,139	1,098,883	1,752,865	1,040,559	1,579,831	1,748,310
Deductions										
Benefit Payments	905,790	923,288	948,489	967,374	988,349	999,813	1,009,501	1,023,375	1,023,704	1,032,124
Refunds	13,552	12,130	11,819	13,603	12,342	11,523	8,953	12,116	11,847	11,693
Administrative Expenses	10,474	10,807	10,974	10,692	11,712	11,941	11,627	13,339	13,817	14,128
Capital Project Expenses	-	181	34	-	-	-	-	-	-	-
Total Deductions	929,816	946,406	971,316	991,669	1,012,403	1,023,277	1,030,081	1,048,830	1,049,368	1,057,945
Net Increase (Decrease) in Fiduciary Net Position	\$(250,508)	\$(347,490)	\$112,489	\$(43,890)	\$237,736	\$75,606	\$722,784	\$(8,271)	\$530,463	\$690,365

DRAFT - KRS 2024 ACFR - DRAFT**Changes in Fiduciary Net Position - KERS Nonhazardous Insurance Plan**

As of June 30 (\$ in Thousands)

Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Employers' Contributions	\$132,208	\$131,935	\$133,024	\$132,364	\$173,576	\$170,479	\$153,571	\$31,611	\$35,549	\$41,362
Actuarially Accrued Liability Contributions	-	-	-	-	-	-	-	101,637	87,674	87,782
Net Investment Income (Loss)	8,690	(3,904)	90,915	61,331	43,202	10,624	258,595	(85,555)	128,052	166,714
Retired Re-employed (HB1)	3,732	3,880	3,765	4,055	3,996	4,502	4,705	5,041	5,885	7,484
Member Drug Reimbursement	-	-	1	5	3	2	-	-	4	4
Premiums Received from Retirees	272	240	248	216	184	183	182	182	(27)	79
Humana Gain Share Payment	-	-	-	-	3,079	-	17,167	7,321	4,851	8,440
Employer Cessation	-	-	15,567	-	1,391	25	28,400	2,405	-	-
Northern Trust Settlement	-	-	-	32	4	-	-	-	-	-
Health Insurance Contribution (HB1)	-	-	-	-	-	6,127	6,326	6,560	8,370	10,603
Total Additions	144,902	132,151	243,520	198,003	225,435	191,942	468,946	69,202	270,358	322,468
Deductions										
Health Insurance Premiums	123,127	126,550	127,648	130,069	127,221	125,006	119,897	118,451	103,952	93,751
Administrative Expenses	893	818	861	760	875	847	815	821	771	727
Self-Funded Healthcare Costs	2,145	2,095	1,920	1,819	1,962	1,724	1,609	1,525	1,668	1,378
Excise Tax Insurance	3	6	3	3	3	3	-	6	-	7
Total Deductions	126,168	129,469	130,432	132,651	130,061	127,580	122,321	120,803	106,391	95,863
Net Increase (Decrease) in Fiduciary Net Position	\$18,734	\$2,679	\$113,088	\$65,352	\$95,374	\$64,362	\$346,625	\$(51,601)	\$163,967	\$226,605

DRAFT - KRS 2024 ACFR - DRAFT**Changes in Fiduciary Net Position - KERS Hazardous Pension Plan**

As of June 30 (\$ in Thousands)

Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Members' Contributions	\$12,670	\$15,055	\$17,523	\$17,891	\$17,118	\$19,769	\$19,961	\$20,588	\$17,459	\$21,568
Employers' Contributions	28,374	23,690	37,630	32,790	55,229	59,096	62,182	59,052	64,020	89,898
General Fund Appropriations	-	-	15,000	10,000	-	-	-	-	-	-
Health Insurance Contributions (HB1)	537	684	811	909	934	4	3	(5)	(7)	(8)
Net Investment Income (Loss)	8,701	(1,652)	70,993	51,848	36,704	6,805	174,922	(51,841)	77,261	102,139
Actuarially Accrued Liability Contributions (AALC)	767	-	-	-	-	-	-	-	-	-
Northern Trust Settlement	-	-	-	33	4	-	-	-	-	-
Pension Spiking	162	70	344	871	29	19	18	3	29	1
Total Additions	51,211	37,847	142,301	114,342	110,018	85,693	257,086	27,797	167,520	213,598
Deductions										
Benefit Payments	56,774	59,306	61,231	65,616	69,527	71,861	73,889	77,047	78,636	80,528
Refunds	2,609	2,211	2,106	2,501	2,684	3,168	4,380	4,976	4,041	4,133
Administrative Expenses	844	903	919	975	1,103	1,176	1,255	1,465	1,513	1,583
Capital Project Expenses	-	15	4	-	-	-	-	-	-	-
Total Deductions	60,227	62,435	64,260	69,092	73,314	76,205	79,524	83,488	84,190	86,244
Net Increase (Decrease) in Fiduciary Net Position	\$(9,016)	\$(24,588)	\$78,041	\$45,250	\$36,704	\$9,488	\$177,562	\$(55,691)	\$83,330	\$127,354

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Changes in Fiduciary Net Position - KERS Hazardous Insurance Plan										
As of June 30 (\$ in Thousands)										
Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Employers' Contributions	\$14,173	\$15,929	\$4,688	\$4,302	\$3,725	\$4,482	\$23	\$1	\$37	\$45
Net Investment Income (Loss)	7,793	(882)	59,188	42,567	28,049	638	126,475	(27,406)	52,991	67,435
Retired Re-employed (HB1)	709	837	932	986	1,245	1,294	1,276	1,280	1,452	1,865
Actuarially Accrued Liability Contributions (AALC)	-	-	-	-	-	-	-	-	-	-
Member Drug Reimbursement	-	-	-	-	-	1	-	1	-	-
Premiums Received from Retirees	14	(13)	(51)	(50)	(19)	(5)	(11)	(54)	(69)	(24)
Humana Gain Share	-	-	-	-	213	-	1,253	548	368	651
Northern Trust Settlement	-	-	-	18	2	-	-	-	-	-
Health Insurance Contributions (HB1)	-	-	-	-	-	1,100	1,164	1,232	1,592	2,094
Total Additions	22,689	15,871	64,757	47,823	33,215	7,510	130,180	(24,398)	56,371	72,066
Deductions										
Health Insurance Premiums	17,000	17,490	17,562	18,697	19,280	19,630	19,800	20,355	19,748	20,260
Administrative Expenses	101	97	105	104	117	123	118	125	123	117
Self-Funded Healthcare Costs	-	-	45	79	94	125	112	109	80	94
Excise Tax Insurance	-	-	-	-	-	-	-	-	-	-
Total Deductions	17,101	17,587	17,712	18,880	19,491	19,878	20,030	20,589	19,951	20,471
Net Increase (Decrease) in Fiduciary Net Position	\$5,588	\$(1,716)	\$47,045	\$28,943	\$13,724	\$(12,368)	\$110,150	\$(44,987)	\$36,420	\$51,595

DRAFT - KRS 2024 ACFR - DRAFT**Changes in Fiduciary Net Position - SPRS Pension Plan**

As of June 30 (\$ in Thousands)

Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Members' Contributions	\$5,150	\$5,149	\$5,349	\$5,522	\$5,062	\$4,767	\$4,752	\$4,773	\$5,250	\$5,703
Employers' Contributions	31,444	25,723	38,028	36,486	58,947	58,358	59,262	62,341	58,121	61,998
General Fund Appropriations	-	-	25,000	10,000	1,086	1,086	384	215,000	-	-
Health Insurance Contributions (HB1)	94	113	131	155	176	-	-	(26)	(8)	(12)
Net Investment Income (Loss)	3,427	(3,841)	26,795	18,487	14,863	6,359	61,966	(22,148)	40,801	57,058
Bank of America Settlement	646	-	-	-	-	-	-	-	-	-
Northern Trust Settlement	-	-	-	21	3	-	-	-	-	-
Pension Spiking	546	99	210	392	15	9	4	-	-	-
Total Additions	41,307	27,243	95,513	71,063	80,152	70,579	126,368	259,940	104,164	124,747
Deductions										
Benefit Payments	54,766	56,268	56,935	58,805	60,948	62,423	63,249	64,121	63,805	63,823
Refunds	85	11	26	22	162	88	273	280	166	220
Administrative Expenses	201	176	181	194	225	266	230	273	293	314
Capital Project Expenses	-	4	1	-	-	-	-	-	-	-
Total Deductions	55,052	56,459	57,143	59,021	61,335	62,777	63,752	64,674	64,264	64,357
Net Increase (Decrease) in Fiduciary Net Position	\$(13,745)	\$(29,216)	\$38,370	\$12,042	\$18,817	\$7,802	\$62,616	\$195,266	\$39,900	\$60,390

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Changes in Fiduciary Net Position - SPRS Insurance Plan										
As of June 30 (\$ in Thousands)										
Additions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Employers' Contributions	\$10,379	\$10,228	\$9,222	\$9,397	\$13,282	\$13,133	\$9,284	\$8,782	\$9,289	\$10,158
Net Investment Income (Loss)	2,921	(48)	21,570	16,420	10,766	1,108	50,051	(10,787)	21,426	26,836
Retired Re-employed (HB1)	3	9	-	-	6	-	-	-	-	5
Member Drug Reimbursement	-	-	-	-	-	-	-	-	-	-
Premiums Received from Retirees	1	(29)	(55)	(41)	(13)	(12)	(14)	(27)	(131)	(13)
Humana Gain Share	-	-	-	-	144	-	811	342	224	390
Northern Trust Settlement	-	-	-	8	1	-	-	-	-	-
Health Insurance contributions (HB1)	-	-	-	-	-	196	209	256	356	408
Total Additions	13,304	10,160	30,737	25,784	24,186	14,425	60,341	(1,434)	31,164	37,784
Deductions										
Health Insurance Premiums	13,483	13,836	13,405	13,881	13,942	14,215	14,487	14,461	14,290	12,412
Administrative Expenses	65	89	66	62	69	71	71	73	74	71
Self-Funded Healthcare Costs	-	-	24	38	40	22	25	21	18	7
Excise Tax Insurance	-	-	-	-	-	-	-	-	-	-
Total Deductions	13,548	13,925	13,495	13,981	14,051	14,308	14,583	14,555	14,382	12,490
Net Increase (Decrease) in Fiduciary Net Position	\$(244)	\$(3,765)	\$17,242	\$11,803	\$10,135	\$117	\$45,758	\$(15,989)	\$16,782	\$25,294

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Schedule of Benefit Expenses

The following tables include individuals receiving a monthly benefit as of June 30 in the indicated fiscal year. A single member may have multiple accounts which contribute to one pension. This table represents all individuals receiving a benefit including dependent children, Qualified Domestic Relations Order (QDRO) accounts and multiple beneficiary accounts. If a member has died or a disability decision is pending, the monthly benefit amount is reflected as zero until the account status changes.

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Benefit Expenses - KERS Nonhazardous**

As of June 30 (in Whole \$)

	Normal Retirement	Early Retirement	Disability Retirement	Beneficiary Payments
Fiscal Year 2015				
Average Benefit	\$992	\$1,901	\$996	\$909
Number of Accounts	6,896	33,940	2,696	983
Total Monthly Benefits	\$6,843,193	\$64,503,048	\$2,684,720	\$893,407
% of Total Monthly Benefits	9.13%	86.09%	3.58%	1.19%
Fiscal Year 2016				
Average Benefit	\$989	\$1,886	\$1,005	\$902
Number of Accounts	7,390	35,192	2,770	1,014
Total Monthly Benefits	\$7,312,293	\$66,383,638	\$2,784,928	\$914,804
% of Total Monthly Benefits	9.45%	85.77%	3.60%	1.18%
Fiscal Year 2017				
Average Benefit	\$992	\$1,883	\$1,013	\$924
Number of Accounts	7,628	35,890	2,772	1,028
Total Monthly Benefits	\$7,565,780	\$67,591,003	\$2,807,938	\$950,318
% of Total Monthly Benefits	9.59%	85.65%	3.56%	1.20%
Fiscal Year 2018				
Average Benefit	\$998	\$1,879	\$1,019	\$940
Number of Accounts	8,070	37,141	2,767	1,007
Total Monthly Benefits	\$8,049,794	\$69,780,011	\$2,818,593	\$946,466
% of Total Monthly Benefits	9.87%	85.52%	3.45%	1.16%
Fiscal Year 2019				
Average Benefit	\$993	\$1,876	\$1,029	\$933
Number of Accounts	8,387	37,751	2,751	997
Total Monthly Benefits	\$8,328,706	\$70,826,696	\$2,831,527	\$930,110
% of Total Monthly Benefits	10.04%	85.42%	3.41%	1.12%
Fiscal Year 2020				
Average Benefit	\$984	\$1,872	\$1,031	\$937
Number of Accounts	8,622	38,233	2,676	987
Total Monthly Benefits	\$8,483,484	\$71,585,386	\$2,759,983	\$924,459
% of Total Monthly Benefits	10.13%	85.47%	3.30%	1.10%
Fiscal Year 2021				
Average Benefit	\$984	\$1,864	\$1,036	\$949
Number of Accounts	9,046	39,020	2,698	1,019
Total Monthly Benefits	\$8,897,420	\$72,724,923	\$2,796,355	\$966,951
% of Total Monthly Benefits	10.42%	85.17%	3.27%	1.13%
Fiscal Year 2022				
Average Benefit	\$987	\$1,860	\$1,031	\$966
Number of Accounts	9,279	39,508	2,609	1,033
Total Monthly Benefits	\$9,155,941	\$73,489,369	\$2,690,544	\$997,608
% of Total Monthly Benefits	10.61%	85.12%	3.12%	1.16%
Fiscal Year 2023				
Average Benefit	\$982	\$1,861	\$1,034	\$956
Number of Accounts	9,464	39,505	2,531	1,024
Total Monthly Benefits	\$9,291,103	\$73,531,803	\$2,615,997	\$979,166
% of Total Monthly Benefits	10.75%	85.09%	3.03%	1.13%
Fiscal Year 2024				
Average Benefit	\$981	\$1,862	\$1,027	\$990
Number of Accounts	9,704	39,488	2,456	1,038
Total Monthly Benefits	\$9,519,101	\$73,544,350	\$2,523,189	\$1,027,961
% of Total Monthly Benefits	10.99%	84.91%	2.91%	1.19%

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Benefit Expenses - KERS Hazardous**

As of June 30 (in Whole \$)

	Normal Retirement	Early Retirement	Disability Retirement	Beneficiary Payments
Fiscal Year 2015				
Average Benefit	\$986	\$1,556	\$661	\$714
Number of Accounts	1,912	1,566	193	90
Total Monthly Benefits	\$1,884,477	\$2,436,923	\$127,477	\$64,250
% of Total Monthly Benefits	41.76%	54.00%	2.82%	1.42%
Fiscal Year 2016				
Average Benefit	\$984	\$1,542	\$663	\$730
Number of Accounts	2,046	1,658	194	94
Total Monthly Benefits	\$2,011,530	\$2,557,114	\$128,663	\$68,605
% of Total Monthly Benefits	42.21%	53.65%	2.70%	1.44%
Fiscal Year 2017				
Average Benefit	\$993	\$1,541	\$662	\$721
Number of Accounts	2,101	1,719	205	96
Total Monthly Benefits	\$2,086,732	\$2,648,685	\$135,625	\$69,255
% of Total Monthly Benefits	42.24%	53.61%	2.75%	1.40%
Fiscal Year 2018				
Average Benefit	\$1,002	\$1,551	\$684	\$737
Number of Accounts	2,215	1,877	205	100
Total Monthly Benefits	\$2,218,520	\$2,911,409	\$140,174	\$73,704
% of Total Monthly Benefits	41.52%	54.48%	2.62%	1.38%
Fiscal Year 2019				
Average Benefit	\$1,020	\$1,561	\$708	\$744
Number of Accounts	2,269	1,987	208	99
Total Monthly Benefits	\$2,315,435	\$3,101,783	\$147,342	\$73,702
% of Total Monthly Benefits	41.07%	55.01%	2.61%	1.31%
Fiscal Year 2020				
Average Benefit	\$1,017	\$1,561	\$701	\$739
Number of Accounts	2,334	2,061	207	94
Total Monthly Benefits	\$2,374,412	\$3,216,376	\$145,112	\$69,433
% of Total Monthly Benefits	40.90%	55.40%	2.50%	1.20%
Fiscal Year 2021				
Average Benefit	\$1,021	\$1,551	\$701	\$751
Number of Accounts	2,414	2,164	215	97
Total Monthly Benefits	\$2,464,831	\$3,355,473	\$150,742	\$72,837
% of Total Monthly Benefits	40.78%	55.52%	2.49%	1.21%
Fiscal Year 2022				
Average Benefit	\$1,032	\$1,560	\$711	\$786
Number of Accounts	2,434	2,267	216	96
Total Monthly Benefits	\$2,512,089	\$3,536,881	\$153,476	\$75,437
% of Total Monthly Benefits	40.01%	56.34%	2.44%	1.20%
Fiscal Year 2023				
Average Benefit	\$1,040	\$1,565	\$703	\$843
Number of Accounts	2,441	2,296	213	98
Total Monthly Benefits	\$2,538,237	\$3,592,494	\$149,801	\$82,626
% of Total Monthly Benefits	39.89%	56.46%	2.35%	1.30%
Fiscal Year 2024				
Average Benefit	\$1,049	\$1,579	\$708	\$863
Number of Accounts	2,444	2,327	214	99
Total Monthly Benefits	\$2,562,636	\$3,673,571	\$151,555	\$85,417
% of Total Monthly Benefits	39.59%	56.75%	2.34%	1.32%

DRAFT - KRS 2024 ACFR - DRAFT**Schedule of Benefit Expenses - SPRS**

As of June 30 (in Whole \$)

