

**KENTUCKY RETIREMENT SYSTEMS**  
**Board of Trustees**  
**Regular Quarterly Meeting**  
**November 12, 2020 at 10:00 A.M., ET**  
**VIA Live Teleconference/Facebook Live**

1. Roll Call
2. Approval of Minutes\* – September 10, 2020 and September 16, 2020
3. Public Comment
4. Draft 2020 Actuarial Valuations - Janie Shaw and Danny White (GRS)
  - Overview
  - KERS
  - CERS
  - SPRS
5. Retiree Health Plan Committee Report – David Rich/Connie Pettyjohn
6. Approval of the CERS Health Insurance Trust Documents\* - Kathy Rupinen
7. Investment Committee Report and Investment Policy Statement Approval\* - Prewitt Lane
8. Audit Committee Report\*– November 5, 2020; John Chilton/Kristen Coffey/Rebecca Adkins
  - Hazardous Duty Positions
  - Financial Statements
  - GASB 67 and GASB 74
9. Legislative Update - David Eager
  - Housekeeping Bill
  - Fixed Allocation BR 424
10. KRS Update - David Eager
  - HB 484
  - Retirement Trends
  - Staffing Update
11. Closed Session [Pending Litigation KRS 61.810(1)(c)]; Personnel KRS61.810(1)(f)] \*
12. Adjourn

*\*Board Action Required*

**MINUTES OF MEETING #430**  
**BOARD OF TRUSTEES KENTUCKY RETIREMENT SYSTEMS**  
**QUARTERLY MEETING SEPTEMBER 10, 2020 AT 9:00A.M.**  
**VIA LIVE VIDEO TELECONFERENCE DUE TO SB 150,**  
**SIGNED INTO LAW BY THE GOVERNOR ON MARCH 30, 2020,**  
**AND EXECUTIVE ORDER 2020-215 DECLARING A STATE OF EMERGENCY**  
**EFFECTIVE MARCH 6, 2020 DUE TO COVID-19**

At the Quarterly Meeting of the Board of Trustees held on September 10, 2020 the following members were present: David Harris (Chair), Joe Brothers, John Chilton (arrived at 10:20 a.m.), John Cheshire, Raymond Connell (arrived at 9:21 a.m.), Kelly Downard, JT Fulkerson, Joseph Grossman, Sherry Kremer, Prewitt Lane, Matthew Monteiro, Keith Peercy, Betty Pendergrass, Jerry Powell, David Rich and Sec. Gerina Whethers. Staff members present were David Eager, Rebecca Adkins, Erin Surratt, Kathy Rupinen, Rich Robben, Connie Davis, D’Juan Surratt, Kristen Coffey, Connie Pettyjohn, Ann Case, Elizabeth Smith, Victoria Hale, Justin McNeil, Jared Crawford, Carrie Bass, Shaun Case, Phillip Cook and Alane Foley.

Mr. Harris called the meeting to order.

Ms. Alane Foley called roll.

Being no *Public Comment*, Mr. Harris introduced agenda item *Approval of Minutes- May 21, 2020*. A motion was made by Mr. Brothers and was seconded by Mr. Powell to approve the minutes as presented. The motion passed unanimously.

Mr. Harris introduced agenda item *Approval of the Board Election Policy*. After a lengthy discussion, Mr. Powell made a motion and was seconded by Ms. Pendergrass to ratify the Audit Committee’s approval of the Board Election Policy on August 27, 2020. The motion passed unanimously. Mr. Brothers made a motion and was seconded by Mr. Downard to allow a one-time exception to accept the top nine vote getters. The motion passed unanimously. Ms. Pendergrass moved and was seconded by Mr. Brothers to ratify the Audit Committee’s decision to designate that the #3 in the vote tally receive the shorter term. Mr. Brothers then amended the motion and

was seconded by Mr. Fulkerson to include an exception if the current office holder is 1<sup>st</sup> or 2<sup>nd</sup> in the vote tally, that individual will take the November term and 1<sup>st</sup> and 3<sup>rd</sup> will take the April term. The motion passed unanimously.

Mr. Harris introduced agenda item *CERS Board of Trustee Candidate Presentations and Nominations*. The candidate presentations were in the following order: Ms. Melanie Lilly, Ms. Betty Pendergrass, Mr. Jason Potts, Mr. Jerry Powell, Mr. Roy Pridgen Jr., Mr. David Rich, Mr. Paul Routen, Mr. Ronald Scott and Mr. Charles Wright. Ms. Kristen Coffey read statements from Ms. Patricia Carver and Mr. Harold Monroe as they were unable to attend.

Ms. Alane Foley called roll and allowed each Trustee to state their votes. Ms. Kristen Coffey, Ms. Rebecca Adkins and Ms. Alane Foley tallied Trustees votes.

Ms. Kristen Coffey provided the names of the top nine candidates: Ms. Melanie Lilly, Ms. Betty Pendergrass, Mr. Jason Potts, Mr. Jerry Powell, Mr. David Rich, Mr. Ronald Scott, Mr. Charles Wright, Ms. Patricia Carver and Mr. Harold Monroe.

Mr. Fulkerson made a motion and was seconded by Mr. Grossman to accept the top nine candidates on the CERS ballot. The motion passed unanimously.

Mr. Harris introduced agenda item *Retiree Health Plan Committee Update*. Mr. Rich and Ms. Connie Pettyjohn provided an update to the Trustees from their September 3, 2020 meeting. Mr. Fulkerson made a motion and was seconded by Mr. Lane to ratify the recommendations of the Retiree Health Plan Committee regarding the health plans for non-Medicare-eligible retirees. The motion passed unanimously.

Ms. Pendergrass made a motion and was seconded by Mr. Powell to accept the Retiree Health Plan Committee's recommendation to add an enhanced dental benefit for Medicare-eligible retirees. A roll call vote was taken: Harris (N), Brothers (Y), Chilton (N), Cheshire (N), Connell (N), Downard (Y), Fulkerson (N), Grossman (N), Kremer (N), Lane (N), Monteiro (N), Peercy (N), Pendergrass (Y), Powell (Y), Rich (Y) and Sec. Whethers(Y). The motion failed with 10(N) and 6(Y).

Mr. Fulkerson made a motion and was seconded by Mr. Connell to accept the remaining recommendations of the Retiree Health Plan Committee regarding health plans for Medicare-eligible retirees excluding the dental coverage. The motion passed unanimously.

Mr. Grossman made a motion and was seconded by Ms. Kremer to ratify the recommendations of the Retiree Health Plan Committee regarding the gain share agreement and the COVID-19 premium reimbursement. The motion passed unanimously.

Mr. Harris called for a short recess.

Mr. Harris called the meeting back to order and introduced agenda item *Investment Committee Report and Recommendations*. Mr. Rich Robben provided a performance update and provided details from the September Investment Committee meeting. Ms. Kremer moved and was seconded by Mr. Fulkerson to ratify the recommendations of the Investment Committee. The motion passed unanimously.

Mr. Harris introduced agenda item *Audit Committee Report*. Ms. Pendergrass provided details of the Hazardous Duty Requests. Mr. Fulkerson made a motion and was seconded by Mr. Brothers to approve hazardous duty coverage for Bourbon County Fiscal Court and Burlington Fire Protection. District. The motion passed unanimously. Ms. Rebecca Adkins provided the financial statements, cash flow/net position report and budget to actual report. These reports were provided for informational purposes only.

Mr. Harris introduced agenda item *Amendments to 105 KAR 1:149 Quasi-Governmental Employer Cessation Window*. Mr. Justin McNeil provided amendment details to the Trustees. Ms. Pendergrass made a motion and was seconded by Mr. Connell to approve the amendment of KAR 1:149 as recommended by staff. The motion passed unanimously.

Mr. Harris introduced agenda item *Bylaw Revision*. Ms. Kathy Rupinen provided details of the suggested revisions. Ms. Pendergrass made a motion and was seconded by Mr. Powell to table this agenda item until April 2021. Prior to a roll call vote to confirm whether the motion passed, Facebook Live went down. After IT was unsuccessful in reconnecting to Facebook Live the remainder of the meeting had to be postponed.

The continuance of this meeting will take place on September 16, 2020 at 10:00 a.m.

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Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held September 10, 2020 except documents provided during a closed session conducted pursuant to the open meetings act and exempt under the open records act.

## CERTIFICATION

I do certify that I was present at this meeting, and I have recorded the above actions of the Directors 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.

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Recording Secretary

We, the Chair of the Board of Directors of the Kentucky Retirement Systems and Executive Director of the Kentucky Retirement Systems, do certify that the Minutes of Meeting Number 430, held on September 10, 2020 were approved on November 12, 2020.

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Chair of the Board of Directors

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Executive Director

I have reviewed the Minutes of the September 10, 2020 Board of Trustees Meeting for content, form, and legality.

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Interim Executive Director  
Office of Legal Services

**MINUTES OF MEETING #430**  
**BOARD OF TRUSTEES KENTUCKY RETIREMENT SYSTEMS**  
**SPECIAL CALLED MEETING SEPTEMBER 16, 2020 AT 10:00A.M.**  
**(CONTINUANCE OF QUARTERLY MEETING SEPTEMBER 10, 2020 WHICH WAS**  
**POSTPONED DUE TO TECHNICAL DIFFICULTIES)**  
**VIA LIVE VIDEO TELECONFERENCE DUE TO SB 150,**  
**SIGNED INTO LAW BY THE GOVERNOR ON MARCH 30, 2020,**  
**AND EXECUTIVE ORDER 2020-215 DECLARING A STATE OF EMERGENCY**  
**EFFECTIVE MARCH 6, 2020 DUE TO COVID-19**

This meeting is a continuance of the September 10, 2020 meeting that was postponed due to technical difficulty. At the Special Called Meeting of the Board of Trustees held on September 16, 2020 the following members were present: Joe Brothers, John Chilton, John Cheshire, Raymond Connell, Kelly Downard, JT Fulkerson, Joseph Grossman, Sherry Kremer, Keith Percy, Betty Pendergrass, Jerry Powell, David Rich and Sec. Gerina Whethers. Staff members present were David Eager, Rebecca Adkins, Erin Surratt, Kathy Rupinen, Carrie Bass, Kristen Coffey, Shaun Case, Phillip Cook and Alane Foley.

Mr. Percy called the meeting to order.

Ms. Alane Foley called roll.

Mr. Percy advised that the September 10, 2020 meeting ended at agenda item *10. Bylaw Revision*. At that time Ms. Pendergrass made a motion and was seconded by Mr. Powell to table this agenda item until April 2021. A roll call vote was not taken to confirm passage of that motion. Ms. Pendergrass stated that she had worked with KRS legal staff to clear up the issues of concern on her end and advised that she would like to withdraw the motion to table at this time. The Trustees had a lengthy discussion regarding the need to submit recommended Bylaw changes at a Board Meeting and then vote to approve/deny those changes at the next Board meeting. This will ensure that the Trustees have adequate time to review the recommended changes. Mr. Brothers made a motion and was seconded by Mr. Fulkerson to suspend the provision of the Bylaws that state they “may be amended at any regular meeting of the Board of Trustees by a vote of a majority of the entire membership of the Board”. The motion passed unanimously. Mr. Brothers made a motion

and was seconded by Mr. Cheshire to approve the amended bylaws as recommended by staff. The motion passed unanimously.

Mr. Peercy introduced agenda item *Approval of the Board Election Policy*. Mr. Fulkerson made a motion and was seconded by Ms. Pendergrass to approved the amended Board Election policy as presented by staff. The motion passed unanimously.

Mr. Peercy introduced agenda *Withdrawal of Board Policies*. Ms. Carrie Bass reviewed the policies staff is recommending been withdrawn. Mr. Grossman made a motion and was seconded by Mr. Powell to withdraw the Reimbursement of Moving Expenses Policy (June 15, 2011) and Travel Policies and Procedures (September 10, 2015). The motion passed unanimously. The Kentucky Retirement Systems Funding Policy 2013 will stand at this time.

Mr. Peercy introduced agenda item *Legislative Issues*. Mr. Eager provided a memo to the Trustees.

Mr. Peercy introduced agenda item *KRS Update*. Ms. Rebecca Akins provided an IT security update to the Trustees.

A motion was made by Mr. Downard and seconded by Ms. Pendergrass to go in to closed session. The motion passed unanimously.

Mr. Peercy read the following statement and the meeting moved into closed session: A motion having been made in open session to move into 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.

The meeting was called back into open session.



There being no further business, a motion was made by Mr. Rich and seconded by Mr. Downard to adjourn the meeting, to meet again on November 12, 2020 or upon the call of the Executive Director or the Chair of the Board of Trustees. The motion passed unanimously.

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Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held September 16, 2020 except documents provided during a closed session conducted pursuant to the open meetings act and exempt under the open records act.

**CERTIFICATION**

I do certify that I was present at this meeting, and I have recorded the above actions of the Directors 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

We, the Chair of the Board of Directors of the Kentucky Retirement Systems and Executive Director of the Kentucky Retirement Systems, do certify that the Minutes of Meeting Number 43029, held on September 16, 2020 and a continuance of the September 10, 2020 meeting were approved on November 12, 2020.

\_\_\_\_\_  
Chair of the Board of Directors

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Executive Director

I have reviewed the Minutes of the September 16, 2020 Board of Trustees Meeting for content, form, and legality.

\_\_\_\_\_  
Interim Executive Director

Office of Legal Services



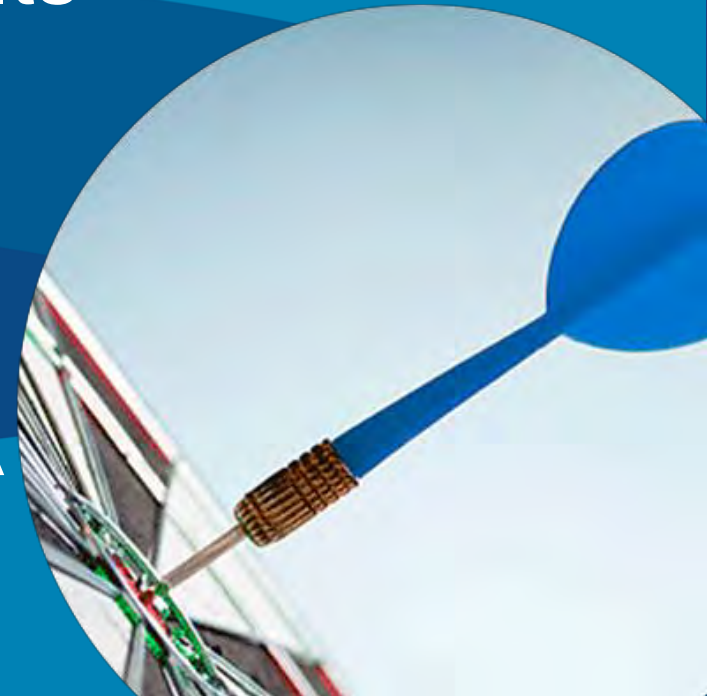
# Kentucky Retirement Systems

2020 Actuarial Valuation Results

November 12, 2020

Janie Shaw, ASA, MAAA

Danny White, FSA, EA, MAAA



# Comments on KERS Non-Haz Retirement Fund

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- Imperative to maintain or increase contribution effort for the KERS Non-Hazardous Retirement Fund
  - June 30, 2020 plan assets were \$2,308 million
  - Fund distributed \$1,023 million in benefit payments and administrative expenses in FYE 2020
  - Actuarially determined employer contribution for FYE 2022 is \$1,045 million (75.32% of covered payroll)
- Covered payroll decreased by 3.5% since the prior valuation
  - We recommend KRS work with the legislators to change the method for collecting the amortization cost of the unfunded liability such that it is no longer dependent on covered payroll (similar to HB 171 from the 2020 session).



# Comments on Valuation Results

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- Overview of legislation passed in 2020
  - SB 249: Changed the amortization period to 30 years (from 24 years) at June 30, 2019
    - Gains and losses incurring in future years are amortized as separate closed 20-year amortization bases
  - SB 249: CERS rates remained unchanged from FYE 2020 to FYE 2021
    - Expected FYE 2021 contributions \$74 million less for the non-hazardous fund and \$27 million less for the hazardous fund
  - HB 352: KERS Non-Hazardous Quasi contribution rate of 49.47% of pay extended for an additional year
    - Expected FYE 2021 contributions \$102 million less due to legislation



# Comments on Valuation Results

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- Change in active membership and covered payroll
  - Active membership declined in all funds except KERS Haz
  - Covered payroll decreased in KERS Non-Haz and SPRS
  - Covered payroll increased by 13.5% in KERS Haz
  - Covered payroll increased by 1.7% and 1.6% in CERS Non-Haz and CERS Haz, respectively (payroll growth assumption is 2%)
- FYE 2020 Investment Experience
  - 0.1% to 2.3% return on market value (varies by fund)
    - Assumed rate of return is 5.25% for KERS Non-Haz and SPRS retirement funds and 6.25% for all other funds)
  - Fund assets \$957M less than expected (\$629M pension and \$328M insurance)



# Comments on Valuation Results

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- Retirement Fund Liability Experience
  - \$136 million gain for all retirement funds combined
- Insurance Fund Liability Experience
  - \$662 million gain for all insurance funds combined
  - Both the 2021 non-Medicare and Medicare premiums were lower than expected based on the prior year's actuarial assumptions





# Employer Contribution Rates

Fund	Actuarially Determined Rates 2019 Valuation (prior to SB 249)			Actuarially Determined Rates 2019 Valuation (after SB 249)			FYE 2021 Certified Rates
	Pension	Insurance	Combined	Pension	Insurance	Combined	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KERS Non-Hazardous	80.98%	12.03%	<b>93.01%</b>	73.28%	11.15%	<b>84.43%</b>	<b>84.43%</b>
KERS Hazardous	38.71%	0.00%	<b>38.71%</b>	36.00%	0.00%	<b>36.00%</b>	<b>36.00%</b>
CERS Non-Hazardous	26.21%	5.78%	<b>31.99%</b>	23.81%	5.43%	<b>29.24%</b>	<b>24.06%</b>
CERS Hazardous	46.31%	10.47%	<b>56.78%</b>	42.02%	9.86%	<b>51.88%</b>	<b>39.58%</b>
SPRS	136.12%	20.85%	<b>156.97%</b>	123.79%	19.69%	<b>143.48%</b>	<b>143.48%</b>



# Employer Contribution Rates

Fund	Actuarially Determined Rates 2019 Valuation (after to SB 249)			Actuarially Determined Rates 2020 Valuation			FYE 2021 Certified Rates	FYE 2022 Certified Rates
	Pension	Insurance	Combined	Pension	Insurance	Combined		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
KERS Non-Hazardous	73.28%	11.15%	<b>84.43%</b>	75.32%	9.71%	<b>85.03%</b>	<b>84.43%</b>	<b>85.03%</b>
KERS Hazardous	36.00%	0.00%	<b>36.00%</b>	33.43%	0.00%	<b>33.43%</b>	<b>36.00%</b>	<b>33.43%</b>
CERS Non-Hazardous	23.81%	5.43%	<b>29.24%</b>	23.88%	4.17%	<b>28.05%</b>	<b>24.06%</b>	<b>26.95%</b>
CERS Hazardous	42.02%	9.86%	<b>51.88%</b>	43.23%	8.73%	<b>51.96%</b>	<b>39.58%</b>	<b>44.33%</b>
SPRS	123.79%	19.69%	<b>143.48%</b>	127.99%	18.07%	<b>146.06%</b>	<b>143.48%</b>	<b>146.06%</b>



# Actuarially Determined Employer Contributions (\$ in Millions)

	2019 Valuation (after SB 249)			2020 Valuation			Change In ADEC
	Pension	Insurance	Combined	Pension	Insurance	Combined	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KERS Non-Hazardous	\$1,053	\$160	\$1,213	\$1,045	\$134	\$1,179	<b>\$(34)</b>
KERS Hazardous	54	0	54	57	0	57	<b>3</b>
CERS Non-Hazardous	612	138	750	625	108	733	<b>(17)</b>
CERS Hazardous	240	56	296	251	50	301	<b>5</b>
SPRS	59	9	68	59	8	67	<b>(1)</b>

Amounts above reflect the full actuarially determined employer contributions. The KERS non-hazardous fund amounts do not reflect any reduction in the rates for Quasi agencies and the CERS amounts do not reflect any contribution rate phase-in provisions.

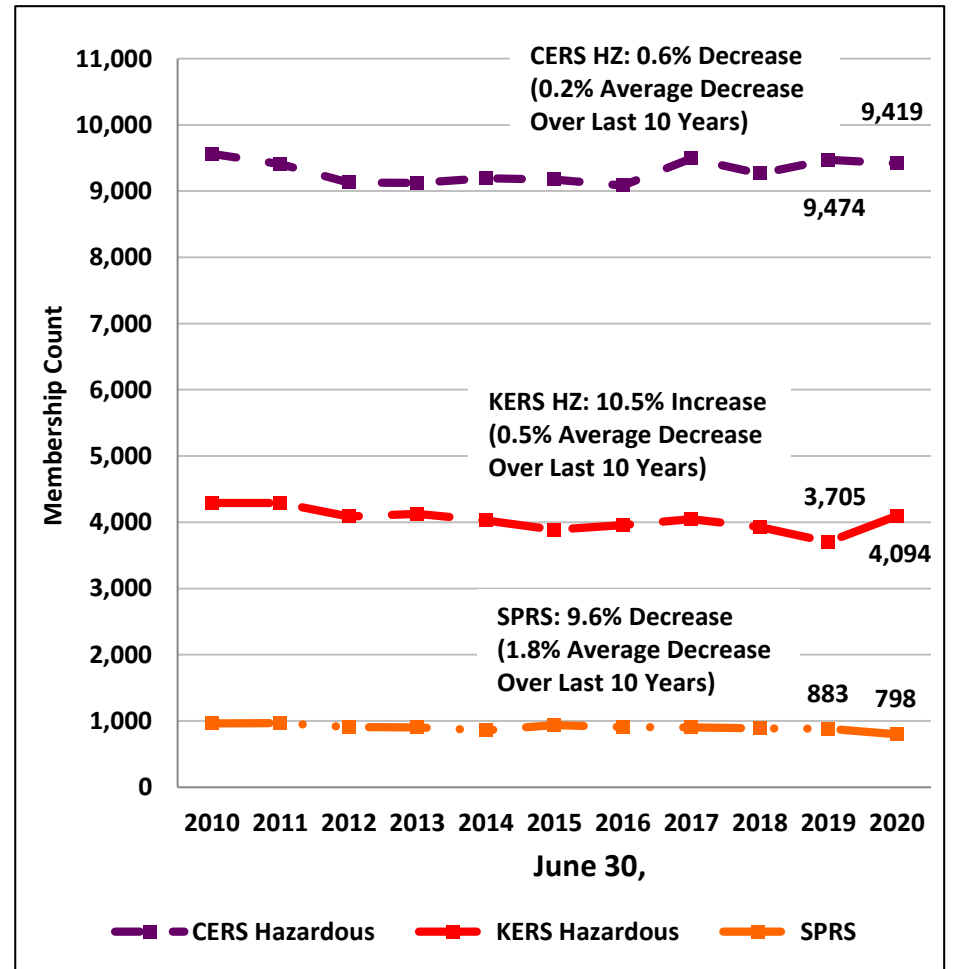
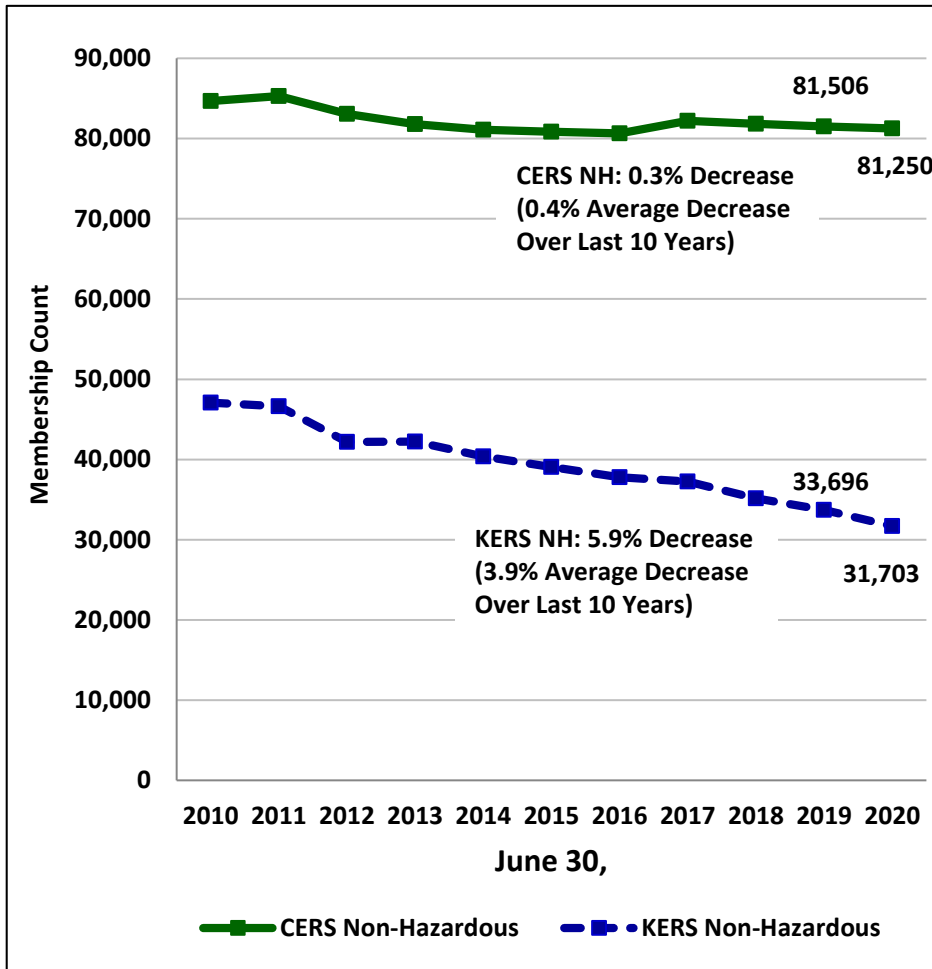


# Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

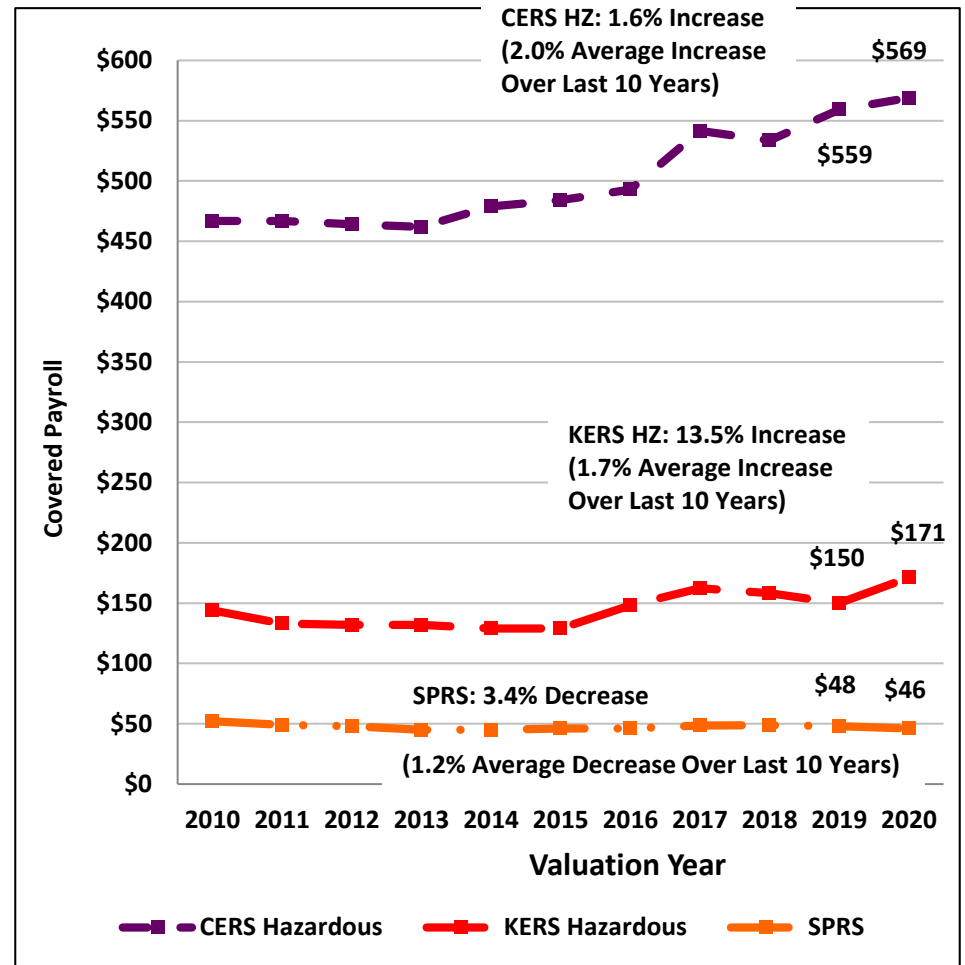
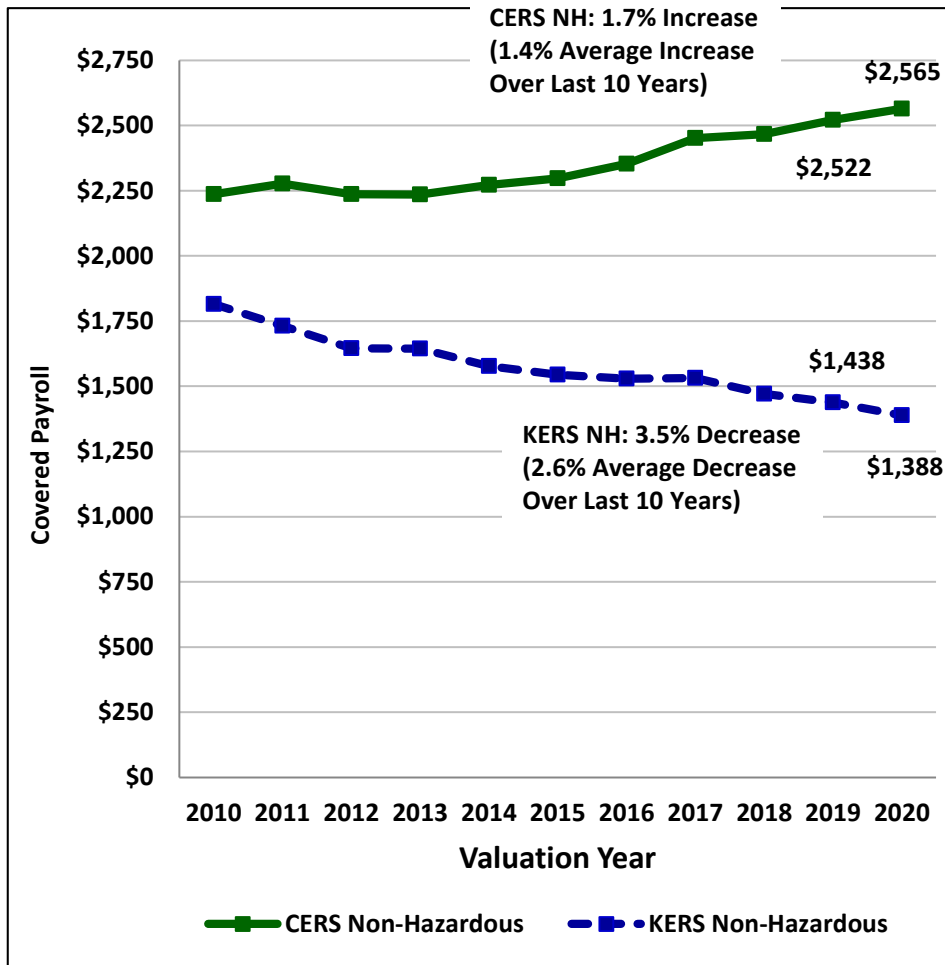
	2019 Valuation			2020 Valuation			Change In UAAL
	Pension	Insurance	Combined	Pension	Insurance	Combined	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KERS Non-Hazardous	\$14.26	\$1.74	\$16.00	\$14.03	\$1.47	\$15.50	<b>\$(0.50)</b>
KERS Hazardous	0.55	(0.10)	0.45	0.57	(0.11)	0.46	<b>0.01</b>
CERS Non-Hazardous	7.31	1.04	8.35	7.39	0.73	8.12	<b>(0.23)</b>
CERS Hazardous	2.87	0.42	3.29	2.98	0.38	3.36	<b>0.07</b>
SPRS	0.76	0.08	0.84	0.76	0.07	0.83	<b>(0.01)</b>
<b>Total</b>	<b>\$25.75</b>	<b>\$3.18</b>	<b>\$28.93</b>	<b>\$25.73</b>	<b>\$2.54</b>	<b>\$28.27</b>	<b>\$(0.66)</b>



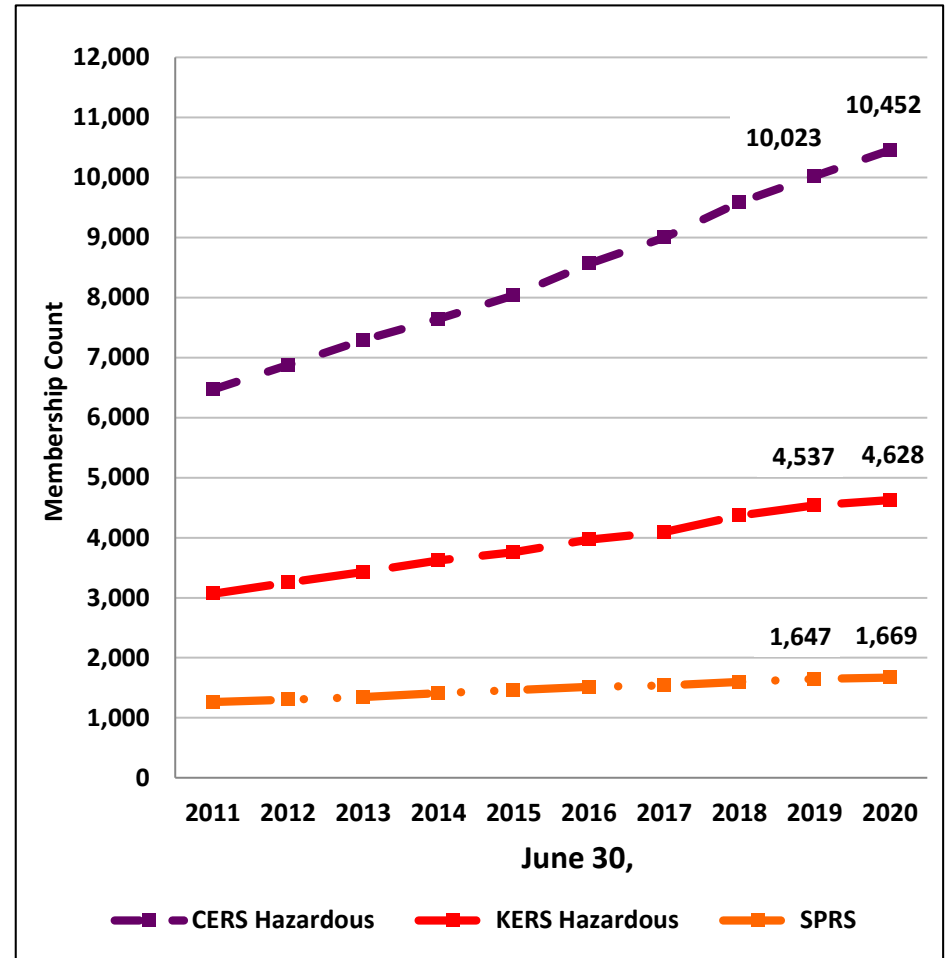
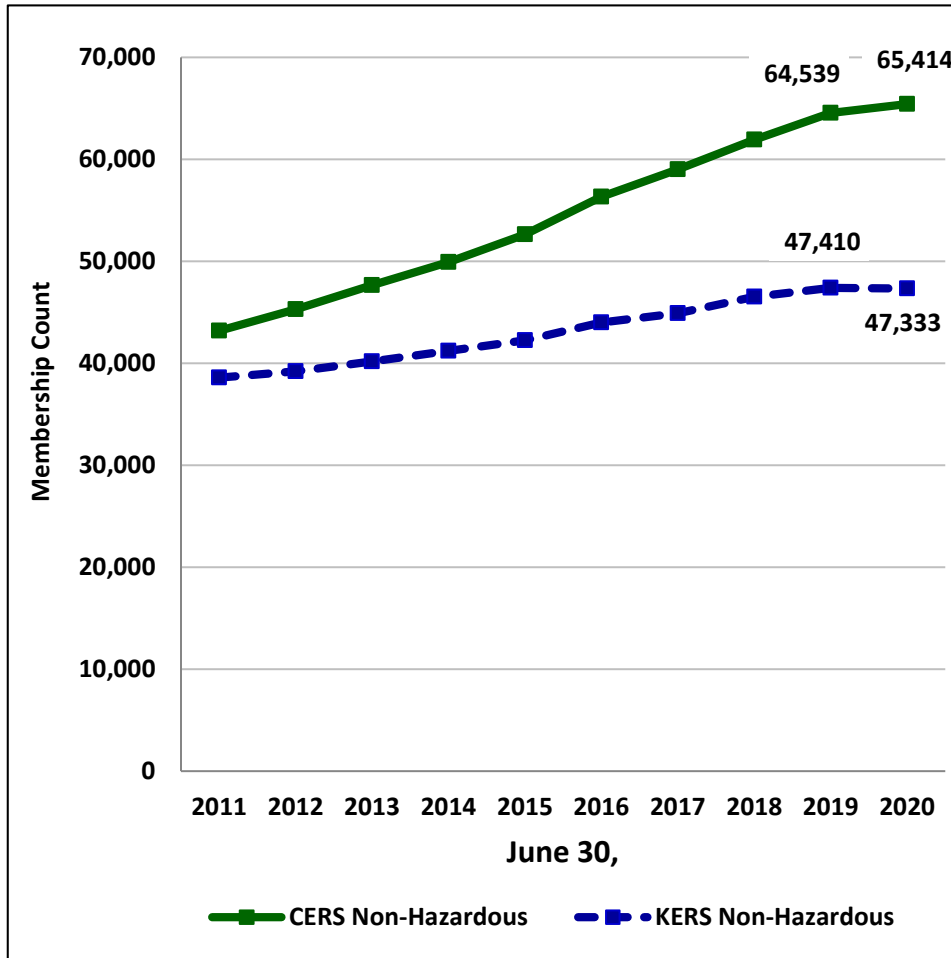
# Active Membership Count