	Normal Retirement	Early Retirement	Disability Retirement	Beneficiary Payments
Fiscal Year 2015				
Average Benefit	\$3,578	\$3,189	\$1,347	\$2,153
Number of Accounts	150	1,213	75	23
Total Monthly Benefits	\$536,649	\$3,867,971	\$101,018	\$49,524
% of Total Monthly Benefits	11.78%	84.91%	2.22%	1.09%
Fiscal Year 2016				
Average Benefit	\$3,579	\$3,135	\$1,269	\$2,008
Number of Accounts	155	1,277	82	25
Total Monthly Benefits	\$554,743	\$4,002,993	\$104,056	\$50,196
% of Total Monthly Benefits	11.77%	84.95%	2.21%	1.07%
Fiscal Year 2017				
Average Benefit	\$3,611	\$3,135	\$1,278	\$2,008
Number of Accounts	149	1,303	82	25
Total Monthly Benefits	\$538,032	\$4,084,771	\$104,788	\$50,196
% of Total Monthly Benefits	11.26%	85.50%	2.19%	1.05%
Fiscal Year 2018				
Average Benefit	\$3,642	\$3,128	\$1,289	\$2,082
Number of Accounts	153	1,361	83	26
Total Monthly Benefits	\$557,249	\$4,257,579	\$107,019	\$54,127
% of Total Monthly Benefits	11.20%	85.56%	2.15%	1.09%
Fiscal Year 2019				
Average Benefit	\$3,607	\$3,138	\$1,298	\$2,082
Number of Accounts	156	1,401	83	26
Total Monthly Benefits	\$562,630	\$4,395,857	\$107,737	\$54,127
% of Total Monthly Benefits	10.99%	85.85%	2.10%	1.06%
Fiscal Year 2020				
Average Benefit	\$3,628	\$3,154	\$1,339	\$2,137
Number of Accounts	152	1,440	80	26
Total Monthly Benefits	\$551,470	\$4,541,490	\$107,148	\$55,558
% of Total Monthly Benefits	10.49%	86.41%	2.04%	1.06%
Fiscal Year 2021				
Average Benefit	\$3,542	\$3,160	\$1,287	\$2,137
Number of Accounts	156	1,468	84	26
Total Monthly Benefits	\$552,551	\$4,638,826	\$108,101	\$55,558
% of Total Monthly Benefits	10.32%	86.63%	2.02%	1.04%
Fiscal Year 2022				
Average Benefit	\$3,565	\$3,163	\$1,275	\$2,077
Number of Accounts	159	1,481	83	25
Total Monthly Benefits	\$566,764	\$4,683,959	\$105,787	\$51,931
% of Total Monthly Benefits	10.48%	86.60%	1.96%	0.96%
Fiscal Year 2023				
Average Benefit	\$3,550	\$3,146	\$1,294	\$2,077
Number of Accounts	155	1,486	83	25
Total Monthly Benefits	\$550,304	\$4,674,802	\$107,386	\$51,931
% of Total Monthly Benefits	10.22%	86.82%	1.99%	0.97%
Fiscal Year 2024				
Average Benefit	\$3,511	\$3,145	\$1,286	\$2,172
Number of Accounts	155	1,481	76	24
Total Monthly Benefits	\$544,210	\$4,658,414	\$97,752	\$52,129
% of Total Monthly Benefits	10.17%	87.03%	1.83%	0.97%

DRAFT - KRS 2024 ACFR - DRAFT**Active Refunds**

Active Refunds Report For the Period ended June 30, 2024 (in Whole \$)							
System	Tier	Active Termination Refunds		Active Death Refunds		Totals	
		Number of Refunds	Amount of Refunds	Number of Refunds	Amount of Refunds	Number of Refunds	Amount of Refunds
KERS Nonhazardous	1	161	2,497,333	79	268,714	240	2,766,047
	2	73	506,667	14	81,433	87	588,100
	3	723	7,939,370	11	41,846	734	7,981,216
	Total	957	10,943,370	104	391,993	1,061	11,335,363
KERS Hazardous	1	13	201,697	2	5,579	15	207,276
	2	16	130,529	3	8,477	19	139,006
	3	223	3,630,505	10	68,691	233	3,699,196
	Total	252	3,962,731	15	82,747	267	4,045,478
SPRS	1	1	19,477	-	-	1	19,477
	2	-	-	-	-	-	-
	3	5	201,096	-	-	5	201,096
	Total	6	220,573	-	-	6	220,573
TOTALS		1,215	\$15,126,674	119	\$474,740	1,334	\$15,601,414

DRAFT - KRS 2024 ACFR - DRAFT**Analysis of Initial Retirees**

Analysis of Initial Retirees As of June 30 (in Whole \$)			
	KERS Nonhazardous	KERS Hazardous	SPRS
Fiscal Year 2015			
Number of Accounts	2,078	191	55
Average Service Credit (months)	204	164	251
Average Final Compensation	\$47,187	\$47,148	\$67,862
Average Monthly Benefit	\$1,308	\$1,280	\$3,009
Average System Payment for Health Insurance	\$549	\$906	\$1,376
Fiscal Year 2016			
Number of Accounts	2,043	205	57
Average Service Credit (months)	207	160	234
Average Final Compensation	\$47,429	\$44,494	\$65,535
Average Monthly Benefit	\$1,351	\$1,225	\$2,953
Average System Payment for Health Insurance	\$558	\$870	\$1,425
Fiscal Year 2017			
Number of Accounts	2,094	191	30
Average Service Credit (months)	208	146	241
Average Final Compensation	\$46,753	\$47,604	\$68,401
Average Monthly Benefit	\$1,339	\$1,150	\$2,935
Average System Payment for Health Insurance	\$558	\$872	\$1,192
Fiscal Year 2018			
Number of Accounts	2,682	328	68
Average Service Credit (months)	223	167	241
Average Final Compensation	\$48,552	\$51,219	\$71,132
Average Monthly Benefit	\$1,481	\$1,392	\$3,035
Average System Payment for Health Insurance	\$578	\$1,033	\$1,365
Fiscal Year 2019			
Number of Accounts	1,993	234	63
Average Service Credit (months)	204	174	254
Average Final Compensation	\$47,824	\$51,901	\$73,795
Average Monthly Benefit	\$1,355	\$1,532	\$3,341
Average System Payment for Health Insurance	\$569	\$1,015	\$1,391
Fiscal Year 2020			
Number of Accounts	1,755	195	54
Average Service Credit (months)	211	150	245
Average Final Compensation	\$47,069	\$51,021	\$78,468
Average Monthly Benefit	\$1,352	\$1,242	\$3,313
Average System Payment for Health Insurance	\$579	\$1,013	\$1,404
Fiscal Year 2021			
Number of Accounts	1,644	201	32
Average Service Credit (months)	201	143	217
Average Final Compensation	\$46,600	\$49,664	\$72,942
Average Monthly Benefit	\$1,276	\$1,248	\$2,872
Average System Payment for Health Insurance	\$560	\$1,019	\$1,347
Fiscal Year 2022			
Number of Accounts	1,910	221	46
Average Service Credit (months)	213	165	245
Average Final Compensation	\$48,028	\$52,575	\$76,377
Average Monthly Benefit	\$1,389	\$1,515	\$3,287
Average System Payment for Health Insurance	\$599	\$1,020	\$1,345

DRAFT - KRS 2024 ACFR - DRAFT

Analysis of Initial Retirees As of June 30 (in Whole \$) Continued			
	KERS Nonhazardous	KERS Hazardous	SPRS
Fiscal Year 2023			
Number of Accounts	1,479	136	13
Average Service Credit (months)	190	146	186
Average Final Compensation	\$50,304	\$52,473	\$73,081
Average Monthly Benefit	\$1,332	\$1,315	\$2,737
Average System Payment for Health Insurance	\$640	\$1,151	\$1,208
Fiscal Year 2024			
Number of Accounts	1,483	146	16
Average Service Credit (months)	195	150	171
Average Final Compensation	\$50,548	\$57,500	\$70,651
Average Monthly Benefit	\$1,310	\$1,430	\$2,492
Average System Payment for Health Insurance	\$680	\$1,173	\$1,366
<i>Note: This table represents all individuals who had an initial retirement date within the fiscal year.</i>			

Payment Options

Payment Options Selected by Retired Members As of June 30, 2024 (in Whole \$)							
	Basic	Other	Period Certain	Pop Up	Social Security Adjustment	Survivorship	Annuity
KERS Nonhazardous							
Number of Accounts	19,521	23	6,745	10,142	3,174	13,055	26
Monthly Benefits	\$28,708,579	\$45,511	\$10,402,173	\$20,532,386	\$5,504,498	\$21,414,771	\$6,684
KERS Hazardous							
Number of Accounts	1,424	6	554	1,417	314	1,364	5
Monthly Benefits	\$1,602,073	\$5,498	\$698,705	\$2,142,484	\$360,813	\$1,662,219	\$1,387
SPRS							
Number of Accounts	187	1	132	756	178	482	-
Monthly Benefits	\$539,025	\$3,084	\$380,895	\$2,616,641	\$350,170	\$1,462,691	\$-
KRS Total							
Number of Accounts	21,132	30	7,431	12,315	3,666	14,901	31
Monthly Benefits	\$30,849,677	\$54,093	\$11,481,773	\$25,291,511	\$6,215,481	\$24,539,681	\$8,071
<i>The information in this table represents accounts administered by KPPA. A single member may have multiple accounts, which contribute to one pension.</i>							

DRAFT - KRS 2024 ACFR - DRAFT

Employer Contribution Rates

In KERS and SPRS, both the employee and the employer contribute a percentage of creditable compensation to KRS.

The employee contribution rate is set by state statute. Nonhazardous employees contribute 5% while Hazardous duty and SPRS members contribute 8%. Employees hired on or after September 1, 2008, contribute an additional 1% to health insurance.

The actual pension and insurance employer contribution rates that were paid are shown below.

Under Kentucky Revised Statutes 61.565, KERS and SPRS employer contribution rates are set by the KRS Board based on an annual actuarial valuation. However, KERS and SPRS employer rates are subject to approval by the Kentucky General Assembly through the adoption of the biennial Executive Branch Budget. The tables on pages 121 and 122 in the Actuarial Section, shows the KERS and SPRS employer contribution rates that were actuarial recommended rates in the annual valuation. House Bill 8 passed during the 2021 legislative session changed how employer contributions are allocated and collected from the participating employers in the KERS Nonhazardous Plan. Each employer will pay a normal cost contribution on the payroll of their covered employees and contribute to the Plan an allocated share of the cost required to amortize the unfunded liability.

Employer Contribution Rates (%) As of June 30										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
KERS Nonhazardous*										
Actual Rate	38.77%	38.77%	48.59%	49.47%	83.43%	83.43%	84.43%	10.10%	9.97%	9.97%
KERS Hazardous										
Actual Rate	26.34%	26.34%	23.82%	23.70%	36.85%	36.85%	36.00%	33.43%	31.82%	31.82%
SPRS										
Actual Rate	75.76%	75.76%	89.21%	91.24%	146.28%	146.28%	143.48%	146.06%	99.43%	99.43%
<i>*2021 House Bill 8 changed the manner in which KERS Nonhazardous pays employer contributions. Beginning in FY22, each employer pays the normal cost, which is the rate stated above, along with an actuarial accrued liability payment that is calculated and provided by the actuary.</i>										

DRAFT - KRS 2024 ACFR - DRAFT

Insurance Contracts

KRS provides medical insurance and other managed care coverage for eligible retired members.

Participation in the insurance program is optional and requires the completion of the proper forms at the time of retirement in order to obtain the insurance coverage. KRS provides access to health insurance coverage through the Kentucky Employees' Health Plan (KEHP) for recipients until they reach age 65 and/or become Medicare eligible. After a retired member becomes eligible for Medicare, coverage is available through a Medicare eligible plan offered by KRS. A retired member's spouse and/or dependents may also be covered on health insurance through KRS.

Insurance Benefits Paid to Retirees & Beneficiaries Participating in a KRS Health Insurance Plan As of June 30, 2024 (in Whole \$)			
	KERS Nonhazardous	KERS Hazardous	SPRS
Number	31,088	3,100	1,768
Average Service Credit (Months)	311	264	318
Average Monthly System Payment for Health Insurance	\$290	\$691	\$914
Average Monthly Member Payment for Health Insurance	\$36	\$34	\$24
Total Monthly Payment for Health Insurance	\$9,543,037	\$1,841,985	\$1,277,999

Insurance Contracts by Type As of June 30										
KERS										
Nonhazardous	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
KEHP Parent Plus	452	441	411	460	441	433	428	434	433	395
KEHP Couple/Family	714	656	663	696	700	666	633	612	553	473
KEHP Single	9,251	8,876	8,627	8,638	8,304	7,942	7,415	7,141	6,693	6,334
Medicare without Prescription	1,303	1,286	1,229	1,179	1,141	1,089	1,026	989	957	939
Medicare with Prescription	18,577	19,447	20,215	21,117	21,713	22,271	22,648	22,903	22,976	22,947
Hazardous	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
KEHP Parent Plus	110	97	88	96	103	112	104	116	118	108
KEHP Couple/Family	448	439	432	478	493	491	491	477	470	462
KEHP Single	656	663	667	686	699	677	667	686	653	621
Medicare without Prescription	62	66	72	73	83	82	82	84	72	66
Medicare with Prescription	1,177	1,302	1,401	1,495	1,584	1,662	1,693	1,746	1,796	1,843
SPRS	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
KEHP Parent Plus	81	77	79	74	77	85	89	90	92	79
KEHP Couple/Family	441	447	420	426	454	459	448	454	434	415
KEHP Single	265	246	251	253	224	226	221	217	230	239
Medicare without Prescription	16	18	17	21	16	16	13	14	17	16
Medicare with Prescription	777	850	897	941	975	998	1,003	1,016	1,022	1,019
KRS Total	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
KEHP Parent Plus	643	615	578	630	621	630	621	640	643	582
KEHP Couple/Family	1,603	1,542	1,515	1,600	1,647	1,616	1,572	1,543	1,457	1,350
KEHP Single	10,172	9,785	9,545	9,577	9,227	8,845	8,303	8,044	7,576	7,194
Medicare without Prescription	1,381	1,370	1,318	1,273	1,240	1,187	1,121	1,087	1,046	1,021
Medicare with Prescription	20,531	21,599	22,513	23,553	24,272	24,931	25,344	25,665	25,794	25,809

DRAFT - KRS 2024 ACFR - DRAFT**Acronym Glossary for Kentucky Retirement Systems
As of December 5, 2024**

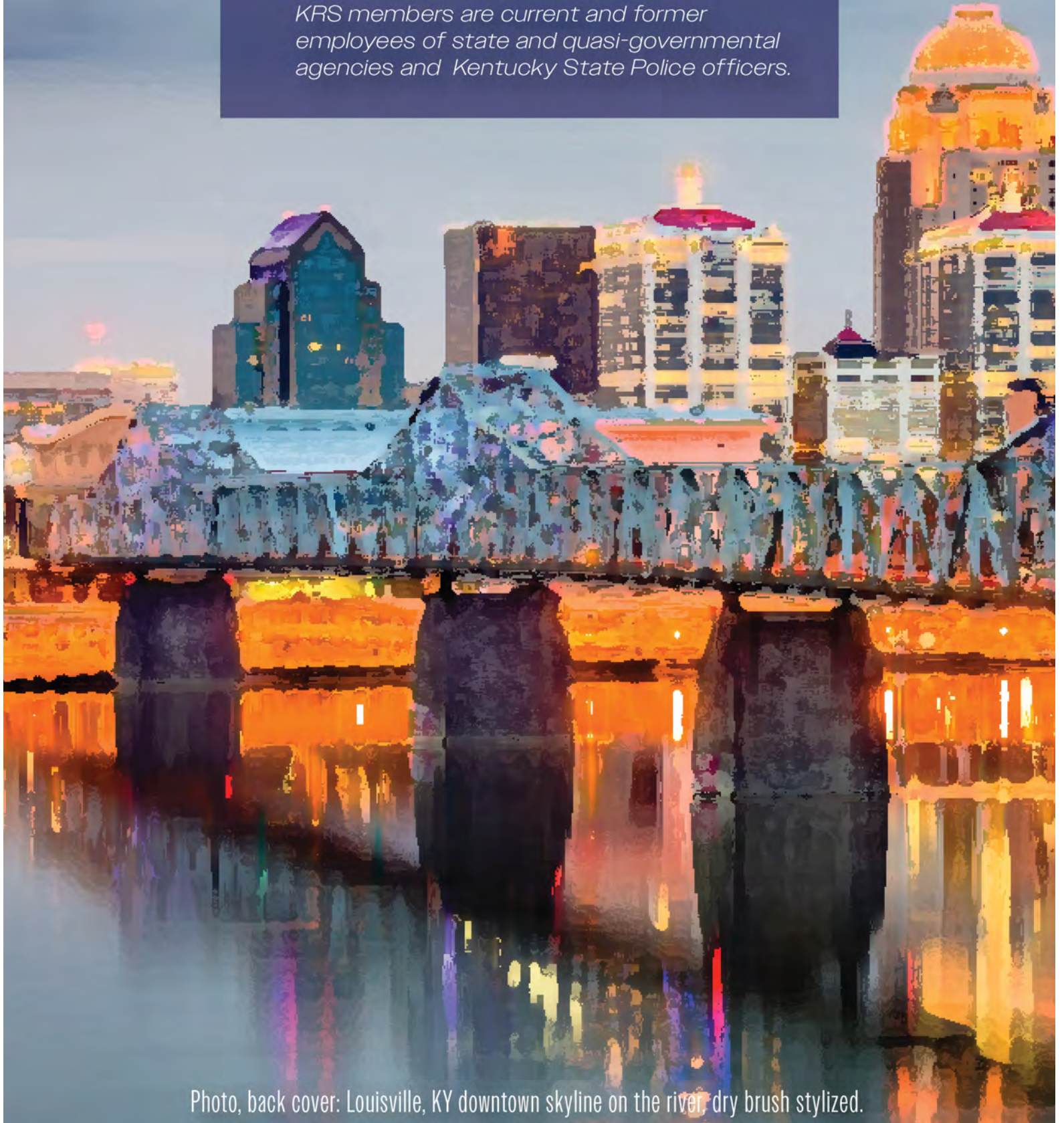
Phrase	Acronym
Actuarially Determined Contribution	ADC
Annual Required Contribution	ARC
Annual Comprehensive Financial Report	ACFR
Board of Trustees	Board
Collateralized Mortgage Obligations	CMO
Commonwealth of Kentucky	Commonwealth
Consumer Price Index	CPI
Department of Employee Insurance	DEI
Emerging Market Debt	EMD
Executive Order	EO
Exchange Traded Funds	ETFs
Fiscal Year	FY
Generally Accepted Accounting Principles	GAAP
Governmental Accounting Standards Board	GASB
Gabriel, Roeder, Smith & Co.	GRS
House Bill	HB
Investment Management Agreement	IMA
Investment Policy Statement	IPS
Internal Revenue Service	IRS
Information Technology	IT
Kentucky Administrative Regulations	KAR
Kentucky Employees' Health Plan	KEHP
Kentucky Public Pensions Authority	KPPA
Kohlberg, Kravis, Roberts	KKR
Kentucky Retirement Systems	KRS
Net Asset Value	NAV
Net OPEB Liability	NOL
Net Pension Liability	NPL
Not Rated	NR
Other post-employment benefits	OPEB
Pacific Alternative Asset Management Company	PAAMCO
Perimeter Park West Incorporated	PPW
Qualified Domestic Relations Order	QDRO
Required Supplementary Information	RSI
Senate Bill	SB
Senate Resolution	SR
Strategic Technology Advancements for the Retirement of Tomorrow	START
Short Term Investment Funds	STIFs
Total Pension Liability	TPL
Teachers' Retirement System	TRS
Unfunded Actuarial Accrued Liability	UAAL
Unfunded Accrued Liability	UAL
Unrelated Business Income	UBI

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KENTUCKY RETIREMENT SYSTEMS
1260 LOUISVILLE ROAD, FRANKFORT, KY 40601

KRS members are current and former employees of state and quasi-governmental agencies and Kentucky State Police officers.