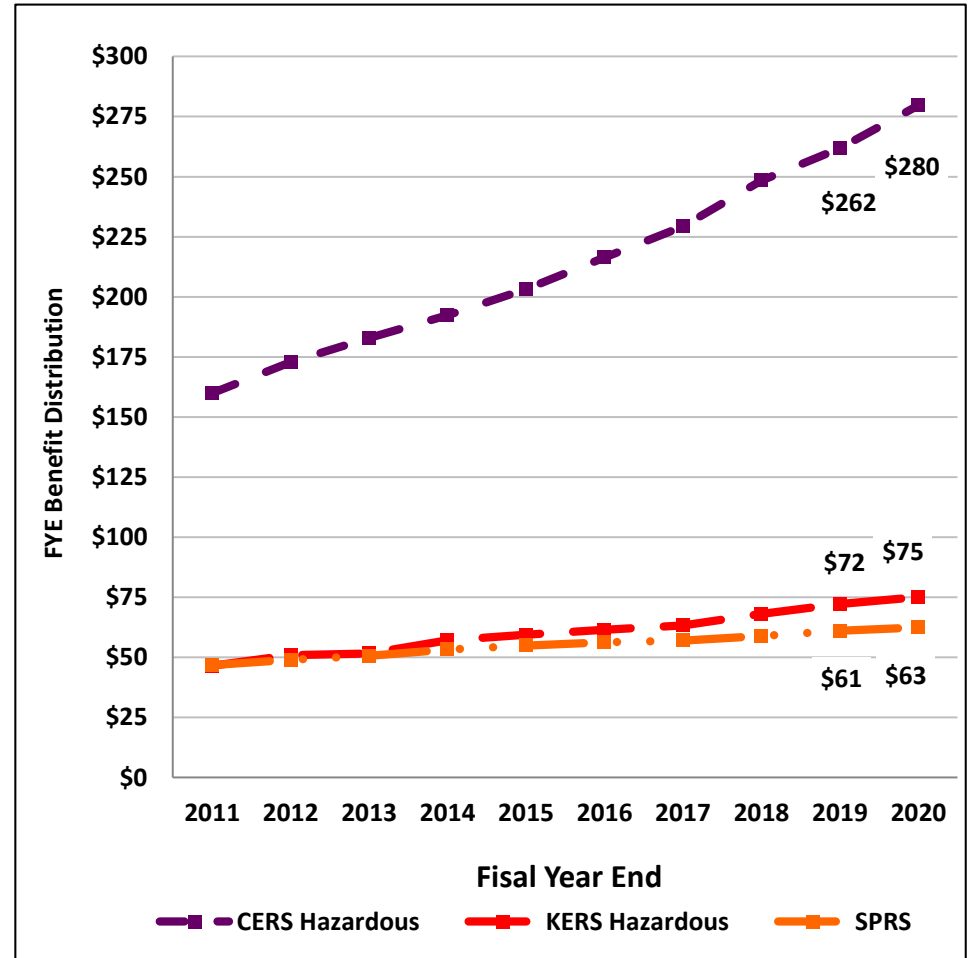
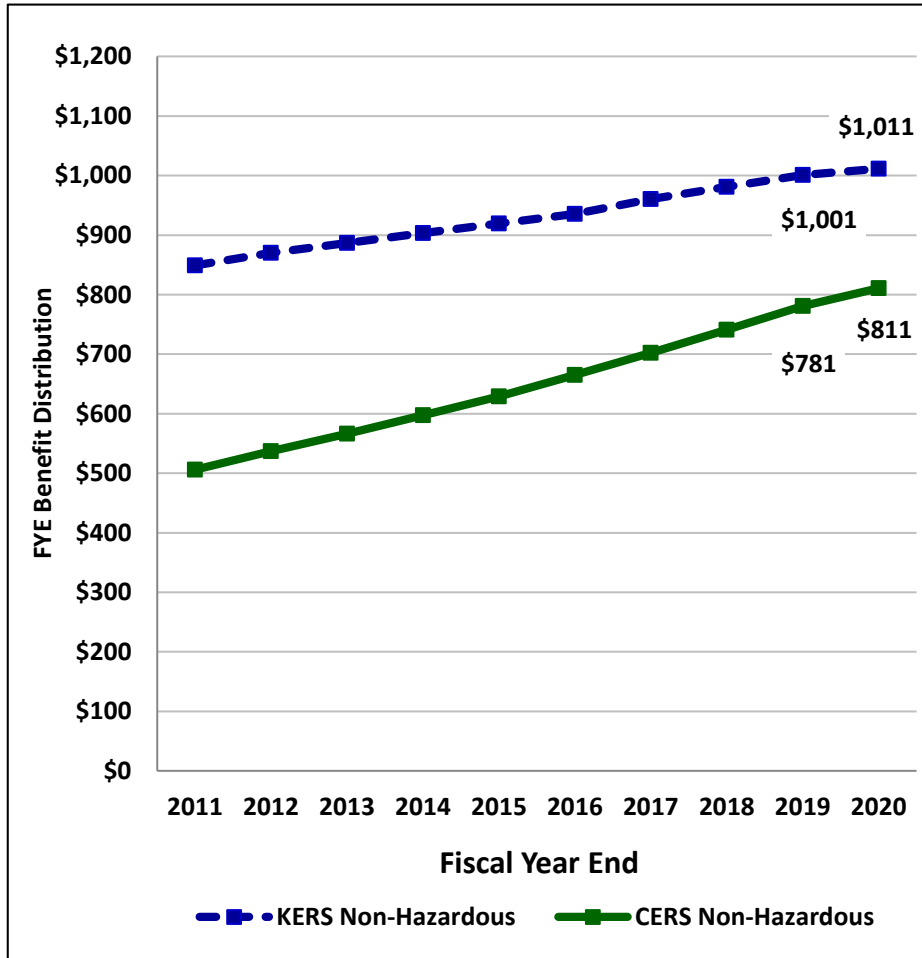
# Covered Payroll (\$ in Millions)



# Retired Membership Count



# Pension Benefit Distributions (\$ in Millions)





# Funding Results – KERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2019*	2020	2019*	2020	2019*	2020	2019*	2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	12.18%	12.04%	2.71%	2.58%	16.48%	16.15%	4.92%	4.63%
Member Rate	<u>(5.00%)</u>	<u>(5.00%)</u>	<u>(0.41%)</u>	<u>(0.44%)</u>	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.60%)</u>	<u>(0.64%)</u>
Employer Normal Cost Rate	7.18%	7.04%	2.30%	2.14%	8.48%	8.15%	4.32%	3.99%
Administrative Expenses	0.81%	0.86%	0.06%	0.06%	0.73%	0.69%	0.08%	0.07%
Amortization Cost	<u>65.29%</u>	<u>67.42%</u>	<u>8.79%</u>	<u>7.51%</u>	<u>26.79%</u>	<u>24.59%</u>	<u>(4.97%)</u>	<u>(4.94%)</u>
<b>Total Actuarially Determined Rate</b>	<b>73.28%</b>	<b>75.32%</b>	<b>11.15%</b>	<b>9.71%</b>	<b>36.00%</b>	<b>33.43%</b>	<b>0.00%</b>	<b>0.00%</b>
Actuarial Accrued Liability (AAL)	\$16,466	\$16,349	\$2,733	\$2,565	\$1,226	\$1,284	\$427	\$428
Actuarial Value of Assets	<u>2,206</u>	<u>2,323</u>	<u>991</u>	<u>1,096</u>	<u>672</u>	<u>710</u>	<u>525</u>	<u>539</u>
<b>Unfunded AAL</b>	<b>\$14,260</b>	<b>\$14,026</b>	<b>\$1,742</b>	<b>\$1,469</b>	<b>\$555</b>	<b>\$574</b>	<b>(\$99)</b>	<b>(\$111)</b>
<b>Funded Ratio</b>	<b>13.4%</b>	<b>14.2%</b>	<b>36.3%</b>	<b>42.7%</b>	<b>54.8%</b>	<b>55.3%</b>	<b>123.1%</b>	<b>126.0%</b>



\* after reflection of SB 249

# Funding Results – SPRS (\$ in millions)

Item	Pension		Insurance	
	2019*	2020	2019*	2020
(1)	(2)	(3)	(4)	(5)
Total Normal Cost Rate	26.92%	26.46%	8.41%	7.69%
Member Rate	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.40%)</u>	<u>(0.44%)</u>
Employer Normal Cost Rate	18.92%	18.46%	8.01%	7.25%
Administrative Expenses	0.47%	0.58%	0.14%	0.15%
Amortization Cost	<u>104.40%</u>	<u>108.95%</u>	<u>11.54%</u>	<u>10.67%</u>
<b>Total Actuarially Determined Rate</b>	<b>123.79%</b>	<b>127.99%</b>	<b>19.69%</b>	<b>18.07%</b>
Actuarial Accrued Liability (AAL)	\$1,045	\$1,053	\$277	\$276
Actuarial Value of Assets	<u>282</u>	<u>296</u>	<u>197</u>	<u>207</u>
<b>Unfunded AAL</b>	<b>\$763</b>	<b>\$757</b>	<b>\$79</b>	<b>\$69</b>
<b>Funded Ratio</b>	<b>27.0%</b>	<b>28.1%</b>	<b>71.3%</b>	<b>75.0%</b>

\* after reflection of SB 249



# Funding Results – CERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2019*	2020	2019*	2020	2019*	2020	2019*	2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	10.77%	10.59%	3.40%	3.17%	19.05%	18.65%	5.84%	5.33%
Member Rate	<u>(5.00%)</u>	<u>(5.00%)</u>	<u>(0.49%)</u>	<u>(0.52%)</u>	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.46%)</u>	<u>(0.51%)</u>
Employer Normal Cost Rate	5.77%	5.59%	2.91%	2.65%	11.05%	10.65%	5.38%	4.82%
Administrative Expenses	0.86%	0.87%	0.04%	0.04%	0.31%	0.35%	0.08%	0.08%
Amortization Cost	<u>17.18%</u>	<u>17.42%</u>	<u>2.48%</u>	<u>1.48%</u>	<u>30.66%</u>	<u>32.23%</u>	<u>4.40%</u>	<u>3.83%</u>
<b>Total Actuarially Determined Rate</b>	<b>23.81%</b>	<b>23.88%</b>	<b>5.43%</b>	<b>4.17%</b>	<b>42.02%</b>	<b>43.23%</b>	<b>9.86%</b>	<b>8.73%</b>
Actuarial Accrued Liability (AAL)	\$14,356	\$14,611	\$3,568	\$3,392	\$5,245	\$5,431	\$1,733	\$1,741
Actuarial Value of Assets	<u>7,050</u>	<u>7,221</u>	<u>2,523</u>	<u>2,661</u>	<u>2,375</u>	<u>2,448</u>	<u>1,314</u>	<u>1,362</u>
<b>Unfunded AAL</b>	<b>\$7,307</b>	<b>\$7,390</b>	<b>\$1,045</b>	<b>\$731</b>	<b>\$2,870</b>	<b>\$2,983</b>	<b>\$419</b>	<b>\$379</b>
<b>Funded Ratio</b>	<b>49.1%</b>	<b>49.4%</b>	<b>70.7%</b>	<b>78.5%</b>	<b>45.3%</b>	<b>45.1%</b>	<b>75.8%</b>	<b>78.2%</b>



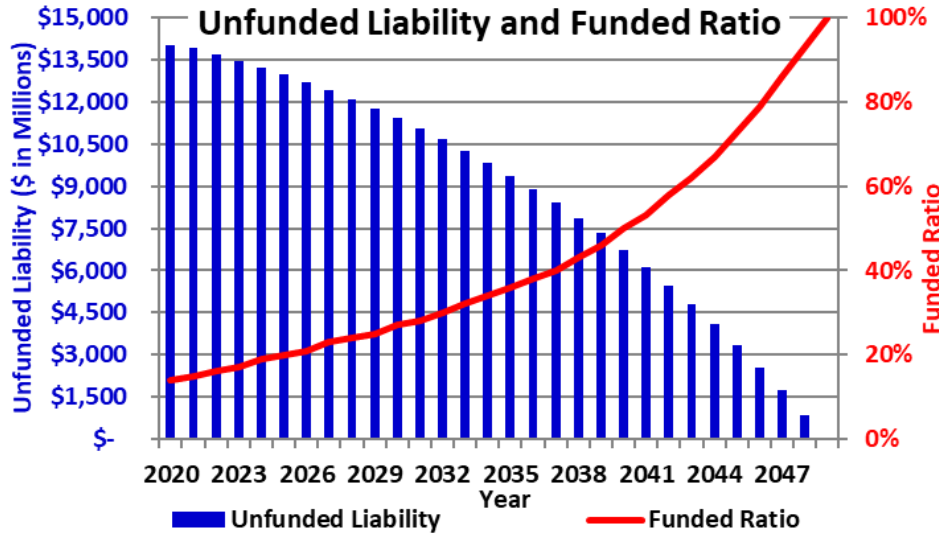
\* after reflection of SB 249

# PROJECTION INFORMATION PENSION AND INSURANCE

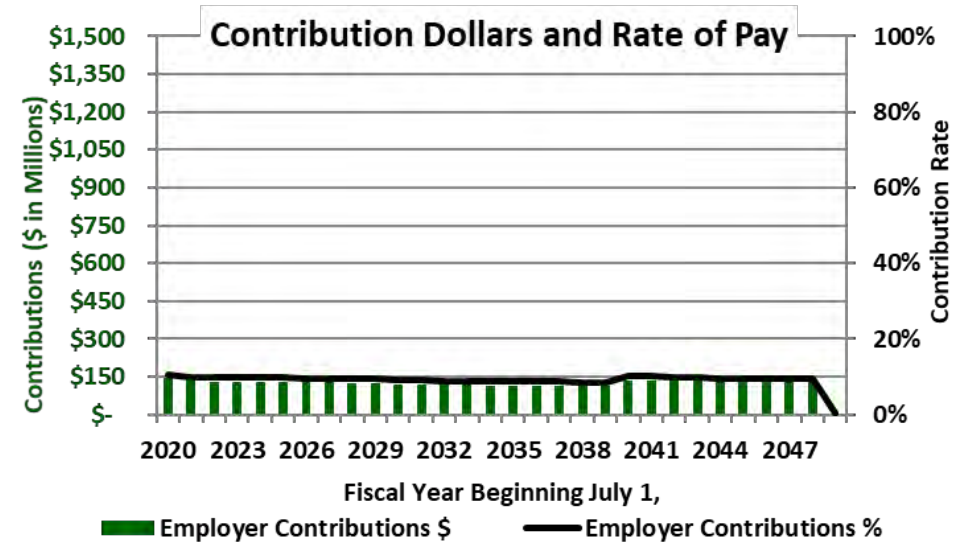
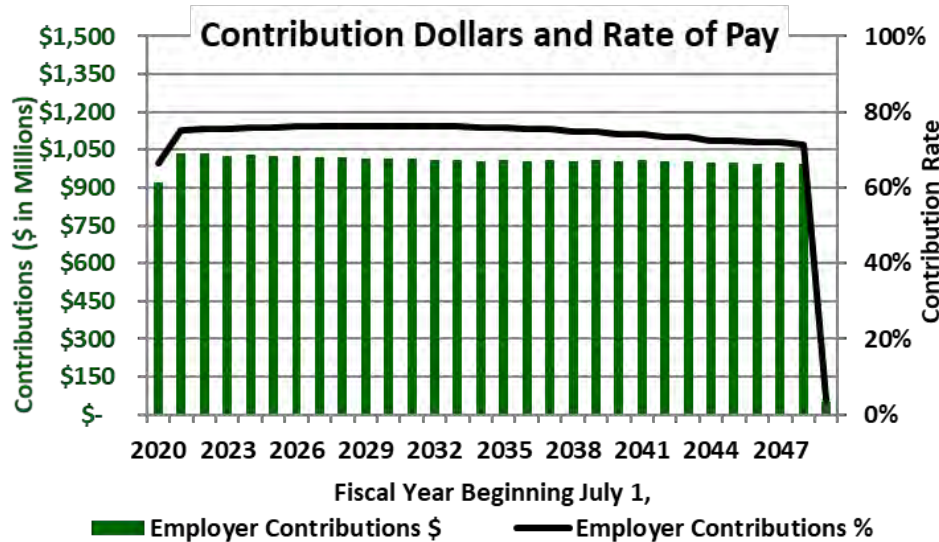
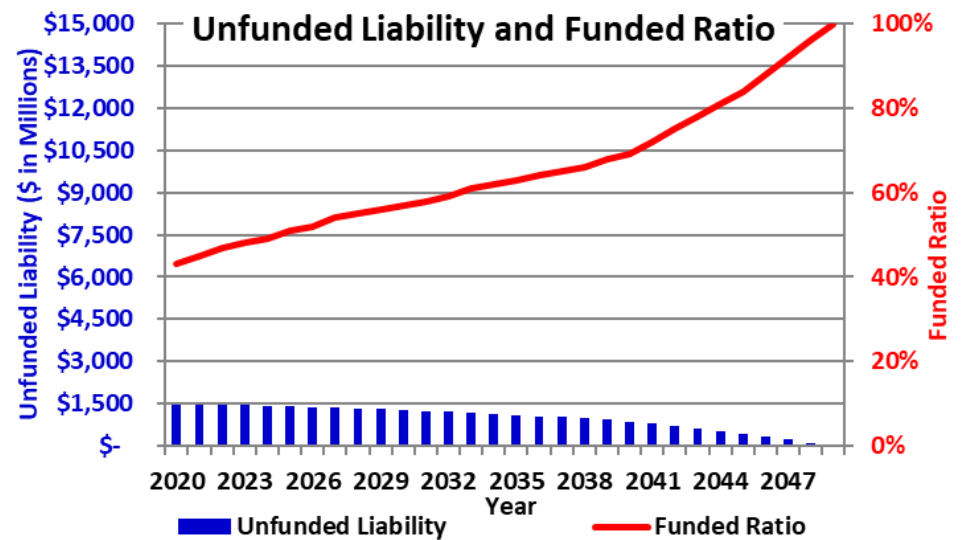


# KERS Non-Hazardous Projection

## Pension

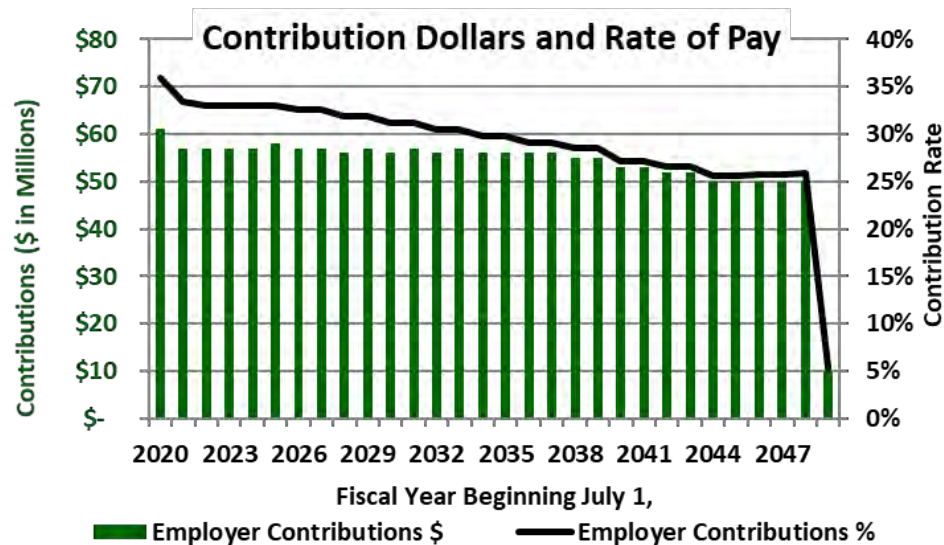
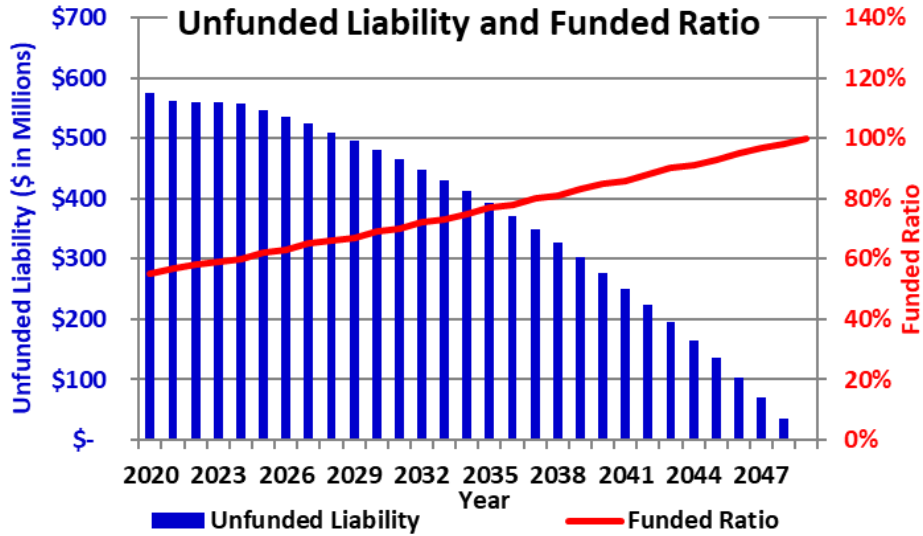


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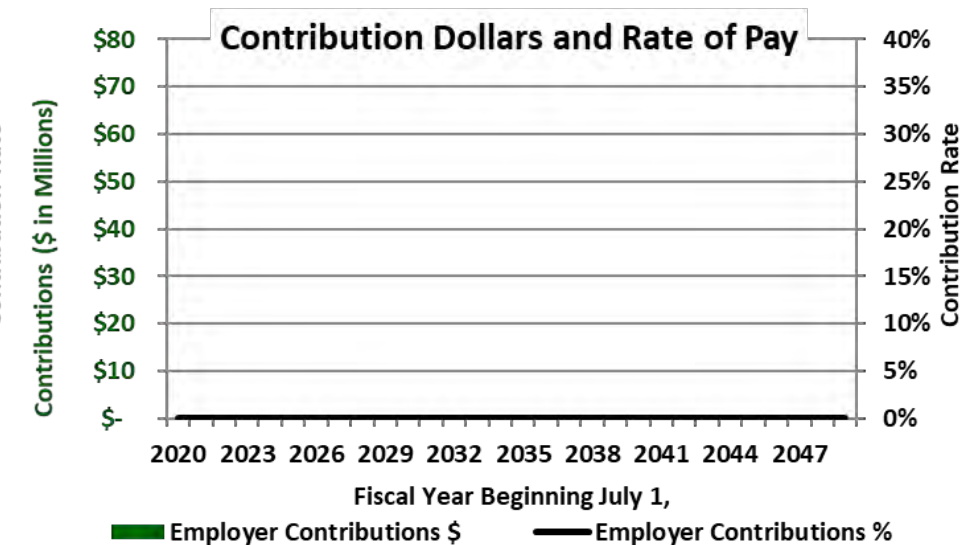
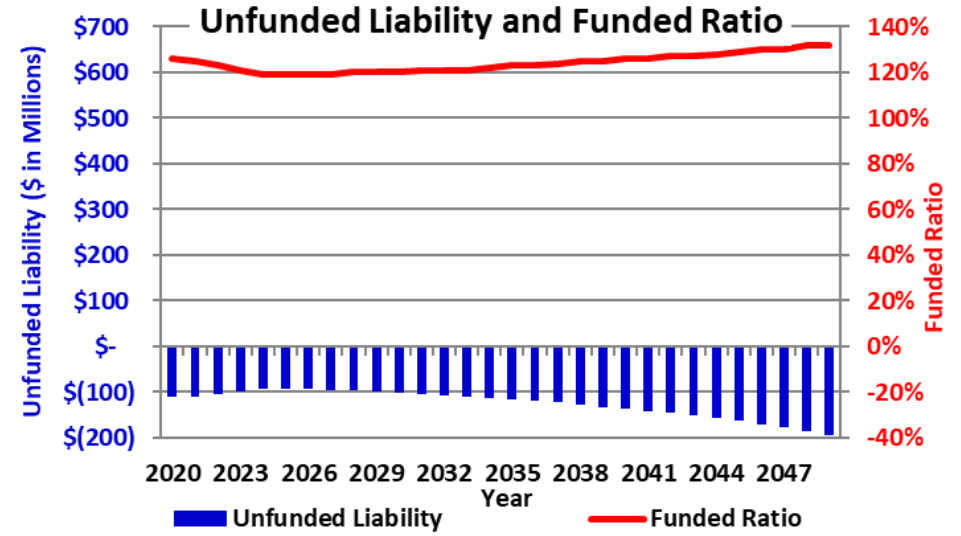


# KERS Hazardous Projection

## Pension

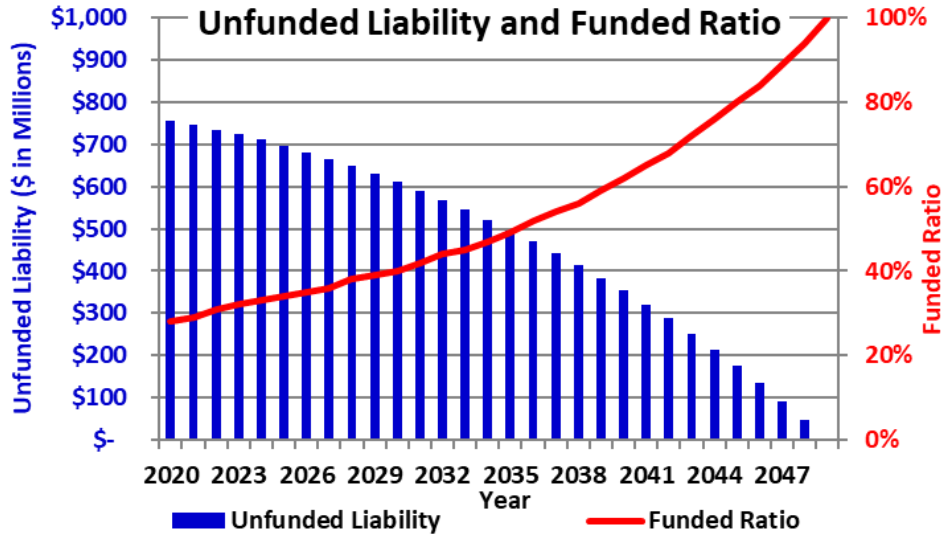


## Insurance

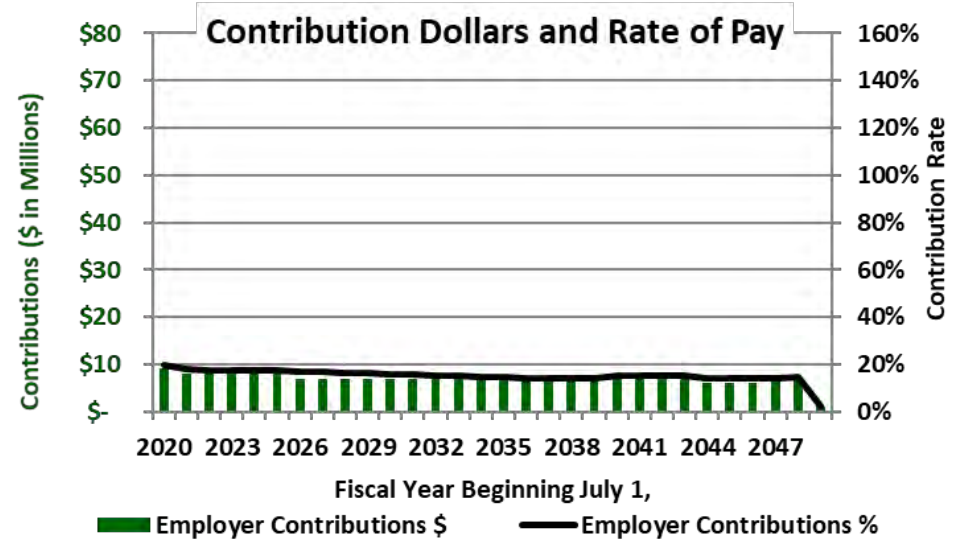
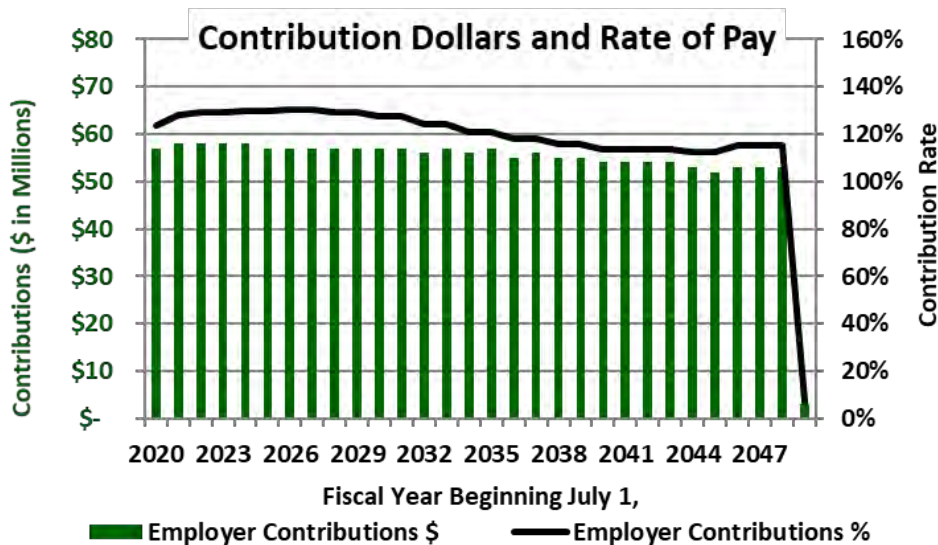
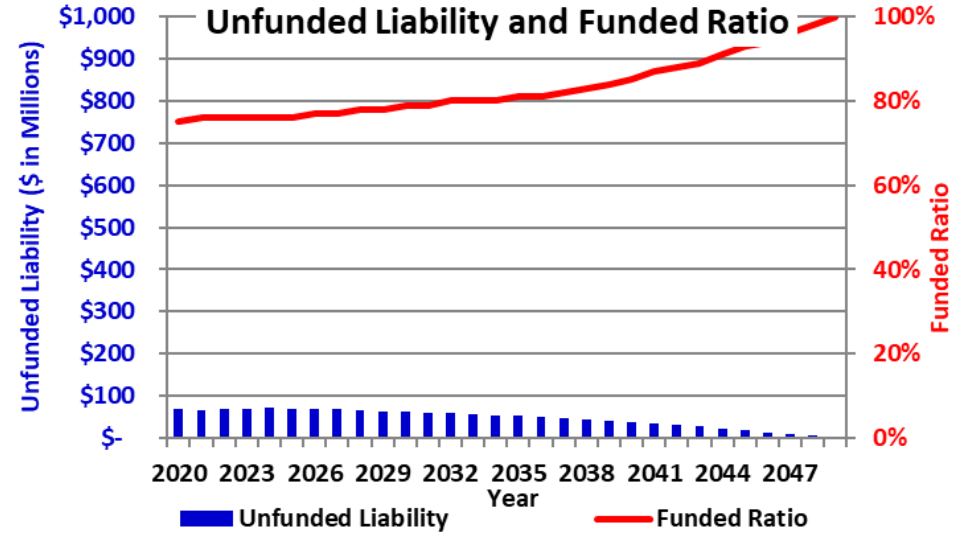


# SPRS Projection

## Pension

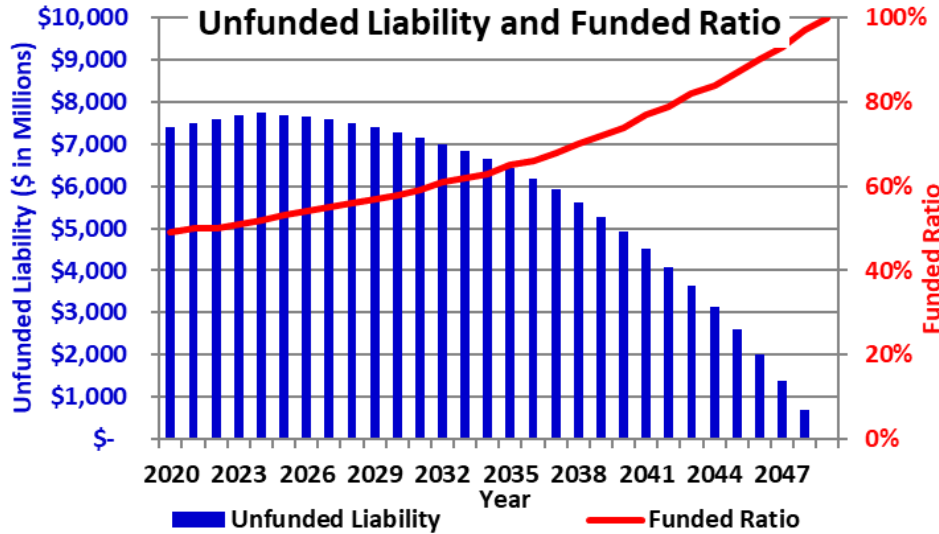


## Insurance

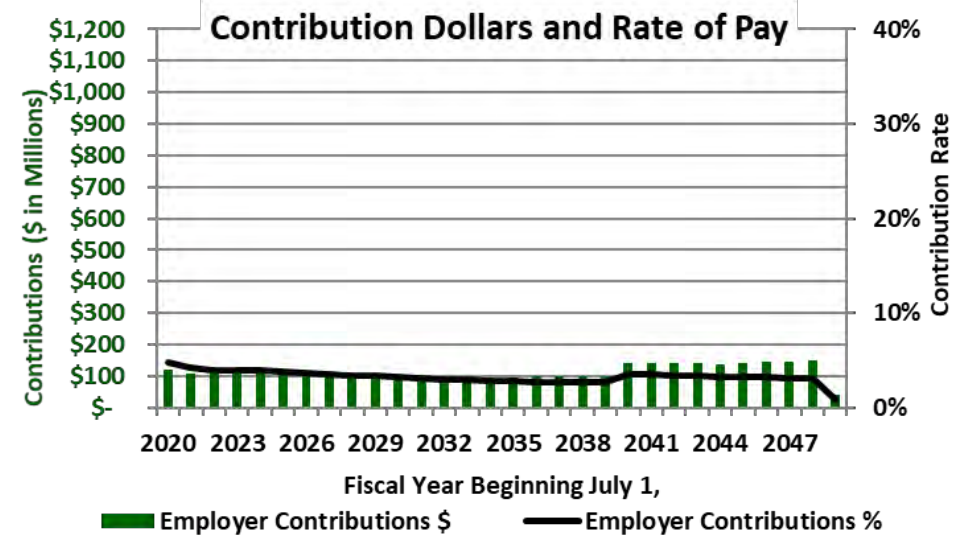
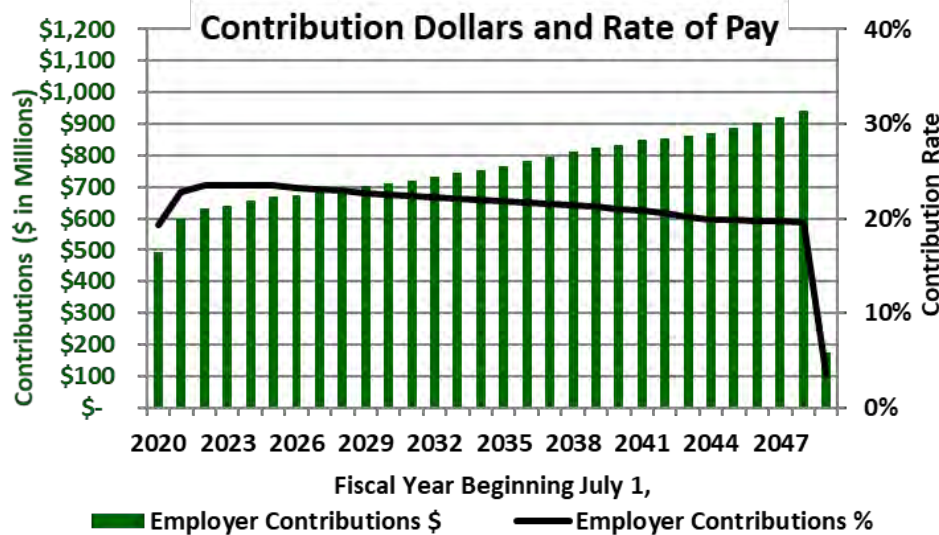
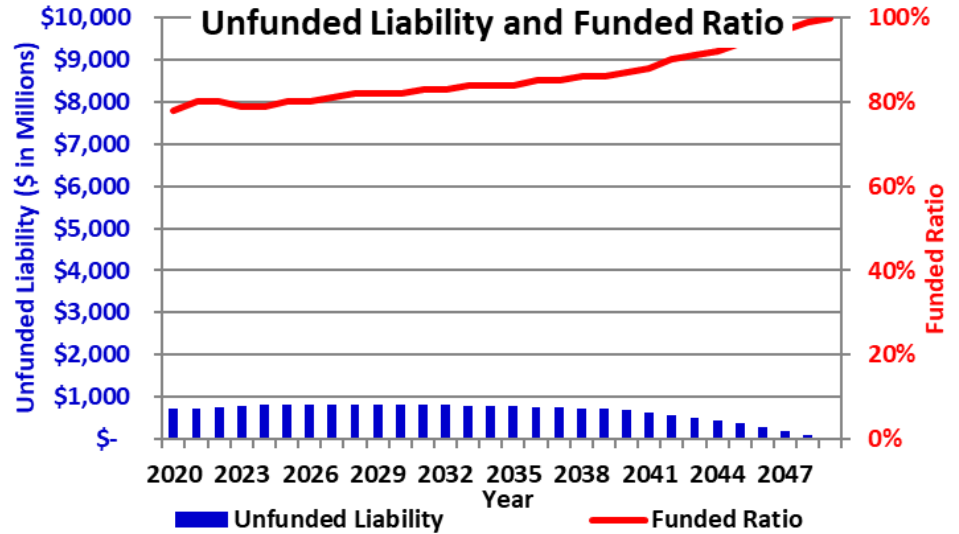


# CERS Non-Hazardous Projection

## Pension



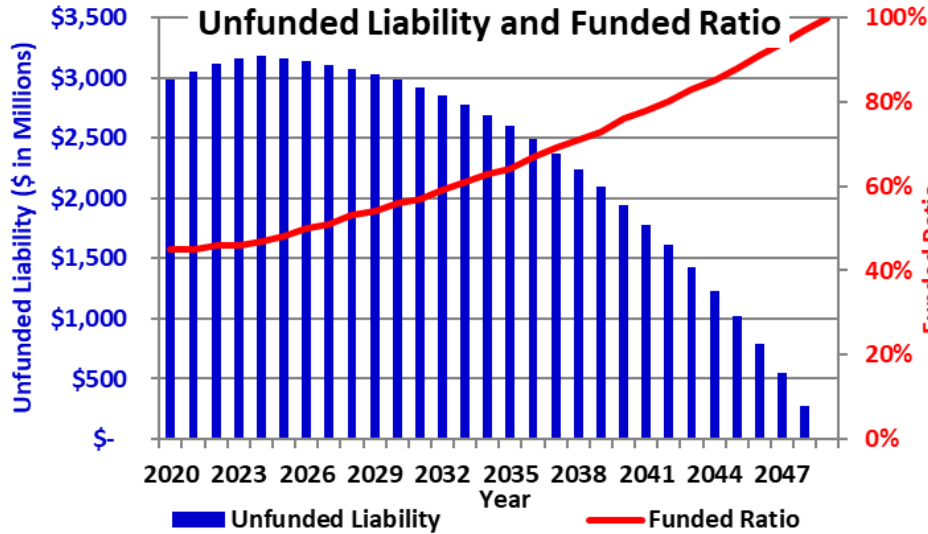
## Insurance



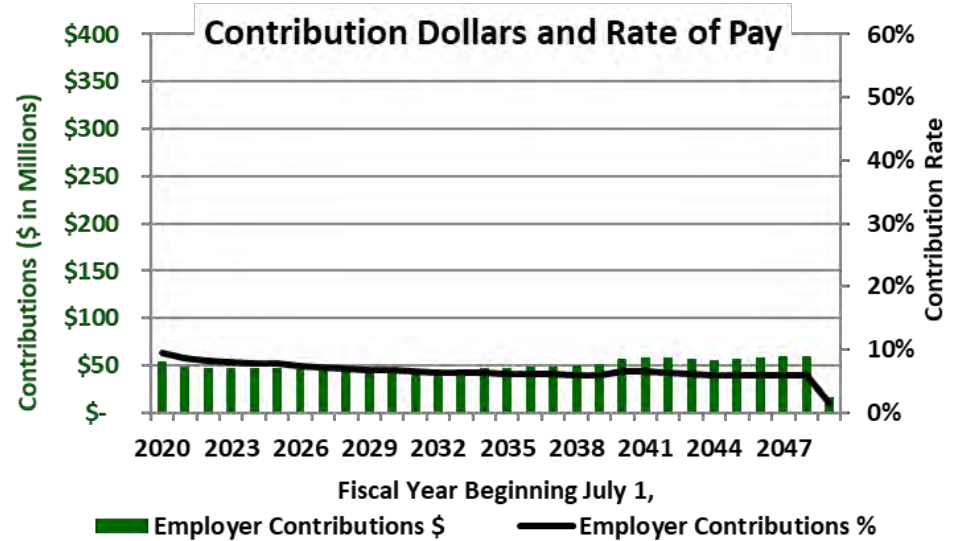
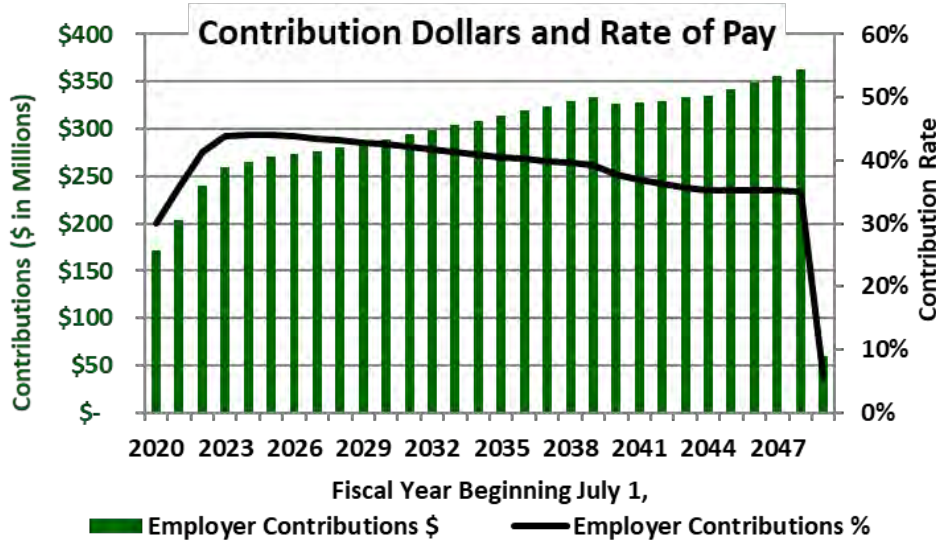
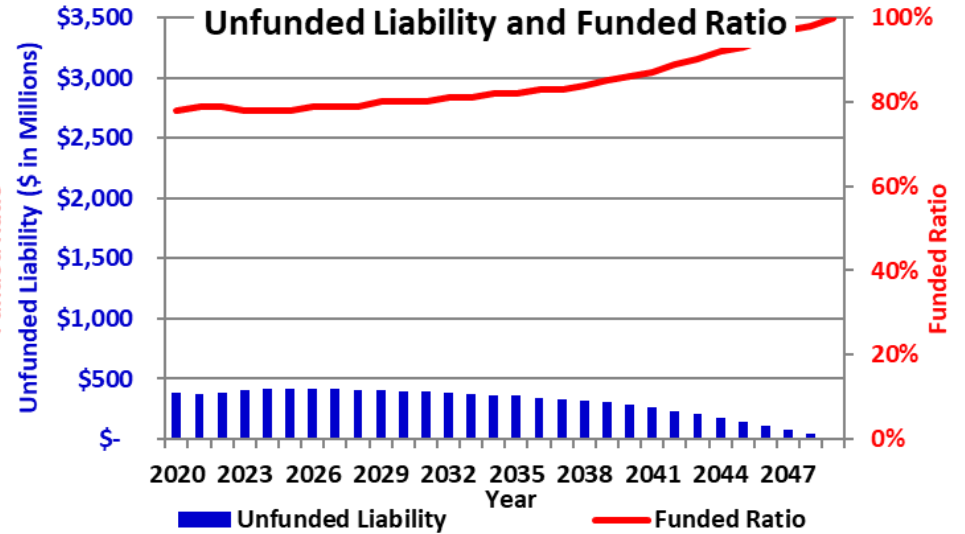


# CERS Hazardous Projection

## Pension



## Insurance



# Closing Comments on 2020 Valuation Results

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- It is imperative the State and participating employers in the Systems contribute the actuarially determined contributions in each future year to improve the System's financial security.
- We recommend KRS work with the legislators to find an alternative method for collecting the amortization cost from participating employers that is not payroll based.
  - Needed most for the KERS Non-Hazardous System
  - Legislative action will be required (similar to HB 171 from the 2020 legislative session)



# Disclaimers

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- This presentation is intended to be used in conjunction with the actuarial valuation as of June 30, 2020. 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 RETIREMENT SYSTEMS

**TO:** Members of the of the Kentucky Retirement Systems Board of Trustees

**FROM:** Retiree Health Plan Committee

**DATE:** November 12, 2020

**SUBJECT:** Retiree Health Plan Committee Report

The Retiree Health Plan Committee met on Tuesday, November 10, 2020, and reviewed an informational presentation from Humana regarding the KRS Medicare Eligible Pharmacy Review for 2021, Cohere Health, 2022 STAR Ratings, 2020 Dental Utilization and 2021 COVID Support.

2021 Formulary changes:

- Prior authorization changes have a 2.7% member impact – 0.5% in 2020.
- Negative tier changes has a 1.5% member impact - 2.8% in 2020.
- Positive tier changes have a 1.0% member impact – 1.6% in 2020.
- Step therapy has a 0.2% member impact – 0.7% in 2020.

The Committee also reviewed 2020-2021 continuing Customer Service Enhancements. The KRS Retiree Health Care (RHC) Online Web Enrollment Process accommodates submission of the health insurance enrollment form and the hazardous duty retiree dependent verification Form 6256. After the forms are submitted online an email is generated to the member with a copy of the forms attached confirming the retiree successfully enrolled in the plan and completed the 6256 verification. The system contribution paid towards the member's benefit is immediately available for viewing in the individual's retiree self-service account. During the month of October, 2,267 forms (6256) were completed on the web.

RHC sent several member outreach emails regarding Open Enrollment. Emails were sent to 57,324 individuals with a nearly 99% delivery rate. Additionally, RHC staff has answered 12,977 phone calls and 401 emails thus far. Due to the office being closed to the public, RHC looked for new outreach opportunities to engage with members. Webinars have proven to be a successful form of communication with members. Webinars have been provided for the individuals on the both the Kentucky Employee Health Plan (KEHP) plans and Humana plans. 1,504 members have participated in these webinars.

RHC discussed the cost of printing the Open Enrollment Materials and postage associated with the mailings with the Committee. The cost of printing and mailing will be \$54,426.60 for 34,500 KEHP Open Enrollment Books, 6,516 New Retiree Books, and 516 Qualifying Event books. RHC will continue to review options to decrease cost and enhance customer service.

## MEMORANDUM

TO: Board of Trustees of the Kentucky Retirement Systems (“Board”)

FROM: Kathy Rupinen, Interim Executive Director, Office of Legal Services

DATE: November 9, 2020

RE: Board approval of the County Employee Retirement System insurance trust fund documents for submission to the Internal Revenue Service to obtain a private letter ruling

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HB 484, Section 27, amends KRS 61.701 to require the creation of the County Employees Retirement System insurance trust fund. It also states that effective April 1, 2021, all assets held in the Kentucky Retirement Systems insurance trust fund as of March 31, 2021 that were attributable to contributions made by County Employee Retirement System members, employers, or recipients and the resulting investment returns shall be transferred to the County Employees Retirement System insurance trust fund. In preparation for the fulfillment of this requirement, the Kentucky Retirement Systems’ staff have asked Ice Miller to prepare the County Employees Retirement System insurance trust fund plan documents, which are attached to this Memorandum. These plan documents are comparable to the Kentucky Retirement Systems insurance trust fund documents, which Ice Miller also prepared and which Ice Miller used as the template for the County Employees Retirement System plan documents. Ice Miller has recommended that we submit the attached County Employees Retirement System insurance trust fund plan documents to the Internal Revenue Service for a Private Letter Ruling establishing the qualified tax status of this insurance trust fund. Optimally, we will have the Private Letter Ruling before the plan goes into effect on April 1, 2021. Because of the significant time it takes to receive a Private Letter Ruling, it is preferable for the Board to vote on submitting the attached County Employees Retirement System insurance trust fund plan documents to the Internal Revenue Service for a Private Letter Ruling at the upcoming November 2020 meeting of the Board. Alternatively, if the Board would like more time to review these documents, this matter would need to be voted on at the December 2020 meeting of the Board.

### STAFF RECOMENTATION:

That the Board approve the County Employee Retirement System insurance trust fund documents for submission to the Internal Revenue Service to obtain a Private Letter Ruling establishing the qualified tax status of this insurance trust fund.

**DRAFT**

**AUGUST 16, 2020**

**COUNTY EMPLOYEES RETIREMENT SYSTEM  
INSURANCE FUND TRUST AGREEMENT**

**Effective: [DATE]**

**DRAFT****AUGUST 16, 2020****TABLE OF CONTENTS**

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**AUGUST 16, 2020**

**COUNTY EMPLOYEES RETIREMENT SYSTEM  
INSURANCE FUND TRUST AGREEMENT**

**THIS TRUST AGREEMENT** is executed as of this [DAY] day of [MONTH] 2020, by the Board of Trustees of the Kentucky Retirement Systems ("KRS") on behalf of the Board of Trustees of the County Employees Retirement System.

**WITNESSETH:**

**WHEREAS**, the County Employees Retirement System Insurance Fund Trust ("Trust") was created and established pursuant to Kentucky Revised Statutes 61.701 for the purpose of providing medical benefits under Kentucky Revised Statutes 61.702 to retired recipients and employees of employers participating in the County Employees Retirement System and to certain of their dependents or beneficiaries;

**WHEREAS**, pursuant to Governmental Accounting Standards Board Statements No. 43 ("GASB 43") and No. 45 ("GASB 45"), a non-federal governmental plan and employer must take steps to define and disclose the post-employment benefits, other than pension benefits, provided for former employees and retirees and to actuarially determine its liability for such benefits;

**WHEREAS**, a governmental plan or employer may reduce or eliminate its net OPEB obligation (as defined in GASB 43 or GASB 45) by making contributions to an irrevocable trust in relation to such anticipated benefits;

**WHEREAS**, the Trust is intended to be established as an irrevocable trust that receives contributions for the purpose of providing certain post-employment benefits other than pension benefits and to make distributions from the Trust for certain post-employment benefits other than pension benefits;

**WHEREAS**, Kentucky Revised Statutes 78.782 established the Board of Trustees of the County Employees Retirement System ("Trustees");

**WHEREAS**, pursuant to Kentucky Revised Statutes 78.790, the Trustees are authorized and directed to administer and manage the assets of the Trust, and are given full and exclusive power to invest and reinvest such funds in accordance with federal law;

**WHEREAS**, the Trustees may establish separate sub-trusts and accounts within the Trust to accept contributions and make distributions for the medical benefits described in Kentucky Revised Statutes 61.702;

**WHEREAS**, participation in and any coverage under the Trust shall not constitute nor be construed to constitute a specific, accrued or vested benefit for any specific employee or retiree unless otherwise specifically provided herein;

**DRAFT**

**AUGUST 16, 2020**

**WHEREAS**, the Trustees are authorized to receive, hold and manage the funds in the Trust, and such funds, when received by the Trustees (or its delegate), will constitute the trust fund (the "Trust Fund" or "Fund");

**WHEREAS**, the Trustees agree to accept this Trust and to perform the duties of the Trustees hereunder;

**WHEREAS**, the Commonwealth intends that the income accruing to the Trust shall be excluded from income for tax purposes, as such trust income accrues to the Commonwealth or an entity the income of which is excluded from taxation under Section 115 of the Code, and as such trust income is derived from the exercise of an essential governmental function as provided for under section 115(1) of the Code, Revenue Rulings 77-261 and 90-74, and other relevant guidance;

**WHEREAS**, pursuant to Section 45 of House Bill 484 (2020), the Board of Trustees of the Kentucky Retirement Systems ("KRS Board") is authorized and directed to act on behalf of the Trustees prior to April 1, 2021; and

**WHEREAS**, pursuant to Section 45 of House Bill 484 (2020), all administrative decisions made by the KRS Board prior to April 1, 2021, on behalf of the County Employees Retirement System shall be implemented on April 1, 2021, and all administrative regulations promulgated by the KRS Board prior to April 1, 2021, on behalf of the County Employees Retirement System shall continue to apply to the County Employees Retirement System on or after April 1, 2021;

**NOW, THEREFORE, the Board of Trustees of the Kentucky Retirement Systems, on behalf of the Board of Trustees of the County Employees Retirement System, hereby adopts a Trust to provide as follows:**

## **ARTICLE I**

### **DEFINITIONS AND RULES OF CONSTRUCTION**

**Section 1.01** **Definitions.** When the initial letter of a word or phrase is capitalized, it shall have the following meaning:

- (a) "CERS" means the County Employees Retirement System or any successor thereto.
- (b) "Code" means the Internal Revenue Code of 1986, as amended.
- (c) "Custodian" means a bank, mutual fund, savings and loan association, insurance company or other qualified entity selected by the Trustees, to hold and administer the assets of the Trust Fund.

**DRAFT**

**AUGUST 16, 2020**

(d) "Dependent" means a dependent, as defined in Section 152 of the Code, determined without regard to subsections (b)(1), (b)(2) and (d)(1)(B) thereof, of a Retiree.

(e) "Health and Welfare Benefit" means a medical or prescription drug benefit considered a post-retirement benefit other than pension under GASB 43 or GASB 45. Such a benefit is limited to medical care expenses as defined by Code Section 213(d).

(f) "Investment Fund" means an investment fund that forms part of the Trust Fund as established by the Trustees.

(g) "Investment Manager" means an investment manager selected by the Trustees.

(h) "KRS" means Kentucky Retirement Systems.

(i) "OPEB Obligation" means the Commonwealth's net obligation for post-employment benefits other than pension benefits under GASB 43 or GASB 45; *i.e.*, the cumulative difference between annual OPEB cost (normal cost plus amortized unfunded actuarial accrued liabilities) and contributions to date for Health and Welfare Benefits.

(j) "Property" refers to any property, real or personal, or partial interests therein, wherever situated, including, but without being limited to, preferred and common stocks, shares of investment companies, bonds, notes, debentures and mortgages, equipment trust certificates, investment trust certificates, interests in limited liability companies, in partnerships whether limited or general or in any insurance contract, policy, annuity, or other investment media offered by an insurance company, in which trust assets may be invested pursuant to Kentucky law.

(k) "Regulation" means a policy, procedure, rule or regulation adopted by the Trustees, establishing administrative procedures or interpretations affecting the Trust.

(l) "Retiree" means a former employee of an employer participating in CERS who receives a monthly retirement allowance from CERS.

(m) "Trust" means the trust created and established hereunder.

(n) "Trust Administrator" means CERS, except that prior to April 1, 2021, "Trust Administrator" means KRS acting on CERS' behalf.

(o) "Trust Fund" means all such money, Property, and all investments made therewith and proceeds thereof and all earnings and profits thereon, less payments made by the Trustees as authorized herein.

(p) "Trust Year" means the twelve (12) month period beginning each July 1 and ending the following June 30 on which the books and records of the Trust are maintained.

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**AUGUST 16, 2020**

(q) "Trustees" means the Board of Trustees of the County Employees Retirement Systems, except that prior to April 1, 2021, "Trustees" means the Board of Trustees of the Kentucky Retirement System acting on CERS' behalf.

**Section 1.02 Rules of Construction.** Words used herein in the masculine gender shall be construed to include the feminine gender where appropriate, and words used herein in the singular or plural shall be construed as being in the plural or singular where appropriate. Accounting terms and principles used herein or applicable hereto shall be as defined and described from time to time by pronouncements and other guidance of the Governmental Accounting Standards Board, or any successor organization.

## **ARTICLE II**

### **TRUST AND TRUST ADMINISTRATION**

#### **Section 2.01 Trust Fund.**

(a) Each employer participating in the CERS as provided in Kentucky Revised Statutes 78.510 to 78.852 shall contribute to the Trust the amount necessary to provide Health and Welfare Benefits as provided for under this Trust Agreement. Separate sub-trusts may be established for appropriate categories of Retirees or of employers and any income or earnings of the Trust Fund shall be allocable to each sub-trust.

(b) The Trustees shall receive and accept for the purposes hereof all contributions described herein and shall hold, invest, reinvest, manage, administer, and distribute Property and the increments, proceeds, earnings, and income solely to meet OPEB Obligations and provide Health and Welfare Benefits as described herein, and in accordance with Code Sections 105 and 106.

(c) All assets held by the Trustees in the Trust are referred to herein as the "Trust Fund." The Trustees have the authority to invest and manage the assets of the Trust Fund.

(d) This Trust is created for the sole purpose of providing Health and Welfare Benefits as described herein. During the life of the Trust, no portion of the principal or income of this Trust shall revert to the Commonwealth or an employer or shall be used for or diverted to any purpose other than to provide Health and Welfare Benefits for Retirees, spouses and the Dependents of Retirees as provided by Kentucky law and to pay the reasonable expenses of the Trust. Trust assets shall not be used to satisfy the claims of any creditor of any employer, the Commonwealth, or the Trustees.

(e) The contributions made by each employer and all investments, receipts, disbursements, and other transactions thereunder may be maintained in a common account, which contributions shall be used solely for the payment of benefits, expenses and other charges properly allocable to the Trust.

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(f) To the extent possible the assets of the Trust shall be invested in the same manner as those of the other CERS funds. The Trust Fund shall continue to be held by the Trustees in trust and dealt with in accordance with the provisions of the Trust. At no time shall any part of the Trust Fund be used for, or diverted to, purposes other than for the exclusive benefit of Retirees and their eligible spouses and Dependents, as applicable, as provided herein and for defraying the reasonable expenses of administering the Trust.

### **ARTICLE III**

#### **DEPOSITS AND DISBURSEMENTS FROM THE TRUST FUND**

##### **Section 3.01 Trust Deposits.**

(a) The Trustees hereby delegate to the Trust Administrator the responsibility for accepting contributions to the Trust and remitting said contributions to the Custodian. The Trust Administrator is also responsible for crediting the deposits to the appropriate sub-trust, if sub-trusts have been established. In all cases, deposits of contributions shall be treated as actually made only as of the date the funds are accepted as in good order by the Trust Administrator.

(b) The Trustees shall: (i) invest and reinvest the Trust Fund, and (ii) pay benefits as described herein from the Trust Fund on the order of the Trust Administrator or its duly authorized representative. The Trustees shall account for contributions, income, and payments made to or from the Trust. The Trustees, Custodian and Trust Administrator shall not be responsible for the adequacy of the Trust Fund to meet and discharge any liabilities of the Commonwealth.

(c) Contributions to fund the benefits under the Trust shall consist of annual amounts determined under Kentucky law pursuant to Kentucky Revised Statutes 78.635.

**Section 3.02 Sub-Trusts.** Separate sub-trusts in the Trust Fund may be maintained by the Trust Administrator for appropriate categories of Retirees or employers. The Trustees shall not be required to maintain separate investments for any sub-trust. Interest may be credited to each sub-trust by the Trustees from time to time.

##### **Section 3.03 Trust Payments.**

(a) The Trustees shall disburse amounts from the Trust Fund for the sole purpose of assisting in the payment of Health and Welfare Benefits for Retirees and their eligible spouse and Dependents and for reasonable expenses, fees and allocated administrative fees and expenses.

(b) Any amounts remaining in the Trust Fund after all Health and Welfare Benefits, fees and expenses have been paid shall be retained for payment of future Health and Welfare Benefits until all Commonwealth liabilities for such benefits have been satisfied.

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**AUGUST 16, 2020**

(c) **Trust Expenses.** The Trustees may incur reasonable administrative expenses, which shall be payable from the assets of the Trust Fund.

#### **ARTICLE IV**

##### **ACCOUNTS AND INVESTMENTS**

**Section 4.01 Accounts.** Trust assets shall be held in a common account. The Trustees and Custodian shall be under no duty to determine the amount of contributions paid to the Trust, whether such contributions are adequate to meet the Commonwealth's obligations for Health and Welfare Benefits, or to collect or enforce payment of any contribution.

**Section 4.02 Investment of Trust Fund.**

(a) Except as otherwise provided by Regulation or as delegated to the Custodian or an Investment Manager, the Trustees shall have complete control of the management and investment of the Trust Fund and shall have all powers necessary or convenient to enable it to exercise such control.

(b) The Trustees may invest and reinvest funds held by the Fund in any investments which are legal investments under Kentucky law, and shall have the discretion to decide the allocation of funds among such investments. The Trustees may purchase, acquire, hold, lease, sell, and convey real and personal Property, and place funds held herein with banks or trust companies which have corporate trust powers, with insurance companies authorized to do business within the Commonwealth, and do all such other acts as are permitted by law.

#### **ARTICLE V**

##### **POWERS AND DUTIES OF THE TRUSTEES**

**Section 5.01 Appointment of Trustees.** Prior to April 1, 2021, the Board of Trustees of KRS shall serve as the Board of Trustees of this Trust. Therefore, the appointment and term of members of the Board of Trustees of this Trust shall be made pursuant to Kentucky Revised Statutes 61.645. On and after April 1, 2021, the Board of Trustees of CERS shall serve as the Board of Trustees of this Trust. Therefore, the appointment and term of members of the Board of Trustees of this Trust shall be made pursuant to Kentucky Revised Statutes 78.782.

**Section 5.02 Powers and Duties.** The Trustees, in administering the Trust, shall have such power and authority (including discretion with respect to the exercise of that power and authority) as may be necessary, advisable, desirable, or convenient to the Trustees, in their sole discretion as Trustees and investment fiduciaries subject to the provisions of this Trust Agreement, and consistent with Kentucky Revised Statutes 61.645 and 78.782, including the power and authority:

(a) To make Regulations with respect to the Trust not inconsistent with the Trust, GASB 43 or 45, Code Section 115 or applicable law, and to amend or rescind such Regulations;

**DRAFT**

**AUGUST 16, 2020**

(b) To determine, consistent with the applicable laws, rules or regulations, all questions of law or fact that may arise as to any person or entity claiming rights under the Trust;

(c) Subject to and consistent with GASB 43 and 45, Code Section 115 and applicable law, to construe and interpret the Trust and to correct any defect, supply any omission, or reconcile any inconsistency in the Trust;

(d) To adopt and amend bylaws governing its operations and procedures;

(e) To make and enter into contracts with any agency of the Commonwealth or any outside agency or company for the purpose of assisting in the general administration of the Trust or the investing or advising as to the investment of the Trust Fund;

(f) To provide for termination of trusteeship and transfer of assets to successor trustees as permitted by law;

(g) To employ legal counsel;

(h) To employ and contract with actuaries, auditors, accountants, investment advisers, investment brokers, consultants, medical personnel, and other agents and employees;

(i) Subject to Section 4.01, to collect and disburse all funds due and payable under the Trust;

(j) To provide for and promulgate all the rules, regulations, and forms that are deemed as necessary or desirable in fulfilling its purposes of assisting in providing Health and Welfare Benefits and in maintaining proper records and accountings consistent with GASB Statement 43 and 45 and Internal Revenue Service standards;

(k) To adopt an Investment Policy Statement and asset allocation;

(l) To bring and defend actions, sue and be sued, and plead and be impleaded;

(m) To expend funds for the purchase of fidelity and surety bonds and liability insurance for the protection and indemnification of Trustees in the performance of their duties;

(n) To expend funds for the reasonable expenses of the Trustees while engaged in the performance of their duties;

(o) To employ insurance companies, banks, trust companies, and investment brokers as agents for the keeping of records and the receipt and disbursement of funds held by or due the Trustees;

(p) To exercise generally any of the powers of an owner with respect to all or any part of the Trust Fund; and

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**AUGUST 16, 2020**

(q) To take all actions consistent with this Trust Agreement necessary or appropriate to administer or carry out the purposes of the Trust; provided, however, the Trustees need not take any action unless in their opinion there are sufficient Trust assets available for the expense thereof.

**Section 5.03 Fiduciary Liability Insurance.** The Trustees may buy fiduciary liability insurance or errors and omissions insurance, as described above. However, all such insurance shall provide that proceeds shall be payable to the Trust and shall contain express provisions reserving to the insurer executing the same the full right of recourse against all parties or other individuals whose errors, acts, omissions, or breaches may obligate such insurer to make payments to the Trust. CERS may buy fiduciary liability insurance covering any fiduciary of the Trust, including any member of the Trustees, and CERS shall pay the premiums therefore from the Trust.

**Section 5.04 Delegation by Trustees.** In addition to the powers stated in Section 5.02, the Trustees may from time to time delegate to an individual, committee, or organization certain of its fiduciary responsibilities under the Trust. Any such individual, committee, or organization shall remain a fiduciary until such delegation is revoked by the Trustees, which revocation may be without cause and without advance notice. Such individual, committee, or organization shall have such power and authority with respect to such delegated fiduciary responsibilities as the Trustees have under the Trust.

## **ARTICLE VI**

### **LIMITATIONS OF RESPONSIBILITY AND INDEMNIFICATION**

**Section 6.01 Limitations of Responsibility.** The Trustees' responsibilities and liabilities shall be subject to the following limitations:

(a) The Trustees shall have no duties other than those expressly set forth in this Trust Agreement and those imposed on the Trustees by applicable laws.

(b) The Trustees and the Trust Administrator shall not be responsible for any particular federal, state or local income, payroll or other tax consequence to the Commonwealth or a Retiree, spouse, or Dependent.

(c) The Trustees shall be responsible only for money and Property actually received by the Trust, and then to the extent described in this Trust Agreement.

(d) The Trustees shall not be responsible for the correctness of any determination of payments or disbursements from the Trust Fund.

(e) No Trustee shall have any liability for the acts or omissions of any predecessor or successor in office.



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**AUGUST 16, 2020**

(f) The Trustees shall have no liability for (i) the acts or omissions of any Investment Manager or Managers; (ii) the acts or omissions of any insurance company; (iii) the acts or omissions of any Investment Fund; (iv) the acts or omissions of any Custodian; (v) the acts or omissions of the Trust Administrator; or (vi) the acts or omissions of any contractor.

**Section 6.02 Indemnification.** The Trust shall, and hereby does, to the extent permitted by law, indemnify the Trustees, including persons who have served as such in the past or who are heirs, executors, or administrators thereof, against expenses (including attorney's fees), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any actual or threatened proceeding of any kind, arising by reason of the fact that any such person is or was a Trustee, and shall advance to such person expenses reasonably incurred in defending any such proceedings as permitted by law. Such indemnity shall apply, however, only if, in connection with the matter at issue, the person claiming indemnity hereunder acted in good faith and in a manner he or she reasonably believed was in the best interests of the Trust. This indemnity does not extend to any acts of the person seeking indemnity which involve gross negligence or willful misconduct, or are materially in breach of this Agreement, or any bylaw. The Trustees may obtain and may rely on a written opinion of independent legal counsel on any issues of good faith, reasonable belief, or breach, or on any and all other issues that may bear on the application of this indemnity.

## **ARTICLE VII**

### **ACCOUNTS AND RECORDKEEPING**

**Section 7.01 Maintenance of Records.** The Trustees shall maintain or cause to be maintained suitable records, data, and information relating to its responsibilities hereunder. The Trust's books and records relating thereto shall be open to inspection and audit at reasonable times, subject to applicable law.

**Section 7.02 Independent Audit.** The Trustees shall cause an independent audit of the Trust Fund to be performed annually, with results reported to the Trust Administrator.

**Section 7.03 Annual Report.** Each year, the Trustees shall publish an annual consolidated report that includes:

- (a) The fiscal transactions of the Trust Fund for the preceding Trust Year; and
- (b) The amount of the accumulated cash, securities, and other assets of the Trust Fund.

## **ARTICLE VIII**

### **RELIANCE ON COMMUNICATIONS**

**Section 8.01 Certification of Trust Administrator.** The Trustees may rely upon a certification of the Trust Administrator with respect to any instruction, direction, or approval of

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such Trust Administrator and may continue to rely upon such certification until a subsequent certification is filed with the Trustees. The Trustees shall have no duty to make any investigation or inquiry as to any statement contained in any such writing but may accept the same as fully authorized by the Trust Administrator.

**Section 8.02 Certification of Other Providers.** The Trustees shall be protected further in relying upon a written certification that purports to be from any Custodian, Investment Manager, insurance company, or mutual fund as to the person or persons authorized to give instructions or directions on behalf of such Custodian, Investment Manager or insurance company and continue to rely upon such certification until a subsequent written certification is filed with the Trustees.

## ARTICLE IX

### AMENDMENT AND TERMINATION

**Section 9.01 Amendment.** This Trust Agreement may be amended by the Trustees at any time and in any manner permitted by applicable Commonwealth law and not inconsistent with GASB 43 and 45 or Code Section 115. Notice of such Amendment shall be promptly provided to the Trust Administrator and Custodian.

**Section 9.02 Irrevocability.** This Trust Agreement and the Trust created hereby is irrevocable.

**Section 9.03 Termination.** The Trust shall have perpetual existence, except if dissolved by the Trustees. Following any such dissolution, the Trustees shall proceed to wind up the affairs of the Trust in an orderly manner and within a reasonable period of time considering relevant circumstances. After paying or making reasonable provision for the payment of all liabilities of the Trust, and upon receipt of such releases, indemnities or like documentation as the Trustees may reasonably deem necessary for the protection of the Trustees, the Trustees shall distribute the remaining Property of the Trust, in cash or in kind or partly each, for the sole purpose of assisting in the payment of Health and Welfare Benefits for Retirees and their eligible spouses and Dependents, and for related reasonable expenses, fees and allocated administrative fees and expenses. If all such obligations are extinguished, the assets of the Trust may revert to the employers that participate in CERS as determined by the Trustees; provided, however, that any employer receiving such a reversion must be a state, a political subdivision of a state, or an entity whose income is excluded from gross income under Code Section 115.

## ARTICLE X

### MISCELLANEOUS

**Section 10.01 Construction and Governing Law.**

(a) This Trust Agreement shall be construed, enforced and administered and the validity thereof determined in accordance with the Code and the laws of the Commonwealth of

**DRAFT****AUGUST 16, 2020**

Kentucky. If any provision of the Trust Agreement is held to violate the Code or Kentucky law, or to be illegal or invalid for any other reason, that provision shall be deemed to be null and void, but the invalidation of that provision shall not otherwise affect the Trust.

(b) The headings and subheadings in this Trust Agreement are inserted for convenience of reference only and are not to be considered in the construction of any provision of the Trust Agreement.

(c) In resolving any conflict among provisions of this Trust Agreement and in resolving any other uncertainty as to the meaning or intention of any provision of this Trust Agreement, the interpretation that (i) causes the Trust to be exempt from tax as a governmental instrumentality under Code Section 115, and (ii) causes the Trust to comply with all applicable requirements of the Code and the laws of the Commonwealth of Kentucky, shall prevail over any different interpretation.

**Section 10.02 Parties Bound.** This Trust Agreement shall be binding upon the Trustees, the Commonwealth and, as the case may be, the delegates, successors, and assigns of each of them.

**Section 10.03 Necessary Parties to Disputes.** Necessary parties to any accounting, litigation, or other proceedings relating to the Trust Agreement shall include only the Trustees. The settlement or judgment in any such case in which the Trustees are duly served or cited shall be binding upon all persons claiming by, through, or under this Trust.

**Section 10.04 Severability.** If any provisions of the Trust Agreement shall be held by a court of competent jurisdiction to be invalid or unenforceable, the remaining provisions of the Trust Agreement shall continue to be fully effective.

**Section 10.05 Supersession.** The terms of the Trust Agreement shall supersede any previous oral or written agreement between the parties to this Trust pertaining to matters that are the subject of the Trust.

**Section 10.06 Nonassignment.** The Commonwealth may not commute, sell, assign, transfer, or otherwise convey any right it may have under the Trust. The assets held under this Trust shall not be subject to the rights of the creditors of the Commonwealth, the Trustees or the Trust Administrator, and shall be exempt from execution, attachment, prior assignment or any other judicial relief or order for the benefit of creditors or other third person.

**Section 10.07 Erroneous Payments.** If the Trustees or the Trust Administrator make any payment that according to the terms of the Trust and the benefits provided hereunder should not have been made, the Trustees or Trust Administrator may recover that incorrect payment, by whatever means necessary, whether or not it was made due to the error of the Trustees or Trust Administrator, from the person to whom it was made or from any other appropriate party. For example, the Trustees or Trust Administrator may deduct the amount of the incorrect payment when making any future payments to the recipient of the incorrect payment.

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**Section 10.08 Release.** Any payment to any Commonwealth agency or insurance company, or its designee, shall, to the extent thereof, be in full satisfaction of the claim of such entity being paid thereby and the Trustees or Trust Administrator may condition payment thereof on the delivery by the Commonwealth agency or insurance company, or its designee, of the duly executed receipt and release in such form as may be determined by the Trustees or Trust Administrator.

IN WITNESS WHEREOF, this Trust has been executed by the undersigned on the date indicated.