Photo, back cover: Louisville, KY downtown skyline on the river, dry brush stylized.



KENTUCKY PUBLIC PENSIONS AUTHORITY

Ryan Barrow, Executive Director

1260 Louisville Road • Frankfort, Kentucky 40601
kyret.ky.gov • Phone: 502-696-8800 • Fax: 502-696-8822



December 5, 2024

Government Finance Officers Association
203 North LaSalle Street, Suite 2700
Chicago, IL 60601-1210

RE: Certificate of Achievement for Excellence in Financial Reporting
Report #COA-2023-00415

Pursuant to the instructions included in the report referenced above, responses to the comments and suggestions for improvement of Kentucky Public Pensions Authority's (KPPA) Annual Comprehensive Financial Report (ACFR) for the Fiscal Year Ended June 30, 2023, follow:

Comment 101: Cover, table of contents, and formatting

Information should be more specific than "team members". The title page should indicate the individual or department responsible for preparing the annual comprehensive financial report.

Management concurs with the recommendation. For 2024 the KPPA has issued two separate ACFRs for the systems we administer, and we have indicated on the cover page that the Division of Accounting is responsible for preparing the annual comprehensive financial report.

Comments 102: Introductory section

Consider incorporating the "management responsibility letter" in the letter of transmittal, since topics like management responsibility, internal control, and references to the independent auditor's report are all important elements of a letter of transmittal.

It is recommended that the letter of transmittal acknowledge that management is responsible for the contents of the annual comprehensive financial report.

Management concurs with the recommendation. For the 2024 ACFRs, the content of the management responsibility letter is included in the letter of transmittal.

Also, the letter of transmittal acknowledges that management is responsible for the contents of the annual comprehensive financial report.

It is recommended that the letter of transmittal specifically direct readers to Management's Discussion and Analysis.

Management concurs with the recommendation. For the 2024 ACFRs, the letter of transmittal specifically directs the readers to Management's Discussion and Analysis.

The schedule of fees and commissions is presented on pages 141 -142 rather than pages 143-144.

The organization chart(or other discussion of the administrative organization) should inform readers of the specific location within the investment section where information can be found regarding investment professionals who provide services to the postemployment benefit system (i.e., the Schedule of Fees and Commissions).

Management concurs with the recommendation. For the 2024 ACFRs, the page numbers for the schedule of fees and commissions have been corrected.

Comment 116 Investment section

The Core Fixed Income table indicates that the five-year return of the performance benchmark is 77.00% , which appears incorrect. Please clarify.

Management concurs with the statement. The Core Fixed Income table's five-year performance benchmark of 77.00% was a typo. It should have been 0.77%. The typo has been corrected on the KPPA ACFR on the KPPA website.

Comment 117 Actuarial section

Expressly state that the assumptions and methods used for "funding purposes" meet the parameters set by Actuarial Standards of Practice.

The actuary's certification letter should expressly state that the assumptions and methods used for funding purposes meet the

parameters set by Actuarial Standards of Practice. If they do not, a description of how they depart from those parameters should be included.

Management concurs with the recommendation. For the 2024 ACFRs, the actuary's certification letter expressly states that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice.

Should you have any questions regarding our responses, or our ACFRs for FYE 2024, please do not hesitate to telephone me directly at (502) 696-8733.

Sincerely,



Michael B. Lamb, CPA
Chief Financial Officer

Enclosure

cc: Ryan P. Barrow
Executive Director

Connie A. Davis, CIA, CGAP, CRMA
Director of Accounting

Rebecca H. Adkins
Deputy Executive Director

/ACFR Submission Letter - 2024



KRS
Kentucky Retirement Systems



SPRS
State Police Retirement System

MEMORANDUM

To: Kentucky Retirement Systems Board of Trustees

From: C. Prewitt Lane, Chair
Investment Committee

Date: December 4, 2024

Subject: Summary of Investment Committee Meeting

The Kentucky Retirement Systems Investment Committee held a Special Called meeting on November 21, 2024.

1. **No recommendations were made that required approval by the Investment Committee.**
2. **No actions were taken that required ratification by the Kentucky Retirement Systems Board of Trustees.**
3. Investment Staff and Wilshire presented material* and discussed the following items during the Investment Committee meetings.
 - a. Review of Economic Conditions, Market Activity and Outlook.
 - b. Absolute and Relative Performance and Asset Allocations for the Pension and Insurance Portfolios for the Quarter ending September 30, 2024.

Quarter Ending September 30, 2024:

KERS Pension 5.23%
SPRS Pension 5.29%
Benchmark 4.45%

KERSH Pension 5.19%
KERS Insurance 5.42%
KERSH Insurance 4.75%
SPRS Insurance 4.81%
Benchmark 4.46%

- c. Performance Attribution – Relative outperformance in the Real Return and Real Estate portfolios were the largest contributors to outperformance during the Quarter while relative underperformance of the Private Equity portfolio compared to its stated benchmark was identified as the main detractor. The Real Return portfolio produced a return of 6.70% outpacing its benchmark by 573 basis points while the Real Estate portfolio's 1.71% return outperformed the -0.66% return of its benchmark. Over the LTMs the Real Return portfolio has outperformed its benchmark by almost 11% which has contributed close to 100 basis points to overall Fund outperformance while the Private Equity portfolio has underperformed its benchmark by almost 23% which contributed 150-200 basis of underperformance relative to the benchmark at the Fund level.
 - d. Internal Portfolios - An update was provided on the performance of the internally managed passive and proxy portfolios. The portfolios performed in line with expectations and consistent with their mandates.
 - e. Peer Universe – All portfolios have continued to produce top decile or top quartile risk adjusted performance over 3 and 5-year time periods.
 - f. Asset Allocations – Staff provided an update on the rebalancing activity and noted that as of the end of the Quarter, all asset classes were within their specified IPS allocation ranges with the majority of asset classes within 1.5% of their Target Allocations.
 - g. Compliance Review – As of the end of the Quarter there were no compliance violations reported.
4. Staff provided an update on the Investment Budget. For the first quarter of the Fiscal Year, expenditures totaled only 16% of the amount budgeted or \$2.0MM. While Consulting and Contractual services were in line with the amounts budgeted, expenses for Legal and Auditing Services were well below budget with only 7% of the amount budgeted spent in the first Quarter. The total of base Investment Advisory fees have only increased 5% since FY2021 while total assets in the Trusts have increased by 50% since FY2021. Staff highlighted that Core Fixed Income Advisory fees were \$520k less than the same period of Fiscal 2023 despite the 50% increase in the market value of the asset class. The reduction in fees was driven by moving management of a portion of the asset allocation in-house with expected full year savings of \$1.5MM to \$2.00MM.

*All material presented is available in Board Books and was reviewed at the Investment Committee meetings.

Kentucky Retirement Systems

Investment Review and Update

Quarter Ending: September 30, 2024


Pension Portfolios Performance

KERS, KERS-HAZ, & SPRS - PENSION FUND - PLAN NET RETURNS - 09/30/24											
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
KERS	4,515,541,697.91	1.67	5.23	5.23	16.26	5.00	7.65	6.74	6.68	7.86	8.79
KY Ret. KERS Plan IPS Index		1.50	4.45	4.45	16.03	5.10	7.19	6.54	6.62	7.83	8.83
KERS- H	1,078,653,525.61	1.67	5.19	5.19	18.22	5.97	8.48	7.41	7.00	8.08	8.95
KY Ret. KERS Haz Plan IPS Index		1.61	4.46	4.46	18.24	6.15	8.55	7.28	7.00	8.08	9.02
SPRS	689,086,706.09	1.69	5.29	5.29	16.49	5.46	7.76	6.74	6.67	7.85	8.79
KY Ret. SPRS Plan IPS Index		1.50	4.45	4.45	16.03	5.10	7.19	6.49	6.61	7.82	8.82
KPPA PENSION FUND UNIT - NET RETURNS - 09/30/24 - PROXY PLAN ASSET PERFORMANCE											
Structure		Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
PUBLIC EQUITY		1.89	6.69	6.69	30.10	6.75	11.54	9.12	8.08	9.20	10.48
MSCI ACWI		2.32	6.61	6.61	31.76	7.65	11.87	9.13	8.03	9.05	10.38
PRIVATE EQUITY		1.59	2.19	2.19	3.24	4.82	11.66	11.58	10.95		11.41
Russell 3000 + 3%(Qtr Lag)		3.33	4.05	4.05	26.12	11.09	17.19	15.28	12.87		12.74
SPECIALTY CREDIT		1.47	3.09	3.09	12.39	7.04	6.87				6.78
50% BB US HY / 50% Morningstar LSTA Lev'd Ln		1.17	3.66	3.66	12.66	4.83	5.27				5.07
CORE FIXED INCOME		1.29	5.13	5.13	11.76	1.80	2.59	3.01			3.03
Bloomberg US Aggregate		1.34	5.20	5.20	11.57	-1.39	0.33	1.84			2.04
CASH		0.43	1.33	1.33	5.54	3.41	2.33	1.80	1.94	2.76	3.38
FTSE Treasury Bill-3 Month		0.44	1.37	1.37	5.63	3.63	2.38	1.67	1.59	2.41	3.01
REAL ESTATE		0.30	1.71	1.71	-5.90	2.29	5.80	7.79	7.16	6.07	6.20
NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^		-0.66	-0.66	-0.66	-9.99	1.02	2.27	5.47	5.81	7.06	5.91
REAL RETURN		2.89	6.70	6.70	16.38	11.94	9.49	6.05			5.93
US CPI +3%		0.33	0.97	0.97	5.53	7.33	6.76	4.35			4.29

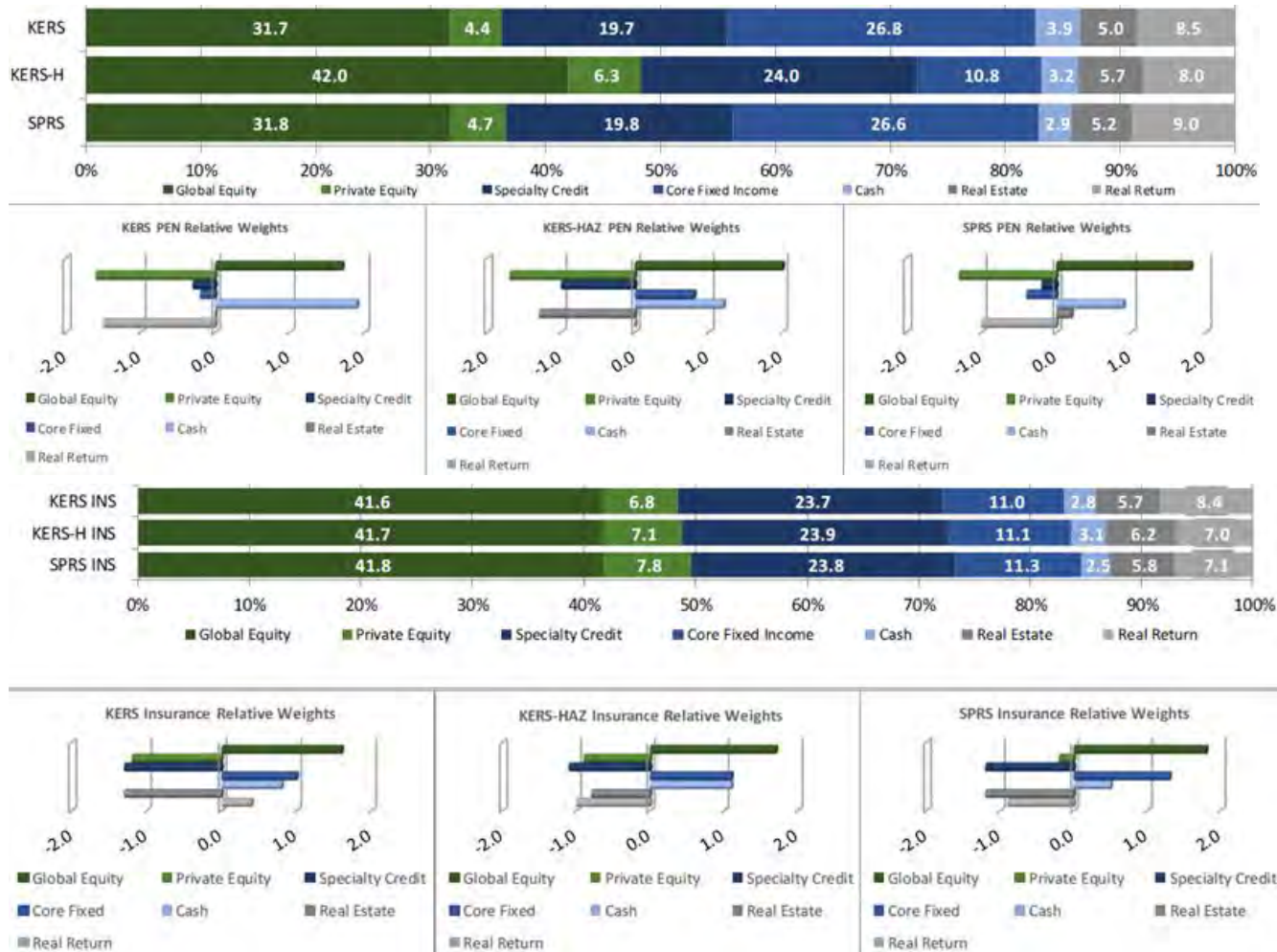
Insurance Portfolios Performance

KERS INS, KERS-HAZ INS, SPRS INS - INSURANCE FUND - PLAN NET RETURNS - 09/30/24											
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
KERS INS	1,763,306,356.33	1.84	5.42	5.42	18.62	6.25	8.63	7.26	6.71	7.21	7.46
KY Ins. KERS Plan IPS Index		1.61	4.46	4.46	18.24	6.23	8.48	7.28	6.89	7.58	7.78
KERS - H INS	694,712,425.05	1.52	4.75	4.75	17.70	6.21	8.52	7.45	6.84	7.30	7.53
KY Ins. KERS Haz Plan IPS Index		1.61	4.46	4.46	18.24	6.23	8.39	7.26	6.88	7.58	7.77
SPRS INS	281,704,795.15	1.56	4.81	4.81	17.68	6.20	8.67	7.63	6.93	7.35	7.58
KY Ins. SPRS Plan IPS Index		1.61	4.46	4.46	18.24	6.23	8.39	7.28	6.89	7.58	7.78
KPPA INSURANCE FUND UNIT - NET RETURNS - 09/30/24 - PROXY PLAN ASSET PERFORMANCE											
Structure		Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
PUBLIC EQUITY		1.88	6.63	6.63	29.92	6.69	11.50	9.16	7.95		8.97
MSCI ACWI		2.32	6.61	6.61	31.76	7.64	11.85	9.13	7.85		8.84
PRIVATE EQUITY		1.22	1.63	1.63	4.99	8.43	11.93	12.74	11.10		10.71
Russell 3000 + 3%(Qtr Lag)		3.33	4.05	4.05	26.12	11.09	17.19	15.28	12.62		12.31
SPECIALTY CREDIT		1.39	3.07	3.07	12.47	7.31	6.89				6.69
50% BB US HY / 50% Morningstar LSTA Lev'd Ln		1.17	3.66	3.66	12.66	4.83	5.27				5.07
CORE FIXED INCOME		1.28	5.10	5.10	11.69	1.63	2.39	2.74			2.76
Bloomberg US Aggregate		1.34	5.20	5.20	11.57	-1.39	0.33	1.84			2.04
CASH		0.43	1.32	1.32	5.57	3.41	2.23	1.67	1.78		2.57
FTSE Treasury Bill-3 Month		0.44	1.37	1.37	5.63	3.63	2.38	1.67	1.59		2.48
REAL ESTATE		0.38	1.68	1.68	-6.06	2.06	5.65	7.82			8.17
NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^		-0.66	-0.66	-0.66	-9.99	1.02	2.27	5.47			4.75
REAL RETURN		3.14	6.65	6.65	14.64	10.57	8.94	5.72			5.56
US CPI +3%		0.33	0.97	0.97	5.53	6.98	6.80	4.41			4.33