*On behalf of the Board of Trustees of the County  
Employees Retirement System*

**BOARD OF TRUSTEES OF THE KENTUCKY  
RETIREMENT SYSTEMS**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**The Trust provides no guaranty that payments or reimbursements to employees, former employees, retirees, spouses or beneficiaries will be tax-free. The Trust will obtain a ruling from the Internal Revenue Service concerning only the federal tax treatment of the Trust's income. That ruling may not be cited or relied upon by the County Employees Retirement Systems whatsoever as precedent concerning any matter relating to the Kentucky Retirement Systems' health plan(s) (including post-retirement health plans). In particular, that ruling has no effect on whether contributions to the County Employees Retirement Systems' health plan(s) or payments from the County Employees Retirement Systems' health plans (including reimbursements of medical expenses) are excludable from the gross income of employees, former employees or retirees, under the Internal Revenue Code. The federal income tax consequences to employees, former employees and retirees depend on the terms and operation of the County Employees Retirement Systems' health plan(s).**

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September  
2020

## KRS MONTHLY PERFORMANCE UPDATE

**What's going on in the marketplace?**

Global equity markets fell during the month of September based primarily on the potential of a second wave of Covid-19 erupting in Europe. In addition, the global economic outlook became challenged as signs of slowing growth emerged. In the U.S. specifically, congress failed to pass an additional stimulus package creating even more volatility. As a result, U.S. stocks trailed the international markets. Global bond markets declined slightly but fared much better than their equity counterparts.

**The KRS investment portfolio returned -0.3% versus the benchmark of -0.7%.**

The portfolio benefitted from relative outperformance provided by several asset classes, especially within the Specialty Credit, U.S. Equity, Real Estate, and Absolute Return segments of the portfolio. Further, the significant underweight to the Real Return bucket was beneficial, as the asset class was weaker than the overall portfolio benchmark. Offsetting some of this relative outperformance was the overweight position to public equities as these were the weakest performing asset classes during the month.

**The fiscal year return to date now stands at 4.9% versus a benchmark return of 4.7%**

In general, the portfolio has benefitted from its overweight to the public equity markets, as these have been the strongest performing asset classes for the period. Further, strong absolute performance within the private equity and leveraged loan portions of the portfolio have been beneficial.

**U.S. Equities**

U.S. markets fell -3.6% during the month per the Russell 3000. All market cap segments lost ground. That said, mid- and small caps held up better than large caps (MC & SC: -3.3% vs LC: -3.8%). Value provided roughly 2% downside protection over growth (R3000V: -2.6% vs R3000G: -4.6%).

During the month, the KRS U.S. Equity portfolio provided 42 bps of downside protection, returning -3.2% versus the Russell 3000 Index return of -3.6%. Stock selection was mixed but beneficial as several mandates outpaced their respective indices. Reversing a long running trend, the portfolio's slight value tilt was beneficial. The smaller market cap positioning was slightly additive.

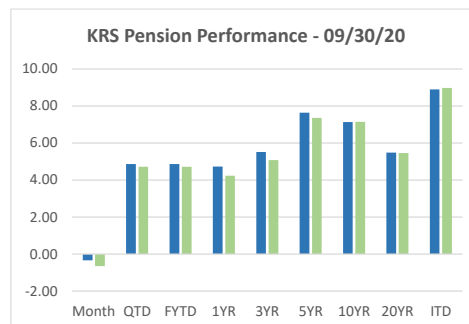
For the quarter, the portfolio returned 8.5% versus the benchmark return of 9.2%. Stock selection has been mixed. Relative underperformance can be primarily explained through allocation, as the portfolio has a slight value tilt along with being slightly smaller than the index in terms of market cap. Growth outperformed value by roughly 7.5% (12.9% vs 5.4%) during the period, while large caps outperformed their small cap counterparts by 4% (8.9% vs 4.9%).

**Non-U.S. Equities**

Non-U.S. equity markets declined -2.5% for the month per the MSCI ACWI-Ex US Index. Emerging markets (MSCI EM: -1.6%) held up better than their developed market counterparts (MSCI World Ex-US: -2.8%). Unlike in the U.S., growth continued to outpace value in the international markets.

The KRS Non-U.S. Equity portfolio fell -2.4% during the month, trailing the benchmark by 10 bps. KRS' external MSCI ACWI Ex-US and MSCI EM individual mandates were mixed in terms of relative performance versus their respective benchmarks; however, those that trailed did so to a greater degree than those that outperformed. The value tilt hampered relative performance.

During the quarter, the KRS Non-U.S. Equity portfolio has returned 7.3%, outpacing the index by 47 bps. Strong results from two of the four active MSCI ACWI Ex-U.S. mandates have driven this relative outperformance, as the growth oriented mandates have provided significant outperformance.



## Special Called Investment Committee Meeting - Addendum - Standard Reports

**Fixed Income**

The month was relatively calm in the overall fixed income markets. Those segments considered safer in nature were flat during the period, while those parts of the fixed income markets with higher credit risk were more volatile in terms of the returns produced. The high yield market fell just over -1.0%, while the leveraged loan segment of the market provided 63 bps of positive performance.

The KRS Specialty Credit allocation returned 95 bps, outpacing its benchmark that lost 20 bps during the month. Individual strategy relative performance was pretty evening split; however, those that outperformed their respective indices did so to a greater degree than those that underperformed their respective indices, especially within the leveraged loan portfolio. The KRS Core Fixed Income portfolio was flat, edging out the Bloomberg Barclays Aggregate (0.03% vs -0.05%). Relative performance amongst the individual mandates was mixed.

The KRS Specialty Credit allocation has returned 4.3% during the first quarter of the fiscal year just behind its benchmark return of 4.4%. Individual strategy relative performance has been mixed. The liquidity portion of the credit allocation has returned 1.1% during the quarter, with the intermediate portion of the core portfolio driving the bulk of performance.

**Alternative Assets**

The diversifying strategy group fell -0.1% during the month, with two of the four major portfolio segments losing ground during the period. The Opportunistic portfolio returned 2.5%, and the Absolute Return portfolio gained 1.3%. The Real Estate portfolio fell just -9 bps and the Real Return portfolio lost -1.4%. The Private Equity portion of the portfolio returned 7.8% on the month.

For the first quarter of the new fiscal year, the Private Equity, Opportunistic, Real Return, and Absolute Return allocations returned 7.3%, 6.8%, 2.3%, and 2.1%, respectively. The only negative performance fiscal year to date comes from the Real Estate portfolio, which has lost -28 bps.

**Cash**

The Cash portfolio performed in line with the 3-month T-Bill, returning 1bp. This brought the fiscal year return to 3bps.

**NOTES:**

- 1) Returns displayed are "net". For the purposes of this report, total fund return information is net of fees and expenses, with audited data beginning in July 2011. At the manager level returns are net of fees beginning with July 2011, and gross of fees for prior data.
- 2) Individual plan allocation and performance (pg.4).
- 3) Prior to January 1, 2014, the inception date for the Private Equity asset class was stated as 10/1/1990 for Pension Fund and 6/1/2001 for Insurance Fund. Prior to 07/01/02, the characteristics of the allocation, and the benchmark itself, were more closely aligned with Real Estate. As such, it is not appropriate to report this portion of the return stream within the Private Equity allocation, whose true inception date has been determined to be 07/01/02 based on funding the Systems' first private equity mandate. The portion of the original return streams that are no longer reported within the Private Equity allocation (Pension from 10/1/90 to 06/30/02; Insurance 06/01/01 to 06/30/02) are reported within the Fund Level performance figures.
- 4)

Private Equity Composite (Pension) Inception (07/01/02) to 06/30/11 60.00% S&P 1500 Composite Index 40.00% Barclays US Corporate High Yield Index 07/01/11 to 12/31/15 100.00% Russell 3000 Index + 4% (Qtr Lag) <b>01/01/16 to Present</b> <b>100.00% Russell 3000 Index + 3% (Qtr Lag)</b>	Private Equity Composite (Insurance) Inception (07/01/02) to 06/30/11 80.00% S&P 1500 Composite Index 20.00% Barclays US Corporate High Yield Index 07/01/11 to 12/31/15 100.00% Russell 3000 Index + 4% (Qtr Lag) <b>01/01/16 to Present</b> <b>100.00% Russell 3000 Index + 3% (Qtr Lag)</b>
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- 5) The Private Equity & Real Return Benchmarks, from one month returns up until five year returns, is equal to the performance of the associated KRS allocations. Given there is not appropriate benchmark to use for short term performance evaluation, this will allow greater focus on longer term returns, which is more appropriate given the long term nature of these investments.

## Special Called Investment Committee Meeting - Addendum - Standard Reports

Pension Benchmark Composite 01/01/16 to 08/31/17

US Equity: Russell 3000 (25.6%)  
 Non US Equity: MSCI AXCI Ex-US IMI (25.2%)  
 Global Fixed Income: Barclays Universal Index (6.8%)  
 Credit Fixed Income: Barclays US High Yield (7.2%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return: Allocation Specific (8.0%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (10.0%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.2%)

Pension Benchmark Composite 09/01/17 to 05/31/18 -Transition Period w/Sliding Targets

US Equity: Russell 3000 (23.6%)  
 Non US Equity: MSCI AXCI Ex-US IMI (23.2%)  
 Global Fixed Income: Barclays Universal Index (9.0%)  
 Credit Fixed Income: Barclays US High Yield (9.0%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
 Real Return>5yrs: CPI+3% (8%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (10.0%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.2%)

Pension Benchmark Composite 06/01/18 to 07/31/18

US Equity: Russell 3000 (17.0%)  
 Non US Equity: MSCI AXCI Ex-US IMI (21.0%)  
 Global Fixed Income: Barclays Universal Index (13.0%)  
 Credit Fixed Income: Barclays US High Yield (12.4%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
 Real Return>5yrs: CPI+3% (10.0%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (9.4%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.2%)

Pension Benchmark Composite 07/31/18 to Present

**US Equity: Russell 3000 (18.2%)**  
**Non US Equity: MSCI AXCI Ex-US IMI (18.2%)**  
**Core Fixed Income: Barclays US Aggregate (14.8%)**  
**Specialty Credit/High Yield FI: Custom Benchmark (15.0%)**  
**Real Estate: NCREIF ODCE (5.0%)**  
**Absolute Return: HFRI Diversified FOF (3.0%)**  
**Real Return<5yrs: Actual Performance**  
**Real Return>5yrs: CPI+3% (15.0%)**  
**Private Equity<5Yrs: Actual Performance**  
**Private Equity>5Yrs: Russell 3000 Index+3% (9.4%)**  
**Cash: Cit Grp 3-mos Treasury Bill (1.4%)**

Insurance Benchmark Composite 01/01/16 to 08/31/17

US Equity: Russell 3000 (26.5%)  
 Non US Equity: MSCI AXCI Ex-US IMI (26.5%)  
 Global Fixed Income: Barclays Universal Index (6.0%)  
 Credit Fixed Income: Barclays US High Yield (6.0%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return: Allocation Specific (8.0%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (10.0%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.0%)

Insurance Benchmark Composite 09/01/17 to 05/31/18 -Transition Period w/Sliding Targets

US Equity: Russell 3000 (24.5%)  
 Non US Equity: MSCI AXCI Ex-US IMI (24.5%)  
 Global Fixed Income: Barclays Universal Index (8.0%)  
 Credit Fixed Income: Barclays US High Yield (8.0%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
 Real Return>5yrs: CPI+3% (8%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (10.0%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.0%)

Insurance Benchmark Composite 06/01/18 to 07/31/18

US Equity: Russell 3000 (17.9%)  
 Non US Equity: MSCI AXCI Ex-US IMI (21.9%)  
 Global Fixed Income: Barclays Universal Index (13.0%)  
 Credit Fixed Income: Barclays US High Yield (11.0%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
 Real Return>5yrs: CPI+3% (10.0%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (9.2%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.0%)

Insurance Benchmark Composite 07/31/18 to Present

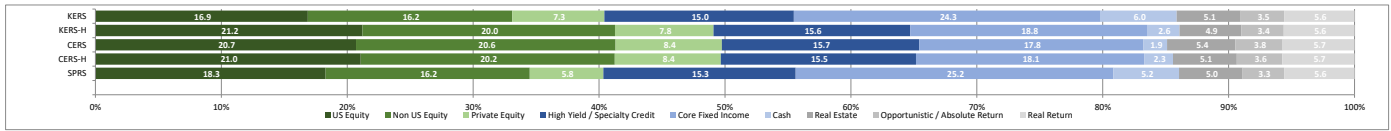
**US Equity: Russell 3000 (18.75%)**  
**Non US Equity: MSCI AXCI Ex-US IMI (18.75%)**  
**Core Fixed Income: Barclays US Aggregate (5.0%)**  
**Specialty Credit/High Yield FI: Custom Benchmark (13.5%)**  
**Real Estate: NCREIF ODCE (10.0%)**  
**Absolute Return: HFRI Diversified FOF (3.0%)**  
**Real Return<5yrs: Actual Performance**  
**Real Return>5yrs: CPI+3% (15.0%)**  
**Private Equity<5Yrs: Actual Performance**  
**Private Equity>5Yrs: Russell 3000 Index+3% (15.0%)**  
**Cash: Cit Grp 3-mos Treasury Bill (1.0%)**

\*\*Fund composite benchmark is a roll-up of individual plans, which may differ from one another.

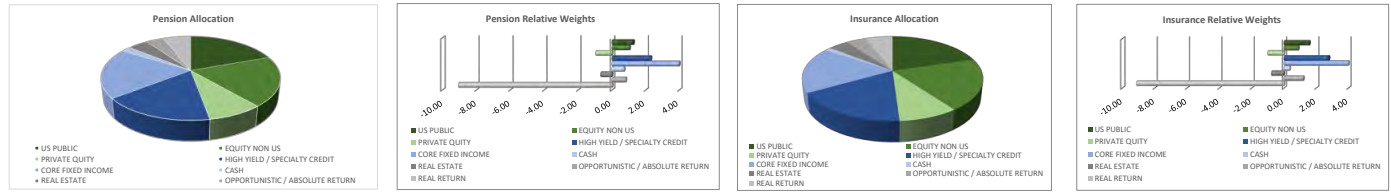
Special Call Investment Committee Meeting - Addendum - Standard Reports

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - NET RETURNS - 09/30/20																						
Structure <sup>1</sup>	Benchmark	Inception	Market Value <sup>2</sup>	% of Total <sup>3</sup>	Month <sup>4</sup>		QTD		Fiscal YTD <sup>5</sup>		1 Year <sup>6</sup>		3 Year <sup>7</sup>		5 Year <sup>8</sup>		10 Year <sup>9</sup>		20 Year <sup>10</sup>		ITDD <sup>11</sup>	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
TOTAL FUND	KY Ret. Blended Index	4/1/1984	13,271,844,612.03	100.00	-0.34	-0.65	4.86	4.72	4.86	4.72	4.73	4.23	5.51	5.07	7.64	7.36	7.13	7.14	5.48	5.46	8.90	8.98
GROWTH	KY Ret. Blended Index	7/1/2018	8,553,546,706.13	64.45	-0.54	-0.65	6.88	6.88	6.88	6.88	6.35	6.35	5.51	5.07	7.64	7.36	7.13	7.14	5.48	5.46	8.90	8.98
PUBLIC EQUITY	Global Equity Blended Index	4/1/1984	5,136,347,064.03	38.70	-2.82	-2.98	7.89	8.02	7.89	8.02	9.45	9.23	6.64	6.37	10.18	10.03	8.53	8.56	4.94	4.93	10.31	10.14
US PUBLIC	KY Domestic Equity Blend	4/1/1984	2,583,680,170.41	19.47	-3.22	-3.64	8.50	9.21	8.50	9.21	12.35	15.00	10.39	11.65	12.77	13.69	12.70	13.49	6.42	6.93	11.25	11.17
EQUITY NON US	KY Ret. Int'l Eq. Blended Index	7/1/2000	2,552,666,993.62	19.23	-2.40	-2.30	7.27	6.80	7.27	6.80	6.33	3.51	3.33	1.13	7.88	6.45	4.78	4.39			3.20	3.24
PRIVATE EQUITY	Russell 3000 + 3%(Qtr Lag)	7/1/2002	1,120,360,401.34	8.44	7.84	7.84	7.30	7.30	7.30	7.30	4.40	2.40	9.49	9.49	9.58	9.58	11.93	15.27			10.83	11.37
HIGH YIELD / SPECIALTY CREDIT	High Yield Custom Benchmark	7/1/2017	2,296,890,240.76	17.31	0.95	-0.20	4.30	4.38	4.30	4.38	0.85	2.17	4.17	3.67							4.77	3.86
FIXED INCOME / LIQUIDITY	Bloomberg Barclays US Aggregate	7/1/2018	2,848,316,546.90	21.46	0.03		1.12	1.12	1.12	1.12	1.07										5.15	
CORE FIXED INCOME	Bloomberg Barclays US Aggregate	7/1/2018	2,557,773,367.38	19.35	0.03	-0.05	1.20	0.62	1.30	0.62	5.27	6.98	4.36	5.24	3.80	4.18					3.65	3.91
CASH	Citigroup Treasury Bill-3 Month	1/1/1988	280,543,179.52	2.11	0.01	0.03	0.03	0.03	0.03	1.35	1.02	1.96	1.65	1.52	1.16	0.92	0.61	1.93	1.50	3.48	3.04	
DIVERSIFYING STRATEGIES	NCREIF NFI-OCCE Net 1 Qtr in Arrears Index*	7/1/2018	1,870,342,682.10	14.09	-0.07		2.22	2.22	2.22	-2.24											1.93	
REAL ESTATE	NCREIF NFI-OCCE Net 1 Qtr in Arrears Index*	7/1/1984	573,219,463.33	4.33	-0.09	-1.75	-0.28	-1.75	-0.28	-1.75	5.18	1.33	8.80	4.72	9.07	6.35	9.82	9.78	6.95	6.80	6.23	6.29
OPPORTUNISTIC / ABSOLUTE R	HFRI Diversified	7/1/2011	595,226,107.56	4.51	1.30	-0.22	2.14	3.72	2.14	3.72	-1.72	5.44	0.23	3.07	0.80	2.67					2.98	3.02
REAL RETURN	Pension Real Return Custom Benchmark	7/1/2011	789,797,111.21	5.95	-1.35	-1.35	2.27	2.27	2.27	2.27	-7.79	-7.79	-0.70	-0.70	2.84	2.84					2.51	1.62

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - PLAN NET RETURNS - 09/30/20																						
Plan	Benchmark	Inception	Market Value <sup>2</sup>	% of Total <sup>3</sup>	Month <sup>4</sup>		QTD		Fiscal YTD <sup>5</sup>		1 Year <sup>6</sup>		3 Year <sup>7</sup>		5 Year <sup>8</sup>		10 Year <sup>9</sup>		20 Year <sup>10</sup>		ITDD <sup>11</sup>	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
KERS	KY Ret. KERS Plan Index		2,428,621,575.61	100.00	0.10	-0.71	4.72	4.19	4.72	4.19	5.69	4.24	5.60	5.01	7.16	7.02	7.01	7.00	5.42	5.39	8.86	8.94
KERS-H	KY Ret. KERS Haz Plan Index		728,646,123.52	100.00	-0.47	-0.65	4.90	4.87	4.90	4.87	4.59	4.37	5.42	5.17	7.65	7.46	7.13	7.13	5.48	5.46	8.90	8.98
CERS	KY Ret. CERS Plan Index		7,336,507,832.91	100.00	-0.45	-0.65	4.90	4.87	4.90	4.87	4.49	4.37	5.42	5.17	7.72	7.50	7.13	7.13	5.48	5.46	8.90	8.98
CERS-H	KY Ret. CERS Haz Plan Index		2,478,898,923.65	100.00	-0.46	-0.65	4.89	4.87	4.89	4.87	4.39	4.37	5.40	5.17	7.69	7.48	7.13	7.13	5.48	5.46	8.90	8.98
SPRS	KY Ret. SPRS Plan Index		299,209,957.19	100.00	-0.36	-0.71	4.46	4.19	4.46	4.19	5.34	4.24	5.48	5.02	7.26	7.20	6.89	6.99	5.36	5.39	8.83	8.94

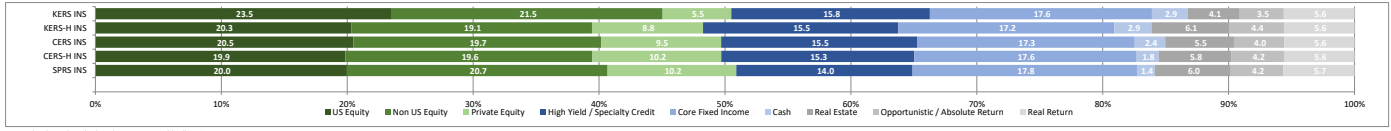


Note: The above chart displays the average monthly allocation.



KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - NET RETURNS - 09/30/20																						
Structure <sup>1</sup>	Benchmark	Inception	Market Value <sup>2</sup>	% of Total <sup>3</sup>	Month <sup>4</sup>		QTD		Fiscal YTD <sup>5</sup>		1 Year <sup>6</sup>		3 Year <sup>7</sup>		5 Year <sup>8</sup>		10 Year <sup>9</sup>		20 Year <sup>10</sup>		ITDD <sup>11</sup>	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
TOTAL FUND	KY Ret. Blended Index	4/1/1987	5,748,767,719.33	100.00	-0.52	-0.89	4.84	4.63	4.84	4.63	4.15	3.93	5.35	5.03	7.73	7.45	7.01	7.52	4.92	5.09	7.29	7.61
GROWTH	Growth Custom Benchmark	7/1/2018	3,838,806,962.24	66.78	-0.83	-1.63	6.56	9.45	6.56	9.45	5.04	8.67	6.57	6.33	10.25	10.01	8.44	8.30	5.14	4.76	8.54	8.33
PUBLIC EQUITY	Global Equity Blended Index	7/1/1992	2,298,110,874.80	39.98	-2.83	-2.97	7.93	8.01	7.93	8.01	9.45	9.19	6.57	6.33	10.25	10.01	8.44	8.30	5.14	4.76	8.54	8.33
US PUBLIC	KY Domestic Equity Blend	7/1/1992	1,168,851,873.71	20.33	-3.22	-3.64	8.52	9.21	8.52	9.21	12.29	15.00	10.35	11.65	12.92	13.69	12.66	13.44	6.63	6.39	9.72	9.73
EQUITY NON US	KY Ret. Int'l Eq. Blended Index	4/1/2000	1,129,279,001.09	19.64	-2.42	-2.30	7.34	6.80	7.34	6.80	6.35	3.51	3.20	1.13	7.79	6.45	4.59	4.39			3.18	2.49
PRIVATE EQUITY	Russell 3000 + 3%(Qtr Lag)	7/1/2002	517,344,161.07	9.00	5.13	4.64	4.64	4.64	4.64	-4.90	-4.90	7.29	7.29	8.98	8.98	12.43	15.47			9.47	10.86	
HIGH YIELD / SPECIALTY CREDIT	Bloomberg Barclays US High Yield	7/1/2017	1,023,351,226.37	17.80	1.01	-0.20	4.29	4.38	4.29	4.38	0.60	2.17	3.94	3.67							4.48	3.86
FIXED INCOME / LIQUIDITY	Bloomberg Barclays US Aggregate	7/1/2018	1,067,152,220.50	18.91	0.02		1.13	1.13	1.13	1.13	1.02										5.06	
CORE FIXED INCOME	Bloomberg Barclays US Aggregate	7/1/2018	1,009,303,588.84	17.56	0.02	-0.05	1.30	0.62	1.30	0.62	4.89	6.98	4.20	5.24	3.72	4.18					3.31	3.91
CASH	Citigroup Treasury Bill-3 Month	7/1/1992	77,888,631.66	1.35	0.01	0.01	0.03	0.03	0.03	0.90	1.02	1.70	1.65	1.25	1.16	0.76	0.61	1.70	1.50	2.57	2.44	
DIVERSIFYING STRATEGIES	NCREIF NFI-OCCE Net 1 Qtr in Arrears Index*	7/1/2018	823,094,168.04	14.32	0.11		2.64	2.64	2.64	-0.75											2.63	
REAL ESTATE	NCREIF NFI-OCCE Net 1 Qtr in Arrears Index*	5/1/2009	242,914,014.04	4.23	0.06	-1.75	-0.02	-1.75	-0.02	-1.75	5.50	1.33	8.98	4.72	9.34	6.35					9.06	5.55
OPPORTUNISTIC / ABSOLUTE R	HFRI Diversified	7/1/2011	241,440,511.40	4.20	1.26	-0.22	2.08	3.72	2.08	3.72	-1.71	5.44	0.26	3.07	0.82	2.67					2.94	3.02
REAL RETURN	Pension Real Return Custom Benchmark	7/1/2011	338,649,642.60	5.89	-1.21	-1.21	2.72	2.72	2.72	2.72	-5.17	-5.17	0.19	3.17	3.17						2.59	1.97

KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - PLAN NET RETURNS - 09/30/20																						
Plan	Benchmark	Inception	Market Value <sup>2</sup>	% of Total <sup>3</sup>	Month <sup>4</sup>		QTD		Fiscal YTD <sup>5</sup>		1 Year <sup>6</sup>		3 Year <sup>7</sup>		5 Year <sup>8</sup>		10 Year <sup>9</sup>		20 Year <sup>10</sup>		ITDD <sup>11</sup>	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
KERS INS	KY Ins. KERS Plan Index		1,050,867,747.53	100.00	-0.82	-0.90	5.08	4.65	5.08	4.65	5.18	4.04	5.06	5.05	7.52	7.58	6.78	7.42	4.81	5.04	7.22	7.58
KERS-H INS	KY Ins. KERS Haz Plan Index		534,020,558.57	100.00	-0.41	-0.50	4.83	4.65	4.83	4.65	3.90	4.04	5.18	5.10	7.62	7.56	6.37	7.45	4.50	5.06	7.28	7.59
CERS INS	KY Ins. CERS Plan Index		2,598,289,134.02	100.00	-0.50	-0.90	4.77	4.65	4.77	4.65	5.91	4.04	5.04	5.09	7.73	7.53	7.04	7.46	4.94	5.07	7.30	7.60
CERS-H INS	KY Ins. CERS Haz Plan Index		1,357,296,340.37	100.00	-0.42	-0.90	4.77	4.65	4.77	4.65	3.81	4.04	5.36	5.09	7.76	7.53	7.06	7.46	4.95	5.07	7.31	7.60
SPRS INS	KY Ins. SPRS Plan Index		207,683,947.40	100.00	-0.38	-0.90	4.84	4.65	4.84	4.65	4.24	4.04	5.50	5.09	7.83	7.52	7.10	7.47	4.96	5.07	7.32	7.60





Kentucky Retirement Systems

# Security Litigation Report

Quarter Ending: September 30, 2020

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Claims Filed during the Quarter (pg 3):

**9**

Proceeds Received during the Quarter (pg 4):

**\$69,651.32**

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Special Called Investment Committee Meeting - Addendum - Standard Reports

<b>Kentucky Retirement Systems</b>	
Quarterly Securities Litigation Report	
Quarter Ended 09/30/20	
<b>Total Claims Filed</b>	
No Claim on File	9
Fiscal Year 1997	1
Fiscal Year 1998	2
Fiscal Year 1999	5
Fiscal Year 2000	9
Fiscal Year 2001	8
Fiscal Year 2002	33
Fiscal Year 2003	45
Fiscal Year 2004	38
Fiscal Year 2005	89
Fiscal Year 2006	150
Fiscal Year 2007	70
Fiscal Year 2008	73
Fiscal Year 2009	85
Fiscal Year 2010	65
Fiscal Year 2011	69
Fiscal Year 2012	54
Fiscal Year 2013	48
Fiscal Year 2014	65
Fiscal Year 2015	80
Fiscal Year 2016	224
Fiscal Year 2017	140
Fiscal Year 2018	74
Fiscal Year 2019	55
Fiscal Year 2020	42
Fiscal Year 2021	9
<b>Total Filed</b>	<b>1,542</b>
<b>Proceeds Received</b>	
Fiscal Year 1998	\$67,682
Fiscal Year 1999	\$233,370
Fiscal Year 2000	\$303,918
Fiscal Year 2001	\$415,502
Fiscal Year 2002	\$387,318
Fiscal Year 2003	\$519,059
Fiscal Year 2004	\$1,080,920
Fiscal Year 2005	\$1,645,440
Fiscal Year 2006	\$797,535
Fiscal Year 2007	\$5,398,363
Fiscal Year 2008	\$5,402,336
Fiscal Year 2009	\$3,504,682
Fiscal Year 2010	\$2,776,544
Fiscal Year 2011	\$1,292,484
Fiscal Year 2012	\$468,657
Fiscal Year 2013	\$1,070,427
Fiscal Year 2014	\$308,704
Fiscal Year 2015	\$23,639,565
Fiscal Year 2016	\$2,417,957
Fiscal Year 2017	\$1,886,532
Fiscal Year 2018	\$2,247,966
Fiscal Year 2019	\$1,702,272
Fiscal Year 2020	\$1,743,474
Fiscal Year 2021	\$69,351
<b>Total Proceeds</b>	<b>\$59,380,060</b>

## Special Called Investment Committee Meeting - Addendum - Standard Reports

Class Action Name	TNT Status Code	Status as of Date	Class Period Start Date	Class Period End Date	Class Account Id	Claimed Account Name
FIRST SOLAR, INC.	FILED	6/24/2020	4/30/2008	2/28/2012	KR2F1902002	S&P 500 INDEX
FIRST SOLAR, INC.	FILED	6/24/2020	4/30/2008	2/28/2012	KR3F1902002	S&P 500 INDEX
FIRST SOLAR, INC.	FILED	6/24/2020	4/30/2008	2/28/2012	KR2F1901002	STATE STREET TRANSITION
HD SUPPLY HOLDINGS, INC.	FILED	7/7/2020	11/9/2016	6/5/2017	956768	KRS INS WESTFIELD CAPITAL
HD SUPPLY HOLDINGS, INC.	FILED	7/7/2020	11/9/2016	6/5/2017	956591	KRS WESTFIELD CAPITAL
Collins & Aikman Corp. (2007) (SEC Fair Fund)	FILED	7/8/2020	2/20/2002	5/17/2005	KR2F1002002	NTGI STRUCTURED
COLLINS & AIKMAN CORP(2007)(SEC FAIR FD)	FILED	7/9/2020	2/19/2002	8/15/2005	2602408	ZZ*KRS PEN NTGI STRUCTURED SM-
EQUIFAX INC. (N.D. GA.)	FILED	7/15/2020	2/25/2016	9/15/2017	956596	KRS KRS INTERNAL EQUITY
EQUIFAX INC. (N.D. GA.)	FILED	7/15/2020	2/25/2016	9/15/2017	956772	KRS INS KRS INTERNAL EQUITY
EQUIFAX INC. (N.D. GA.)	FILED	7/15/2020	2/25/2016	9/15/2017	956599	KRS S P 500 INDEX
HENRY SCHEIN, INC.	FILED	8/26/2020	3/7/2013	2/12/2018	956599	KRS S P 500 INDEX
HENRY SCHEIN, INC.	FILED	8/26/2020	3/7/2013	2/12/2018	956596	KRS KRS INTERNAL EQUITY
HENRY SCHEIN, INC.	FILED	8/27/2020	3/7/2013	2/12/2018	KR3F1011002	KRS INTERNAL EQUITY
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR3F2008002	LAZARD ASSET MGMT
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR3F1003002	SYSTEMATIC
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR3F1011002	KRS INTERNAL EQUITY
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR3F1006002	WESTFIELD CAPITAL
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR2F2008002	LAZARD ASSET MGMT
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	956599	KRS S P 500 INDEX
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	956766	KRS INS SYSTEMATIC
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	956774	KRS INS S P 500 INDEX
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR2F1003002	SYSTEMATIC
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR2F1006002	WESTFIELD CAPITAL
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR2F1011002	KRS INTERNAL EQUITY
SIGNET JEWELERS LIMITED (2016)	FILED	8/27/2020	8/29/2013	5/25/2017	KR2F1902002	S&P 500 INDEX
DESARROLLADORA HOMEX	FILED	9/1/2020	4/27/2012	8/3/2016	KEN04	KRS PEN BOSTON CO NON-US VALUE
DESARROLLADORA HOMEX	FILED	9/1/2020	4/27/2012	8/3/2016	KEN05	KRS INSURANCE TRANSITION AC
DESARROLLADORA HOMEX	FILED	9/1/2020	4/27/2012	8/3/2016	KEN06	KRS INS BOSTON CO NON-US VALUE
INSYS THERAPEUTICS, INC. (2016)	FILED	9/8/2020	3/3/2015	1/25/2016	KR3F1002002	NTGI STRUCTURED
INSYS THERAPEUTICS, INC. (2016)	FILED	9/8/2020	3/3/2015	1/25/2016	KR2F1002002	NTGI STRUCTURED
SCANA Corporation (2017)(D.S.C)	FILED	9/23/2020	10/27/2015	12/20/2017	956599	KRS S P 500 INDEX
SCANA Corporation (2017)(D.S.C)	FILED	10/22/2020	10/27/2015	12/20/2017	956772	KRS INS KRS INTERNAL EQUITY
SCANA Corporation (2017)(D.S.C)	FILED	10/22/2020	10/27/2015	12/20/2017	956596	KRS KRS INTERNAL EQUITY

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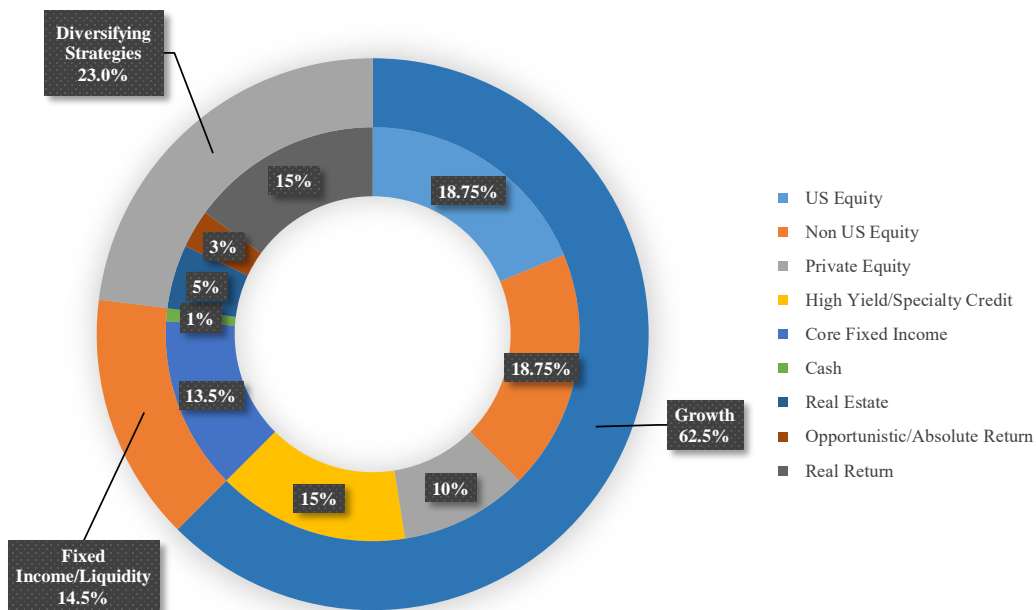
**Kentucky Retirement Systems (KRS)**  
 Fiscal Year 2021 Investment Policy Performance Review  
 For the Quarter Ended September 30, 2020

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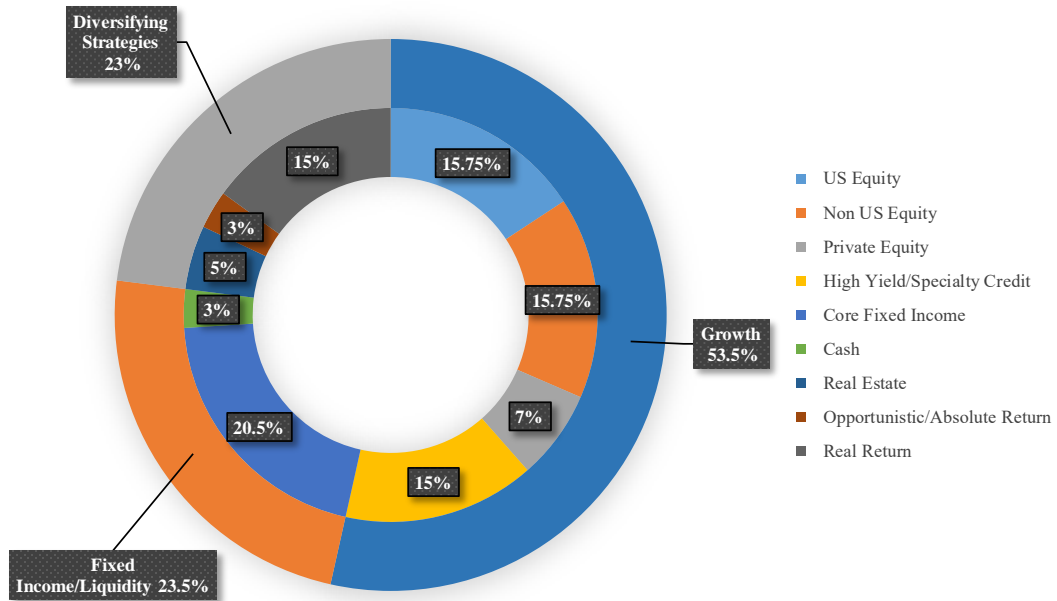
**Asset Allocations**

The Investment Committee recognizes asset allocation as an investment strategy where apportioning resources across asset classes may temper volatility and risk. Portfolio diversification is important because risk tolerance is not the same for all plans. Therefore, each system has been studied and asset allocation guidelines have been established on a fund-by-fund basis. For example, KERS and SPRS are more risk averse because of funding levels compared to CERS, CERS-H, and KERS-H. The former are overweight in Fixed Income/Liquidity to balance the risks associated with the Growth strategy, which includes publicly traded equities, high yield credit, and private equity.