Internal Portfolios Performance

 Kentucky Retirement Systems Pension Monthly Investment Manager Performance (Net of Fee) As of Date: 9/30/2024														Reporting Currency: BASE	
Structure	Account/Security Id	Market Value	% of Total	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	ITD	Inception Date		
PUBLIC EQUITY															
S&P 500 INDEX	KR2F19020002	3,451,868,181.96	17.35	2.13	5.88	5.88	36.27	11.98	16.20	13.50	10.96	9.32	7/1/2001		
KY Ret. S&P Blend	KR2GX00SP500			2.14	5.89	5.89	36.35	11.91	15.98	13.38	10.89	9.24	7/1/2001		
Internal US Mid Cap	KR2F10100002	226,767,708.87	1.14	1.08	6.95	6.95	27.71	8.19	12.48	10.81		10.66	8/1/2014		
S&P MidCap 400 Index	IX1F0000180C			1.16	6.94	6.94	26.79	7.47	11.78	10.32		10.18	8/1/2014		
Scientific Beta	KR2F10110002	282,197,377.80	1.42	1.59	8.03	8.03	28.72	7.97	10.84			11.24	7/1/2016		
S&P 500 - Total Return Index	IX1F00079488			2.14	5.89	5.89	36.35	11.91	15.98			15.04	7/1/2016		
PRIVATE EQUITY															
INTERNAL PRIVATE EQ	KR2F48100002	90,999,868.25	0.46	1.31	5.13	5.13						16.50	12/1/2023		
CORE FI															
INTERNAL CORE FI	KR2F30250002	1,017,348,078.00	5.11	1.32	5.28	5.28	11.90					8.31	9/1/2023		
Bloomberg U.S. Aggregate Bond Index	IX1F00003848			1.34	5.20	5.20	11.57					8.04	9/1/2023		
REAL ESTATE															
INTERNAL REAL ESTATE	KR2F48200002	53,185,497.33	0.27	3.40	17.11	17.11						15.45	12/1/2023		
NCREIF NFI ODCE Net 1Qtr in Arrears Index^	IX1G00369207			-0.66	-0.66	-0.66									
REAL RETURN															
INTERNAL REAL RETURN	KR2F36130002	271,596,188.64	1.37	4.85	12.93	12.93						18.43	12/1/2023		
KRS CPI + 300 bpts	KR2GX0005CPI3			0.33	0.97	0.97						4.80	12/1/2023		
INTERNAL TIPS	KR2F39010002	142,334.60	0.00	0.43	1.32	1.32	5.49	3.62	2.54	2.26	3.47	4.24	5/1/2002		
KR2 Internal US TIPS Blend	KR2GX000TIPS			1.25	3.43	3.43	8.88	1.00	3.29	2.62	3.62	4.38	5/1/2002		
CASH ACCOUNT	KR2F90010002	601,749,157.70	3.02	0.43	1.33	1.33	5.54	3.41	2.33	1.80	1.94	3.38	1/1/1988		
FTSE Treasury Bill-3 Month	IX1F0003127C			0.44	1.37	1.37	5.63	3.63	2.38	1.67	1.59	3.01	1/1/1988		

Allocations



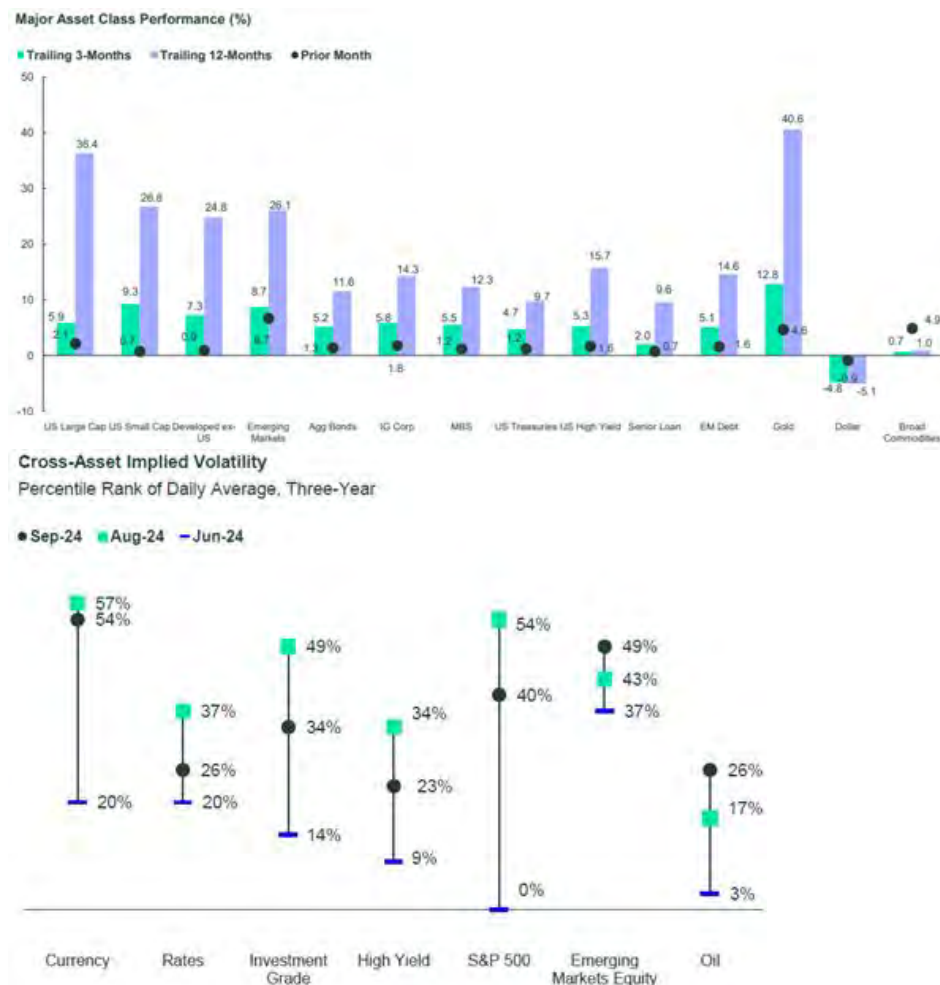
Performance Highlights

- The KRS Pension Composite produced a return of 5.23% for the quarter versus the blended benchmark return of 4.46%.
- The KRS Insurance Composite produced a return of 5.18% for the quarter versus the benchmark return of 4.46%.

KERS Pension 5.23%
SPRS Pension 5.29%
Benchmark 4.45%

KERSH Pension 5.19%
KERS Insurance 5.42%
KERSH Insurance 4.75%
SPRS Insurance 4.81%
Benchmark 4.46%

- Across portfolios, the largest contributors to outperformance were the relative outperformance in the Real Return and Real Estate portfolios while underperformance in the Private Equity portfolio relative to its public equity benchmark was a modest detractor.
- Markets struggled early in the quarter as rising fears of a US recession led to a sharp rotation out of growth stocks and into value stocks. Equity markets fell while the yield curve steepened. Markets began to stabilize in August as stronger than expected data alleviated near-term recession fears and gained steam with the Fed signaling rate cuts were imminent. September saw markets further buoyed as the Fed began the easing cycle by cutting rates 50 bps and indicating a further 100 bps of cuts by the end of 2025.
- While the probability of a recession remains remote, monetary policy will continue to have an unduly high impact via the valuations discounting mechanism and the interaction between fiscal and monetary policy will be crucial to future outcomes.



Performance Highlights

Public Equities

- Despite bouts of volatility, Public Equity markets pushed higher during the quarter with broad market indices reaching all-time highs as they recovered strongly from the early August lows with markets buoyed by the start of the Fed easing cycle.
- Market participation broadened significantly with a rotation in leadership away from Technology with Real Estate and Utilities the best performing sectors while Financials and Industrials contributed the most to performance and Value outperformed Growth.
- Small caps significantly outperformed Large caps for the quarter but still trailed by a large margin over the LTM.
- The S&P 500 Index is up 22% YTD, its best nine month start since 1997.
- International Equities markets also performed well, outperforming their US counterparts during the quarter with emerging markets outperforming developed.
- Small Cap equities remain compelling, trading near historic trough levels compared to the fuller valuations in Large Caps. A declining interest rate environment should bode well for this segment of the market as these companies tend to be more sensitive to borrowing costs.

S&P 500 Nine-Months Compared to the Rest of the Year



Complete Reversal in Size and Style Leadership in 3Q



Large Growth Went From Best To Worst!

Performance Highlights

Public Equities

- The Public Equity portfolio returned 6.69% during the quarter versus its benchmark return of 6.61%.
- Overall, the relative overweight to Non-US equities was a positive contributor to performance while stock selection modestly detracted from performance.
- The US Equity Portfolio returned 6.18% vs 6.23% for the Russell 3000 with 5 of 7 mandates performing in line or outperforming their benchmark.
- The Non-US Equity Portfolio returned 7.47% vs 8.18% for the MSCI ACWI Ex-US with broad underperformance at the mandate level but outperformance provided by deep value strategies.
- Over the LTM the Public Equity portfolio has underperformed the benchmark by 166 basis points due to value and size factor tilts in the US portfolio and broad-based stock selection weakness in the Non-US portfolio.

Relative Valuations of Value vs. Growth at Extreme Levels



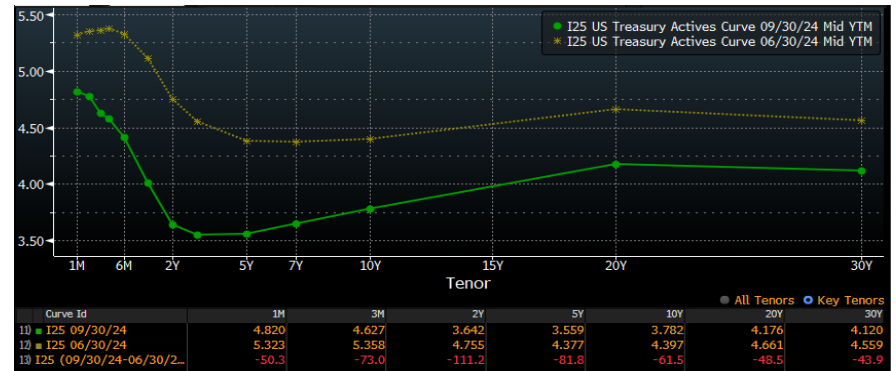
Small Relative to Large Near Trough Levels



Performance Highlights

Core Fixed Income

- US Treasury yields dropped across the curve over the quarter with the Federal Reserve cutting rates at their September meeting.
- The 2YR rallied the most with yields declining 111 basis points causing the 2-10YR curve to have a positive slope for the first time since mid-2022, finishing the quarter with a spread of 14 basis points.
- The 2YR closed the quarter at 3.64% while the 5YR US Treasury yield fell 82 basis points to close at 3.56%. The 10YR yield was 62 basis points lower to close at 3.78%. The 20YR and 30YR yields were lower 49 basis points and 44 basis points to finish the quarter at 4.18% and 4.12%, respectively.
- As of September 30, markets priced in an additional 75 basis points of cuts by the end of 2024, 25 basis points more than the FOMC’s median of their dot plot.

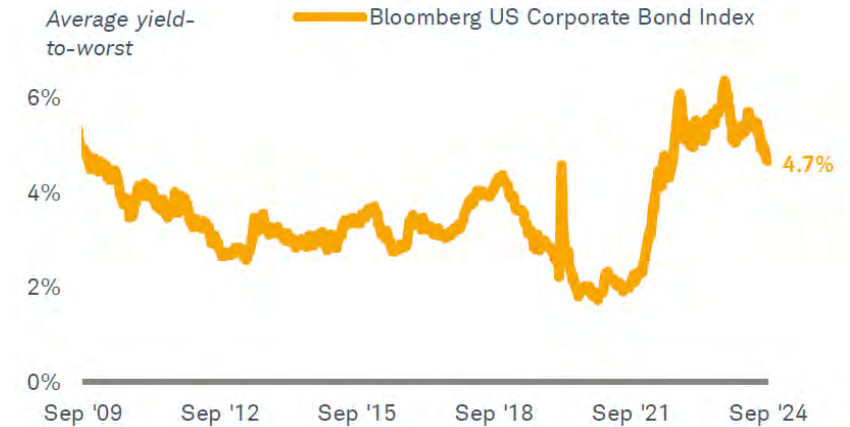
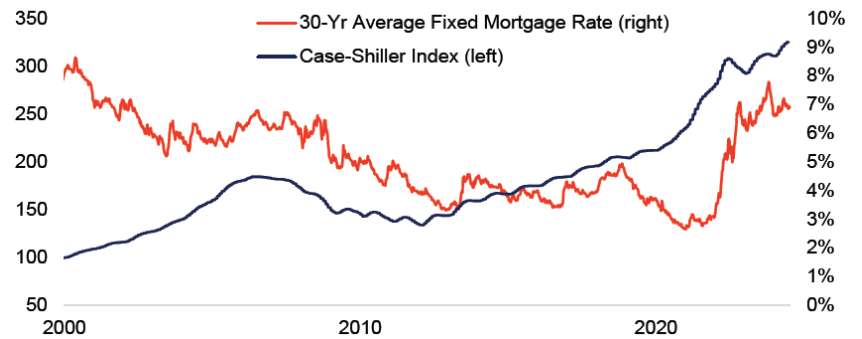


Performance Highlights

Core Fixed Income

- The Core Fixed Income Portfolio produced a return of 5.13% for the quarter, slightly underperforming the benchmark's return of 5.20%. The Internal Core portfolio produced a return of 5.28% for the quarter.
- The portfolio's relative underperformance was driven by an overweight ABS allocation as the sector generated a 3.35% total return for the quarter, the lowest of the Securitized sectors.
- Within the broader Securitized sector, MBS led the way with a 5.53% return followed by CMBS which produced a 4.65% while ABS returns trailed at 3.35%.
- The Corporate index OAS (Option Adjusted Spread) closed 5 basis points tighter at 89 during the quarter generating a total return of 5.84%, the best performing sector of the market, benefitting the most from falling yields.
- Home prices have steadily risen since GFC and surged in the pandemic. Demand from increasing immigration has mixed with inflexible supply to drive prices higher. Mortgage rates will fall slightly as the Fed cuts rates, but that will lead to further price increases.

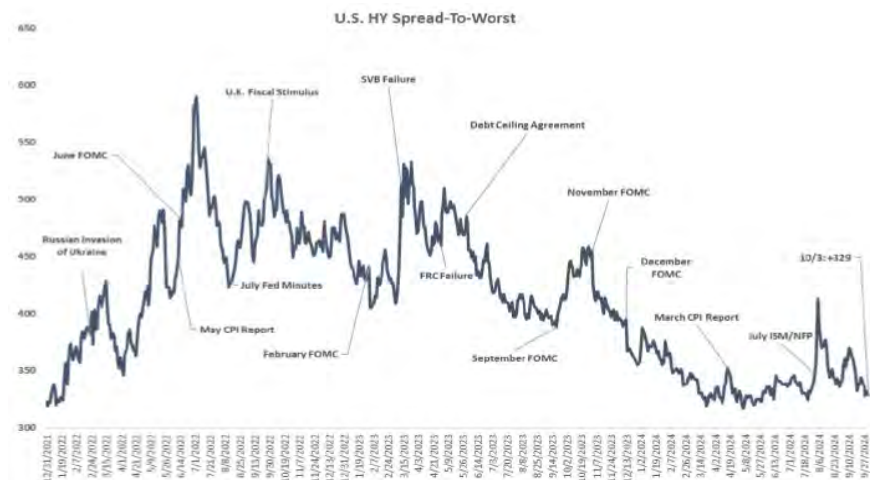
Case-Shiller vs Avg 30yr Mortgage Rates



Performance Highlights

Specialty Credit Fixed Income

- The Specialty Credit portfolio produced a return of 3.09% for the quarter, underperforming the custom benchmark which returned 3.66%.
- Overall underperformance was driven by the relative overweight to floating rate exposure and shorter durations which benefitted less from the rally in rates during the quarter.
- The public market mandates with the Specialty Credit portfolio underperformed during the quarter driven by security selection and industry allocation. Underweight allocations to distressed issuers, especially in the communication related sectors, hampered relative performance as these issuers significantly outperformed the non-distressed portion of the market.
- Over longer periods the portfolio has contributed significant outperformance, beating the benchmark by 221 and 160 basis points over three- and five-year periods respectively.

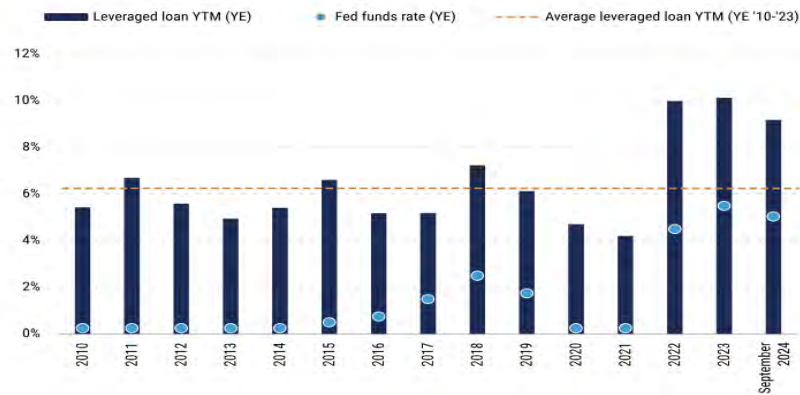


Performance Highlights

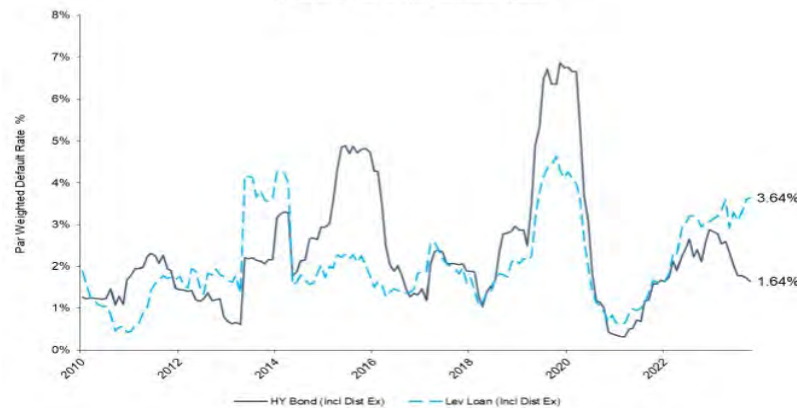
Specialty Credit Fixed Income

- The High Yield option adjusted spread (OAS) tightened 14 basis points during the quarter to 295.
- Lower quality and longer-dated issuers continued to outperform. For the quarter, BB, B, and CCC rated issues returned 4.20%, 4.53%, and 9.22%, respectively.
- Despite the Fed rate cut, loans posted an 11th consecutive monthly gain in September as coupons remained attractive.
- Loan issuance rebounded sharply in September with \$97.1 billion coming to market, a 276% increase from August. Year-to-date issuance has been dominated by repricing and refinancing activity, which have accounted for 52% and 35% of issuance, respectively.
- The high yield bond default and distressed exchange activity remained moderate for the quarter. The LTM par-weighted default rate including distressed exchanges decreased to 1.64%.
- Default and distressed exchange activity remains concentrated in the leveraged loan market, where the par-weighted default rate increased to 3.64%.
- The 200 basis point spread between high yield bond and leveraged loan default activity is the largest difference since October 2000.

Loan Yields Are Likely to Remain Elevated Even as Rates Fall



HY Bond & Loan Par Weighted Default Rates



Performance Highlights

Specialty Credit Fixed Income

- Bearish ratings trends in the public high yield market continued, with activity on pace for a sixth straight year of the rating agency upgrade to downgrade ratios at 1x. Weakening business trends combined with more aggressive capital allocation plans have started to impact balance sheet metrics.
- While the possibility of having ‘higher for longer’ interest rates may cause stress for over-leveraged borrowers, today’s accommodative capital markets and strong borrower demand present an attractive setup for Private Credit.
- Yield levels remain at relative highs and compare favorably to most credit alternatives.
- Private credit continues to gain lending market share as traditional banks retreat further from the market.

	Returns by calendar year					2024	
	2019	2020	2021	2022	2023	Q1	Q2
Global private-equity funds	17.6%	33.7%	40.4%	-8.4%	5.8%	1.2%	0.8%
Venture capital	20.4%	58.2%	49.8%	-20.6%	-2.2%	1.3%	-0.4%
Expansion capital	7.3%	18.2%	27.9%	-11.3%	3.9%	-0.2%	1.5%
Buyout	16.9%	24.6%	37.7%	-1.5%	9.6%	1.2%	1.2%
Global private-credit funds	6.9%	7.2%	15.6%	3.8%	10.0%	1.9%	2.1%
Senior	6.4%	7.9%	7.7%	3.5%	11.6%	1.8%	2.1%
Mezzanine	9.4%	8.5%	16.0%	4.9%	10.4%	2.6%	2.5%
Distressed	4.3%	7.9%	21.8%	3.4%	8.9%	2.0%	2.1%
Global private-real-asset funds	4.5%	0.9%	22.7%	8.3%	1.1%	0.7%	1.1%
Real estate	8.3%	1.6%	26.6%	1.9%	-6.4%	-0.8%	-0.3%
Natural resources	-5.0%	-9.4%	32.4%	21.7%	1.6%	3.8%	2.4%
Infrastructure	8.1%	7.8%	13.6%	9.8%	8.2%	1.1%	2.1%



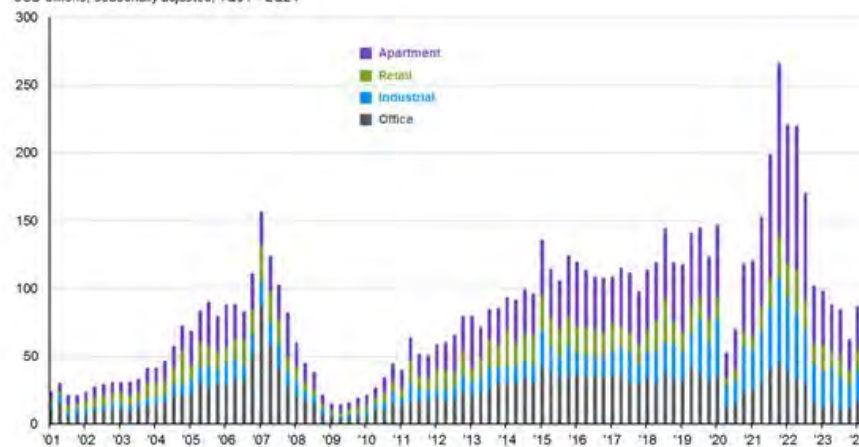
1. Source: Burgis is a recognized source of private equity data, and the Burgis Manager Universe includes funds representing the full range of private capital strategies; it may not include all private equity funds.

Performance Highlights

Real Return - Real Estate

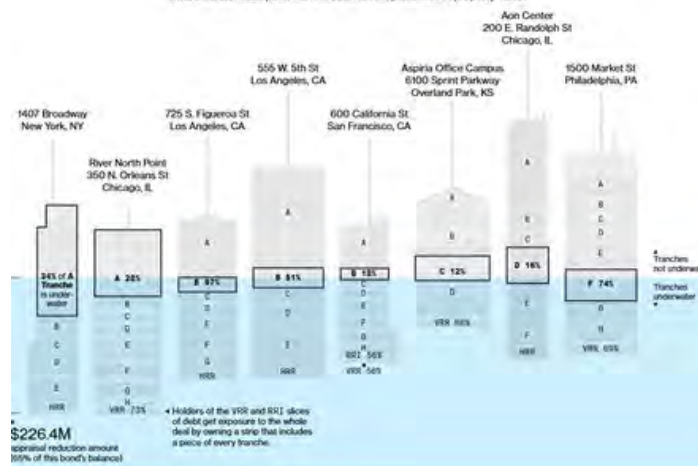
- Real Return markets were broadly positive for the quarter while Real Estate markets continued to struggle, with the benchmark posting its sixth consecutive quarter of negative performance.
- The Real Estate portfolio produced a return of 1.71% during the quarter, outpacing the benchmark's -0.66% return.
- Relative outperformance was driven by the portfolio's open-ended Core strategies which were able to produce positive performance during the quarter although LTM performance remained negative. These strategies have benefitted from lower exposures to the most stressed parts of the market including the Office sector.
- While the prospects of Fed cuts has sparked a degree of optimism in the sector and there are nascent signs of stabilization, the market continues to struggle with low transaction volumes, anemic fundraising, still elevated rates and stagnant rental growth which warrants continued caution for the sector.
- The Office sector continues to face headwinds, with losses reaching the most senior tranches of some commercial mortgage-backed securities for the first time since the Great Financial Crisis.

U.S. real estate transaction volumes
USD billions, seasonally adjusted, 1Q01 – 2Q24



Office Bonds Underwater

CMBS holders face potential losses amid steep declines in property values

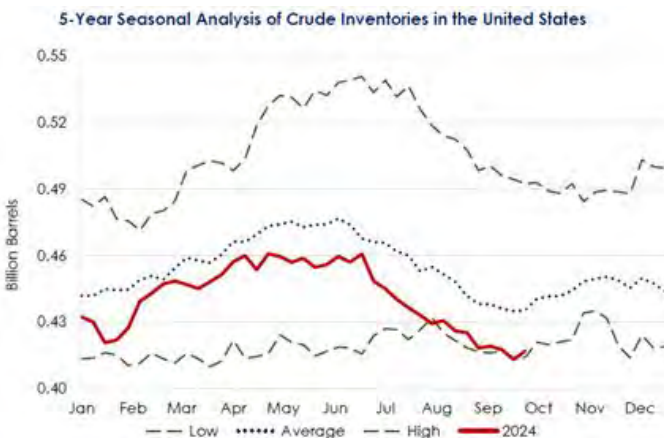
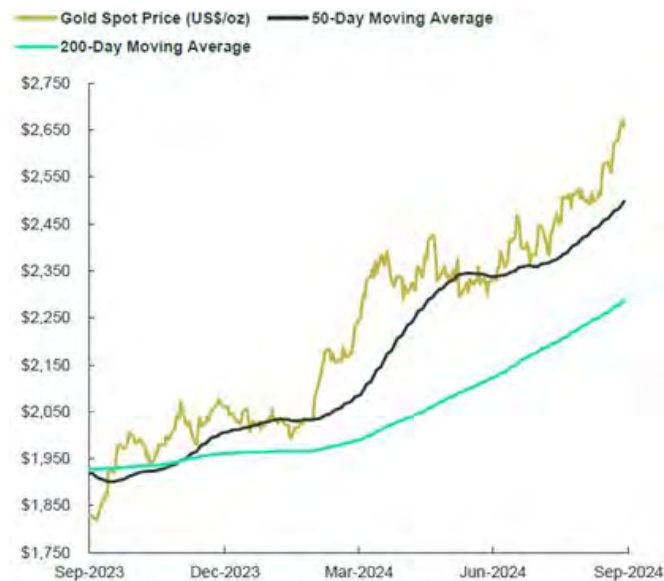


Source: Data compiled by Bloomberg

Performance Highlights

Real Return - Real Estate

- The Real Return portfolio continued to perform well during the quarter posting a return of 6.70% which outpaced the 0.97% return of the benchmark.
- Performance benefitted from strong performance across the recently approved and funded Real Return mandates, all of which outperformed their benchmark during the Quarter.
- The portfolio’s MLP exposure continued to produce solid performance, with a return of 5.99% for the quarter versus its benchmark return of 0.72% and is up over 33% LTM as strong cash flows, disciplined capex and consolidation have continued to benefit the industry.
- Broad commodities were relatively flat for the quarter, with gold rising almost 13% and silver returning 7% while oil was down almost 18%.
 - Oil was down 18% near its lowest level over the past twelve months, but remains generally in line with post-COVID levels.
 - Gold was up almost 13% for the quarter and tallied its fortieth record high for 2024.
 - Agricultural commodities and industrial metals produced modestly positive performance during the quarter.

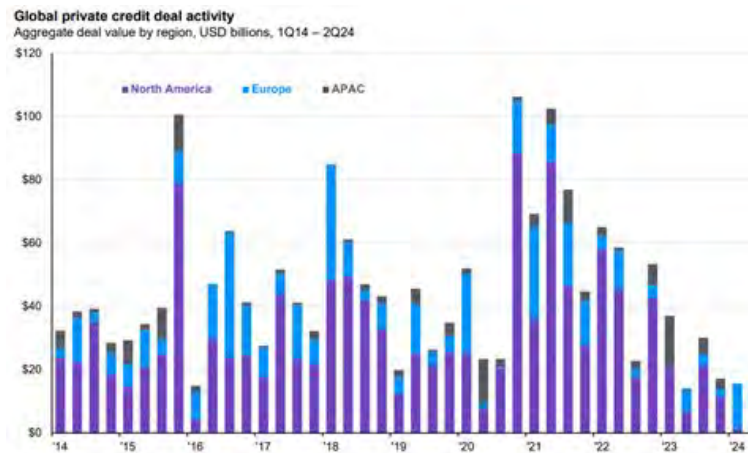
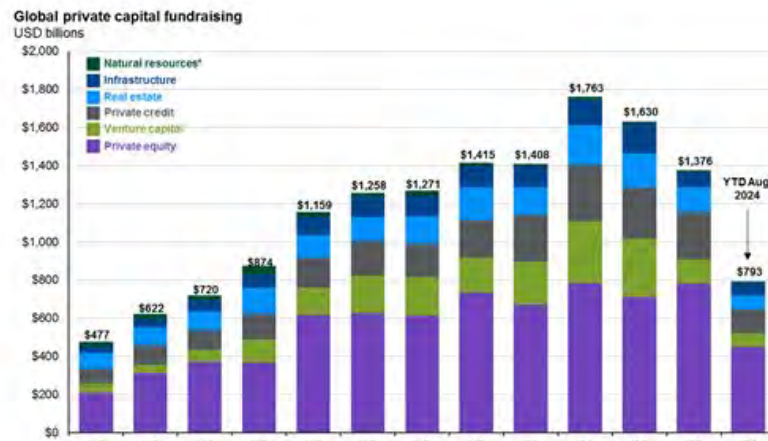


Source: U.S. Department of Energy, Bloomberg

Performance Highlights

Private Equity

- The Private Equity portfolio produced a return of 2.19% for the quarter, underperforming the benchmark’s return of 4.05%.
- Performance relative to the benchmark (Russell 3000 + 3% based on a quarter lag) continues to be volatile given the market and timing misalignments as well as the vintage of the investments in the portfolio.
- While the pace of PE Fund exits and distributions have picked up recently, the very slow pace of distributions remains a concern for LPs in PE funds as newly raised funds continued to call capital while distributions from mature funds have been muted since 2022.
- Pricing in the secondary market has continued to improve, but remains well below peak levels reached in 2021. Some categories are still 25% below 2021 levels.
- Capital remained scarce as GPs faced a more arduous fundraising environment with constrained capital allocations from LPs as a result of limited distributions and already full allocations which continues to slowdown overall deal activity.



Source: Preqin, J.P. Morgan Asset Management. APAC includes data from Asia, Australia and New Zealand. Data are based on availability as of August 31, 2024.

Performance Highlights

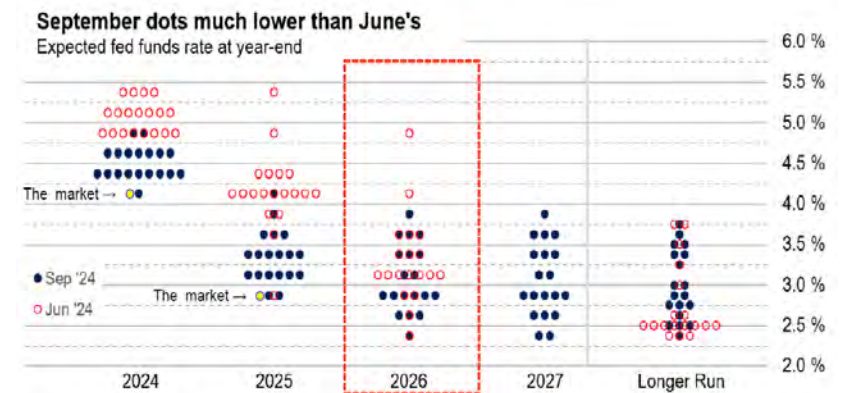
Liquidity

- Dot plot estimates moved decidedly lower in September, indicating a faster pace of rate cuts than anticipated in June. The longer-run range did not change, but the distribution is more even and a higher terminal rate is now expected.
- Cash produced a return of 1.33% for the 3-month period ending September 30th, slightly underperforming its 3-Month Treasury Bill benchmark which returned 1.37%.
- After more than a year on hold, the Fed cut rates 50 basis points in September, the first rate cut in more than four years. The question now for markets is how far the Fed will cut and how quickly they'll get there.
- The Federal Reserve has shifted the focus from inflation to jobs seeing two 25 basis point cuts for the remainder of 2024 and expects to cut four times in 2025 with the median neutral rate of 2.75 – 3.00%.

Market expectation versus FOMC dot-plot median



Dots reset mostly reflecting big September cut



Kentucky Retirement Systems

Compliance Report

Quarter Ending: September 30, 2024





KRS
Kentucky Retirement Systems





SPRS
State Police Retirement System


Compliance Guideline Review Period Ended September 30, 2024	Compliance Status	Legend
Total assets assigned to the selected manager shall not exceed 25% of that firm's total assets under management and shall not exceed 25% of a firm's total assets under management in a commingled product.	●	<p>● In Compliance</p> <p>● To be determined</p> <p>● Not In Compliance</p>
The assets managed by any one active or passive investment manager shall not exceed 15% of the overall assets in the Pension and Insurance funds.	● ¹	
Investment manager's cash holdings do not exceed 5% of the manager's allocation unless such cash holdings are an integral part of a fixed income manager's investment strategy.	●	
No more than 15% of the overall Systems' Pension or Insurance Trust Fund total allocation to private equity investments may be committed to any one partnership.	●	
All instruments in the liquidity allocation shall have a maturity at the time of purchase that does not exceed 397 days.	●	


No more than 50% of the total net assets of the Real Return portfolio may be invested in any one registered investment vehicle, mutual fund, or separately managed account. 


No more than 20% of the total net assets of the Real Return portfolio may be invested in any single closed-end or open-end limited partnership or other unregistered investment vehicle. 


The maximum investment in any co-investment vehicle shall not exceed 50 percent of the total capital committed by all partners at the time of the final closing. The maximum investment in any single direct co-investment shall not exceed 20 percent of the original partnership commitment. Total investment in direct co-investments shall not exceed 20 percent of the asset class portfolio on a cost basis at the time of investment. 

The amount of stock in the domestic or international equity allocation shall not exceed 10% of the aggregate market value of the System's assets. 

The amount of stock in the domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation. 

Investment in "frontier" markets shall not exceed 5% of the System's international equity assets. 

The duration of the core fixed income portfolios combined shall not vary from that of the Systems' Fixed Income Index by more than +/- 25%. 

The amount invested in the debt of a single issuer shall not exceed 5% of the total market value of the Systems' fixed income assets with the exception of U.S. Government issued, guaranteed or agency obligations. 

50% of the core fixed income assets must have stated liquidity that is trade date plus three days or better.