**Figure 1: CERS, CERS-H, and KERS-H Target Asset Allocations**



**Figure 2: KERS and SPRS Target Asset Allocations**



## Investment Objectives and Rates of Return

KRS' returns are measured on a rolling basis and should exceed the return rates of comparable passive market indices. All allocations, ranges, and assumed rates of return are based on actuarial assumptions that went into effect July 12, 2017. The following definitions of short-term and long-term rates of return can be found in KRS' Investment Policy Statement.<sup>1</sup>

Short-Term Rate of Return: defined as a period shorter than the defined long-term period, typically considered as a full market cycle lasting three years. For more information, see the individual portfolio information included in the monthly update.<sup>2</sup>

Long-Term Rate of Return: defined as a period exceeding twenty years. In the long-term, KRS' total assets should achieve a return which exceeds the actuarially required rate of return of each plan. In addition to exceeding the actuarially required rate of return, the total fund return should exceed the return achieved by its blended performance benchmark.

The table below displays the market value, percent ownership of the total market value, rate of return, and index for each plan for the fourth quarter of fiscal year 2020.

KRS Pension Fund Market Values and Returns					
For the Quarter Ended September 30, 2020					
	Market Value	% of Total	Index	Return	Performance
CERS	\$7,336,507,833	55.28%	4.87	4.90	Above Target
CERS-H	\$2,478,858,924	18.68%	4.87	4.89	Above Target
KERS	\$2,428,621,576	18.30%	4.19	4.72	Above Target
KERS-H	\$728,646,124	5.49%	4.87	4.90	Above Target
SPRS	\$299,209,957	2.25%	4.19	4.46	Above Target

<sup>1</sup>Kentucky Retirement Systems, "Statement of Investment Policy." Adopted on July 12, 2017 Available at: <https://kyret.ky.gov/Investments/Investment%20Policies/KRS%20Investment%20Policy%20Statement%20JULY%2012%202017.pdf>

<sup>2</sup> KRS Monthly Staff Performance Reports available at: <https://kyret.ky.gov/Investments/Investments-Library/Pages/Monthly%20Performance%20Updates.aspx>.

## Special Called Investment Committee Meeting - Addendum - Standard Reports

The table below shows 1-Year returns for each of KRS' plans and KRS in total.

<b>KRS Pension Fund FY2020 Returns by Plan</b>				
<b>For the Quarter Ended September 30, 2020</b>				
<b>Fund</b>	<b>Benchmark</b>	<b>Index</b>	<b>Return</b>	<b>Performance</b>
<b>KRS 1-Year Return</b>	KRS Pension Blended Index	4.23	4.73	Above Target
<b>CERS 1-Year Return</b>	CERS Pension Plan Tactical Index	4.37	4.49	Above Target
<b>CERS-H 1-Year Return</b>	CERS-H Pension Plan Tactical Index	4.37	4.39	Above Target
<b>KERS 1-Year Return</b>	KERS Pension Plan Tactical Index	4.24	5.69	Above Target
<b>KERS-H 1-Year Return</b>	KERS-H Pension Plan Tactical Index	4.37	4.59	Above Target
<b>SPRS 1-Year Return</b>	SPRS Pension Plan Tactical Index	4.24	5.34	Above Target

## Special Called Investment Committee Meeting - Addendum - Standard Reports

The table below displays 10-Year and 30-Year returns for all plans.

<b>KRS Pension Fund Long-Term Returns</b>				
<b>For the Quarter Ended September 30, 2020</b>				
<b>Fund</b>	<b>Benchmark</b>	<b>Index</b>	<b>Return</b>	<b>Performance</b>
CERS 30-Year Return	KY Ret. CERS Plan Tactical	8.23	8.31	<b>Above Target</b>
CERS 10-Year Return	KY Ret. CERS Plan Tactical	7.13	7.13	<b>On Target</b>
CERS-H 30-Year Return	KY Ret. CERS Haz Plan Tactical	8.23	8.31	<b>Above Target</b>
CERS-H 10-Year Return	KY Ret. CERS Haz Plan Tactical	7.13	7.13	<b>On Target</b>
KERS 30-Year Return	KY Ret. KERS Plan Tactical	8.19	8.27	<b>Above Target</b>
KERS 10-Year Return	KY Ret. KERS Plan Tactical	7.00	7.01	<b>Above Target</b>
KERS-H 30-Year Return	KY Ret. KERS Haz Plan Tactical	8.23	8.31	<b>Above Target</b>
KERS-H 10-Year Return	KY Ret. KERS Haz Plan Tactical	7.13	7.13	<b>On Target</b>
SPRS 30-Year Return	KY Ret. SPRS Plan Tactical	8.18	8.23	<b>Above Target</b>
SPRS 10-Year Return	KY Ret. SPRS Plan Tactical	6.99	6.89	<b>Below Target</b>



Wilshire Consulting



# Asset Allocation Bucketing

KRS Pension Plan

Periods Ended As of *September 30, 2020*

	Actual		Target	Difference	
	\$	%		\$	%
<b>Growth</b>	<b>\$8,553,546,706</b>	<b>64.4%</b>	<b>60.9%</b>	<b>\$473,647,832</b>	<b>3.6%</b>
U.S. Equity	\$2,583,680,170	19.5%	18.3%	\$161,568,566	1.2%
Non-U.S. Equity	\$2,552,666,894	19.2%	18.3%	\$130,555,290	1.0%
Private Equity	\$1,120,309,401	8.4%	9.5%	-\$140,515,818	-1.1%
High Yield/Specialty Credit	\$2,296,890,241	17.3%	14.9%	\$322,039,793	2.4%
<b>Liquidity</b>	<b>\$2,847,955,018</b>	<b>21.5%</b>	<b>16.1%</b>	<b>\$707,206,515</b>	<b>5.3%</b>
Core Fixed Income	\$2,567,773,362	19.3%	14.9%	\$592,922,914	4.5%
Cash	\$280,181,656	2.1%	1.3%	\$114,283,601	0.9%
<b>Diversifying</b>	<b>\$1,870,342,682</b>	<b>14.1%</b>	<b>23.0%</b>	<b>-\$1,182,181,531</b>	<b>-8.9%</b>
Real Estate	\$575,319,463	4.3%	5.0%	-\$88,272,757	-0.7%
Real Return	\$789,797,111	6.0%	15.0%	-\$1,200,979,550	-9.0%
Absolute Return	\$505,226,108	3.8%	3.0%	\$107,070,776	0.8%

Wilshire Consulting

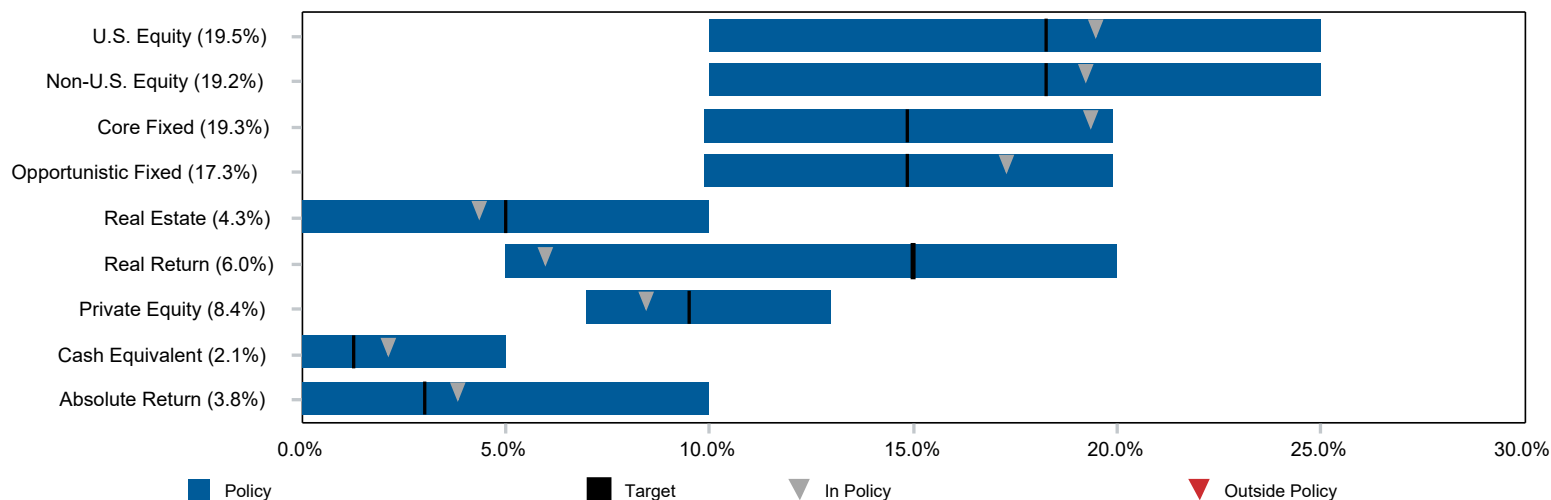


# Asset Allocation Compliance

KRS Pension Plan

Periods Ended As of September 30, 2020

## Executive Summary



	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	2,583,680,170	19.5	10.0	25.0	18.3	-161,568,566
Non-U.S. Equity	2,552,666,894	19.2	10.0	25.0	18.3	-130,555,290
Core Fixed	2,567,773,362	19.3	9.9	19.9	14.9	-593,586,506
Opportunistic Fixed	2,296,890,241	17.3	9.9	19.9	14.9	-322,703,385
Real Estate	575,319,463	4.3	0.0	10.0	5.0	88,272,757
Real Return	789,797,111	6.0	5.0	20.0	15.0	1,200,979,550
Private Equity	1,120,309,401	8.4	7.0	13.0	9.5	140,515,817
Cash Equivalent	280,181,656	2.1	0.0	5.0	1.3	-114,283,601
Absolute Return	505,226,108	3.8	0.0	10.0	3.0	-107,070,775
<b>Total Fund</b>	<b>13,271,844,406</b>	<b>100.0</b>			<b>100.0</b>	

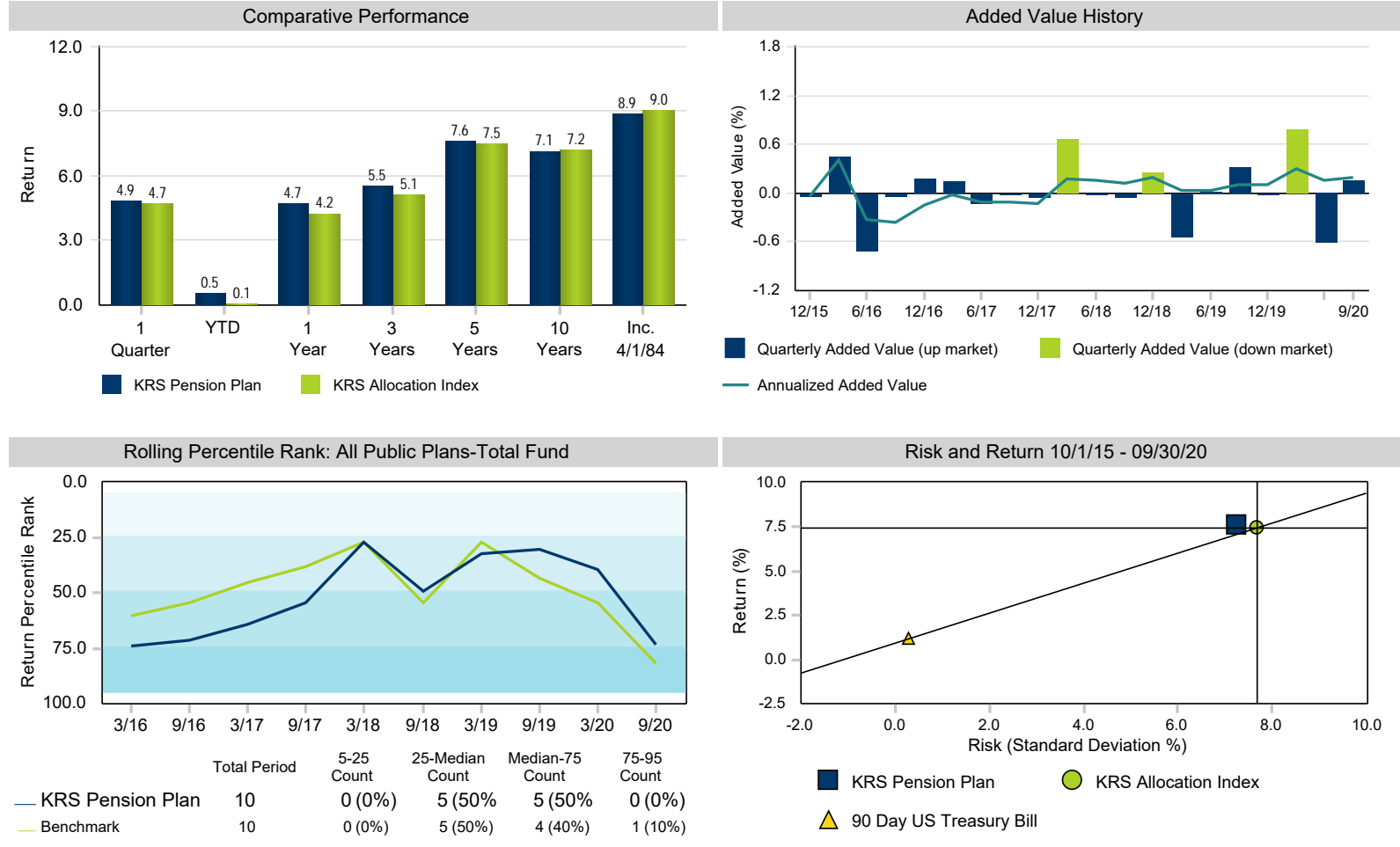
Wilshire Consulting



# Total Fund Summary

KRS Pension Plan

Periods Ended September 30, 2020

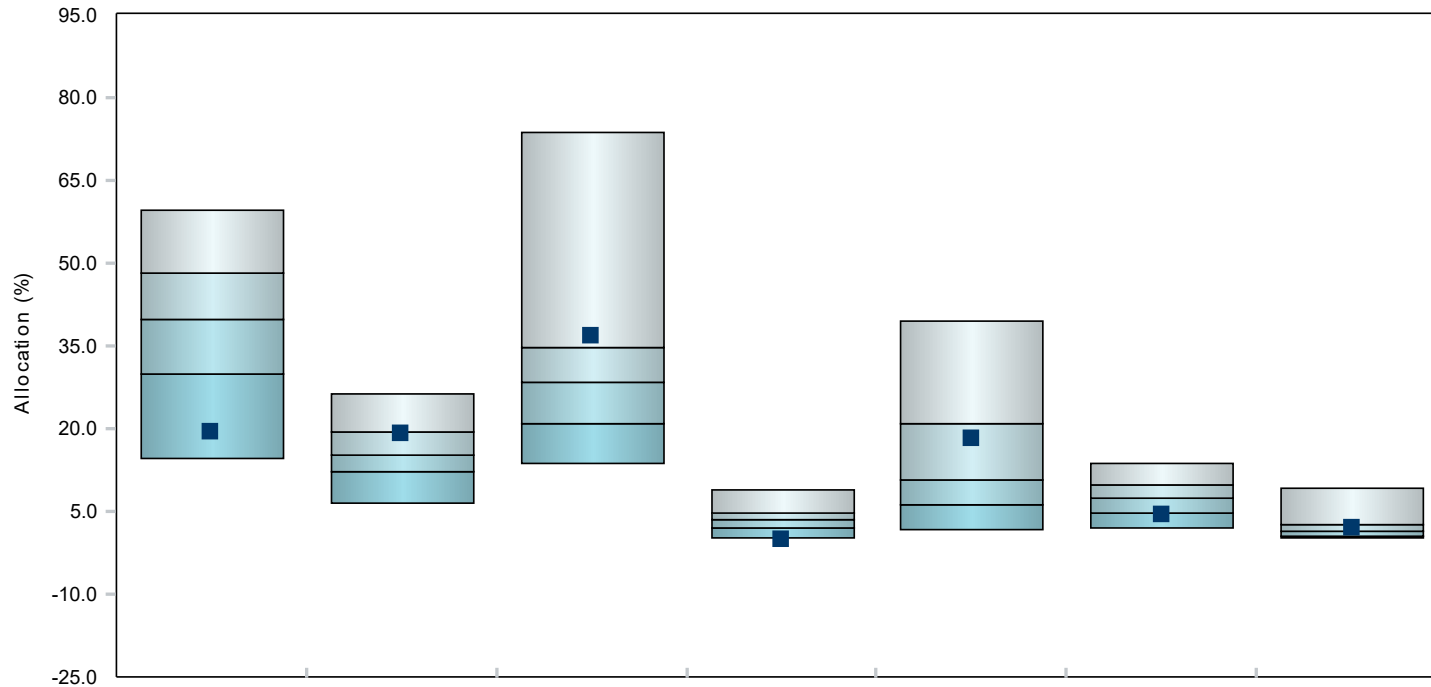


Wilshire Consulting



# Plan Sponsor TF Asset Allocation

KRS Pension Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



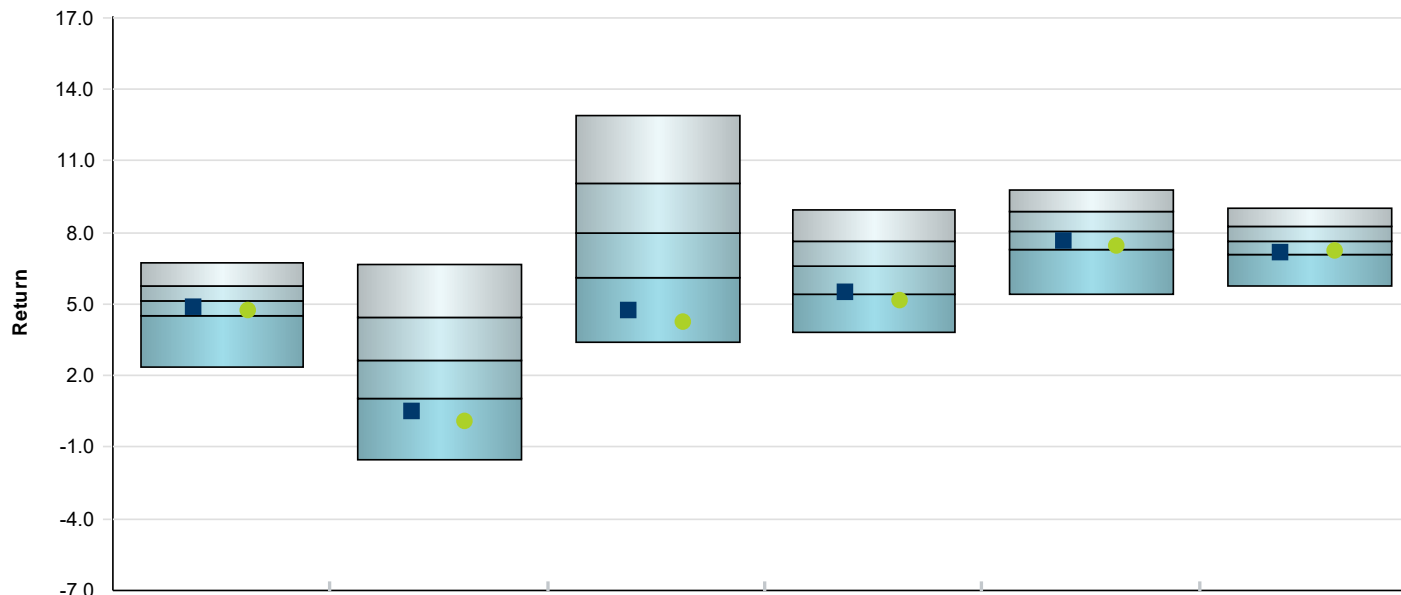
	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
■ KRS Pension Plan	19.47	19.23	36.65	0.00	18.20	4.33	2.11
5th Percentile	59.72	26.29	73.78	9.01	39.52	13.66	9.18
1st Quartile	48.30	19.53	34.60	4.61	20.92	9.65	2.62
Median	39.65	15.25	28.50	3.50	10.63	7.34	1.25
3rd Quartile	30.04	12.27	20.99	2.01	6.05	4.75	0.58
95th Percentile	14.70	6.45	13.76	0.07	1.74	1.98	0.08

Wilshire Consulting



# Plan Sponsor Peer Group Analysis

KRS Pension Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KRS Pension Plan	4.87 (61)	0.53 (81)	4.74 (88)	5.51 (73)	7.64 (64)	7.13 (72)
● KRS Allocation Index	4.72 (67)	0.05 (86)	4.24 (91)	5.13 (82)	7.45 (70)	7.24 (66)
5th Percentile	6.72	6.67	12.88	8.98	9.80	9.01
1st Quartile	5.75	4.43	10.07	7.61	8.87	8.28
Median	5.15	2.63	7.96	6.60	8.06	7.61
3rd Quartile	4.51	1.05	6.12	5.40	7.28	7.05
95th Percentile	2.33	-1.53	3.41	3.84	5.44	5.79
Population	397	396	394	377	352	284

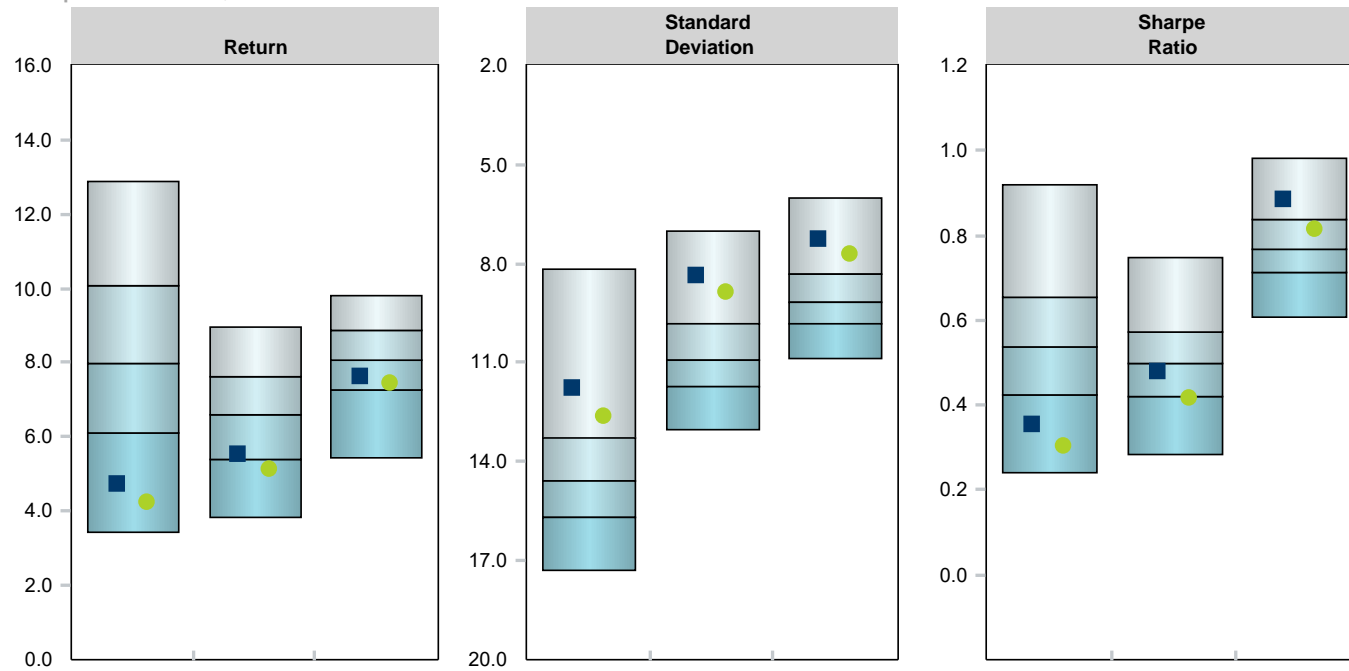
Parenttheses contain percentile rankings.  
 Calculation based on monthly periodicity.

Wilshire Consulting



# Plan Sponsor Peer Group Analysis - Multi Statistics

KRS Pension Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KRS Pension Plan	4.74 (88)	5.51 (73)	7.64 (64)	11.78 (12)	8.35 (7)	7.24 (7)	0.35 (86)	0.48 (58)	0.88 (14)
● KRS Allocation Index	4.24 (91)	5.13 (82)	7.45 (70)	12.65 (16)	8.88 (10)	7.69 (11)	0.30 (92)	0.42 (77)	0.81 (32)
5th Percentile	12.88	8.98	9.80	8.17	7.03	6.00	0.92	0.75	0.98
1st Quartile	10.07	7.61	8.87	13.27	9.83	8.33	0.65	0.57	0.84
Median	7.96	6.60	8.06	14.57	10.91	9.18	0.54	0.50	0.77
3rd Quartile	6.12	5.40	7.28	15.68	11.75	9.84	0.42	0.42	0.71
95th Percentile	3.41	3.84	5.44	17.31	13.01	10.88	0.24	0.28	0.61

Parenttheses contain percentile rankings.  
 Calculation based on monthly periodicity.

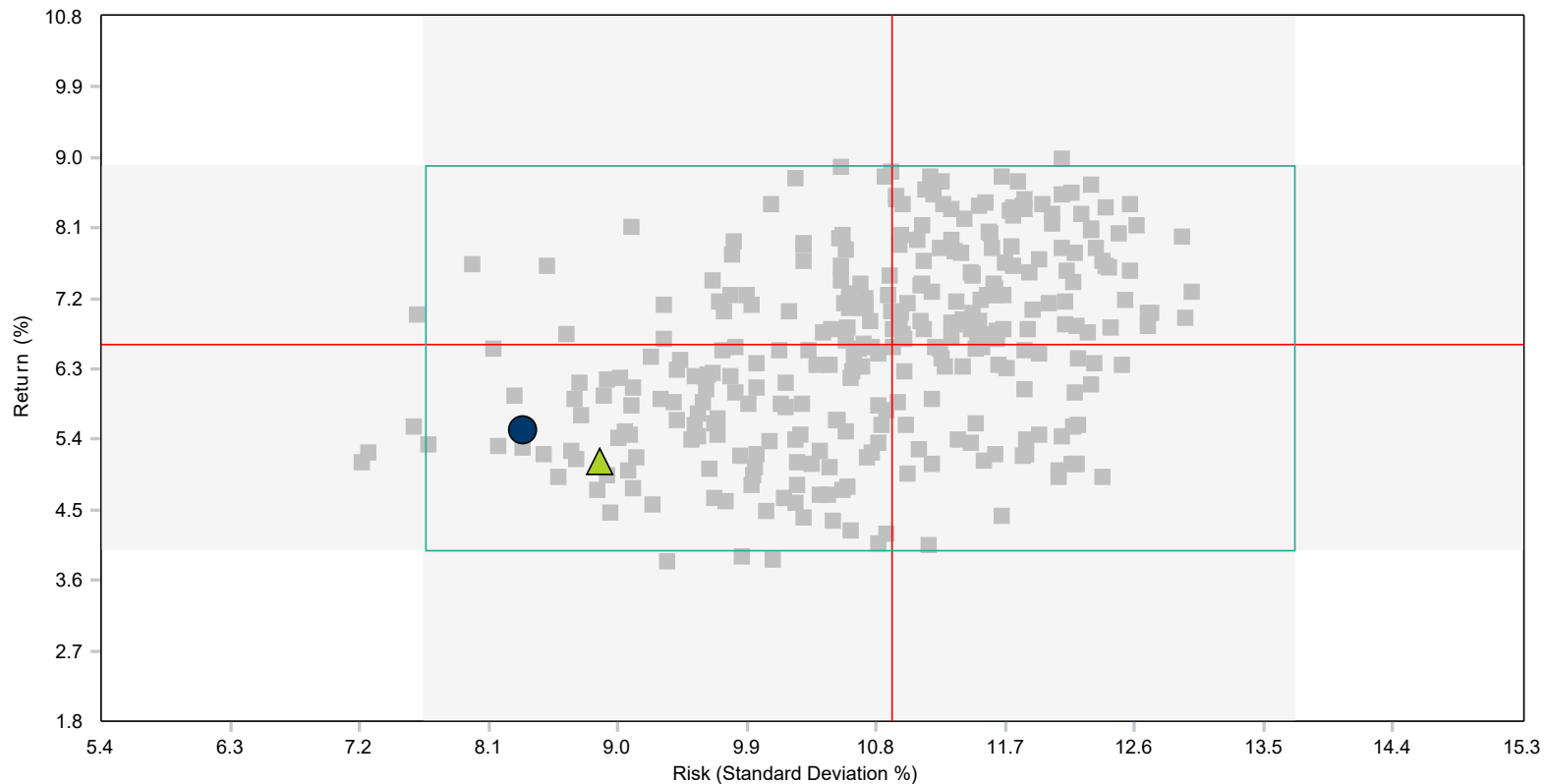
Wilshire Consulting



# Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended October 1, 2017 To September 30, 2020



	Return	Standard Deviation
● KRS Pension Plan	5.51	8.35
▲ KRS Allocation Index	5.13	8.88
— Median	6.60	10.91

Calculation based on monthly periodicity.



# KRS Insurance Plan



Wilshire Consulting



# Asset Allocation Bucketing

KRS Insurance Plan

Periods Ended As of September 30, 2020

	Actual		Target	Difference	
	\$	%		\$	%
<b>Growth</b>	<b>\$3,838,803,774</b>	<b>66.8%</b>	<b>62.5%</b>	<b>\$245,825,948</b>	<b>4.3%</b>
U.S. Equity	\$1,168,828,686	20.3%	18.8%	\$90,935,338	1.6%
Non-U.S. Equity	\$1,129,279,001	19.6%	18.8%	\$51,385,653	0.9%
Private Equity	\$517,344,161	9.0%	10.0%	-\$57,532,291	-1.0%
High Yield/Specialty Credit	\$1,023,351,926	17.8%	15.0%	\$161,037,248	2.8%
<b>Liquidity</b>	<b>\$1,086,956,580</b>	<b>18.9%</b>	<b>14.5%</b>	<b>\$253,385,724</b>	<b>4.4%</b>
Core Fixed Income	\$1,009,303,580	17.6%	13.5%	\$233,220,370	4.1%
Cash	\$77,653,000	1.4%	1.0%	\$20,165,355	0.4%
<b>Diversifying</b>	<b>\$823,004,168</b>	<b>14.3%</b>	<b>23.0%</b>	<b>-\$499,211,672</b>	<b>-8.7%</b>
Real Estate	\$242,914,014	4.2%	5.0%	-\$44,524,212	-0.8%
Real Return	\$338,649,643	5.9%	15.0%	-\$523,665,035	-9.1%
Absolute Return	\$241,440,511	4.2%	3.0%	\$68,977,575	1.2%

Wilshire Consulting

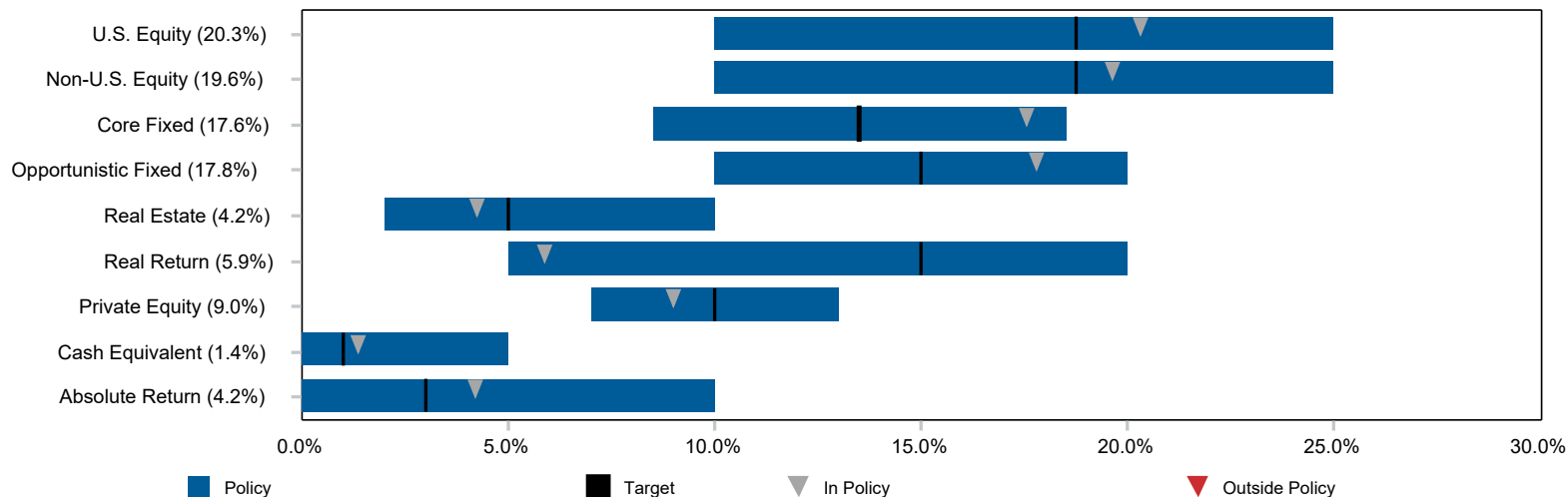


# Asset Allocation Compliance

KRS Insurance Plan

Periods Ended As of September 30, 2020

## Executive Summary



	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	1,168,828,686	20.3	10.0	25.0	18.8	-90,935,338
Non-U.S. Equity	1,129,279,001	19.6	10.0	25.0	18.8	-51,385,653
Core Fixed	1,009,303,580	17.6	8.5	18.5	13.5	-233,220,369
Opportunistic Fixed	1,023,351,926	17.8	10.0	20.0	15.0	-161,037,248
Real Estate	242,914,014	4.2	2.0	10.0	5.0	44,524,212
Real Return	338,649,643	5.9	5.0	20.0	15.0	523,665,036
Private Equity	517,344,161	9.0	7.0	13.0	10.0	57,532,291
Cash Equivalent	77,653,000	1.4	0.0	5.0	1.0	-20,165,355
Absolute Return	241,440,511	4.2	0.0	10.0	3.0	-68,977,576
<b>Total Fund</b>	<b>5,748,764,522</b>	<b>100.0</b>			<b>100.0</b>	

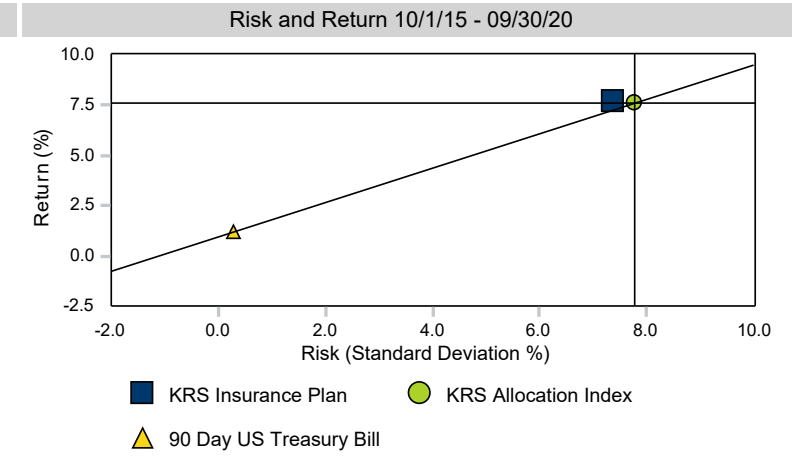
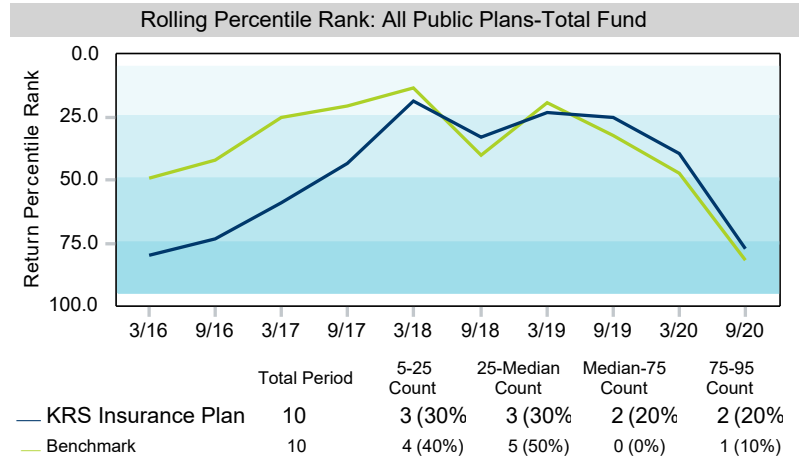
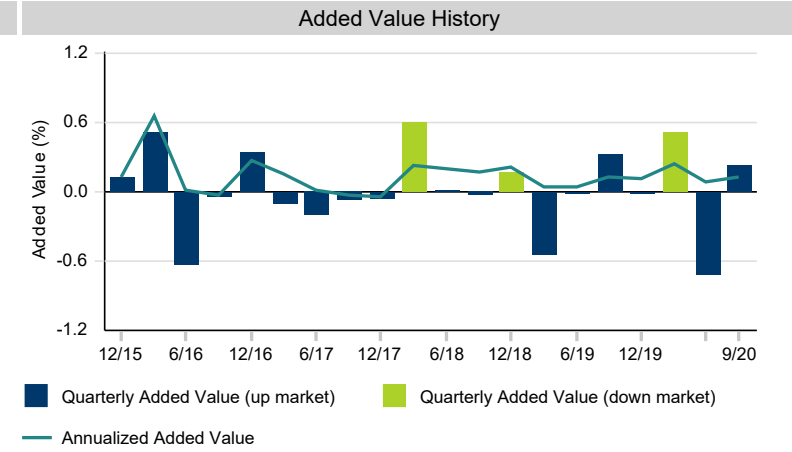
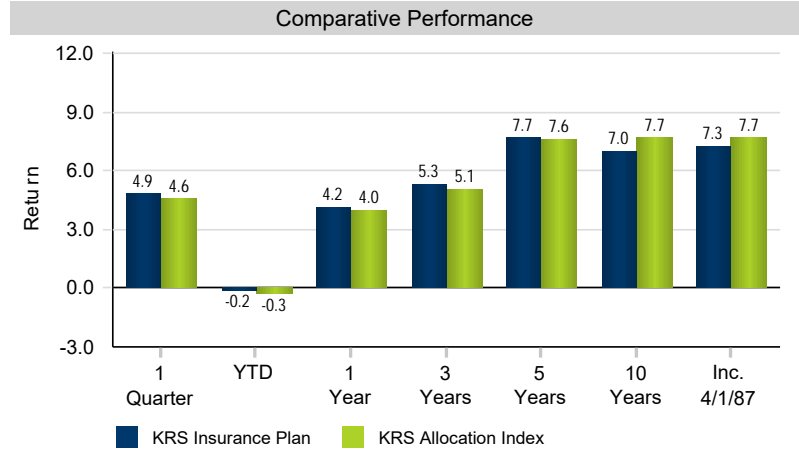
Wilshire Consulting