1. *Interpretation that this restriction only applies to external manager and not assets managed by KPPA Investment Staff.*

Kentucky Retirement Systems

Investment Budget Update

Quarter Ending: September 30, 2024

KRS Board Meeting - Quarterly Investment Office Report

KENTUCKY PUBLIC PENSIONS AUTHORITY										
Investment Budget										
For the twelve month period ending September 30, 2024										
Account Name	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Trust Budget FY 2025	FY25 Expenditures	Remaining	Percentage Spent
CONSULTING SERVICES										
Wilshire Associates	\$ 1,021,799	\$ 1,238,170	\$ 1,225,671	\$ 1,021,175	\$ 838,172	\$ 1,130,417	\$ 1,250,000	\$ 283,332	\$ 966,668	23%
Albourne	-	-	-	-	306,750	270,000	275,000	67,500	207,500	25%
MercerInsight	-	-	-	-	153,548	160,000	165,000	40,000	125,000	24%
New Private Markets Consultant	-	-	-	-	-	-	250,000	-	250,000	0%
SUBTOTAL	1,021,799	1,238,170	1,225,671	1,021,175	1,298,471	1,560,417	1,940,000	390,832	1,549,168	20%
LEGAL & AUDITING SERVICES										
Faegre Drinker			96,039	202,502	16,428	18,519	375,000	275	374,725	0%
Intelligent Management Solutions (IMS)	620,001	202,140	155,700	69,884	81,880	8,061	700,000	126,413	573,588	18%
McClain/Goldberg			891	-	-	312	25,000		25,000	0%
Reinhart	317,909	671,269	663,689	619,509	109,508	619,420	3,000,000		3,000,000	0%
Stoll-Keenon-Ogden	10,314	135,353	254,211	463,560	750,438	210,475	875,000	17,030	857,971	2%
Haystack			-	-	120,175	209,490	200,000	49,355	150,645	25%
Umberg Zipser			289,100	498,058	606,701	738,483	750,000	55,086	694,914	7%
Fiduciary Legal Expenses	-	-	-	-	5,288	400,872	850,000	252,569	597,431	30%
Miscellaneous					-	3,160	50,000	9,450	40,550	19%
SUBTOTAL	948,225	1,008,762	1,459,630	1,853,513	1,690,417	2,208,791	6,825,000	510,177	6,314,823	7%
CONTRACTURAL SERVICES										
Bloomberg	68,722	71,810	98,163	102,243	104,153	110,823	160,000	28,197	131,803	18%
BNYM Custodial Fees	2,056,390	2,088,475	2,379,838	2,565,169	2,333,981	2,752,592	2,700,000	743,009	1,956,991	28%
eVestment (Solovis RMS)			-	30,000	33,800	39,422	35,000		35,000	0%
Solovis (Reporting & Analytics)			-	245,000	266,017	306,319	300,000	319,744	(19,744)	107%
FactSet	222,476	162,295	109,662	140,098	146,411	151,431	150,000	32,926	117,074	22%
Russell Index Subscription	1,075	1,250	1,000	1,000	750	1,000	30,000	250	29,750	1%
S&P Global		94,500	26,250	68,250	27,563		47,500		47,500	0%
TradeWeb			-	6,000	7,700	2,800	-		-	-
State Street/Elkins McSherry	10,000	5,000	15,000	10,000	10,000		10,000		10,000	0%
ISS	32,050	32,050	28,288	35,813	39,875	62,875	60,000	4,250	55,750	7%
MSCI	1,000	1,000	1,000	1,000	1,000	1,000	1,000		1,000	0%
KPMG Tax Guarantor Services		7,606	22,050	7,350	-	9,450	10,000		10,000	0%
Jayant Ghevaria and CO		10,050	-	52,085	-	-	55,000		55,000	0%
India Renewal Fee (SEBI)			-	3,000	-	2,950	3,000		3,000	0%
With Intelligence	-	-	-	-	9,520	9,520	10,000	10,150	(150)	-
SUBTOTAL	2,391,713	2,474,036	2,681,251	3,267,008	2,980,769	3,450,182	3,571,500	1,138,525	2,432,975	32%

KRS Board Meeting - Quarterly Investment Office Report

KENTUCKY PUBLIC PENSIONS AUTHORITY										
Investment Budget										
For the twelve month period ending September 30, 2024										
Account Name	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Trust Budget FY 2025	FY25 Expenditures	Remaining	Percentage Spent
MISCELLANEOUS SERVICES										
Miscellaneous Services							250,000		250,000	
Morningstar						2,500	2,500		2,500	
Oxford						19,500	20,000		20,000	
Pension Real Estate Association						330	350		350	
Reimbursemetn of Pzena	-	-	-	-	-	12,923			-	
SUBTOTAL	-	-	-	-	-	35,253	272,850	-	272,850	0%
INACTIVE CONTRACTURAL SERVICES										
Dean Dorton	9,719		-	-	250	-	-	-	-	
Hirschler		4,794	-	-	-	-	-	-	-	
INFORMA	12,904		-	-	-	-	-	-	-	
Lighthouse Solutions	3,093		-	-	-	-	-	-	-	
London Stock Exchange GBP (GREAT BRITISH POUNDS)	6,467	3,544	-	-	-	-	-	-	-	
Deutsche Bank Trust	3,000		3,000	-	-	-	-	-	-	
Morris James LLP	94,192	20,154	-	-	-	-	-	-	-	
Calcaterra Pollack			1,200,000	-	-	-	-	-	-	
Manatt		90,798	30,757	-	-	-	-	-	-	
ORG	162,344		-	-	-	162,344	-	-	-	
SUBTOTAL	291,718	119,290	1,233,757	-	250	-	-	-	-	
TOTAL	\$ 4,653,455	\$ 4,840,258	\$ 6,600,309	\$ 6,141,696	\$ 5,969,907	\$ 7,254,644	\$ 12,609,350	\$ 2,039,534	\$ 10,569,816	16%

KRS Board Meeting - Quarterly Investment Office Report

INVESTMENT BUDGET	
CONSULTING SERVICES	
Wilshire Associates	General Investment Consulting Services, Manager Research and Due Dilligence, Reporting, Asset Allocation
Albourne	Investment Consultant Research database - Private Markets Manager Research, Private Markets Research, Pension Markets Research
MercerInsight	Investment Consultant Research database - Public Markets Manager Research, Public Markets Research, Pension Markets Research
LEGAL & AUDITING SERVICES	
Faegre Drinker	Delaware litigation counsel
Intelligent Management Solutions (IMS)	IMS is an expert witness in the Bay Hills case.
McClain/Goldberg	Blackstone litigation counsel for the Trustees and Officers
Reinhart	Bay Hills counsel and investment counsel for contract negotiations
Stoll-Keenon-Ogden	Mayberry counsel
Haystack	Conduct Mayberry eDiscovery
Umberg Zipser	PAAMCO-Prisma (California litigation)
Frost Brown Todd	Currently has no investment-related cases
Swansburg & Smith	Reimbursement of Fiduciary Legal Expenses (KKR)
Eddins Domine	Reimbursement of Fiduciary Legal Expenses (KKR)
Taft	Reimbursement of Fiduciary Legal Expenses (Calcaterra Pollack)
CONTRACTURAL SERVICES	
Bloomberg	Bloomberg Professional Services, Data Analytics and Tools, Market Information and News, Research Portal
BNYM Custodial Fees	Full Service Custodial Services, Investment Accounting, Investment Operations, Transaction Services, Performance and Attribution, Reporting
eVestment (Solovis RMS)	Research Management Program organizing internal and external research
Solovis (Reporting & Analytics)	Portfolio and Risk Analytics, Performance Measurement and Attribution, Reporting
FactSet	Workstation and Quant/Risk Applications for managing Public Equity Portfolios
Russell Index Subscription	Access to Russell Indexes for Portfolio Management, Reporting and Performance
S&P Global	Data on the S & P US Index / License to 10,000 Identifiers for Portfolio Management, Reporting and Performance
TradeWeb	Electronic Trading Platform for Internal Management
State Street/Elkins McSherry	Public Equity Trade Cost Analysis
ISS	Portfolio Monitoring and Proxy Voting Services
MSCI	International Public Equity Data Package
KPMG Tax Guarantor Services	Tax Accounting Services - Taiwan
Jayant Ghevaria and CO	Tax Accounting Services - India
India Renewal Fee (SEBI)	Registration of India Local Market Accounts
Oxford Economics	Global macroeconomics and markets research
Morningstar	Access to Morningstar Indexes for Portfolio Management, Reporting and Performance
Pension Real Estate Association	Industry Association for News and Research
With Intelligence	Portfolio Management Research provider

KRS Board Meeting - Quarterly Investment Office Report

KENTUCKY PUBLIC PENSIONS AUTHORITY											
Investment Fees and Expenses											
For the three month periods ending September 30th											
Pension											
	2025		2024		2023		2022		2021		
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	
Core Fixed Income	518,475	3,262,153,338	538,998	2,131,936,660	879,295	2,084,448,991	964,078	2,367,680,815	733,578	2,567,773,367	
<i>Investment Advisory Fees</i>	510,154		525,105		552,736		618,246		722,512		
<i>Performance Fees</i>	-		-		313,985		327,140		-		
<i>Miscellaneous Fees and Expenses</i>	8,322		13,893		12,575		18,692		11,066		
Public Equity	4,806,990	8,809,796,103	3,672,514	7,378,700,486	3,142,570	6,065,660,923	3,636,256	6,871,426,987	2,872,890	5,136,347,064	
<i>Investment Advisory Fees</i>	4,702,779		3,567,463		3,040,804		3,523,547		2,749,937		
<i>Miscellaneous Fees and Expenses</i>	104,211		105,051		101,766		112,709		122,953		
Specialty Credit Fixed Income	25,799,945	3,991,761,404	22,856,573	3,275,957,851	12,036,439	3,083,985,656	13,440,821	3,152,469,147	8,644,395	2,645,521,211	
<i>Investment Advisory Fees</i>	5,715,273		4,074,866		4,746,299		3,964,000		3,565,331		
<i>Performance Fees</i>	10,384,968		9,400,428		1,673,157		7,358,655		4,929,348		
<i>Miscellaneous Fees and Expenses</i>	9,699,703		9,381,280		5,616,983		2,118,166		149,716		
Real Estate	2,547,030	998,333,855	849,546	946,221,229	4,455,872	969,436,952	7,779,711	677,700,443	(1,596,844)	575,319,463	
<i>Investment Advisory Fees</i>	1,738,832		1,924,845		1,579,279		1,114,665		973,432		
<i>Performance Fees</i>	41,823		(2,524,451)		2,231,775		6,615,761		(3,019,709)		
<i>Miscellaneous Fees and Expenses</i>	766,375		1,449,153		644,817		49,285		449,432		
Real Return	3,656,380	1,079,085,350	1,385,926	507,885,793	998,699	426,178,862	1,718,873	1,010,028,940	1,224,854	946,392,249	
<i>Investment Advisory Fees</i>	1,398,185		1,044,249		488,379		1,085,377		1,113,697		
<i>Performance Fees</i>	1,960,002		167,367		285,096		380,418		26,635		
<i>Miscellaneous Fees and Expenses</i>	298,194		174,310		225,224		253,079		84,522		
Private Equity	3,543,093	1,153,983,200	7,960,728	1,178,285,116	(274,776)	1,209,741,651	24,096,611	1,305,498,399	10,317,788	1,120,309,401	
<i>Investment Advisory Fees</i>	1,075,255		1,360,253		1,804,660		1,673,732		5,337,767		
<i>Performance Fees</i>	1,500,160		5,008,292		(2,822,439)		20,395,224		4,237,753		
<i>Miscellaneous Fees and Expenses</i>	967,678		1,592,184		743,004		2,027,655		742,268		
Administrative Expense/Cash	1,377,283	600,819,975	1,036,738	1,175,409,476	666,582	799,782,744	858,178	572,193,644	567,832	280,543,179	
Total Investment Mgmt Fees	42,249,196	19,895,933,225	38,301,024	16,594,396,612	21,904,681	14,639,235,779	52,494,529	15,956,998,375	22,764,493	13,272,205,934	

KRS Board Meeting - Quarterly Investment Office Report

KENTUCKY PUBLIC PENSIONS AUTHORITY											
Investment Fees and Expenses											
For the three month periods ending September 30th											
Insurance											
	2025		2024		2023		2022		2021		
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value	
Core Fixed Income	166,955	1,014,916,318	184,881	754,337,920	324,043	767,219,317	354,733	862,879,050	306,612	1,009,303,589	
<i>Investment Advisory Fees</i>	164,235		180,211		208,100		230,338		302,521		
<i>Performance Fees</i>	-		-		112,040		117,337		-		
<i>Miscellaneous Fees and Expenses</i>	2,720		4,670		3,903		7,058		4,091		
Public Equity	2,159,272	3,831,141,684	1,705,220	3,360,758,473	1,436,037	2,807,242,353	1,625,181	3,080,276,960	1,276,657	2,298,110,875	
<i>Investment Advisory Fees</i>	2,115,591		1,657,228		1,389,622		1,574,855		1,237,579		
<i>Miscellaneous Fees and Expenses</i>	43,681		47,991		46,415		50,326		39,078		
Specialty Credit Fixed Income	11,337,702	1,757,297,204	10,206,292	1,472,221,495	5,558,434	1,371,584,870	5,969,311	1,429,342,653	3,600,898	1,200,876,963	
<i>Investment Advisory Fees</i>	2,468,026		1,741,424		2,178,608		1,781,734		1,612,681		
<i>Performance Fees</i>	4,579,418		4,295,204		964,003		3,271,465		1,919,431		
<i>Miscellaneous Fees and Expenses</i>	4,290,258		4,169,664		2,415,823		916,112		68,786		
Real Estate	1,144,040	446,561,904	511,795	418,297,047	1,799,878	428,984,339	3,228,037	286,774,553	(586,612)	242,914,014	
<i>Investment Advisory Fees</i>	797,124		870,090		604,578		482,095		436,720		
<i>Performance Fees</i>	18,291		(979,568)		919,660		2,722,999		(1,205,411)		
<i>Miscellaneous Fees and Expenses</i>	328,625		621,274		275,640		22,943		182,079		
Real Return	1,578,264	417,376,136	603,897	197,048,651	487,514	166,445,599	740,678	426,269,531	483,916	402,565,117	
<i>Investment Advisory Fees</i>	581,847		466,172		266,024		484,286		449,536		
<i>Performance Fees</i>	867,945		59,893		116,876		140,229		(641)		
<i>Miscellaneous Fees and Expenses</i>	128,472		77,832		104,614		116,163		35,021		
Private Equity	1,499,854	577,355,826	4,590,785	600,831,793	(393,210)	598,395,346	16,466,674	616,691,355	6,117,871	517,344,161	
<i>Investment Advisory Fees</i>	678,155		887,506		1,238,396		1,410,084		1,998,482		
<i>Performance Fees</i>	328,563		3,008,749		(1,963,029)		14,392,982		3,937,310		
<i>Miscellaneous Fees and Expenses</i>	493,136		694,529		331,423		663,608		182,079		
Administrative Expense/Cash	662,252	210,061,290	503,596	304,679,290	359,092	272,226,093	453,829	337,944,259	387,863	77,888,632	
Total Investment Mgmt Fees	\$ 18,548,339	\$ 8,254,710,362	\$ 18,306,465	\$ 7,108,174,671	\$ 9,571,788	\$ 6,412,097,917	\$ 28,838,443	\$ 7,040,178,361	\$ 11,587,205	\$ 5,749,003,351	

KENTUCKY PUBLIC PENSIONS AUTHORITY
Investment Fees and Expenses
For the three month period ending September 30, 2024
Pension

	KERS		KERS Hazardous		SPRS	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Core Fixed Income	197,385	1,209,454,200	19,273	117,013,205	29,945	183,487,258
<i>Investment Advisory Fees</i>	194,224		18,966		29,466	
<i>Performance Fees</i>	-		-		-	
<i>Miscellaneous Fees and Expenses</i>	3,161		307		479	
Public Equity	753,258	1,430,468,667	253,680	452,868,139	129,731	218,839,197
<i>Investment Advisory Fees</i>	735,942		248,392		127,288	
<i>Miscellaneous Fees and Expenses</i>	17,316		5,287		2,443	
Specialty Credit Fixed Income	4,981,300	888,933,654	1,387,191	258,646,846	564,598	136,437,701
<i>Investment Advisory Fees</i>	1,190,014		337,990		161,832	
<i>Performance Fees</i>	1,940,525		525,896		200,308	
<i>Miscellaneous Fees and Expenses</i>	1,850,762		523,306		202,457	
Real Estate	485,577	225,109,876	127,032	61,509,151	75,097	36,098,745
<i>Investment Advisory Fees</i>	344,155		85,281		57,748	
<i>Performance Fees</i>	1,526		2,437		797	
<i>Miscellaneous Fees and Expenses</i>	139,896		39,314		16,552	
Real Return	832,902	385,031,763	114,895	86,409,311	175,297	61,812,751
<i>Investment Advisory Fees</i>	317,871		63,414		68,080	
<i>Performance Fees</i>	451,402		37,534		93,001	
<i>Miscellaneous Fees and Expenses</i>	63,629		13,947		14,216	
Private Equity	658,650	200,669,308	191,545	67,865,722	62,091	32,682,253
<i>Investment Advisory Fees</i>	87,884		61,393		14,637	
<i>Performance Fees</i>	468,142		74,779		28,852	
<i>Miscellaneous Fees and Expenses</i>	102,624		55,372		18,602	
Administrative Expenses/Cash	309,570	175,874,233	74,631	34,341,151	47,502	19,728,801
Total Investment Mgmt Fees	8,218,643	4,515,541,701	2,168,247	1,078,653,526	1,084,261	689,086,706

KENTUCKY PUBLIC PENSIONS AUTHORITY
Investment Fees and Expenses
For the three month period September 30, 2024
Insurance