# Total Fund Summary

KRS Insurance Plan

Periods Ended September 30, 2020

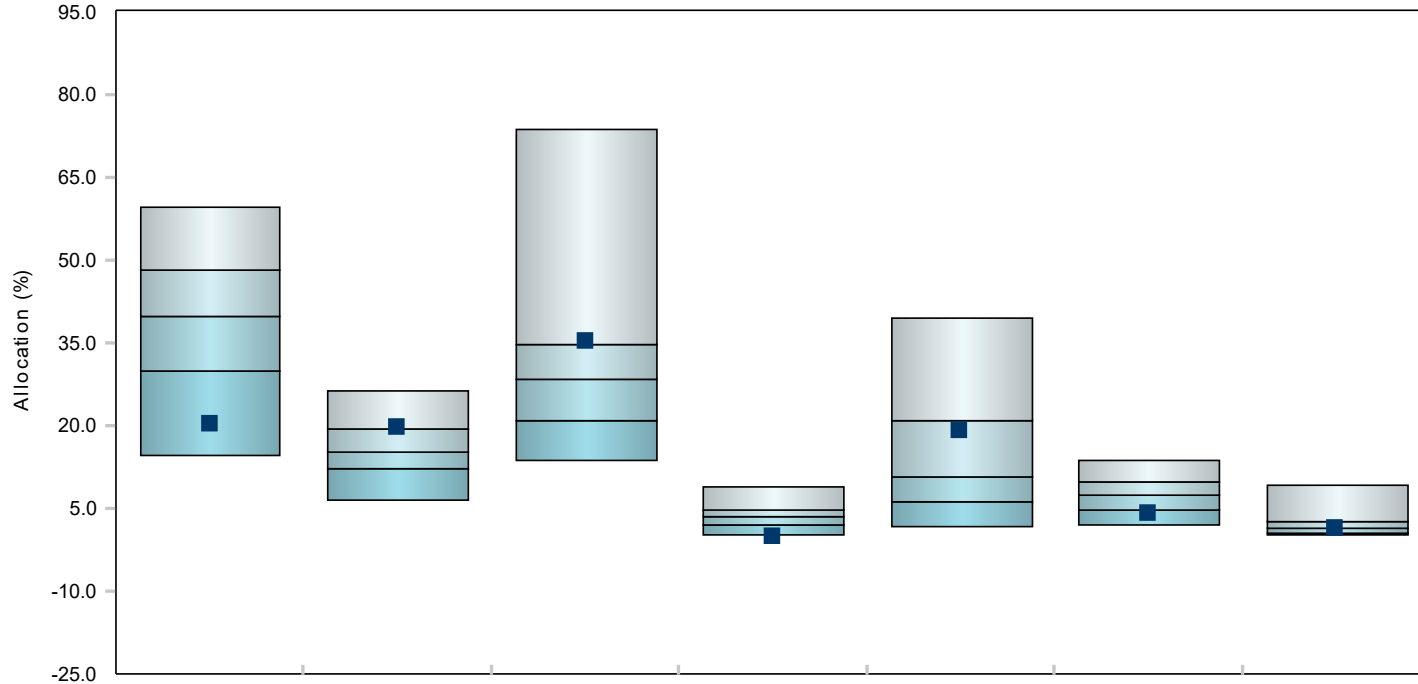


Wilshire Consulting



# Plan Sponsor TF Asset Allocation

KRS Insurance Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



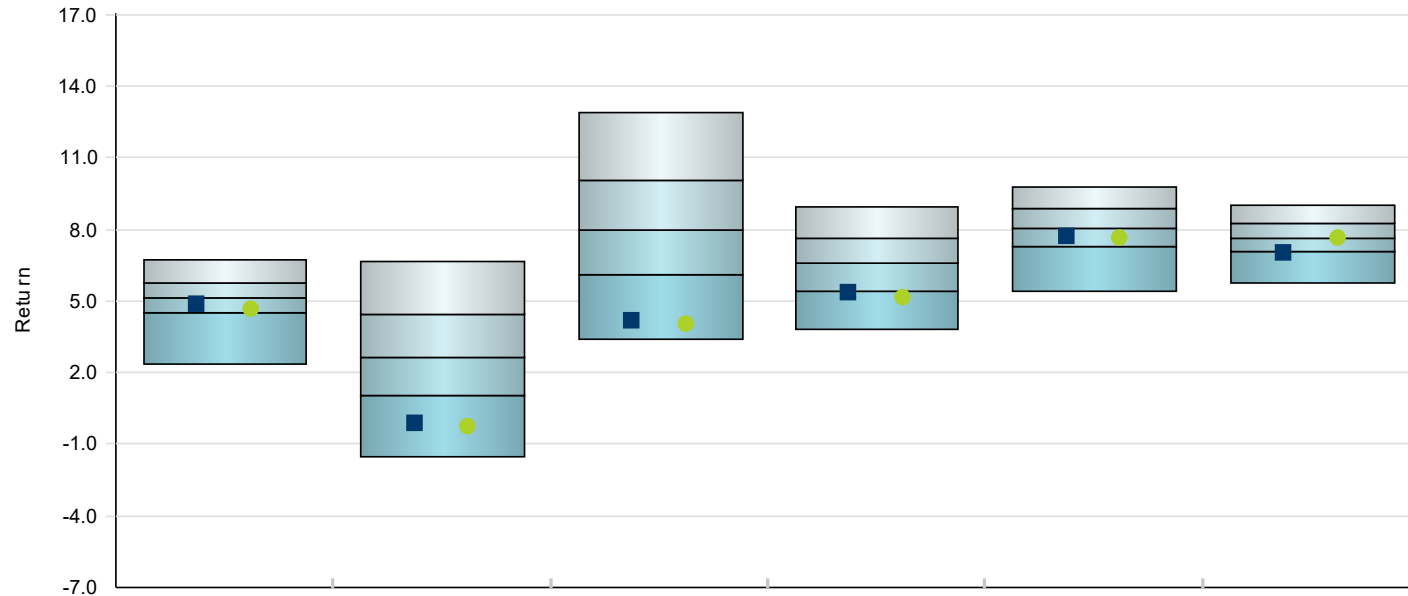
	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
■ KRS Insurance Plan	20.33	19.64	35.36	0.00	19.09	4.23	1.35
5th Percentile	59.72	26.29	73.78	9.01	39.52	13.66	9.18
1st Quartile	48.30	19.53	34.60	4.61	20.92	9.65	2.62
Median	39.65	15.25	28.50	3.50	10.63	7.34	1.25
3rd Quartile	30.04	12.27	20.99	2.01	6.05	4.75	0.58
95th Percentile	14.70	6.45	13.76	0.07	1.74	1.98	0.08

Wilshire Consulting



# Plan Sponsor Peer Group Analysis

KRS Insurance Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KRS Insurance Plan	4.85 (62)	-0.15 (88)	4.16 (92)	5.34 (77)	7.73 (61)	7.01 (78)
● KRS Allocation Index	4.62 (71)	-0.30 (89)	4.01 (93)	5.11 (82)	7.61 (66)	7.67 (47)
5th Percentile	6.72	6.67	12.88	8.98	9.80	9.01
1st Quartile	5.75	4.43	10.07	7.61	8.87	8.28
Median	5.15	2.63	7.96	6.60	8.06	7.61
3rd Quartile	4.51	1.05	6.12	5.40	7.28	7.05
95th Percentile	2.33	-1.53	3.41	3.84	5.44	5.79
Population	397	396	394	377	352	284

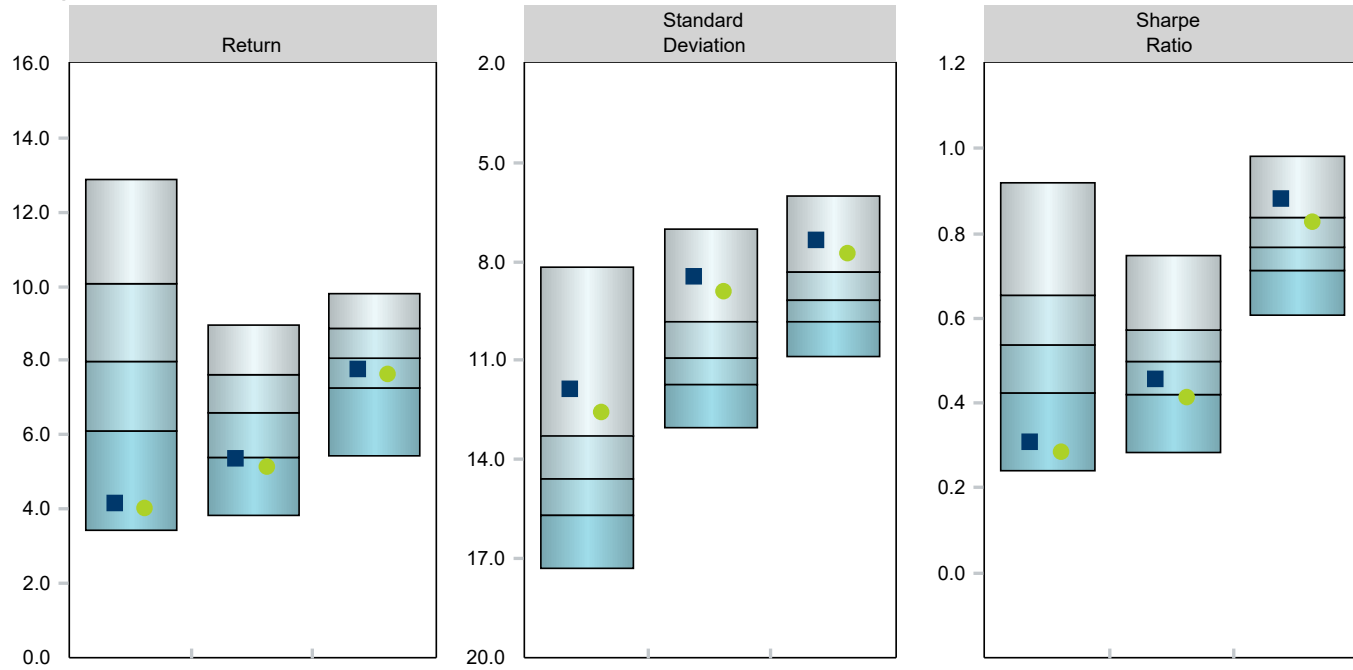
Parenttheses contain percentile rankings.  
 Calculation based on monthly periodicity.

Wilshire Consulting



# Plan Sponsor Peer Group Analysis - Multi Statistics

KRS Insurance Plan vs All Public Plans-Total Fund  
 Periods Ended September 30, 2020



	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KRS Insurance Plan	4.16 (92)	5.34 (77)	7.73 (61)	11.86 (12)	8.45 (7)	7.38 (8)	0.31 (91)	0.46 (67)	0.88 (14)
● KRS Allocation Index	4.01 (93)	5.11 (82)	7.61 (66)	12.58 (16)	8.90 (10)	7.77 (13)	0.29 (93)	0.41 (77)	0.83 (29)
5th Percentile	12.88	8.98	9.80	8.17	7.03	6.00	0.92	0.75	0.98
1st Quartile	10.07	7.61	8.87	13.27	9.83	8.33	0.65	0.57	0.84
Median	7.96	6.60	8.06	14.57	10.91	9.18	0.54	0.50	0.77
3rd Quartile	6.12	5.40	7.28	15.68	11.75	9.84	0.42	0.42	0.71
95th Percentile	3.41	3.84	5.44	17.31	13.01	10.88	0.24	0.28	0.61

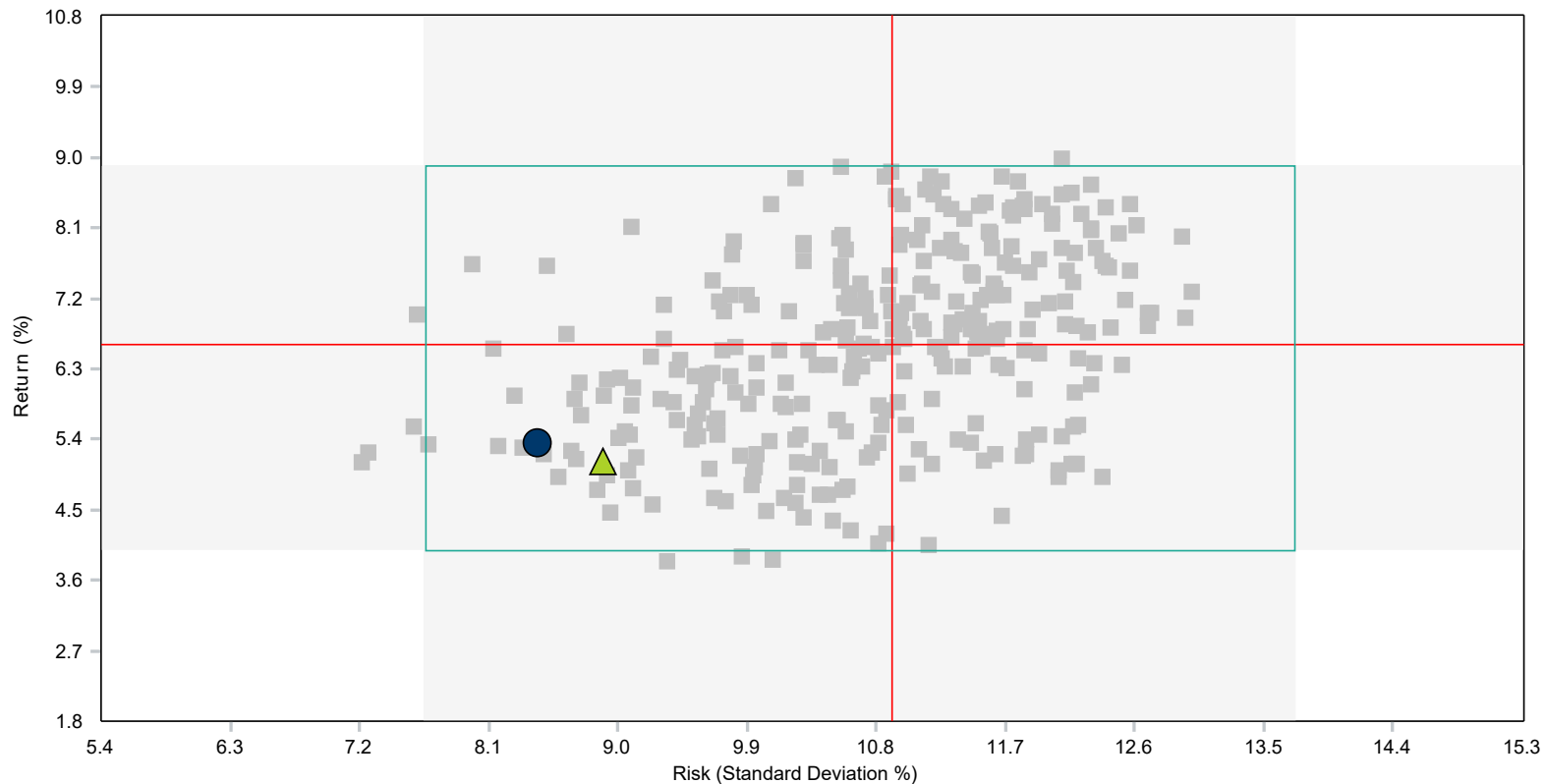
Parenttheses contain percentile rankings.  
 Calculation based on monthly periodicity.

Wilshire Consulting



# Plan Sponsor Scattergram

KRS Insurance Plan vs All Public Plans-Total Fund  
 Periods Ended October 1, 2017 To September 30, 2020



	Return	Standard Deviation
● KRS Insurance Plan	5.34	8.45
▲ KRS Allocation Index	5.11	8.90
— Median	6.60	10.91

Calculation based on monthly periodicity.

Investment Fees and Expenses						
For the Year Ended September 30, 2020						
Pension						
	2021			2020		
	FYTD Fees	% of MV	Market Value	FYTD Fees	% of MV	Market Value
<b>Absolute Return</b>	\$ 155,705	0.10%	\$ 156,595,138	\$ 232,262	0.11%	\$ 204,193,864
Investment Advisory Fees	155,705			240,123		
Performance Fees				(7,861)		
Miscellaneous Fees and Expenses						
<b>Core Fixed Income</b>	733,578	0.03%	2,567,773,367	730,873	0.03%	2,341,871,106
Investment Advisory Fees	722,512			724,163		
Performance Fees				-		
Miscellaneous Fees and Expenses	11,066			6,710		
<b>Opportunistic</b>	649,415	0.19%	348,630,970	566,352	0.41%	139,104,289
Investment Advisory Fees				566,352		
Performance Fees	649,415			-		
Miscellaneous Fees and Expenses						
<b>Private Equity</b>	10,317,788	0.92%	1,120,309,401	10,097,740	0.88%	1,153,844,068
Investment Advisory Fees	5,337,767			2,448,737		
Performance Fees	4,237,753			5,070,080		
Miscellaneous Fees and Expenses	742,268			2,578,923		
<b>Public Equity</b>	2,872,890	0.06%	5,136,347,064	2,218,253	0.05%	4,867,211,185
Investment Advisory Fees	2,749,937			2,102,620		
Miscellaneous Fees and Expenses	122,953			115,633		
<b>Real Estate</b>	(1,596,844)	-0.28%	575,319,463	6,710,740	1.23%	547,646,427
Investment Advisory Fees	973,432			1,247,256		
Performance Fees	(3,019,709)			5,084,005		
Miscellaneous Fees and Expenses	449,432			379,478		
<b>Real Return</b>	1,069,149	0.14%	789,797,111	1,870,567	0.17%	1,106,599,987
Investment Advisory Fees	957,992			1,073,768		
Performance Fees	26,635			224,542		
Miscellaneous Fees and Expenses	84,522			572,258		
<b>Specialty Credit Fixed Income</b>	7,994,980	0.35%	2,296,890,241	5,134,568	0.25%	2,053,123,323
Investment Advisory Fees	3,565,331			3,117,266		
Performance Fees	4,279,933			1,362,169		
Miscellaneous Fees and Expenses	149,716			655,133		
<b>Cash</b>	567,832	0.20%	280,543,179	894,717	0.18%	488,488,198
Consulting				217,711		
Trustee	395,964			301,798		
Miscellaneous Fees and Expenses	171,869			375,208		
*Both FY20 and FY21 Real Estate fees reflect the Prologis adjustment made in June 2020*						
<b>Total Investment Mgmt Fees</b>	<b>22,764,494</b>	<b>0.17%</b>	<b>13,272,205,934</b>	<b>28,456,071</b>	<b>0.22%</b>	<b>12,902,082,447</b>

KENTUCKY RETIREMENT SYSTEMS						
Investment Fees and Expenses						
For the Year Ended September 30, 2020						
Insurance						
	2021			2020		
	FYTD Fees	% of MV	Market Value	FYTD Fees	% of MV	Market Value
<b>Absolute Return</b>	\$ 62,407	0.10%	\$ 63,915,474	\$ 94,313	0.11%	\$ 83,663,076
Investment Advisory Fees	62,407			97,236		
Performance Fees				(2,923)		
Miscellaneous Fees and Expenses						
<b>Core Fixed Income</b>	306,612	0.03%	1,009,303,589	309,986	0.03%	999,540,816
Investment Advisory Fees	302,521			306,854		
Performance Fees				-		
Miscellaneous Fees and Expenses	4,091			3,131		
<b>Opportunistic</b>	330,687	0.19%	177,525,037	288,389	0.41%	70,832,760
Investment Advisory Fees	330,687					
Performance Fees				288,389		
Miscellaneous Fees and Expenses						
<b>Private Equity</b>	6,117,871	1.18%	517,344,161	5,380,282	0.97%	554,094,931
Investment Advisory Fees	1,998,482			2,139,366		
Performance Fees	3,937,310			3,293,822		
Miscellaneous Fees and Expenses	182,079			(52,906)		
<b>Public Equity</b>	1,276,657	0.06%	2,298,110,875	917,480	0.04%	2,165,430,192
Investment Advisory Fees	1,237,579			866,568		
Miscellaneous Fees and Expenses	39,078			50,912		
<b>Real Estate</b>	(586,613)	-0.24%	242,914,014	2,787,805	1.23%	227,114,222
Investment Advisory Fees	436,720			539,323		
Performance Fees	(1,205,411)			2,021,339		
Miscellaneous Fees and Expenses	182,079			227,143		
<b>Real Return</b>	421,509	0.12%	338,649,643	777,604	0.17%	469,151,091
Investment Advisory Fees	387,129			453,197		
Performance Fees	(641)			74,847		
Miscellaneous Fees and Expenses	35,021			249,561		
<b>Specialty Credit Fixed Income</b>	3,270,211	0.32%	1,023,351,926	2,271,502	0.27%	849,707,888
Investment Advisory Fees	1,612,681			1,113,562		
Performance Fees	1,588,744			840,793		
Miscellaneous Fees and Expenses	68,786			317,147		
<b>Cash</b>	387,863	0.50%	77,888,632	416,786	0.46%	90,774,029
Consulting				92,821		
Trustee	291,779			207,655		
Miscellaneous Fees and Expenses	96,084			116,310		
*Both FY20 and FY21 Real Estate fees reflect the Prologis adjustment made in June 2020*						
<b>Total Investment Mgmt Fees</b>	<b>\$ 11,587,205</b>	<b>0.20%</b>	<b>5,749,003,351</b>	<b>\$ 13,244,147</b>	<b>0.24%</b>	<b>5,510,309,004</b>





## Kentucky Retirement Systems

Investment Policy Statement  
Adopted November 12, 2020

This Investment Policy Statement (“IPS”) is issued by the Board of Trustees (“Board” or “Trustees”) of the Kentucky Retirement Systems (“KRS”) in connection with investing the pension and insurance trust funds (“Funds”) of the Kentucky Employees Retirement Systems (“KERS”), the County Employees Retirement Systems (“CERS”) and the State Police Retirement System (“SPRS”), jointly referred to as “Systems”. This document supersedes all prior documents entitled Statement of Investment Policy or Investment Policy Statement.

### I. Introduction

#### A. Purpose

The purpose of this IPS is to define the framework for investing the assets (“Portfolio”) of the Systems. This IPS is intended to provide general principles for establishing the goals of the Systems, the allocation of assets, employment of outside asset management, and monitoring the results of the Plan.

The pension plans administered by KRS are “Qualified Pension Plans” under Section 401(a) of the Internal Revenue Code. Additionally, Kentucky Revised Statutes 61.701 establishes health insurance benefits to recipients of KERS, CERS and SPRS. Kentucky Revised Statutes 61.702 provides that all amounts necessary to provide for insurance benefits shall be paid to the insurance fund. The Board shall administer the insurance trust fund in the same manner as the pension trust funds.

#### B. Philosophy

The Trustees of KRS recognize their fiduciary duty not only to invest the Systems' funds in formal compliance with the Prudent Person Rule but also to manage those funds in continued recognition of the basic long-term nature of the Systems. The Trustees interpret this to mean, in addition to the specific guidelines and restrictions set forth in the law and this document, that the assets of the Systems shall be proactively managed -- that is, investment decisions regarding the particular asset classes, strategies, and securities to be purchased or sold shall be the result of the conscious exercise of discretion.

The Trustees recognize that asset allocation is the primary driver of long-term investment performance, and will therefore review asset allocation and asset-liability studies on a regular basis as outlined in Section III of this document. The Asset Allocation Guidelines represents a strategic decision, with the primary aim that the portfolios meet their performance objectives in the long- term but understanding that they may not necessarily every year.

The Trustees recognize that there is generally an inverse relationship between market efficiency, and the ability for active management to produce alpha. Therefore, investments in efficient markets, such as U.S. Large-Cap Equity and Core Fixed Income, will be made using index or index-like investments with the goal of replicating index returns with low management fees. Active management will be pursued in less efficient markets, such as U.S. Small-Cap Equity and High

Yield/Specialty Credit mandates, accepting higher tracking error and paying higher management fees with the expectation of producing excess returns over the long term. This focuses Office of Investments' ("Staff") and consultant(s) efforts on identifying, selecting, and monitoring managers, as well as the overall management fees paid, in the areas of the market most likely to produce excess returns.

The Trustees recognize that, commensurate with their overall objective of maximizing long-range return while maintaining a high standard of portfolio quality and consistency of return, it is necessary that proper diversification of assets be maintained both across and within the classes of securities held to minimize/mitigate overall portfolio risk. Consistent with carrying out their Fiduciary Responsibilities and the concept of Modern Portfolio Theory, the Trustees will not systematically exclude any investments in companies, industries, countries, or geographic areas unless required to do so by statute. Within this context of proactive management and the necessity for adherence to proper diversification, the Trustees rely upon appropriate professional advice from multiple service providers.

## II. Responsibilities

The Trustees and other fiduciaries shall discharge their duties with respect to the Systems: (1) solely in the interest of the participants and beneficiaries; (2) for the exclusive purpose of providing benefits to participants and beneficiaries; (3) with the care, skill and caution under the circumstances then prevailing which a prudent person acting in a like capacity and familiar with those matters would use in the conduct of an activity of like character and purpose; (4) impartially; (5) incurring and paying appropriate and reasonable expenses of administration which may not necessarily be the lowest and (6) in accordance with a good faith interpretation of the laws, regulations and other instruments governing KRS and the Systems.

Additionally, the Trustees and other fiduciaries shall not engage in any transaction which results in a substantial diversion of the Systems income or assets without adequate security and reasonable rate of return to a disqualified person or in any other prohibited transaction described in Internal Revenue Code Section 503(b).

### A. Board of Trustees

The Investment Committee is created by Kentucky Revised Statutes 61.650 and the Board as set forth in the Board's Statement of Bylaws and Committee Organization. The Chair authorizes and directs the appointment of an Investment Committee with full power to act for the Board in the acquisition, sale and management of the securities and funds of the Systems in accordance with the provisions of any applicable statutes, and policies of the Board. The Investment Committee has the power to act on behalf of the Board on all investment related matters, including the acquisition, sale, safeguarding, monitoring and management of the assets, securities and funds of the Systems. The Board shall review and ratify the actions of the Investment Committee at the Board meeting following the Investment Committee meeting where such action was taken.

### B. Investment Committee

The Investment Committee consists of nine members of the Board. The members of the Investment Committee shall include the six (6) Trustees appointed by the Governor to the Board pursuant to Kentucky Revised Statutes 61.645(1)(e)(5), and three (3) Trustees chosen by the Board Chair. The Investment Committee acts on behalf of the Board on investment related matters.

The Investment Committee has the following oversight responsibilities:

- A. Assure compliance with this IPS and all applicable laws and regulations.
- B. Approve the selection and termination of service providers. If the need arises to terminate a manager between Board meetings, the Chief Investment Officer (“CIO”) will have discretion to do so after receiving approval from either the Board Chair or the Investment Committee Chair. The Investment Committee and the Board must be notified of the manager termination at the next scheduled Investment Committee and Board meetings.
- C. Meet no less than quarterly to evaluate whether this IPS, the investment activities and management controls and processes continue to be consistent in meeting the Systems' goals. Mandate actions necessary to maintain the overall effectiveness of the investment program.
- D. Review assessment of investment program management processes and procedures, and this IPS relative to meeting stated goals.

### C. Staff

The Chief Investment Officer is responsible for the administration of investment assets of the Systems consistent with the policies, guidelines and limits established by the law, the Board, and the Investment Committee.

The Chief Investment Officer receives direction from and reports to the Investment Committee on all investment matters, including but not limited to the following:

- i. Maintaining the diversification and risk exposure of the Funds consistent with policies and guidelines.
- ii. Assess and report on the performance and risk exposure of the overall investment program relative to goals, objectives, policies and guidelines.
- iii. Monitoring and assessing service providers to assure that they meet expectations and conform to policies and guidelines.
- iv. Recommend changes to service providers, statutes, policies or guidelines as needed to maintain a productive relationship between the investment program and its goals; act as liaison on all investment related matters.
- v. Identify issues for consideration by the Investment Committee and prepare recommendations or reports regarding such matters.
- vi. Preparing for each proposed investment a memo to the Investment Committee covering the pertinent details of the investment, including but not limited to: Amount of the investment, type of investment, purpose, opportunity/goal, risks, volatility assumptions, liquidity, structure, fees, background of investment firm with reasons for selection, list of other firms considered, which of the Systems will invest, and the reasons why a specific System may be excluded from the investment.

The Chief Investment Officer or designee is authorized to execute trades on fixed income and equity securities (including exchange-traded funds or “ETF’s”) and to execute proxies for the Board consistent with this IPS.

To carry out this IPS and any investment related decisions of the Board, the Executive Director, Chief Investment Officer or designee is authorized to execute agreements and other necessary or proper documents pertaining to investment managers, consultants, investment related transactions or other investment functions.

#### D. Investment Managers

In instances where the Investment Committee has determined it is desirable to employ the services of an external Investment Manager, the following shall be applicable:

- i. Investment Managers shall be qualified and agree to serve as a fiduciary to the Systems and should be of institutional quality as deemed by Staff in conjuncture with the investment consultant(s).
- ii. Investment Managers shall manage assets in accordance with this IPS and any additional guidelines established by contract, as may be modified in writing from time to time.
- iii. 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. Separate accounts or funds of one are not included in this 25% limitation for commingled products.
- iv. 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.
- v. All investment management services will be contracted according to the Investment Procurement Policy established by the Board.

#### E. Custody Bank

The Board shall hire custodians and other agents who will be fiduciaries to the Systems and who will assume responsibility for the safekeeping and accounting of all assets held on behalf of the Systems and other duties as agreed to by contract.

#### F. Investment Consultants

Qualified independent investment consultants may be retained by the Systems for asset allocation studies, asset allocation recommendations, performance reviews, manager searches and other investment related consulting functions and duties as set forth by contract.

#### G. Selection

Qualified investment managers, custody banks, investment consultants and other investment related service providers shall be selected by the Investment Committee in accordance with the IPS. The selection shall be based upon the demonstrated ability of the professional(s) to provide the required expertise or assistance described in the RFP/RFI (if utilized). In order to create an efficient and effective process, the Investment Committee or Chief Investment Officer may, in their sole discretion, utilize a Request For Information ("RFI"), a Request For Proposals ("RFP"), third party proprietary software or database, review of existing service provider capabilities, or any combination of these or other methods to select a service provider.

### III. Asset Allocation Guidelines

In establishing asset allocation guidelines the Board recognizes that each System has its own capacity to tolerate investment volatility, or risk. Therefore, each System has been studied and asset allocation guidelines have been established on a System by System basis. The Board will cause the asset allocation guidelines of each System to be reviewed annually. The Board will provide the Investment Committee with the results of any asset liability study and guidance for determining the needs of the Systems.

Based on an asset liability valuation study, which analyzed the expected returns, risk and correlations of various asset classes, projected liabilities, liquidity, and the risks associated with alternative asset mix strategies, the Board has established the following Asset Allocation Guidelines, effective January 1, 2021. The asset classes are “bucketed” or grouped together into macro-asset class buckets (i.e. growth, liquidity and diversifying) based on their expected correlations to one another in order to create a better understanding of risk and diversification, and based on asset class exposures to the economic factors of growth and inflation.

<b>KERS Hazardous Pension Plan; CERS Hazardous and Non-Hazardous Pension Plans and the KRS Insurance Fund (excluding KERS Non-Hazardous Pension Plan and SPRS Pension Plan) - 6.25% Assumed Rate of Return</b>				
Asset Class	Target	Relative Range (+/-)*	Minimum	Maximum
<b>Growth</b>	<b>68.50%</b>	<b>15%</b>	<b>58.23%</b>	<b>78.78%</b>
US Equity	21.75%	30%	15.23%	28.28%
Non US Equity	21.75%	30%	15.23%	28.28%
Private Equity	10.00%	30%	7.00%	13.00%
High Yield / Specialty Credit	15.00%	30%	10.50%	19.50%
<b>Liquidity</b>	<b>11.50%</b>	<b>20%</b>	<b>9.20%</b>	<b>13.80%</b>
Core Fixed Income	10.00%	20%	8.00%	12.00%
Cash	1.50%	100%	0.00%	3.00%
<b>Diversifying</b>	<b>20.00%</b>	<b>15%</b>	<b>17.00%</b>	<b>23.00%</b>
Real Estate	10.00%	30%	7.00%	13.00%
Real Return	10.00%	30%	7.00%	13.00%
<b>Opportunistic</b>	<b>0.00%</b>	<b>n/a</b>	<b>0.00%</b>	<b>5.00%</b>

<b>KERS Non-Hazardous Pension Plan and SPRS Pension Plan - 5.25% Assumed Rate of Return</b>				
Asset Class	Target	Relative Range (+/-)*	Minimum	Maximum
<b>Growth</b>	<b>54.50%</b>	<b>15%</b>	<b>46.33%</b>	<b>62.68%</b>
US Equity	16.25%	30%	11.38%	21.13%
Non US Equity	16.25%	30%	11.38%	21.13%
Private Equity	7.00%	30%	4.90%	9.10%
High Yield / Specialty Credit	15.00%	30%	10.50%	19.50%
<b>Liquidity</b>	<b>25.50%</b>	<b>20%</b>	<b>20.40%</b>	<b>30.60%</b>
Core Fixed Income	20.50%	20%	16.40%	24.60%
Cash	5.00%	100%	0.00%	10.00%
<b>Diversifying</b>	<b>20.00%</b>	<b>15%</b>	<b>17.00%</b>	<b>23.00%</b>
Real Estate	10.00%	30%	7.00%	13.00%
Real Return	10.00%	30%	7.00%	13.00%
<b>Opportunistic</b>	<b>0.00%</b>	<b>n/a</b>	<b>0.00%</b>	<b>5.00%</b>

\* The relative range is the percentage of target that the allocation is allowed to deviate above or below target, as detailed in the Minimum and Maximum columns of the table.

The intent of the Board in allocating funds to the investment managers is for the investment managers

to fully invest the funds. However, the Board is aware that from time to time the investment manager will require a portion of the allocated funds to be held in cash provided the cash holdings do not exceed five percent (5%) of the manager's allocation for any given quarter, unless such cash holdings are an integral part of a fixed income manager's investment strategy.

The individual plan level asset allocations of the each Pension and Insurance Fund constituent will be reviewed monthly by Staff relative to its target asset class allocation, taking into account any tactical asset allocation shift directed by the Investment Committee.

Regarding individual investment manager initial allocations, Staff will get approval at the Investment Committee meeting for a specific dollar amount intended to be committed to a closed-end fund such as private equity or real estate funds and will get approval for a percent of the appropriate asset class target for open-end investments such as public equity, public fixed income, and Diversifying Strategies managers. For those open-end funds where assets can be added or subtracted, the Chief Investment Officer will have discretion to reduce or increase an investment manager's allocation between 50% and 150% of the approved target. The target will not be raised prior to the one-year anniversary of the amount approved by the Investment Committee, and must be reported to the Investment Committee at the next scheduled meeting. If the need arises to terminate a manager between Board meetings, the Chief Investment Officer will have discretion to do so after receiving approval from either the Board Chair or the Investment Committee Chair. The Investment Committee and the Board must be notified of the manager termination at the next scheduled Investment Committee and Board meetings.

Short-term market shifts may cause the asset mix to drift from the allocation targets. Should the target percentage fall out of the indicated range for a particular asset class, Staff shall direct rebalancing transactions to reallocate assets from the over-allocated asset class to the under-allocated asset class. Within the allowable ranges, Staff should use regular cash flows to rebalance toward targets to avoid incurring additional trading costs to correct minor deviations from asset allocation targets. Except when there is a perceived extraordinary downside risk in a particular asset class, movement outside the normal ranges should be avoided.

Investments in private assets are generally less liquid than investments in public markets securities and are typically implemented via periodic commitments to funds with limited partnership structures. As a result, actual allocations to these asset classes may deviate from their strategic targets for extended periods. Actual vs. target deviations for these asset classes shall not be considered in violation of the Asset Allocation Guidelines. Under/overweights to these asset classes shall be invested in public markets securities with the most similar risk/return characteristics as a short-term proxy for the private asset classes.