	KERS		KERS Hazardous		SPRS	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Core Fixed Income	33,674	194,363,091	13,391	77,235,845	5,475	31,732,392
<i>Investment Advisory Fees</i>	33,129		13,175		5,386	
<i>Performance Fees</i>	-				-	
<i>Miscellaneous Fees and Expenses</i>	544		216		89	
Public Equity	443,733	733,679,058	169,468	289,365,650	70,473	117,636,463
<i>Investment Advisory Fees</i>	435,332		166,170		69,134	
<i>Miscellaneous Fees and Expenses</i>	8,402		3,298		1,339	
Specialty Credit Fixed Income	2,117,406	418,301,715	1,036,624	166,082,429	399,682	67,150,826
<i>Investment Advisory Fees</i>	532,789		239,428		91,290	
<i>Performance Fees</i>	781,218		465,052		167,882	
<i>Miscellaneous Fees and Expenses</i>	803,399		332,144		140,509	
Real Estate	194,205	100,261,872	117,605	42,774,114	44,889	16,332,874
<i>Investment Advisory Fees</i>	144,690		80,569		30,744	
<i>Performance Fees</i>	2,853		2,137		806	
<i>Miscellaneous Fees and Expenses</i>	46,663		34,900		13,338	
Real Return	398,005	148,098,341	87,430	48,598,934	37,944	19,893,602
<i>Investment Advisory Fees</i>	141,637		46,250		17,187	
<i>Performance Fees</i>	227,172		30,359		16,700	
<i>Miscellaneous Fees and Expenses</i>	29,195		10,822		4,057	
Private Equity	486,665	119,181,833	127,797	49,203,358	47,588	21,864,188
<i>Investment Advisory Fees</i>	89,819		64,498		27,424	
<i>Performance Fees</i>	372,189		24,904		(1,619)	
<i>Miscellaneous Fees and Expenses</i>	24,657		38,395		21,783	
Administrative Expenses/Cash	141,166	49,420,446	55,661	21,452,094	22,686	7,094,451
Total Investment Mgmt Fees	\$ 3,814,853	\$ 1,763,306,356	\$ 1,607,977	\$ 694,712,425	\$ 628,736	\$ 281,704,795

Combining Statement of Fiduciary Net Position

For the three month period ending September 30, 2024, with Comparative Totals for the three month period ending September 30, 2023 (\$ in Thousands) (Unaudited)

	Pension			Insurance			KRS Total		
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	2025	2024	
ASSETS									
CASH AND SHORT-TERM INVESTMENTS									
Cash Deposits	\$255	\$93	\$50	\$101	\$17	\$13	\$529	\$1,976	(73.24)% 1
Short-term Investments	263,482	51,417	34,950	81,045	29,939	10,729	471,562	1,177,925	(59.97)% 2
Total Cash and Short-term Investments	263,737	51,510	35,001	81,146	29,956	10,742	472,091	1,179,901	
RECEIVABLES									
Accounts Receivable	88,224	4,045	2,186	6,487	490	207	101,639	105,375	(3.54)%
Accounts Receivable - Investments	66,482	12,092	10,128	23,133	8,247	3,492	123,575	84,709	45.88% 3
Total Receivables	154,706	16,137	12,314	29,620	8,738	3,699	225,214	190,083	
INVESTMENTS, AT FAIR VALUE									
Core Fixed Income	1,197,820	115,887	181,722	191,962	76,282	31,340	1,795,013	1,217,266	47.46% 4
Public Equities	1,404,171	444,397	214,616	717,055	282,979	115,001	3,178,221	2,659,790	19.49% 5
Private Equities	193,471	66,385	30,212	113,564	49,203	21,864	474,699	418,767	13.36% 6
Specialty Credit	878,166	255,628	134,585	413,199	164,699	66,710	1,912,986	1,375,995	39.03% 7
Derivatives	43	(8)	5	(7)	8	(3)	38	(125)	(130.12)%
Real Return	379,161	85,028	60,936	145,830	47,889	19,588	738,432	175,389	321.02% 8
Real Estate	224,892	61,421	36,070	100,114	42,774	16,333	481,603	365,878	31.63% 9
Total Investments, at Fair Value	4,277,723	1,028,739	658,147	1,681,717	663,835	270,833	8,580,992	6,212,961	38.11%
Securities Lending Collateral Invested	116,563	28,010	17,866	39,754	15,707	6,378	224,278	150,364	49.16% 10
CAPITAL/INTANGIBLE ASSETS									
Capital Assets	929	91	11	-	-	-	1,031	1,031	(0.00)%
Intangible Assets	5,920	494	100	-	-	-	6,513	6,513	0.00%
Accumulated Depreciation	(929)	(91)	(11)	-	-	-	(1,031)	(1,031)	(0.00)%
Accumulated Amortization	(5,920)	(494)	(100)	-	-	-	(6,513)	(6,513)	(0.00)%
Total Capital Assets	-	-	-	-	-	-	-	-	
Total Assets	4,812,729	1,124,396	723,328	1,832,237	718,235	291,652	9,502,575	7,733,309	

Combining Statement of Fiduciary Net Position Continued

For the twelve month period ending June 30, 2024, with Comparative Totals for the twelve month period ending June 30, 2023 (\$ in Thousands) (Unaudited)

	Pension			Insurance			KRS Total			
	KERS Nonhazardous	KERS Hazardous	SPRS	KERS Nonhazardous	KERS Hazardous	SPRS	2024	2023		
LIABILITIES										
Accounts Payable	3,674	1,096	131	103	-	-	5,004	3,852	29.90%	11
Investment Accounts Payable	92,145	13,595	14,139	22,588	7,309	3,349	153,125	115,693	32.36%	12
Securities Lending Collateral	116,563	28,010	17,866	39,754	15,707	6,378	224,278	150,364	49.16%	13
Total Liabilities	212,382	42,701	32,136	62,446	23,015	9,727	382,408	269,908		
Total Fiduciary Net Position Restricted for Pension Benefits										
	\$4,600,346	\$1,081,695	\$691,193	\$1,769,791	\$695,220	\$281,925	\$9,120,168	\$7,463,400		

NOTE - Variance Explanation for changes greater than 10% and more than \$1 million. Differences due to rounding

- 1) The variance is a result of continuous fluctuation of deposits and transactions that flow through the cash account. As a result of an Internal Audit finding, we continue to evaluate the optimum cash balances at JP Morgan Chase.
- 2) Short term investments are primarily comprised of cash on hand at the custodial bank, the variance in the balance is a result of the cash flows of each plan.
- 3) The variance in Investment Accounts Receivable is due to pending trades.
- 4) The increase in Core Fixed Income is a result of additional funding and favorable market conditions.
- 5) The increase in Public Equity is a result of additional funding and favorable market conditions.
- 6) The increase in Private Equities is the result of additional funding and favorable market conditions.
- 7) The increase in Specialty Credit is a result of additional funding and favorable market conditions.
- 8) The increase in Real Return is a result of additional funding of new managers and favorable market conditions.
- 9) The increase in Real Estate is due to additional funding and partnership income.
- 10) The variance is a result of the demand of the Securities Lending Program.
- 11) The variance in Accounts Payable is due to an increase in the payroll and leave liability accrual as well as an increase in outstanding credit invoices for the quarter.
- 12) The variance in Investment Accounts Payable is due to pending trades.
- 13) The variance is a result of the demand of the Securities Lending Program.

Combining Statement of Changes In Fiduciary Net Position									
For the twelve month period ending June 30, 2024, with Comparative Totals for the twelve month period ending June 30, 2023 (\$ in Thousands) (Unaudited)									
	Pension			Insurance			KRS Total		
	KERS	KERS	SPRS	KERS	KERS	SPRS	2024	2023	
	Nonhazardous	Hazardous		Nonhazardous	Hazardous				
ADDITIONS									
Member Contributions	\$25,123	\$5,554	\$1,539	\$-	\$-	\$-	\$32,217	\$30,358	6.12%
Employer Contributions	37,276	18,310	13,450	7,253	1	443	76,733	87,932	(12.74)% 1
Actuarially Accrued Liability Contributions	215,174	-	-	359	-	-	215,533	246,477	(12.55)% 2
General Fund Appropriations	75,000	-	6,250	-	-	-	81,250	60,000	35.42% 3
Pension Spiking Contributions	4	-	-	-	-	-	4	5	(23.26)%
Health Insurance Contributions (HB1)	(8)	(3)	(3)	2,898	543	109	3,536	3,107	13.79%
Humana Gain Share Payment	-	-	-	-	-	-	-	9,481	4
Medicare Drug Reimbursement	-	-	-	1	-	-	1	1	0.00%
Insurance Premiums	-	-	-	11	(7)	(6)	(2)	31	105.93%
Retired Reemployed Healthcare	-	-	-	2,113	543	12	2,667	2,087	27.79%
Total Contributions	352,569	23,862	21,236	12,634	1,080	558	411,939	439,480	
INVESTMENT INCOME									
From Investing Activities									
Net Appreciation (Depreciation) in FV of Investments	192,805	46,027	29,779	78,747	27,423	11,268	386,050	(126,886)	404.25% 5
Interest/Dividends	38,159	9,214	5,766	15,924	5,750	2,340	77,152	63,743	21.04% 6
Total Investing Activities Income (loss)	230,964	55,241	35,545	94,671	33,173	13,608	463,202	(63,144)	
Less: Investment Expense	5,357	1,528	761	2,431	1,086	445	11,608	9,884	17.44% 7
Less: Performance Fees	2,862	641	323	1,383	522	184	5,914	4,314	37.10% 8
Net Income (loss) from Investing Activities	222,745	53,073	34,461	90,856	31,565	12,980	445,680	(77,342)	
From Securities Lending Activities									
Securities Lending Income	1,534	377	264	600	178	81	3,035	1,823	
Less: Securities Lending Borrower Rebates (Income)/Expense	1,370	338	236	532	157	72	2,705	1,567	
Less: Securities Lending Agent Fees	25	6	4	10	3	1	49	38	
Net Income from Securities Lending	140	33	24	58	18	8	281	218	28.66%
Net Investment Income (loss)	222,885	53,106	34,485	90,914	31,583	12,988	445,960	(77,124)	
Total Additions	575,454	76,968	55,721	103,549	32,663	13,546	857,900	362,357	136.76%

Combining Statement of Changes In Fiduciary Net Position Continued



For the twelve month period ending June 30, 2024, with Comparative Totals for the twelve month period ending June 30, 2023 (\$ in Thousands) (Unaudited)



	Pension			Insurance			KRS Total		
	KERS	KERS	SPRS	KERS	KERS	SPRS	2024	2023	
	Nonhazardous	Hazardous		Nonhazardous	Hazardous				
DEDUCTIONS									
Benefit Payments	265,566	23,076	17,523	-	-	-	306,166	292,631	4.63%
Refunds	3,726	1,792	144	-	-	-	5,663	3,855	46.89% 9
Administrative Expenses	3,387	325	76	175	30	18	4,011	3,977	0.86%
Healthcare Premiums Subsidies	-	-	-	25,014	5,307	3,686	34,007	29,248	16.27% 10
Self Funded Healthcare	-	-	-	663	24	7	693	450	54.16%
Excise Tax	-	-	-	-	-	-	-	3	
Total Deductions	272,679	25,193	17,744	25,852	5,360	3,711	350,539	330,164	
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	302,775	51,775	37,977	77,697	27,302	9,834	507,360	32,193	
Total Fiduciary Net Position Restricted for Pension Benefits									
Beginning of Period	4,297,571	1,029,921	653,216	1,692,094	667,917	272,090	8,612,809	7,431,208	
End of Period	\$4,600,346	\$1,081,695	\$691,193	\$1,769,791	\$695,220	\$281,925	\$9,120,170	\$7,463,400	22.20%

NOTE - Variance Explanation for changes greater than 10% and more than \$1 million. Differences due to rounding.

- 1) The decrease in Employer Contributions is due to a decrease in the employer contribution rates across all plans.
- 2) The decrease in AALC is due to the improved funding status of KERS Nonhazardous causing a decrease in required Actuarially Accrued Liability Contributions.
- 3) General Fund Appropriations will vary year to year based on legislated funding.
- 4) The Humana Gain Share payment will fluctuate year to year based on claims paid.
- 5) The increase in Net Appreciation in Fair Value of Investments is the result of gains largely from Public Equities and Core Fixed Income.
- 6) The increase in Interest/Dividend Income is primarily the result of increased Dividends/Interest from Specialty Credit, Real Estate, and Core Fixed Income.
- 7) The increase in Investment Expense is primarily the result of increased market value due to favorable performance and additional funding.
- 8) The increase in performance fees is primarily from Real Return due to funding of new managers creating more fees.

KRS Contribution Report
 For the three month period ending September 30, 2024, with comparative totals for the three month period ending September 30, 2023 (\$ in Millions)

 	Kentucky Employees Retirement System				State Police Retirement System	
	Nonhazardous		Hazardous		System	
	Pension					
	FY25	FY24	FY25	FY24	FY25	FY24
Member Contributions	\$25.1	\$23.7	\$5.6	\$5.2	\$1.5	\$1.4
Employer Contributions	37.3	37.8	18.3	21.9	13.5	15.6
AALC	215.2	224.6	-	-	-	-
General Fund Appropriations	75.0	60.0	-	-	6.2	-
Net Investment Income	30.1	25.2	7.1	5.7	4.7	4.7
Total Inflows	382.7	371.3	31.0	32.8	25.9	21.7
Benefit Payments/Refund	269.3	259.6	24.9	21.0	17.6	15.9
Administrative Expenses	3.4	3.3	0.3	0.4	0.1	0.1
Total Outflows	272.7	262.9	25.2	21.4	17.7	16.0
NET Contributions	110.0	108.4	5.8	11.4	8.2	5.7
Realized Gain/(Loss)	67.0	(18.9)	19.2	(0.2)	10.0	(2.6)
Unrealized Gain/(Loss)	125.8	(38.8)	26.8	(15.8)	19.8	(7.5)
Change in Net Position	302.8	50.7	51.8	(4.6)	38.0	(4.4)
Beginning of Period	4,297.6	3,607.2	1,029.9	902.6	653.2	592.8
End of Period	\$4,600.4	\$3,657.9	\$1,081.7	\$898.0	\$691.2	\$588.4
Net Contributions less Net Investment Income	\$79.9	\$83.2	\$(1.3)	\$5.7	\$3.5	\$1.0
Cash Flow as % of Net Assets	1.74%	2.27%	(0.12)%	0.63%	0.51%	0.17%
Net Investment Income	\$30.1	\$25.2	\$7.1	\$5.7	\$4.7	\$4.7
Yield as % of Net Assets	0.65%	0.69%	0.65%	0.63%	0.68%	0.79%

 	Kentucky Employees Retirement System				State Police Retirement System	
	Nonhazardous		Hazardous		System	
	Insurance					
	FY25	FY24	FY25	FY24	FY25	FY24
Employer Contributions	\$7.3	\$10.1	\$0.0	\$(0.0)	\$0.4	\$2.5
AALC	0.4	21.9	-	-	-	-
Insurance Premiums	0.0	0.0	(0.0)	(0.0)	(0.0)	(0.0)
Humana Gain Share	-	8.4	-	0.7	-	0.4
Retired Reemployed Healthcare	2.1	1.7	0.5	0.4	0.0	-
Health Insurance Contributions	2.9	2.5	0.5	0.5	0.1	0.1
Net Investment Income	12.1	9.8	4.2	3.2	1.7	1.3
Total Inflows	24.8	54.4	5.2	4.8	2.2	4.3
Healthcare Premiums	25.7	21.5	5.3	4.8	3.7	3.5
Administrative Expenses	0.2	0.2	0.0	0.0	0.0	0.0
Total Outflows	25.9	21.7	5.3	4.8	3.7	3.5
NET Contributions	(1.1)	32.7	(0.1)	(0.0)	(1.5)	0.8
Realized Gain/(Loss)	33.6	(2.8)	14.4	(0.1)	5.8	0.1
Unrealized Gain/(Loss)	45.1	(26.3)	13.0	(9.7)	5.5	(4.1)
Change in Net Position	77.6	3.6	27.3	(9.8)	9.8	(3.2)
Beginning of Period	1,692.1	1,465.5	667.9	616.3	272.1	246.8
End of Period	\$1,769.7	\$1,469.1	\$695.2	\$606.5	\$281.9	\$243.6
Net Contributions less Net Investment Income	\$(13.2)	\$22.9	\$(4.3)	\$(3.2)	\$(3.2)	\$(0.5)
Cash Flow as % of Net Assets	(0.75)%	1.56%	(0.62)%	(0.53)%	(1.12)%	(0.22)%
Net Investment Income	\$12.1	\$9.8	\$4.2	\$3.2	\$1.7	\$1.3
Yield as % of Net Assets	0.68%	0.67%	0.60%	0.53%	0.61%	0.54%



KRS Outstanding Invoices by Type and Employer

Invoice Type	9/30/2024	6/30/2024	Change H/(L)
Actuarially Accrued Liability Contribution	\$4,815,381	\$4,474,880	8%
Employer Free Military and Decompression Service	45,258	224,012	(80)%
Member Pension Spiking Refund	(24,532)	(25,045)	(2)%
Monthly Reporting Invoice	(109,510)	(212,923)	(49)%
Penalty – Monthly Reporting	39,000	53,000	(26)%
Reinstatement	11,326	10,716	6%
Other Invoices**	(164,251)	(170,660)	(4)%
Total	4,612,672	4,353,980	
Health Insurance Reimbursement	386,167	999,560	(61)%
Omitted Employer	22,068	194,267	(89)%
Employer Pension Spiking*	201,454	208,082	(3)%
Standard Sick Leave	451,326	1,206,208	(63)%
USERRA Protected Military	35,030	35,030	0%
Total	1,096,044	2,643,147	-59%
Grand Total	\$5,708,716	\$6,997,128	(18)%

*Pension Spiking invoices on this report are Employer Pension Spiking. By statute these invoices are due 12 months from the invoice date. Employer Pension Spiking is in effect only for retirements prior to July 1, 2018, therefore, unless there has been a recently created invoice for a backdated retirement, all of these invoices are greater than 12 months old.

**Other Invoices include Expense Allowance; Expired Post Pending; IPS Employer Refund; Penalty EOY Reporting; Personnel Adjustment; and, Refunded Member Contributions Due.