In keeping with its responsibility as a Board and wherever consistent with its fiduciary responsibility, the Board encourages the investment of the fund's assets in investments, funds, and securities of corporations which provide a positive contribution to the economy of the Commonwealth of Kentucky. However, where any security is not a prohibited investment under the governing laws and policies, discretion will be granted to the appointed investment managers in the selection of such securities and timing of transactions consistent with the following guidelines and restrictions.

#### A. Growth

##### US Equity

Investment may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant ETF's or any other type of security contained in a manager's benchmark. Each individual domestic equity account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance for the account.

The internally managed equity index funds are intended, consistent with the governing Plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. These objectives can be achieved through several management techniques, including but not limited to, portfolio optimization, non-reinvestment of index dividends and other management techniques intended to help achieve the objectives of the entire Pension Fund.

#### Non-US 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 ETF's or any other type of security contained in a manager's benchmark. Each individual Non-US equity account shall have a comprehensive set of investment guidelines which shall contain a listing of permissible investments, portfolio restrictions and standards of performance for the account.

#### High Yield/Specialty Credit

High yield/specialty credit investments will be similar in type to those securities found in the Systems' high yield benchmarks and the characteristics of the portfolio will be similar to the Systems' high yield fixed income benchmarks. The high yield fixed income accounts may include, but are not limited to the following fixed income securities: 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, 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 ETF's.

Each individual high yield/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.

#### Private Equity Investments

Subject to specific approval of the Investment Committee, investments may be made for the purpose of creating a diversified portfolio of alternative investments. 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. Examples of such investments include, but are not limited to, private investments into venture capital, leveraged buyouts, special situations, distressed debt, private debt, timberland, oil and gas partnerships, infrastructure, commodities and private placements. While it is expected that the majority of these assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

## **Guidelines for Private Equity**

The private equity market is highly sophisticated and specialized with respect to variety and types of investment structures. There exists major competition for deal flow on the part of both investor and general partners. To a great extent, market forces drive the bargaining of economic terms. Most investment vehicles are structured as commingled vehicles and often blind pool investment partnerships. The most common offering forms are equity private placements where the governing laws of the partnership impose a passive role of the limited partner investor. These contractual arrangements are long-term in nature and provide the general partner or sponsors a reasonable time horizon to wisely invest capital, add value through intensive operational management, then realize the proceeds of such an investment. Moreover, terms of the partnership are proposed by the general partner and are critical to the economic incentives and ultimate net performance of the partnership.

## **Investment Strategy and Plan Guidelines**

To strengthen the diversification of the investments, several guidelines will be utilized in Staff's formulation and recommended annual investment strategy and plan. These guidelines encompass annual commitment levels to the asset class, types of investment vehicles that can be utilized, controlling financing stage risks, industry, manager and geography concentration/diversification limits, acceptable contract negotiations, appropriate sizes for investments, and the preferred alignment of interests.

*Investment Vehicles:* The Systems will gain exposure to private equity investments by hiring external investment managers either directly or through participation in secondary private equity markets. Typically, KRS will subscribe as a Limited Partner ("LP") to limited partnership vehicles sponsored by such specialty external investment managers. KRS will also at times structure separately managed accounts with specific investment objectives to be implemented by external investment managers. The Systems may also gain exposure by utilizing the following vehicles: limited liability companies and co-investments alongside KRS' existing or potential limited partnerships.

*Investment Timing Risks:* Staff should limit the potential for any one investment to negatively impact the long-term results of the portfolio by investing across business cycles. Moreover, the portfolio must gain exposure to the array of financing stages by opportunistically exploiting the best investments at different stages of the business cycle. Staff may also consider purchasing secondary partnership interests to shorten the effective life of the partnership interest and therefore positively impacting the current and long-term net return of the portfolio. In addition, mindful of vintage year diversification, the Systems should seek to identify attractive commitments annually, further ensuring the portfolio invests across business cycles.

*General Partner Diversification:* Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their deal flow. No more than fifteen (15) percent of the Systems' Pension or Insurance total allocation to private equity investments may be committed to any one partnership, without the approval of the Board.

## **B. Fixed Income/Liquidity**



## Core Fixed Income

Core Fixed Income investments will be similar in type to those securities found in the Systems' core fixed income benchmark(s) and the characteristics of the Systems' core fixed income portfolio will be similar to the System' core fixed income benchmarks. The core fixed income accounts may include, but are not limited to the following fixed income securities: U.S. Government and Agency bonds, investment grade U.S. corporate credit, investment grade non-U.S. corporate credit, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities, and whole loans, asset-backed securities, and asset class relevant ETF's.

Each individual core fixed income 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 Equivalent Securities

Selection of particular short-term instruments, whether viewed as liquidity reserves or as investment vehicles, should be determined primarily by the safety and liquidity of the investment and only secondarily by the available yield. 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' acceptances 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. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

The Systems' fixed income managers that 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.

## C. Diversifying Strategies

### Real Estate

Subject to specific approval of the Investment Committee, investments may be 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. Allowable real estate investments include open-end and closed-end commingled real estate funds, joint venture investments, public and private real estate investment trusts ("REITs"), public real estate operating companies, and real estate related debt.

The Systems has determined that the primary role of the real estate asset class is to provide for the following:

- Attractive risk adjusted returns through active management and ability to access managers with the expertise and capabilities to exploit market inefficiencies in the asset class. The illiquid nature of real estate investments combined with the complexity of investments makes it difficult for casual investors to effectively access the asset class effectively. It is our belief that through active management and by investing in top tier managers with interests aligned through co-investment and incentive based compensation, the Systems can maximize their risk adjusted returns. This active management approach will be pursued.
- Diversification benefits through low correlations with other asset classes, primarily the U.S. equity markets.
- Provide a hedge against unanticipated inflation, which real estate has historically provided due to lease structures and the increases in material and labor costs during inflationary periods.
- Permit the Systems to invest in unique opportunities that arise due to dislocations in markets that occur from time to time.

#### Real Return

The purpose of the Real Return Portfolio is to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of hedging inflation for the broader plans. Real Return strategies are not necessarily a separate asset class but may include real assets, such as infrastructure, real estate, commodities, and natural resources among others, as well as financial assets that have a positive correlation to inflation. This can include “real” bonds such as Treasury Inflation-Protected Securities (“TIPs”) (and other inflation linkers) or “real” stocks such as REITs, Master Limited Partnerships (“MLPs”), and oil & gas stocks. Additionally, Real Return managers may attempt to add value by tactically allocating to various asset classes according to how each asset class performs across an economic cycle and the manager’s perception of where we are in the cycle. The goal is to invest in inflation sensitive assets during inflationary periods, and avoid those assets in deflationary periods, thus providing a positive real return across the cycle.

The real return opportunity set may include numerous vehicles to access a wide variety of investment styles and strategies. These investment vehicles may include mutual funds, ETFs, separately managed accounts as well as hedge funds (open-end limited partnerships) and private equity (close-end limited partnerships). The list of strategies that the Systems’ Real Return Portfolio may use includes, but is not limited to, the following:

- Global Tactical Asset Allocation (“GTAA”)/Global Macro: GTAA or macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. GTAA and macro strategies typically invest in all major assets classes including equity markets, credit and debt instruments, currencies/interest rates, and commodities. These strategies tend to focus on economic factors that would suggest an opportune time to invest in a given asset class, and will change their allocations actively over time. Within a Real Return portfolio, these strategies may use inflation as the economic factor to gain exposure to and will target a real rate of return over time.
- Inflation Linked Securities are securities that directly tie coupon payments or principal

increases to an inflation index, such as Consumer Price Index (“CPI”). These strategies could include not only US TIPs, but also global sovereign inflation linked bonds, corporate or infrastructure inflation linked bonds, and possibly short duration floating rate bonds.

- Inflation Sensitive Equities include publicly traded equity and equity related securities in companies which have a high sensitivity to inflation in their profit margins via the nature of their operating assets, such as energy companies, basic materials and miners, natural resource stocks, and listed infrastructure. This category can also include REITs, MLPs as well as ETFs and index products on REITs, MLPs, natural resource stocks, etc.
- Commodities: Commodities are the raw materials that are physical inputs into the production process. Managers that invest in liquid commodity strategies using exchange traded futures can span from simple indexing (matching a long-only commodities index), to enhanced indexing or active long (selecting positions that vary from the index but within fairly tight ranges), as well as unconstrained long-short managers.
- Private Property: For the purposes of this IPS, private property refers to the ownership of an idiosyncratic, physical asset that is predominately fixed and/or permanent or at least substantially long-lived. This includes real estate, such as land and any improvements to or on the land, as well as timberland and farmland. Timberland investing involves the institutional ownership of forest for the purpose of growing and harvesting the timber. The timber may be used for furniture, housing lumber, flooring, pulp for paper, woodchips, and charcoal, among other things. Farmland investing entails ownership of land used primarily, if not exclusively, for agricultural production both for crops, including row crops and permanent crops, as well as livestock. Private property can also include infrastructure investing, which refers to financing the manufacture or development of the underlying fundamental assets and basic systems that are necessary for an economy whereby such assets are largely fixed and long-lived. These tend to be high cost, capital-intensive investments that are vital to a society’s prosperity and facilitate the transfer, distribution, or production of basic goods and services.
- Natural Resources: Natural resources can include investing in the financing, development, extraction, and production of minerals, basic materials, petroleum products, and water as well as renewable resources such as agricultural commodities and solar energy. As opposed to property, the returns generated in these investment strategies come more from the actual production of the resource itself. Further, these are depleting and/or consumable assets that are also portable and fungible and which in the aggregate comprise a majority of the inputs into most measurements of inflation.
- Private Assets: Private assets can include tangible or intangible assets that are not easily sold in the regular course of a business’ operations for cash, and which are held for their role in contributing directly to the business’ ability to generate profit. As the useful life of the asset tends to extend across many years and the assets tend to be capital intensive as well, they have some similarity to private infrastructure. Further, given that the assets contribute directly to the production process as well as often retaining intrinsic value, there is a fundamental link to inflation somewhat similar to natural resources.
- Other (Opportunistic Inflation Hedge): Other/opportunistic strategies include those that have a propensity to provide a positive real return or positive correlation with inflation over time. Liquid strategies such as inflation swaps, diversified inflation hedging mutual funds,

or nominal bonds backed by inflation sensitive assets may be included in this allocation, while other illiquid strategies that may provide the same real profile can include private equity in inflation sensitive companies, hard asset-backed private credit, and structured inflation-linked products among others.

### **Portfolio Guidelines**

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 relative allocations to the liquid and illiquid portfolios will be determined according to each individual System's liquidity needs, funding status, and allocation targets on an investment by investment basis.

#### **Opportunistic**

Opportunistic investments are intended to capitalize on opportunities outside of the asset classes targeted in the Asset Allocation Guidelines. These allocation are intended to take advantage of market dislocations and unique opportunities and can be short-to-medium-term in nature. Opportunistic investments may be implemented through targeted portfolios or multi-asset approaches. Initial allocations are to be made following the same policies and procedures as all other investments as outlined previously in this IPS.

#### **D. Co-Investment Policy**

The CIO has discretion to make direct co-investments in companies alongside of current general partners. Any co-investment opportunity must also be part of the main account or fund into which the Systems has already invested before it can be considered. For purposes of this IPS, a direct co-investment is defined as a direct investment in a portfolio company alongside an existing Systems' partnership deemed in good standing.

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.

## **IV. Monitoring**

### **Performance Measurement**

The Systems overall fund performance is measured relative to the Systems' Pension or Insurance Total Fund Benchmark. The benchmark is calculated by means of a weighted average methodology. This method is consistent with the CFA Institute Global Investment Performance Standards (GIPS®), a set of standardized, industry-wide ethical principles that guide investment managers and asset owners on how to fairly calculate and present their investment results, with the goal of promoting performance transparency and comparability. It is the product of the various

component weights (i.e., asset classes' percentages) by their respective performance (returns). Due to market fluctuations and acceptable divergence, the asset classes' weights (percentages) are often not equivalent to the benchmark's weights. Therefore, the performance may indicate that the Funds have outperformed (underperformed) relative to their respective benchmarks, even when the preponderance of lesser weighted categories have underperformed (outperformed) their indices.

The Systems measures its asset classes, sub-asset classes, sectors, strategies, portfolios, and instruments (investment) performance with indexes that are recognized and published (e.g., S&P 500 & Barclays Aggregate Bond Index). These indices are determined to be appropriate measures of investments and composites of investments with identical or similar investments profiles, characteristics, and strategies. The benchmarks and indexes are intended to be objective, investable, replicable, representative and measurable of the investment mandate and, developed from publicly available information that is acceptable to the Systems and the investment manager/advisor as the neutral position consistent with the underlying investor status. The Systems' investment consultant and staff recommend the benchmarks and indexes. These measures shall be subject to the review and approval of the Investment Committee with ratification by the Board when asset allocation studies are performed, or when a change to existing benchmarks is recommended by Staff and the investment consultant. The current asset class benchmarks, effective as of July 1, 2018 with the adoption of the asset allocation, are as follows:

Asset Class	Benchmark
<b>Growth</b>	
US Equity	Russell 3000
Non US Equity	MSCI ACWI ex US IMI
Private Equity	Russell 3000 + 300 bps (lagged)
High Yield / Specialty Credit	50% Bloomberg Barclays US High Yield 50% S&P LSTA Leveraged Loan
<b>Liquidity</b>	
Core Fixed Income	Bloomberg Barclays US Aggregate
Cash	Citi Grp 3-mos Treasury Bill
<b>Diversifying</b>	
Real Estate	NCREIF ODCE
Real Return	US CPI + 3%
<b>Opportunistic</b>	
To Be Determined	Highest Assumed Discount Rate of Participating Plans

The following descriptions represent general standards of measurement that will be used as guidelines for the various classes of investments and managers of the Systems. They are to be computed and expressed on a time-weighted total return basis:

*Total 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: Individual portfolios shall be assigned a market goal or benchmark that is representative of the style or market capitalization of the assignment. Individual accounts should be monitored using the following Standards:

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 should also seek to achieve the following:

Short-term

- Alternative investments should earn a Net Internal Rate of Return (“IRR”) that place the investment above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

Intermediate & Long-term

- The private equity portfolio should earn a return that meets or exceeds the Systems Private Equity Index. Individual private equity investments should earn a Net IRR above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

Real Estate

Private Real Estate investments are unique and can be illiquid and long term in nature. Given that this may lead to large short-term performance discrepancies versus public benchmarks, the Systems more appropriately measures its real estate investments based on both relative return and absolute return methodologies:

Relative Return: The Real Estate portfolio is expected to generate returns, net of all fees and expenses, in excess of the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index (“NCREIF ODCE”) lagged 1 calendar quarter.

Absolute Return: The long term real return objective (returns adjusted for inflation) for the Systems’ Real Estate portfolio is five percent (5%) over the Barclays Capital U.S. 7-10 Year Treasury Bond Index, net of investment management fees. This return shall be calculated on a time-weighted basis using industry standard reporting methodologies.

Real Return

The total Real Return allocation shall seek to:

(1) Short-term benchmark: For periods less than five (5) years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (the weighted average return of the underlying investment benchmarks) annually over a complete market cycle, net of all investment management fees.

(2) Strategic objective: For periods greater than five (5) years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds (CPI + 300 basis points) as well.

(3) Achieve a positive risk/reward trade-off when compared to similar style Real Return Investment Managers.

### Opportunistic

The total Opportunistic allocation shall seek to:

(1) Short-term benchmark: For periods less than five (5) years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the highest assumed rate of return of the participating plans.

(2) Strategic benchmark: For periods greater than five (5) years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the highest assumed rate of return of the participating plans.

### Performance Review

On a timely basis, but not less than quarterly, the Investment Committee will review the performance of the portfolio for determination of compliance with this IPS. On an annual basis, a comprehensive review of each asset class and underlying portfolios shall be conducted by the staff and presented to the Investment Committee. The review shall consist of an organizational, performance and compliance assessment.

The Compliance Officer shall perform tests at least monthly to assure compliance with the restrictions imposed by this IPS. These tests shall be performed at the asset class and total fund level. Quarterly, the Compliance Officer shall prepare a report to the Investment Committee detailing the restrictions tested, exceptions, the cause of the exception and the subsequent resolution. The Investment Committee shall report the findings to the Board at the next regularly scheduled meeting.

The following restrictions shall be tested at least monthly:

▶ The amount of stock in the domestic or international equity allocation in any single corporation shall not exceed 5% of the aggregate market value of the Systems' assets.

▶ The amount of stock held in the domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation.

▶ Investment in "frontier" markets (those countries not included in the MSCI EM Index) shall not exceed 5% of the Systems' 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% duration as measured by effective duration, modified duration, or dollar duration except when the Investment Committee has determined a target duration to be used for an interim basis.

- ▶ 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 (or securities collateralized by same), and derivative securities used for exposure, cost efficiency, or risk management purposes in compliance with Section VII of this policy.
- ▶ 50% of the core fixed income assets must have stated liquidity that is trade date plus three days or better.

The CIO shall develop a comprehensive set of investment guidelines for each externally managed account. These guidelines should ensure, at the total fund and asset class level, that the restrictions set forth above are preserved.

#### V Additional Items

##### **Derivatives Permitted Use:**

The Systems permits external managers and Staff 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. Typical uses of derivatives in the portfolio are broadly defined below:

##### **Exposure:**

Derivatives are an effective way for a portfolio manager to gain exposure to a security that the manager does not want to purchase in the cash market. Reasons for gaining exposure to a security through the use of derivatives may include cheaper transactions costs, liquidity/lack of supply in the underlying market, and the flexibility to implement investment views with minimum portfolio disruption. An example is a cash equitization program.

##### **Cost Efficiency:**

Derivatives are often used due to the cost efficiency associated with the contract properties. Given the fact that derivatives can be used as a form of insurance, upfront trading costs must be sufficiently low for investors to purchase the contract and insure their portfolios efficiently. Furthermore, due to properties associated with derivatives and cash outlay characteristics (minimal cash outlay at inception of the contract) derivatives are generally a vehicle of gaining cost efficient exposure. An example is the cost (zero) to purchase a futures contract.

##### **Risk Management:**

Derivatives can be used for mitigating risk in the portfolio. When used as a risk management tool, derivatives can significantly reduce an identified financial risk or involuntary risk from investment areas by providing changes in fair values or cash flows that substantially offset the changes in fair values or cash flows of the associated item being hedged. An example is the use of currency forwards to offset periods of dollar strength when international equity markets increase in value, thereby protecting foreign asset gains in the portfolio.



**Derivatives Restricted Use:**

**Settlement:**

Investments in futures contracts are to be cash settled unless physically settled and stored by external managers. At no time shall the Systems agree to take physical delivery on a futures contract.

**Position Limits:**

Futures and options positions entered into by the Systems, or on its behalf, will comply with all position and aggregate limits established by the local governing authorities within each jurisdiction.

**Over-the-Counter (OTC):**

Investments in securities not traded on public exchanges that are deemed over-the-counter (OTC) in nature are allowed provided that a counterparty risk monitoring component is delineated in the manager's guideline section of the manager's contract. All counterparties must have a short-term credit rating of at least BBB (Standard and Poor's or Fitch) or Baa2 (Moody's).

All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established International Swaps and Derivatives Association, Inc. (ISDA) Master Agreements and have full documentation of all legal obligations of the Systems under the transactions. All ISDA Master Agreements entered into by or on behalf of the Systems by the Staff and external manager pursuant to an Agency Agreement shall provide that Netting applies. (Netting allows the parties to an ISDA Master Agreement to aggregate the amounts owed by each of them under all of the transactions outstanding under that ISDA Master Agreement and replace them with a single net amount payable by one party to the other.) The Staff and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. If an external manager utilizes a collateral arrangement to mitigate counterparty credit or performance risk the arrangement shall be delineated in the manager's guideline section of the manager's contract.

**Derivatives Applications Not Permitted:**

**Speculation:**

Except for investments in alternative, Opportunistic Diversifying Strategies investments, and Real Return investments, derivatives may not be used for any activity for which the primary purpose is speculation or to profit while materially increasing risk to the Systems. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by the IPS or applicable to the portfolio. Derivatives may not be used for circumventing any limitations or restrictions imposed by the IPS or applicable regulatory requirements.

**Leverage:**

Leverage is inherent in derivative contracts since only a small cash deposit is required to establish a much larger economic impact position. Thus, relative to the cash markets, where

in most cases the cash outlay is equal to the asset acquired, derivative investments offer the possibility of establishing substantially larger market risk exposures with the same amount of cash as a traditional cash market portfolio. Therefore, risk management and control processes must focus on the total risk, i.e. the net notional value, assumed in a derivative investment.

*The above is not intended to limit the Systems from borrowing to cover short-term cash flow needs nor prohibit the Systems from loaning securities in accordance with a securities lending agreement.*

The Board recognizes that the voting of proxies is an important responsibility in assuring the overall performance of the Fund over a long time horizon. The Board has delegated the responsibility of voting all proxies to an outside Proxy Voting service provider or contracted external investment manager. The Board expects that the proxy voting service will execute all proxies in a timely fashion, and in accordance with the voting policy which has been formally adopted.

The Board has adopted the ISS U.S. Proxy Voting Guidelines as the Systems' approved Proxy Voting Policy for all internally voted items. This policy is updated at least annually by ISS and hereby incorporated by this reference. The policy can be found publically using the following link:

<http://www.issgovernance.com/files/2012USSummaryGuidelines1312012.pdf>

- A. Investment Procurement Policy as amended and the Investment Manager Onboarding Checklist as amended are hereby incorporated by reference.
- B. Investment Brokerage Policy as amended is hereby incorporated by reference.
- C. Transactions Procedures Policy as amended is hereby incorporated by reference.
- D. Securities Litigation Policy and Procedures as amended is hereby incorporated by reference.
- E. Investment Securities Lending Guidelines as amended is hereby incorporated by reference.
- F. Securities Trading Policy for Trustees and Employees as amended is hereby incorporated by reference.
- G. Manager and Placement Agent Statement of Disclosure Policy as amended is hereby incorporated by reference.

#### Signatories

As Adopted by the Investment Committee

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Mr. C. Prewitt Lane

Chair, Investment Committee

As Adopted by the Board of Trustees

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Mr. David L. Harris

Chair, Board of Trustees



## KENTUCKY RETIREMENT SYSTEMS

David L. Eager, 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: John E. Chilton, CPA, Chair  
Audit Committee of the Board of Trustees

Kristen N. Coffey, CICA *KNC*  
Division Director, Internal Audit Administration

Date: November 12, 2020

Subject: November 5, 2020 Audit Committee Meeting

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The Audit Committee held a regularly scheduled meeting on November 5, 2020.

**1. Two items were approved by the Audit Committee and are being forwarded to the Board of Trustees for ratification:**

- a. Ten requests for Hazardous Position Classifications.
- b. Draft GASB 67 and GASB 74 reports.

**RECOMMENDATION: The Audit Committee requests the Board of Trustees ratify the actions taken by the Audit Committee.**

**2. The Audit Committee approved the draft results of the fiscal year ended June 30, 2020 audit, including the draft Financial Section of the Comprehensive Annual Financial Report. This information will be presented to the Board of Trustees for approval at the December 3, 2020 meeting.**

**3. The Audit Committee will hold a Special Called meeting prior to the next Board meeting to review the audit of the KRS actuary. This audit will be presented at the December 3, 2020 Board meeting.**

**4. The following items were also discussed during the Audit Committee meeting:**

- a. Information disclosures,
- b. Financial statements,
- c. Outstanding invoices,
- d. Employer penalty waivers,
- e. Management's response to Government Finance Officers Association letter,
- f. Internal Audit Budget,
- g. Anonymous reports received,
- h. Status of CERS election,
- i. Status of current internal audits,
- j. Investment Compliance update, and
- k. Investment memorandum issued since last meeting.



**KENTUCKY RETIREMENT SYSTEMS**

**David L. Eager, Executive Director**

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To: Board of Trustees

From: D’Juan Surratt  
 Director of Employer Reporting, Compliance and Education

Date: 11/12/2020

Subject: Hazardous Position Classification

AGENCIES ARE REQUESTING HAZARDOUS DUTY COVERAGE FOR THE FOLLOWING POSITIONS:

<u>Agency</u>	<u>Position</u>	<u>Effective Date</u>
Hardin County Fiscal Court	Emergency Medical Services Director	06/01/2020
Hardin County Fiscal Court	Emergency Medical Services Deputy Director	07/01/2020
Shelby County Fiscal Court	Captain/Emergency Medical Technician (EMT)	12/01/2020
Shelby County Fiscal Court	Chief of Operations/EMT	12/01/2020
Shelby County Fiscal Court	Deputy Chief of Operations/ EMT	12/01/2020
Shelby County Fiscal Court	Sergeant/Emergency Medical Technician (EMT)	12/01/2020
Anchorage Middletown Fire and EMS	Fire Recruit – Career	09/01/2020
Office of the Attorney General	Forensic Computer Examiner I	12/01/2020
Office of the Attorney General	Forensic Computer Examiner II	12/01/2020
Office of the Attorney General	Forensic Computer Examiner III	12/01/2020

Kentucky Retirement Systems has reviewed the above requests and feel that these positions meet the statutory guidelines for Hazardous coverage. Position Questionnaires and Job Descriptions are attached.

\*Hardin County Fiscal Court and Anchorage Middletown Fire and EMS are requesting retroactive effective dates.

**61.592 Retirement of persons working in hazardous positions.**

- (1)
- (a) "Hazardous position" for employees participating in the Kentucky Employees Retirement System, and for employees who begin participating in the County Employees Retirement System before September 1, 2008, means:
1. Any position whose principal duties involve active law enforcement, including the positions of probation and parole officer and Commonwealth detective, active fire suppression or prevention, or other positions, including, but not limited to, pilots of the Transportation Cabinet and paramedics and emergency medical technicians, with duties that require frequent exposure to a high degree of danger or peril and also require a high degree of physical conditioning;
  2. Positions in the Department of Corrections in state correctional institutions and the Kentucky Correctional Psychiatric Center with duties that regularly and routinely require face-to-face contact with inmates; and
  3. Positions of employees who elect coverage under KRS 196.167(3)(b)2. and who continue to provide educational services and support to inmates as a Department of Corrections employee.
- (b) "Hazardous position" for employees who begin participating in the County Employees Retirement System on or after September 1, 2008, means police officers and firefighters as defined in KRS 61.315(1), paramedics, correctional officers with duties that routinely and regularly require face-to-face contact with inmates, and emergency medical technicians if:
1. The employee's duties require frequent exposure to a high degree of danger or peril and a high degree of physical conditioning; and
  2. The employee's duties are not primarily clerical or administrative.
- (c) The effective date of participation under hazardous duty coverage for positions in the Department of Alcoholic Beverage Control shall be April 1, 1998. The employer and employee contributions shall be paid by the employer and forwarded to the retirement system for the period not previously reported.
- (2)
- (a) Each employer may request of the board hazardous duty coverage for those positions as defined in subsection (1) of this section. Upon request, each employer shall certify to the system, in the manner prescribed by the board, the names of all employees working in a hazardous position as defined in subsection (1) of this section for which coverage is requested. The certification of the employer shall bear the approval of the agent or agency responsible for the budget of the department or county indicating that the required employer contributions have been provided for in the budget of the employing department or county. The system shall determine whether the employees whose names have been certified by the employer are working in positions meeting the definition of a hazardous position as provided by subsection (1) of this section. This process shall not be required for employees who elect coverage under KRS 196.167(3)(b)2.

September 4, 2019

**61.315 Benefits payable on death of certain peace officers, firefighters, correctional officers, jailers, school resource officers, members of a state National Guard or Reserve component, and emergency medical services personnel -- Administrative regulations -- Estates to be exempted from probate fees -- Funds allotted to a self-insuring account -- Presumption that firefighter's death from cancer resulted from act in the line of duty under certain conditions. (Effective July 15, 2020)**

(1) As used in this section:

- (a) "Police officer" means every paid police officer, sheriff, or deputy sheriff, corrections employee with the power of a peace officer pursuant to KRS 196.037, any metropolitan or urban-county correctional officer with the power of a peace officer pursuant to KRS 446.010, any jailer or deputy jailer, any auxiliary police officer appointed pursuant to KRS 95.445, any police officer of a public institution of postsecondary education appointed pursuant to KRS 164.950, any school resource officer as defined in KRS 158.441, or any citation or safety officer appointed pursuant to KRS 83A.087 and 83A.088, elected to office, or employed by any county, airport board created pursuant to KRS Chapter 183, city, local board of education, or by the state;
- (b) "Firefighter" means every paid firefighter or volunteer firefighter who is employed by or volunteers his or her services to the state, airport board created pursuant to KRS Chapter 183, any county, city, fire district, or any other organized fire department recognized, pursuant to KRS 95A.262, as a fire department operated and maintained on a nonprofit basis in the interest of the health and safety of the inhabitants of the Commonwealth and shall include qualified civilian firefighters employed at Kentucky-based military installations; and
- (c) "Emergency medical services personnel" means any paid or volunteer emergency medical services personnel who is certified or licensed pursuant to KRS Chapter 311A and who is employed directly by, or volunteering directly for, any:
  - 1. County;
  - 2. City;
  - 3. Fire protection district created under KRS 75.010 to 75.260; or
  - 4. Emergency ambulance service district created under KRS 108.080 to 108.180;

to provide emergency medical services.

- (2) The spouse of any police officer, sheriff, deputy sheriff, corrections employee with the power of a peace officer pursuant to KRS 196.037, any metropolitan or urban-county correctional officer with the power of a peace officer pursuant to KRS 446.010, any jailer or deputy jailer, any auxiliary police officer appointed pursuant to KRS 95.445, any police officer of a public institution of postsecondary education appointed pursuant to KRS 164.950, any school resource officer as defined in KRS 158.441, or any citation or safety officer appointed pursuant to KRS 83A.087 and



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Form 7025
Revised 09/2010

Position Questionnaire

Instructions
To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008

Employer: HARDIN COUNTY FISCAL COURT Position Title: Emergency Medical Services Director

Is this position required to have Peace Officer Professional Standards and Certification? [ ] Yes [X] No
If no, is this position required to carry a firearm? [ ] Yes [X] No
Does this position require active fire suppression or prevention? [ ] Yes [X] No

Section 2: For Employees With a CERS Participation Date On or After September 1, 2008

Employer: HARDIN COUNTY FISCAL COURT Position Title:

Please select the appropriate classification and answer all that are applicable.
[ ] Police Officer
[ ] Firefighter Does this position require active fire suppression? [ ] Yes [ ] No
[ ] Paramedic
[ ] Correctional Officer Does this position routinely require face to face contact with inmates? [ ] Yes [ ] No
[ ] Other Specify:
Is this position required to have Peace Officer Professional Standards and Certification? [ ] Yes [ ] No
If no, is this position required to carry a firearm? [ ] Yes [ ] No
[ ] Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)
Does this position require frequent exposure to a high degree of danger or peril? [ ] Yes [ ] No
Does this position require a high degree of physical conditioning? [ ] Yes [ ] No
Are the employee's duties primarily clerical or administrative? [ ] Yes [ ] No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent:

Description of Duties:

Agency Head Signature:

Date: July 27, 2020

Agency Head Title: Hardin County Judge/Executive

Employer: **HARDIN COUNTY FISCAL COURT**

Position Title: **Emergency Medical Services Director**

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. **BE AS DETAILED AS POSSIBLE.** The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Responding to Emergency Incidents

Percentage of Time Spent: 25%

Description of Duties:

- Responds to emergency incidents within Hardin County and serves as the medical incident commander
- Assists EMS personnel at emergency incidents
- Assists in the coordination of EMS activities with other public safety and public health agencies when involved in community wide emergency incidents
- Fulfills the duties of a paramedic as needed

Position Duty: Administrative/ Management

Percentage of Time Spent: 50%

Description of Duties:

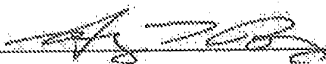
- Supervises the Hardin County EMS program with the goal of providing Hardin County with the most efficient EMS system possible while maintaining the highest level of care
- Ensures all requirements of the Kentucky Board of EMS and local protocols established by the medical director are maintained
- Ensures the compliance of privacy and personnel policies and regulations
- Reviews patient care and other operational reports for completeness and appropriateness of medical care according to protocols in conjunction with the medical director
- Prepares the annual department budget according to the daily budget analysis
- Assists in maintaining the financial stability of the EMS service

Position Duty: Training

Percentage of Time Spent: 25%

Description of Duties:

- Assists with the development and training of emergency medical service personnel to ensure they are kept informed of changes in procedures or protocols
- Maintains an open line of communication with employees, and the reporting authority

Agency Head Signature: 

Date: July 27, 2020

Agency Head Title: Hardin County Judge/Executive



Form # 7020  
Employer ID V047

RECEIVED OCT 21 2020

## Hardin County Government Job Description

*Hazardous*

**Emergency Medical Services Director**

**Pay Grade 22**

STATUS	
Date: June 9, 2020	Department: EMS
FLSA Status: Exempt	Reporting Authority County Emergency Services Officer
Supervisory Responsibility: EMS Deputy Director, Business Specialist	

**Job Summary**

Under the direction of the reporting authority, this position oversees the daily operations of the HCEMS and facilitates the delivery of emergency care to the ill and injured. The nature of the work requires extensive decision-making abilities under pressure and also requires a calm professional demeanor. The HCEMS is a 24-hour response service with multiple stations.

**Major Essential Duties**

- Supervises the Hardin County EMS program with the goal of providing Hardin County with the most efficient EMS system possible while maintaining the highest level of care
- Ensures all requirements of the Kentucky Board of EMS and local protocols established by the medical director are maintained
- Assists with the development and training of emergency medical service personnel to ensure they are kept informed of changes in procedures or protocols
- Ensures the compliance of privacy and personnel policies and regulations
- Reviews patient care and other operational reports for completeness and appropriateness of medical care according to protocols in conjunction with the medical director
- Responds to emergency incidents within Hardin County and serves as the medical incident commander
- Assists EMS personnel at emergency incidents
- Assists in the coordination of EMS activities with other public safety and public health agencies when involved in community wide emergency incidents
- Fulfills the duties of a paramedic as needed
- Maintains an open line of communication with employees, and the reporting authority
- Prepares the annual department budget according to the daily budget analysis
- Assists in maintaining the financial stability of the EMS service

**Minor Essential Duties**

- Accurately records and processes employee time sheets on a bi-weekly basis
- Delegates daily activities to others in the chain of command
- Assist in contract negotiations
- Will maintain a good working relationship with billing contractors

**Qualifications**

***Education and/or Experience***

- Graduate of an accredited high school or equivalent
- Two years or more of management in the field of emergency services
- An Associate degree is strongly preferred

***Language Skills***

- Ability to read, analyze and interpret policies, procedures, professional publications, and governmental regulations, financial reports, and legal documents
- Ability to respond to sensitive inquiries and complaints from regulatory agencies, business community members, and suppliers of goods and services
- Ability to write reports, bid proposals, contracts, business correspondence, and policy and procedure documents
- Ability to make presentations on complex topics to employees, business committee members, elected officials or other members of government
- Ability to display strong oral, written and listening skills
- Ability to write speeches, articles and publications when necessary
- Ability to handle sensitive issues

***Mathematical Skills***

- Ability to add, subtract, multiply, and divide in all units of measure using whole numbers, common fractions, and decimals
- Ability to compute ratio and percent, and to draw and interpret graphs
- Ability to apply concepts of algebra and statistics as needed

***Reasoning Ability***

- Solves practical problems while dealing with several abstract and concrete variables
- Interprets an extensive variety of complex technical and instructional material
- Makes reasonable and logical conclusions from information which may be conflicting or disjointed
- Makes decisions which serve the County's best interest and impact the areas over which authority is exerted

**Certificates, Licenses, Registrations**

- Must possess and maintain licensure as a Paramedic by the Kentucky Board of EMS
- Must possess and maintain a valid Kentucky Driver's License
- Must obtain and maintain other certifications and credentials as required by the EMS Department
- Must maintain training and certifications as required by KY OSHA
- Must maintain training and certifications as required by the Federal Emergency Management Agency (FEMA)
- Must obtain and maintain certification in Hazardous Materials (Operational Level) within one (1) year following placement

**Other Knowledge and/or Skills**

- Display mature judgment, courtesy, and tact in dealing with the public, elected officials and government employees
- Possess the following necessary knowledge, skills, and abilities to
  - Operate complex communications equipment
  - Operate computers
  - Operate basic and advanced life and support and rescue equipment

**Physical Demands**

The physical demands described represents those required to successfully perform the essential job functions Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions

The employee must maintain physical ability to perform the job as required or determined by a periodic physical exam This policy will not infringe on rights provided by the Americans with Disabilities Act (ADA)

While performing job duties, the employee could reasonably be expected to

<u>Regularly (over 2/3 of regular work day)</u>	<u>Occasionally (under 1/3 of regular work day)</u>
Sit	Stand or walk
Talk or hear	See list in Work Environment Section
Use hands to type, handle paper, etc	Walk over rugged, uneven terrain
Reach with hands and arms	Drive an emergency vehicle
Lift and carry a minimum of 25 pounds	
Squat and bend	

Vision requirements include close, distance, color, and peripheral vision, depth perception and the ability to adjust focus This allows the individual the ability to differentiate the color of liquids and smoke

**Work Environment**

The work environments described in the preceding paragraphs represents those encountered while performing the essential job functions. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The noise level is low to moderate.