Employer Name (Top Ten)	9/30/2024	6/30/2024	Change H/(L)
Kentucky River Community Care Inc.***	\$4,714,290	\$4,352,034	8%
Dept. for Behavioral Health Dev. Intell. Disabilities	176,121	226,943	(22)%
Seven County Services, Inc.***	151,493	150,839	0%
Unified Prosecutorial System	97,541	98,394	(1)%
Department for Community Based Services	92,253	184,361	(50)%
Municipal Electric Power Association of Kentucky	88,797	68,922	29%
Office of Personnel Management	65,473	54,259	21%
Personnel Board	55,600	(453)	(12383)%
Health and Family Services Office of the Sec	42,898	46,729	(8)%
Northern Kentucky University	\$39,298	\$38,867	1%

***Indicates invoices turned over to Legal for further action

	Total Unpaid Balance	Invoice Count
KERS	5,599,756	955
KERH	110,444	25
SPRS	(1,484)	4
Grand Total:	\$5,708,716	984



KENTUCKY PUBLIC PENSIONS AUTHORITY

Penalty Invoices Report
From: 7/1/2024 To: 9/30/2024

Note: Delinquent Interest amounts are included in the totals for the invoice

Invoice Amount	Invoice Remaining Balance	Delinquent Interest	Invoice Status Date	Invoice Due Date	Invoice Status	Employer Classification	Comments
\$1,000	\$-	\$-	9/13/2024	1/19/2017	CANC	Master Commissioner	New employer reporting official
1,000	-	-	9/13/2024	12/31/2017	CANC	Master Commissioner	New employer reporting official
1,000	-	-	9/13/2024	3/5/2021	CANC	Master Commissioner	New employer reporting official
1,000	-	-	9/19/2024	11/14/2021	CANC	Non-P1 State Agencies	New employer reporting official
1,000	-	-	9/19/2024	11/25/2021	CANC	Non-P1 State Agencies	New employer reporting official
1,000	-	-	9/13/2024	3/1/2023	CANC	Master Commissioner	New employer reporting official
1,000	-	-	9/9/2024	9/16/2023	CANC	Master Commissioner	Employer in good standing with KPPA
1,000	-	-	9/13/2024	5/2/2024	CANC	Master Commissioner	New employer reporting official
1,000	-	-	9/13/2024	8/15/2024	CANC	County Attorneys	New employer reporting official
Total	\$9,000	\$-					
\$1,010	\$1,010	\$-	9/18/2024	10/18/2024	CRTD	Universities	
Total	\$1,010	\$1,010					
\$1,000	\$-	\$-	8/8/2024	8/15/2024	PAID	Regional Mental Health Units	
1,499	-	-	7/26/2024	8/24/2024	PAID	Universities	
1,135	-	-	8/30/2024	8/25/2024	PAID	Universities	
1,006	-	-	9/18/2024	9/29/2024	PAID	Universities	
1,000	-	-	9/24/2024	10/3/2024	PAID	Master Commissioner	
Total	\$5,640	\$-					

Notes:

Invoice Status:

CANC - Cancelled

CRTD - Created

PAID - Paid

KPPA ADMINISTRATIVE BUDGET FY 2024-2025 BUDGET-TO-ACTUAL SUMMARY ANALYSIS						
FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2024, WITH COMPARATIVE TOTALS FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2023						
CATEGORY	BUDGETED	FY 2025 EXPENSE	REMAINING	PERCENT REMAINING	FY 2024 EXPENSE	PERCENT DIFFERENCE
PERSONNEL	\$36,798,000	\$8,849,836	\$27,948,164	75.95%	\$8,475,218	4.42%
LEGAL CONTRACTS	2,030,000	294,608	1,735,392	85.49%	169,555	73.75%
AUDITING	300,000	40,251	259,749	86.58%	-	100.00%
ACTUARIAL SERVICES	525,000	-	525,000	100.00%	-	0.00%
MEDICAL REVIEWERS	1,800,000	258,085	1,541,915	85.66%	339,790	(24.05)%
OTHER PERSONNEL	510,000	67,440	442,560	86.78%	83,044	(18.79)%
PERSONNEL TOTAL	\$41,963,000	\$9,510,219	\$32,452,781	77.34%	\$9,067,608	4.88%
RENTALS - BUILDING & EQUIPMENT	1,175,000	246,410	928,590	79.03%	263,349	(6.43)%
INFORMATION TECHNOLOGY	4,230,000	851,803	3,378,197	79.86%	624,533	36.39%
OTHER OPERATIONAL	1,397,500	201,536	1,195,964	85.58%	215,067	(6.29)%
OPERATIONAL TOTAL	\$6,802,500	\$1,299,749	\$5,502,751	80.89%	\$1,102,949	17.84%
RESERVE	216,000	-	216,000	100.00%	-	0.00%
ADMINISTRATIVE BUDGETED AMOUNT	\$48,981,500	\$10,809,968	\$38,171,532	77.93%	\$10,170,557	6.29%

Administrative Budget Summary Notes

KPPA has spent \$8.9 million in the 1st Quarter, which is 24.05% of the entire budget, and 4.42% higher than last years 1Q.

One item that is close to its annual budget is the workers comp line item: This is budgeted at \$15k and we have been billed our annual premium of \$12.5k (likely leaving us \$2.5K under budget for the year).

PERSONNEL (Staffing):

KPPA has spent \$295k or 15% of the annual budget, prior years 1Q was \$170k (or 14% of the budget at that time). I do want to note that we have spent 39% of the Ice Miller budget and 35% of the JBB budget in Q1. Furthermore, we have requested an increase for the current Ice Miller contract to accommodate ongoing litigation.

LEGAL CONTRACTS:

All other personnel categories were under budget for the Quarter, bringing the total personnel category to \$9.5M or only 23% of the total budget. This was 4.88% or \$442k higher than the prior year.

OTHER PERSONNEL CATEGORIES:

OPERATIONAL TOTAL:

KPPA spent \$1.3M in the operations category leaving 81% of the budget for the next three quarters.

OVERALL:

The total administrative expenses were \$10.8M for the Quarter, which was 6.29% higher than the prior year Q1, and we have 77.93% (or \$38M) remaining of the total \$49.9M budget.

KPPA ADMINISTRATIVE BUDGET FY 2024-2025						
BUDGET-TO-ACTUAL ANALYSIS						
FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2024, WITH COMPARATIVE TOTALS FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2023						
Account Name	Budgeted	FY 2025 Expense	Remaining	Percent Remaining	FY 2024 Expense	Percent Difference
PERSONNEL						
Staff						
Salaries/Wages	\$21,138,000	\$5,117,359	\$16,020,641	75.79%	\$4,444,515	15.14%
Wages (Overtime)	310,000	49,207	260,793	84.13%	62,121	(20.79)%
Emp Paid FICA	1,641,000	368,985	1,331,117	81.12%	322,894	14.27%
Emp Paid Retirement	10,511,000	2,542,284	8,301,398	78.98%	2,955,059	(13.97)%
Emp Paid Health Ins	2,875,000	754,060	1,729,156	60.14%	635,718	18.62%
Emp Paid Sick Leave	250,000	-	250,000	100.00%	40,221	(100.00)%
Adoption Assistance Benefit	10,000	-	10,000	100.00%	-	0.00%
Escrow for Admin Fees	-	-	-	(100.00)%	-	0.00%
Workers Compensation	15,000	12,485	2,515	16.76%	11,116	12.32%
Unemployment	10,000	2,007	7,993	79.93%	-	100.00%
Emp Paid Life Ins	3,000	772	2,228	74.27%	744	3.76%
Employee Training	25,000	2,676	22,324	89.30%	2,830	(5.44)%
Tuition Assistance	10,000	-	10,000	100.00%	-	0.00%
Bonds	-	-	-	0.00%	-	0.00%
Staff Subtotal	36,798,000	8,849,836	27,948,164	74.95%	8,475,218	4.42%
LEGAL & AUDITING SERVICES						
Legal Hearing Officers	270,000	38,569	231,431	85.72%	48,450	(20.39)%
Legal (Stoll, Keenon)	250,000	-	250,000	100.00%	1,210	(100.00)%
Frost Brown	1,000,000	88,932	911,068	91.11%	26,868	231.00%
Reinhart	50,000	-	50,000	100.00%	-	0.00%
Ice Miller	300,000	116,000	184,000	61.33%	84,540	37.21%
Johnson, Bowman, Branco LLC	100,000	34,942	65,058	65.06%	8,488	311.66%
Dentons Bingham & Greenebaum	50,000	-	50,000	100.00%	-	0.00%
Legal Expense	10,000	16,166	(6,166)	(61.66)%	-	100.00%
Auditing	300,000	40,251	259,749	86.58%	-	100.00%
Total Legal & Auditing Services	2,330,000	334,859	1,995,141	85.63%	169,555	97.49%
CONSULTING SERVICES						
Medical Reviewers	1,800,000	258,085	1,541,915	85.66%	339,790	(24.05)%
Escrow for Actuary Fees	-	-	-	0.00%	-	0.00%
Total Consulting Services	1,800,000	258,085	1,541,915	85.66%	339,790	(24.05)%
CONTRACTUAL SERVICES						
Miscellaneous Contracts	425,000	51,533	373,467	87.87%	73,888	(30.26)%
Human Resources Consulting	10,000	-	10,000	100.00%	-	0.00%
Actuarial Services	525,000	-	525,000	100.00%	-	0.00%
Facility Security Charges	75,000	15,907	59,093	78.79%	9,156	73.73%
Contractual Subtotal	1,035,000	67,440	967,560	93.48%	83,044	(18.79)%
PERSONNEL SUBTOTAL	\$41,963,000	\$9,510,219	\$32,452,781	77.34%	\$9,067,608	4.88%
OPERATIONAL						
Natural Gas	45,000	1,408	43,592	96.87%	1,566	(10.09)%
Electric	130,000	32,721	97,279	74.83%	31,232	4.77%
Rent-Non State Building	80,000	-	80,000	100.00%	-	0.00%
Building Rental - PPW	1,000,000	240,492	759,508	75.95%	240,493	(0.00)%
Copier Rental	90,000	4,431	85,569	95.08%	21,708	(79.59)%
Rental Carpool	5,000	1,487	3,513	70.26%	1,147	29.64%
Vehicle/Equip. Maint.	1,300	-	1,300	100.00%	-	0.00%

KPPA ADMINISTRATIVE BUDGET 2024-25						
BUDGET-TO-ACTUAL ANALYSIS						
FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2024, WITH COMPARATIVE TOTALS FOR THE THREE MONTHS ENDING SEPTEMBER 30, 2023						
Account Name	Budgeted	FY 2025 Expense	Remaining	Percent Remaining	FY 2024 Expense	Percent Difference
Postage	450,000	32,299	417,701	92.82%	77,249	(58.19)%
Freight	200	-	200	100.00%	-	0.00%
Printing (State)	15,000	50	14,950	99.67%	-	100.00%
Printing (non-state)	85,000	-	85,000	100.00%	-	0.00%
Insurance	7,500	12,692	(5,192)	(69.23)%	5,066	150.53%
Garbage Collection	7,000	1,646	5,354	76.48%	1,745	(5.67)%
Conference Expense	45,000	16,576	28,424	63.16%	8,180	102.64%
Conference Exp. Investment	2,000	-	2,000	100.00%	-	0.00%
Conference Exp. Audit	3,000	-	3,000	100.00%	-	0.00%
MARS Usage	50,000	14,678	35,322	70.64%	6,775	116.65%
COVID-19 Expenses	-	-	-	0.00%	-	0.00%
Office Supplies	90,000	9,275	80,725	89.69%	9,914	(6.45)%
Furniture & Office Equipment	30,000	85	29,915	99.72%	-	100.00%
Travel (In-State)	15,500	3,226	12,274	79.19%	5,250	(38.55)%
Travel (In-State) Investment	-	-	-	#DIV/0!	-	0.00%
Travel (In-State) Audit	1,000	-	1,000	100.00%	-	0.00%
Travel (Out of State)	77,000	20,673	56,327	73.15%	17,841	15.87%
Travel (Out of State) Investment	135,000	-	135,000	100.00%	9,286	(100.00)%
Travel (Out of State) Audit	3,000	-	3,000	100.00%	-	0.00%
Dues & Subscriptions	69,000	13,618	55,382	80.26%	13,757	(1.01)%
Dues & Subscriptions Invest	15,000	6,360	8,640	57.60%	4,470	42.28%
Dues & Subscriptions Audit	1,000	-	1,000	100.00%	-	0.00%
Miscellaneous	55,000	449	54,551	99.18%	15,075	(97.02)%
Miscellaneous Investment	-	-	-	0.00%	-	0.00%
Miscellaneous Audit	-	-	-	0.00%	-	0.00%
COT Charges	40,000	3,267	36,733	91.83%	3,049	7.15%
Telephone - Wireless	10,000	1,790	8,210	82.10%	2,151	(16.78)%
Telephone - Other	90,000	47,694	42,306	47.01%	19,154	149.00%
Telephone - Video Conference	15,000	973	14,027	93.51%	-	100.00%
Computer Equip./Software	4,120,000	833,858	3,286,142	79.76%	614,709	35.65%
Comp. Equip./Software Invest	-	-	-	0.00%	-	0.00%
Comp. Equip./Software Audit	20,000	-	20,000	100.00%	-	0.00%
OPERATIONAL SUBTOTAL	\$6,802,500	\$1,299,749	\$5,502,751	80.89%	\$1,102,949	17.84%
SUB-TOTAL	\$48,765,500	\$10,809,968	\$37,955,532	77.83%	\$10,170,557	6.29%
Reserve	216,000	-	216,000	100.00%	-	0.00%
TOTAL	\$48,981,500	\$10,809,968	\$38,171,532	77.93%	\$10,170,557	6.29%

Differences due to rounding

Plan	Budgeted	FY 2025 Expense	% of Total KPPA FY 2025 Expense
CERS Nonhazardous	\$28,899,085	\$6,377,881	59.00%
CERS Hazardous	2,527,445	557,794	5.16%
KERS Nonhazardous	15,436,030	3,406,653	31.514%
KERS Hazardous	1,771,661	390,997	3.617%
SPRS	347,279	76,643	0.709%
TOTAL	\$48,981,500	\$10,809,968	100.00%

**JP MORGAN CHASE CREDIT EARNINGS AND FEES
FOR THE FISCAL YEAR ENDING JUNE 30, 2025**

	Earnings	Fees	Net Earnings
July-24	\$-	\$(7,337)	\$(7,337)
August-24	-	(7,646)	\$(7,646)
September-24		(7,733)	\$(7,733)
October-24			\$-
November-24			\$-
December-24			\$-
January-25			\$-
February-25			\$-
March-25			\$-
April-25			\$-
May-25			\$-
June-25			\$-
Total	\$-	\$(22,716)	\$(22,716)

**JP MORGAN CHASE HARD INTEREST EARNED
FOR THE FISCAL YEAR ENDING JUNE 30, 2025**

	Clearing Account	CERS	KERS	SPRS	Total
July-24	\$25,823	\$15,119	\$7,930	\$348	\$49,220
August-24	27,262	20,476	10,633	1,081	\$59,451
September-24	34,046	16,441	8,353	262	\$59,101
October-24					\$-
November-24					\$-
December-24					\$-
January-25					\$-
February-25					\$-
March-25					\$-
April-25					\$-
May-25					\$-
June-25					\$-
Total	\$87,131	\$52,035	\$26,916	\$1,690	\$167,773



KENTUCKY PUBLIC PENSIONS AUTHORITY

Ryan Barrow, Executive Director

1260 Louisville Road • Frankfort, Kentucky 40601
kyret.ky.gov • Phone: 502-696-8800 • Fax: 502-696-8822



To: Kentucky Retirement Systems Board of Trustees

From: D’Juan Surratt
Director of Employer Reporting, Compliance and Education

Date: December 4, 2024

Subject: Hazardous Position Classification

AGENCIES ARE REQUESTING HAZARDOUS DUTY COVERAGE FOR THE FOLLOWING POSITIONS:

<u>Agency</u>	<u>Position</u>	<u>Effective Date</u>
Attorney General	Executive Director (Criminal Investigations)	10/1/2024
Eastern Kentucky University	Lieutenant Colonel	8/1/2024

Kentucky Public Pensions Authority has reviewed the above requests and determined that they meet the statutory guidelines for Hazardous coverage. Position Questionnaires and Job Descriptions are attached.



KENTUCKY PUBLIC PENSIONS AUTHORITY

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To: KPPA/CERS/KRS Board
From: Ryan Barrow
Date: December 2, 2024
Subject: KPPA Update

- I. **LEGISLATION:** The KPPA is well positioned to address our two key legislative priorities: reorganization and pension spiking. As a reminder, legislative updates this coming session starting January 7, 2025 will be provided weekly, with more frequent updates when key bills advance out of committee or receive a floor vote.
- II. **LOUISVILLE OFFICE:** The final floor plan/design have been signed off by KPPA. The Department for Facilities and Support Services in the Finance and Administration Cabinet will proceed with selection.
- III. **PUBLIC PENSION OVERSIGHT BOARD (PPOB):** On November 19th, Rebecca Adkins and I presented at the PPOB, providing an overview of the valuations for all systems.
- IV. **STRATEGIC PLANNING TEAMS:**
 1. QA Account Audit Team - Areas for improvement in the account audit process are being implemented in the February build.
 2. Survey Team - Recommendations are under review for prioritization.
 3. Member Presentations - Holding regular meetings and researching best practices.
 4. Artificial Intelligence (AI) – Currently being developed, with a focus on using AI to transcribe phone calls.
- V. **STAFFING:** Current full-time staffing stands at 258, with six positions posted under the new Team Kentucky Internship Program (KTIP) and interns will begin in the summer of 2025. Additionally, a new counselor training class is set to start in January, with six new counselors undergoing three months of training before transitioning to their respective areas.
- VI. **COMMUNICATION:** Effective communication is essential to our success, and I want to thank everyone at KPPA and the Trustees who have shared their thoughts, concerns, and suggestions. Over the past few months, you may have noticed changes in the structure of board packets and meeting minutes. More importantly, we are testing an after-action

process to track follow-up times and ensure tasks are delegated to the appropriate person.

- VII. KENTUCKY EMPLOYEE CHARITABLE CAMPAIGN (KECC):** KPPA has surpassed our KECC goal of 20% participation and \$20,000 in donations, raising a total of \$26,006 to date, with 22% of staff participating through payroll deduction.