Considerable health and physical strength requirements are necessary. Though safety and risk management measures are implemented wherever possible, there remain numerous unavoidable aspects of this position, which may place the individual at risk of personal harm or illness resulting from performance of his/her duties. Situations which may result in such personal harm or illness included but are not limited to:

- Driving an emergency vehicle using lights and sirens
- Exposure to hostile or combative patients and other individuals
- Response to violent crime scenes
- Response to accidents involving hazardous chemical spills
- Exposure to communicable diseases
- Danger from moving traffic at highway/roadway accidents
- Response to environments including those involving chemical, radiological, biological or explosive hazards
- Exposure to dirty needle sticks and medical waste
- Performance of certain high-risk procedures in the delivery of advanced life support
- Temperature level will vary from extreme cold to extreme heat

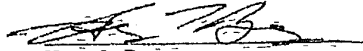
**Comments**

- Must display the following
  - Positive communication
  - Objectivity
  - Willingness to solve problems
  - Commitment to serve the county's best interests
- Must adhere to the applicable provisions of the Department Rules, Regulations, Protocols and Standard Operating Guidelines, the Personnel Policy Manual, the Hardin County Administrative Code, the Kentucky Revised Statutes, the Kentucky Administrative Regulations, and any other procedures, rules, regulations, and policies set forth by appropriate authorities
- Must maintain confidentiality
- Must have personal integrity and remain free of felony convictions
- Must be neat in appearance
- Must be 21 years or older

*Emergency Medical Services Director  
June 9, 2020  
Page 4 of 5*

The above is intended to describe the general content of and the requirements for the performance of this job. It is not to be construed as an exhaustive statement of duties, requirements or responsibilities.

Date Approved June 9, 2020

  
Harry L. Berry  
Hardin County Judge/Executive

*Emergency Medical Services Director  
June 9, 2020  
Page 3 of 5*



KENTUCKY RETIREMENT SYSTEMS

1260 Louisville Road · Frankfort, Kentucky 40601
kyret.ky.gov · Phone: 502-696-8800 · Fax: 502-696-8822



Form 7025
Revised 09/2010

Position Questionnaire

Instructions
To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008

Employer: HARDIN COUNTY FISCAL COURT Position Title: Emergency Medical Services Deputy Director

- Is this position required to have Peace Officer Professional Standards and Certification?
If no, is this position required to carry a firearm?
Does this position require active fire suppression or prevention?

Section 2: For Employees With a CERS Participation Date On or After September 1, 2008

Employer: HARDIN COUNTY FISCAL COURT Position Title:

Please select the appropriate classification and answer all that are applicable.

- Police Officer
Firefighter Does this position require active fire suppression?
Paramedic
Correctional Officer Does this position routinely require face to face contact with inmates?
Other Specify:
Is this position required to have Peace Officer Professional Standards and Certification?
If no, is this position required to carry a firearm?
Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)
Does this position require frequent exposure to a high degree of danger or peril?
Does this position require a high degree of physical conditioning?
Are the employee's duties primarily clerical or administrative?

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent:

Description of Duties:

Agency Head Signature: [Signature] Date: July 27, 2020

Agency Head Title: Hardin County Judge/Executive Page 1

Employer: **HARDIN COUNTY FISCAL COURT**

Position Title: **Emergency Medical Services Deputy Director**

**Section 3. For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Responding to Emergency Incidents

Percentage of Time Spent: 50%

**Description of Duties:**

- Responds to emergency incidents within Hardin County and serves as the medical incident commander in the absence of the director or as his/her designee
- Assists EMS personnel at emergency incidents on a daily basis
- Assists in the coordination of EMS activities with other public safety and public health agencies when involved in community wide emergency incidents
- Fulfills the duties of a paramedic as needed

Position Duty: Administrative/ Management

Percentage of Time Spent: 25%

**Description of Duties:**

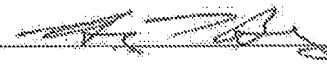
- Supervises employee conduct, dress, attitude, and job performance
- Disciplines employees as necessary
- Oversees the maintenance and repair of vehicles and equipment
- Oversees bidding and purchasing of vehicles and medical equipment
- Investigates complaints as assigned
- Assists in the employment selection process for department staff
- Assists with the development of the annual department budget preparation
- Maintains inventory of supplies to ensure sufficient stock is on hand
- Ensures the completion of the daily work schedule for all ambulance personnel
- Approves work schedule changes in coordination with EMS supervisors

Position Duty: Training

Percentage of Time Spent: 25%

**Description of Duties:**

- Develops and conducts educational and training programs for department personnel and area public safety agencies
- Assists in the development of departmental long-term planning

Agency Head Signature: 

Date: July 27, 2020

Agency Head Title: Hardin County Judge/Executive

Form #: 7020  
Employer id: V047

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## Hardin County Government Job Description

*Hazardous*

**Emergency Medical Services Deputy Director      Pay Grade 20**

STATUS	
Date: June 9, 2020	Department: FMS
FLSA Status: Exempt	Reports To: EMS Director
Supervisory Responsibility: Paramedic - Shift Supervisors Assumes the authority and responsibility of the department in the absence of the EMS Director	

**Job Summary**

Under limited supervision will supervise the daily operations of the EMS Department and provide emergency care to the ill and injured. Will serve as a backup to the regular duty shifts or assist the regular duty shifts when they are overextended. The nature of the work requires extensive decision-making abilities under pressure and requires a calm professional demeanor. The HCEMS is a 24-hour response service with multiple stations.

**Major Essential Duties**

- Responds to emergency incidents within Hardin County and serves as the medical incident commander in the absence of the director or as his/her designee
- Assists EMS personnel at emergency incidents on a daily basis
- Assists in the coordination of EMS activities with other public safety and public health agencies when involved in community wide emergency incidents
- Fulfills the duties of a paramedic as needed
- Supervises employee conduct, dress, attitude, and job performance
- Disciplines employees as necessary
- Oversees the maintenance and repair of vehicles and equipment
- Oversees bidding and purchasing of vehicles and medical equipment
- Investigates complaints as assigned
- Assists in the employment selection process for department staff
- Assists with the development of the annual department budget preparation

**Minor Essential Duties**

- Maintains inventory of supplies to ensure sufficient stock is on hand
- Ensures the completion of the daily work schedule for all ambulance personnel
- Approves work schedule changes in coordination with EMS supervisors



- Develops and conducts educational and training programs for department personnel and area public safety agencies
- Assists in data collection activities
- Assists in the development of departmental long-term planning

**Qualifications**

***Education and/or Experience***

- Graduate of an accredited high school or equivalent
- Two years or more of management in the field of emergency services
- An Associate degree is preferred

***Language Skills***

- Ability to read, analyze and interpret policies, procedures, professional publications, and governmental regulations, financial reports, and legal documents
- Ability to respond to sensitive inquiries and complaints from regulatory agencies, business community members, and suppliers of goods and services
- Ability to write reports, bid proposals, contracts, business correspondence, and policy and procedure documents
- Ability to make presentations on complex topics to employees, business committee members, elected officials or other members of government
- Ability to display strong oral, written and listening skills
- Ability to write speeches, articles and publications when necessary
- Ability to handle sensitive issues

***Mathematical Skills***

- Ability to add, subtract, multiply, and divide in all units of measure using whole numbers, common fractions, and decimals
- Ability to compute ratio and percent, and to draw and interpret graphs
- Ability to apply concepts of algebra and statistics as needed

***Reasoning Ability***

- Solves practical problems while dealing with several abstract and concrete variables
- Interprets an extensive variety of complex technical and instructional material
- Makes reasonable and logical conclusions from information which may be conflicting or disjointed
- Makes decisions in the best interest of the patient
- Makes decisions which serve the county's best interest and impact the areas over which authority is exerted

*Emergency Medical Services Deputy Director  
June 9, 2020  
Page 2 of 5*

**Certificates, Licenses, Registrations**

- Must possess and maintain licensure as a Paramedic by the Kentucky Board of EMS
- Must possess and maintain a valid Kentucky Driver's License
- Must obtain and maintain other certifications and credentials as required by the EMS Department
- Must maintain training and certifications as required by KY OSHA
- Must maintain training and certifications as required by the Federal Emergency Management Agency (FEMA)
- Must obtain and maintain certification in Hazardous Materials (Operational Level) within one (1) year following placement

**Other Knowledge and/or Skills**

- Display mature judgment, courtesy, and tact in dealing with the public, elected officials, and government employees
- Possess the following necessary knowledge, skills, and abilities to
  - Operate basic and advanced life support and rescue equipment
  - Operate complex communications equipment
  - Operate computers

**Physical Demands**

The physical demands described represent those required to successfully perform the essential job functions. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

The employee must maintain physical ability to perform the job as required or determined by a periodic physical exam. This policy will not infringe on rights provided by the Americans with Disabilities Act (ADA).

While performing job duties, the employee could reasonably be expected to

<u>Regularly (over 2/3 of regular work day)</u>	<u>Occasionally (under 1/3 of regular work day)</u>
Sit	Stand or walk
Talk or hear	See list in work environment section below
Use hands to type, handle paper, etc	Drive an emergency vehicle
Reach with hands and arms	Walk over rugged, uneven terrain
Lift and carry a minimum of 25 pounds	
Squat and bend	

Vision requirements include close, distance, color, and peripheral vision, depth perception and the ability to adjust focus. This allows the individual the ability to differentiate skin colors and tones, and the color of liquids and smoke.

**Work Environment**

The work environments described in the preceding paragraphs represents those encountered while performing the essential job functions. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The noise level is moderate to high.

Considerable health and physical strength requirements are necessary. Though safety and risk management measures are implemented wherever possible, there remain numerous unavoidable aspects of this position which may place the individual at risk of personal harm or illness resulting from performance of his/her duties. Situations which may result in such personal harm or illness include but are not limited to:

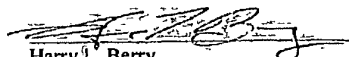
- Driving an emergency vehicle using lights and sirens
- Exposure to hostile or combative patients and other individuals
- Response to violent crime scenes
- Response to accidents involving hazardous chemical spills
- Exposure to communicable diseases
- Danger from moving traffic at highway/roadway accidents
- Response to environments including those involving chemical, radiological, biological, or explosive hazards
- Exposure to dirty needle sticks and medical waste
- Performance of certain high-risk procedures in the delivery of advanced life support
- Temperature level will vary from extreme cold to extreme heat

**Comments**

- Must display the following
  - Positive communication
  - Objectivity
  - Willingness to solve problems
  - Commitment to serve the county's best interests
- Must adhere to the applicable provisions of the Department Rules, Regulations, Protocols, and Standard Operating Guidelines, the Personnel Policy Manual, the Hardin County Administrative Code, the Kentucky Revised Statutes, the Kentucky Administrative Regulations, and any other procedures, rules, regulations, and policies set forth by appropriate authorities
- Must maintain confidentiality
- Must have personal integrity and remain free of felony convictions
- Must be neat in appearance
- Must be 21 years or older

The above is intended to describe the general content of and the requirements for the performance of this job. It is not to be construed as an exhaustive statement of duties, requirements or responsibilities.

Date Approved June 9, 2020

  
Harry L. Berry  
Hardin County Judge/Executive



**KENTUCKY RETIREMENT SYSTEMS**

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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

- To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.
- To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.
- To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT

Position Title: CAPTAIN / EMERGENCY MEDICAL TECHNICIAN (EMT)

- Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No
- If no, is this position required to carry a firearm?  Yes  No
- Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT

Position Title: CAPTAIN / EMERGENCY MEDICAL TECHNICIAN (EMT)

Please select the appropriate classification and answer all that are applicable.

- Police Officer
- Firefighter Does this position require active fire suppression?  Yes  No
- Paramedic
- Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No
- Other Specify: \_\_\_\_\_

- Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No
- If no, is this position required to carry a firearm?  Yes  No

Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)

- Does this position require frequent exposure to a high degree of danger or peril?  Yes  No
- Does this position require a high degree of physical conditioning?  Yes  No
- Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: 10%

Description of Duties:

ADMINISTRATIVE DUTIES WOULD INCLUDE RUNNING REPORTS, DATA ENTRY, RECORDS ENTRY DURING DAY TO DAY OPERATIONS.

Agency Head Signature: [Signature]  
Agency Head Title: Shelby County Judge Executive

Date: 9/30/20

Employer: SHELBY COUNTY FISCAL COURT

Position Title: CAPTAIN  
EMERGENCY MEDICAL TECHNICIAN (EMT)

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: 911 RESPONSE

Percentage of Time Spent: 60%

Description of Duties:

DURING DAY TO DAY OPERATIONS THIS POSITION WOULD REQUIRE THE EMPLOYEE TO MAKE 911 AND NON-URGENT CALLS AS NEEDED. THIS POSITION WILL EXPOSE THE EMPLOYEE TO ILL AND INJURED PATIENTS AND THE RISK OF BEING EXPOSED TO VARIOUS COMMUNICABLE DISEASES AND HAZARDOUS SITUATIONS.

Position Duty: SUPERVISOR FOR SERVICE/SHEEP

Percentage of Time Spent: 30%

Description of Duties:

EMPLOYEE WILL BE THE DEPUTY SUPERVISOR FOR AN ASSIGNED SHEEP AND FOR THE SERVICE IN GENERAL. THIS WILL REQUIRE MANAGEMENT OF PERSONNEL AND OTHER VARIOUS JOB DUTIES INCLUDING BUT NOT LIMITED TO SUPPLY, FEED MANAGEMENT, INVENTORY MANAGEMENT, ETC.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Agency Head Signature: [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

## *Shelby County Fiscal Court*

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### POSITION DESCRIPTION

**POSITION TITLE:** Captain/  
Emergency Medical Technician (EMT)      **DEPARTMENT:** EMS  
**CLASSIFICATION:** Technician      **SUBMITTED BY:** Human Resources  
**SALARY RANGE:** Based on Experience      **APPROVED BY:** County Judge Executive

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### REPORTING RELATIONSHIPS

**POSITION REPORTS TO:** Chief of Operations and Deputy Chief of Operations  
**POSITIONS SUPERVISED:** EMS Personnel

---

### POSITION PURPOSE

Under limited supervision, performs highly responsible duties of rendering emergency care and transportation to the ill and injured person(s). The nature of the work requires extensive decision-making abilities under pressure and requires a calm, professional demeanor. Considerable health and physical strength requirements are necessary. Although safety and risk management measures are implemented wherever possible, there remains numerous unavoidable aspects of this class which may place the Captain/EMT at risk of personal harm or illness resulting from the performance of their duties. Situations which may result in such personnel harm or illness include but are not limited to: Driving of an emergency vehicle using lights and sirens, exposure to hostile or combative patients, response to violent crime scenes, response to accidents involving hazardous chemical spills, exposure to communicable disease(s), danger to moving traffic at highway/roadway accidents, response to hazardous environments, exposure to dirty needle sticks, and performance of certain high risk procedures in the delivery of basic life support.

### ESSENTIAL FUNCTIONS AND BASIC DUTIES

1. Responsible for assigned shift.
2. Ensure all personnel maintain necessary certifications required to perform work responsibilities.
3. Drives an ambulance to scenes and facilities in a safe and expeditious manner while observing traffic ordinances and regulations concerning emergency vehicle operation.
4. Administers appropriate medications when required by clinical situations and local protocol.
5. Provides basic airway control utilizing acceptable methods following local protocol.
6. Performs other forms of basic life support as specified in State and Local Emergency Medical Technician Regulations and Policy.
7. Assumes the role of highest medical authority in the pre-hospital setting, unless a Paramedic is in attendance. If a Paramedic is in attendance, then the Paramedic will assume the highest medical authority. If a Paramedic is

*Captain/EMT*

*Rev. 9/2020*

not in attendance and a physician is, the physician in attendance will assume the highest medical authority with the patient and remains so through transportation to the receiving medical facility.

8. Ensures appropriate personnel are on scene.
9. Maintains adequate supply and control of medications carried on the ambulance.
10. Maintains radio contact with base at all times.
11. Reports (via radio or other method) to receiving hospitals on the nature and extent of injuries/illness of patient(s) being transported.
12. Presents a reassuring and professional attitude at all times.
13. Complies with guidelines and recommendations on the handling of medical waste. Assures all medical waste generated at the scene is removed from the scene and disposed of properly.
14. Employs techniques to minimize the risk of acquiring infection or spread of communicable diseases.
15. Prepares a detailed Electronic Patient Care Report of each patient attended to.
16. Obtains and completes all necessary forms for billing purposes.
17. Performs other duties as established in the Paramedic Job Description.
18. Maintains all credentials and required for certification.
19. Attends meetings, conferences and seminars as required.
20. Supervising the personnel on the shift.
21. Prepare daily reports.
22. Correcting any deficiencies found on the shift as soon as possible.
23. Properly and appropriately delegates any of the above to the Shift Sergeant or any other employee of their choice.
24. Prepare employee evaluations when directed to do so by the Chief.
25. Any and other related duties as required.

## QUALIFICATIONS

### EDUCATION/CERTIFICATION:

- Graduate of High School or GED equivalent
- 2-year college or trade school (desired)
- Current licensed EMT – State of Kentucky
- PEPP Certification
- CPR Certification
- CPR Instructor (desired)
- PHTLS or ITLS Certification
- Maintain all required certifications and renewals

*Captain/EMT*

*Rev. 9/2020*



**EXPERIENCE REQUIRED:**

- 2 to 5 years supervisory/administrative experience in EMS setting
- 5 to 10 years OSHA experience
- 5 to 10 years EMT experience

**REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

1. Knowledge of Business Management Principles and Techniques.
2. Knowledge of Local, State and Federal Laws and Regulations applicable to EMS.
3. Ability to analyze complex budget, inventory and agency issues.
4. Ability to maintain confidential information and exercise professional judgment.
5. Ability to deal with the public, government officials and other agencies professionally.
6. Ability to organize and administer the agency programs.
7. Ability to communicate orally and in writing.
8. Ability to react quickly and competently in an emergency situation.
9. Understands the healthcare delivery system.
10. Knowledge of fleet management.
11. Knowledge of Employee/Employer relationship.
12. Knowledge of and training in the care and use of emergency equipment commonly accepted and employed by EMS agencies, such as oxygen, delivery systems, suction apparatus, anti-shock trousers, splinting devices, backboards, stretcher, etc.
13. Knowledge of the use and care of basic life support equipment, including heart monitors, basic airway equipment, pulse oximeters, blood glucometers, and medications.
14. Considerable knowledge and skill in treatment of trauma, cardiac, cardiac arrest, childbirth, respiratory emergencies, pediatric emergencies, shock, etc.
15. Ability to manage stressful situations.
16. Ability to perform related duties as assigned.

**CONDITONS OF EMPLOYMENT:**

- Resident of Shelby County (desired)
- Direct Deposit Participation
- Background Check
- Drug Screening

*Captain/EMT*

*Rev. 9/2020*

**WORKING CONDITIONS PHYSICAL EFFORT:**

- Moderate to extreme physical/mental activity under extreme weather conditions.
- Potential for hostile environments.
- Ability to lift 75 pounds on a regular basis.

**OVERTIME REQUIREMENTS:** Non-exempt

**AVAILABILITY:** 24-hour shift every 3<sup>rd</sup> day. May be contacted on emergency basis.

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**INTENT AND FUNCTIONS OF JOB DESCRIPTIONS**

Job descriptions assist organizations in ensuring that the hiring process is fairly administered and that qualified employees are selected. They are also essential to an effective appraisal system and related promotion, transfer, layoff, and termination decisions. Well-constructed job descriptions are an integral part of any effective compensation system.

All descriptions have been reviewed to ensure that only essential functions and basic duties have been included. Peripheral tasks, only incidentally related to each position, have been excluded. Requirements, skills, and abilities however, should the duties, responsibilities, and requirements delineated be interpreted as all inclusive. Additional functions and requirements may be assigned by supervisors as deemed appropriate.

In accordance with the American Disabilities Act, it is possible that requirements may be modified to reasonably accommodate disabled individuals. However, no accommodations will be made which may pose serious health or safety risks to the employee or others or which impose undue hardships on the organization.

Job descriptions are not intended as and do not create employment contracts. The organization maintains its status as an at-will employer. Employees can be terminated for any reasons not prohibited by law.



**KENTUCKY RETIREMENT SYSTEMS**

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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT Position Title: CHIEF OF OPERATIONS/EMT

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT Position Title: CHIEF OF OPERATIONS/EMT

Please select the appropriate classification and answer all that are applicable.

Police Officer

Firefighter Does this position require active fire suppression?  Yes  No

Paramedic

Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No

Other Specify: \_\_\_\_\_

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)

Does this position require frequent exposure to a high degree of danger or peril?  Yes  No

Does this position require a high degree of physical conditioning?  Yes  No

Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: 50%

Description of Duties:

MANAGING DAY TO DAY OPERATIONS, INCLUDING GATHERING DATA, SAFETY COMPLIANCE, CONDUCT TRAINING, RUNNING DAILY REPORTS OR AS DIRECTED BY FISCAL COURT. MANAGING BUDGET APPROVED BY FISCAL COURT AND CONTACTED ACCOUNTS/VENDORS FOR EMS.

Agency Head Signature: [Signature] Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

Employer: SHELBY COUNTY FISCAL COURT

Position Title: CHIEF OF OPERATIONS/EMT

Section 3: For All Positions

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: RENDERING AED TO THE ILL AND INJURED

Percentage of Time Spent: 50%

Description of Duties:

IN ADDITION TO ADMINISTRATIVE DUTIES THIS POSITION WOULD REQUIRE THE TREATMENT OF THE ILL AND INJURED AS NEEDED. MAKING 911 CALLS AND CONDUCT TRAININGS AS NEEDED. THIS POSITION WILL PLACE THE EMPLOYEE IN HAZARDOUS SITUATIONS AND EXPOSURE TO VARIOUS TYPES OF COMMUNICABLE DISEASES.

Position Duty:

Percentage of Time Spent:

Description of Duties:

Position Duty:

Percentage of Time Spent:

Description of Duties:

Agency Head Signature: Doug R. [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

## *Shelby County Fiscal Court*

### POSITION DESCRIPTION

<b>POSITION TITLE:</b> Chief of Operations/EMT	<b>DEPARTMENT:</b> EMS
<b>CLASSIFICATION:</b> Administrative/Technician	<b>SUBMITTED BY:</b> Human Resources
<b>SALARY RANGE:</b> Based on Experience	<b>APPROVED BY:</b> County Judge Executive

### REPORTING RELATIONSHIPS

**POSITION REPORTS TO:** County Judge Executive

**POSITIONS SUPERVISED:** EMS Personnel

### POSITION PURPOSE

Manages and implements the day to day operations of the County EMS Services. Performs duties of rendering emergency care and transportation to the ill and injured. The nature of the work requires extensive decision-making abilities under pressure and also requires a calm, professional demeanor. Considerable health and physical strength requirements are necessary. Though thorough safety and risk management measures are implemented wherever possible, there remain numerous unavoidable aspects of this class which may place the Chief at risk of personal harm or illness resulting from the performance of their duties. Situations which may result in such personnel harm or illness include but are not limited to: driving of an emergency vehicle using lights and siren, exposure to hostile or combative patients, response to violent crime scenes, response to accidents involving hazardous chemical spills, exposure to communicable diseases, danger to moving traffic at highway/roadway accidents, response to hazardous environments, exposure to dirty needle sticks, and performance of certain high risk procedures in the delivery of Basic life support and supporting Advanced life support procedures.

### ESSENTIAL FUNCTIONS AND BASIC DUTIES

1. Consults with County Judge Executive in the preparation of the EMS budget.
2. Ensures EMS operations are carried out within the approved budget.
3. Develop and maintain operational procedure for EMS operations.
4. Serves as public relations spokesperson for EMS operations.
5. Development and maintenance of work schedules for EMS employees.
6. Identifies and applies for grants to assist in funding EMS operations.
7. Responsible for adequate staff or certified emergency medical personnel necessary for departmental operation.
8. Assures compliance with county personnel procedures in the recruitment and hiring/termination of personnel.
9. Ensure all personnel maintain necessary certifications required to perform work responsibilities.
10. Drives an ambulance to scenes and facilities in a safe and expeditious manner, while observing traffic ordinances and regulations concerning emergency vehicle operation.

*Chief of Operations/EMT*

*Rev. 9/2020*

11. Administers appropriate medications when required by clinical situations and local protocol.
12. Provides basic and airway control utilizing blind airway devices, or other acceptable methods.
13. Performs other forms of basic life support as specified in State and Local EMT Regulations and Policy.
14. Assumes role of highest medical authority in the pre-hospital setting, unless a Paramedic or physician is in attendance with the patient and remains so throughout transportation to the receiving medical facility.
15. Ensures appropriate personnel are on the scene.
16. Maintains a adequate supply and control of medications carried on the ambulance.
17. Maintains radio contact with base at all times.
18. Reports via radio or other method to receiving hospitals on the nature and extent of injuries/illness of patient(s) being transported.
19. Presents a reassuring and professional attitude at all times.
20. Complies with guidelines and recommendations on the handling of medical waste. Assures all medical waste generated at the scene is removed from the scene and disposed of properly.
21. Employs techniques to minimize the risk of acquiring infection or spread of communicable diseases.
22. Prepares a detailed written medical report of each patient attended to and provides a copy of the report to the receiving facility.
23. Obtains and completes all necessary forms for billing purposes.
24. Performs other duties as established in the EMT Job Description.
25. Maintains all credentials as required for certification.
26. Attends meetings, conferences, and seminars as required.
27. Any and other related duties as required.

## QUALIFICATIONS

### EDUCATION/CERTIFICATION:

- Graduate of High School or GED equivalent
- Graduate of a 2-year college or trade school (desired)
- Current EMT License in the State of Kentucky
- PEPP Certification or equivalent
- CPR Certification
- CPR Instructor (desired)
- PHTLS or ITLS Certification
- Maintain all required certifications and renewals

**EXPERIENCE REQUIRED:**

- 2 to 5 years supervisory/administrative experience in EMS setting
- 5 to 10 years OSHA experience
- 5 to 10 years EMT experience

**REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

1. Knowledge of Business Management Principles and Techniques.
2. Knowledge of Local, State and Federal Laws and Regulations applicable to EMS.
3. Ability to analyze complex budget, inventory and agency issues.
4. Ability to maintain confidential information and exercise professional judgment.
5. Ability to deal with the public, government officials and other agencies professionally.
6. Ability to organize and administer the agency programs.
7. Ability to communicate orally and in writing.
8. Ability to react quickly and competently in an emergency situation.
9. Understands the healthcare delivery system.
10. Knowledge of fleet management.
11. Knowledge of Employee/Employer relationship.
12. Knowledge of and training in the care and use of emergency equipment commonly accepted and employed by EMS agencies, such as oxygen, delivery systems, suction apparatus, anti-shock trousers, splinting devices, backboards, stretcher, etc.
13. Knowledge of the use and care of basic life support equipment, including heart monitors, basic airway equipment, pulse oximeters, blood glucometers, and medications.
14. Considerable knowledge and skill in treatment of trauma, cardiac, cardiac arrest, childbirth, respiratory emergencies, pediatric emergencies, shock, etc.
15. Ability to manage stressful situations.
16. Ability to perform related duties as assigned.

**CONDITIONS OF EMPLOYMENT:**

- Resident of Shelby County (desired)
- Direct Deposit Participation
- Background Check
- Drug Screening

**WORKING CONDITIONS PHYSICAL EFFORT:**

- Moderate to extreme physical/mental activity under extreme weather conditions.

- Potential for hostile environments.
- Ability to lift 75 pounds on a regular basis.

**OVERTIME REQUIREMENTS:** Non-exempt

**AVAILABILITY:** 24-hour shift every 3<sup>rd</sup> day. May be contacted on emergency basis.

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#### INTENT AND FUNCTIONS OF JOB DESCRIPTIONS

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All descriptions have been reviewed to ensure that only essential functions and basic duties have been included. Peripheral tasks, only incidentally related to each position, have been excluded. Requirements, skills, and abilities however, should the duties, responsibilities, and requirements delineated be interpreted as all inclusive. Additional functions and requirements may be assigned by supervisors as deemed appropriate.

In accordance with the American Disabilities Act, it is possible that requirements may be modified to reasonably accommodate disabled individuals. However, no accommodations will be made which may pose serious health or safety risks to the employee or others or which impose undue hardships on the organization.

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**KENTUCKY RETIREMENT SYSTEMS**

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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT

Position Title:

DEPUTY CHIEF OF OPERATIONS/EMT

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT

Position Title:

DEPUTY CHIEF OF OPERATIONS/EMT

Please select the appropriate classification and answer all that are applicable.

Police Officer

Firefighter Does this position require active fire suppression?  Yes  No

Paramedic

Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No

Other Specify: \_\_\_\_\_

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)

Does this position require frequent exposure to a high degree of danger or peril?  Yes  No

Does this position require a high degree of physical conditioning?  Yes  No

Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: 50%

**Description of Duties:**

ASSIST WITH THE MANAGEMENT OF DAY TO DAY OPERATIONS. MONITORING AND MANAGING DAY TO DAY OPERATIONS, RUNNING REPORTS, GATHERING AND ENTERING DATA OR ANY OTHER TASK AS DIRECTED BY THE CHIEF OF OPERATIONS.

Agency Head Signature: [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

Employer: SHELBY COUNTY FISCAL COURT

Position Title: DEPUTY CHIEF OF OPERATIONS/EMT

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: RENDERING AED TO THE ILL AND INJURED

Percentage of Time Spent: 50%

Description of Duties:

IN ADDITION TO THE ADMINISTRATIVE DUTIES THIS POSITION WOULD REQUIRE THE TREATMENT OF THE ILL AND INJURED AS NEEDED. MAKING 911 CALLS AND CONDUCTING TREATING AS NEEDED. THIS POSITION WILL PLACE THE EMPLOYEE IN HAZARDOUS SITUATIONS AND EXPOSE THE EMPLOYEE TO VARIOUS TYPES OF COMMUNICABLE DISEASES.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Agency Head Signature: Doug R. [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

## *Shelby County Fiscal Court*

### POSITION DESCRIPTION

<b>POSITION TITLE:</b>	Deputy Chief of Operations/EMT	<b>DEPARTMENT:</b>	EMS
<b>CLASSIFICATION:</b>	Administrative/Technician	<b>SUBMITTED BY:</b>	Human Resources
<b>SALARY RANGE:</b>	Based on Experience	<b>APPROVED BY:</b>	County Judge Executive

### REPORTING RELATIONSHIPS

**POSITION REPORTS TO:** Chief of Operations - EMS

**POSITIONS SUPERVISED:** EMS Personnel

### POSITION PURPOSE

Assists with the managing and implementing the day to day operations of the County EMS Services. Performs duties of rendering emergency care and transportation to the ill and injured. The nature of the work requires extensive decision-making abilities under pressure and also requires a calm, professional demeanor. Considerable health and physical strength requirements are necessary. Though thorough safety and risk management measures are implemented wherever possible, there remain numerous unavoidable aspects of this class which may place the Deputy Chief at risk of personal harm or illness resulting from the performance of their duties. Situations which may result in such personnel harm or illness include but are not limited to: driving of an emergency vehicle using lights and siren, exposure to hostile or combative patients, response to violent crime scenes, response to accidents involving hazardous chemical spills, exposure to communicable diseases, danger to moving traffic at highway/roadway accidents, response to hazardous environments, exposure to dirty needle sticks, and performance of certain high risk procedures in the delivery Basic life support and supporting Advanced life support procedures.

### ESSENTIAL FUNCTIONS AND BASIC DUTIES

1. Consults with Chief of Operations in the preparation of the EMS budget.
2. Ensures EMS operations are carried out within the approved budget.
3. Develop and maintain operational procedure for EMS operations.
4. Serves as public relations spokesperson for EMS operations.
5. Development and maintenance of work schedules for EMS employees.
6. Identifies and applies for grants to assist in funding EMS operations.
7. Responsible for adequate staff or certified emergency medical personnel necessary for departmental operation.
8. Assures compliance with county personnel procedures in the recruitment and hiring/termination of personnel.
9. Ensure all personnel maintain necessary certifications required to perform work responsibilities.
10. Drives an ambulance to scenes and facilities in a safe and expeditious manner, while observing traffic ordinances and regulations concerning emergency vehicle operation.

*Deputy Chief of Operations/EMT*

*Rev. 9/2020*

11. Administers appropriate medications when required by clinical situations and local protocol.
12. Provides basic airway control utilizing blind airway devices, or other acceptable methods.
13. Performs other forms of basic life support as specified in State and Local EMT Regulations and Policy.
14. Assumes role of highest medical authority in the pre-hospital setting, unless a Paramedic or physician is in attendance with the patient and remains so throughout transportation to the receiving medical facility.
15. Ensures appropriate personnel are on the scene.
16. Maintains adequate supply and control of medications carried on the ambulance.
17. Maintains radio contact with base at all times.
18. Reports via radio or other method to receiving hospitals on the nature and extent of injuries/illness of patient(s) being transported.
19. Presents a reassuring and professional attitude at all times.
20. Complies with guidelines and recommendations on the handling of medical waste. Assures all medical waste generated at the scene is removed from the scene and disposed of properly.
21. Employs techniques to minimize the risk of acquiring infection or spread of communicable diseases.
22. Prepares a detailed written medical report of each patient attended to and provides a copy of the report to the receiving facility.
23. Obtains and completes all necessary forms for billing purposes.
24. Performs other duties as established in the Paramedic Job Description.
25. Maintains all credentials as required for certification.
26. Attends meetings, conferences and seminars as required.
27. Any and other related duties as required.

## QUALIFICATIONS

### EDUCATION/CERTIFICATION:

- Graduate of High School or GED equivalent
- Graduate of a 2-year college or trade school (desired)
- Current EMT Certification in the State of Kentucky
- PEPP Certification or equivalent
- CPR Certification
- CPR Instructor (desired)
- PHTLS or ITLS Certification
- Maintain all required certifications and renewals

**EXPERIENCE REQUIRED:**

- 2 to 5 years supervisory/administrative experience in EMS setting
- 5 to 10 years OSHA experience
- 5 to 10 years EMT experience

**REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

1. Knowledge of Business Management Principles and Techniques.
2. Knowledge of Local, State and Federal Laws and Regulations applicable to the program.
3. Ability to analyze complex budget, inventory and agency issues.
4. Ability to maintain confidential information and exercise professional judgment.
5. Ability to deal with the public, government officials and other agencies professionally.
6. Ability to organize and administer the agency programs.
7. Ability to communicate orally and in writing.
8. Ability to react quickly and competently in an emergency situation.
9. Understands the healthcare delivery system.
10. Knowledge of fleet management
11. Knowledge of Employee/Employer relationship.
12. Considerable knowledge of and training in the care and use of emergency equipment commonly accepted and employed by EMS agencies, such as oxygen, delivery systems, suction apparatus, anti-shock trousers, splinting devices, backboards, stretcher, etc.
13. Considerable knowledge of the use and care of basic life support equipment, including heart monitors, basic airway equipment, pulse oximeters, blood glucometers, and medications.
14. Considerable knowledge and skill in treatment of trauma, cardiac, cardiac arrest, childbirth, respiratory emergencies, pediatric emergencies, shock, etc.
15. Ability to manage stressful situations.
16. Ability to perform related duties as assigned.

**CONDITIONS OF EMPLOYMENT:**

- Resident of Shelby County (desired)
- Direct Deposit Participation
- Background Check
- Drug Screening

**WORKING CONDITIONS PHYSICAL EFFORT:**

- Moderate to extreme physical/mental activity under extreme weather conditions.
- Potential for hostile environments.
- Ability to lift 75 pounds on a regular basis.

**OVERTIME REQUIREMENTS:** Exempt

**AVAILABILITY:** Regular shift. May be contacted on an emergency basis.

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**INTENT AND FUNCTIONS OF JOB DESCRIPTIONS**

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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

- To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.
- To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.
- To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT Position Title: SERGEANT / EMERGENCY MEDICAL TECHNICIAN (EMT)

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: SHELBY COUNTY FISCAL COURT Position Title: SERGEANT / EMERGENCY MEDICAL TECHNICIAN (EMT)

Please select the appropriate classification and answer all that are applicable.

Police Officer

Firefighter Does this position require active fire suppression?  Yes  No

Paramedic

Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No

Other Specify: \_\_\_\_\_

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No

If no, is this position required to carry a firearm?  Yes  No

Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)

Does this position require frequent exposure to a high degree of danger or peril?  Yes  No

Does this position require a high degree of physical conditioning?  Yes  No

Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: 10%

**Description of Duties:**

ADMINISTRATIVE DUTIES WOULD INCLUDE RUNNING REPORTS, DATA ENTRY, RECORDS ENTRY DURING DAY TO DAY OPERATIONS.

Agency Head Signature: [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive

Employer: SHELBY COUNTY FISCAL COURT

Position Title: SERGEANT / EMERGENCY MEDICAL TECHNICIAN (EMT)

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: 911 RESPONSE

Percentage of Time Spent: 60%

Description of Duties:

DURING DAY TO DAY OPERATIONS THIS POSITION WOULD REQUIRE THE EMPLOYEE TO MAKE 911 AND NON-URGENT CALLS AS NEEDED. THIS WILL EXPOSE THE EMPLOYEE TO THE SUI AND INJURED AND EXPOSURE TO VARIOUS COMMUNICABLE DISEASES AND HAZARDOUS SITUATIONS.

Position Duty: SUPERVISOR FOR SERVICES/SHELF

Percentage of Time Spent: 30%

Description of Duties:

EMPLOYEE WILL BE THE DIRECT SUPERVISOR FOR AN ASSIGNED SHELF AND THE SERVICES IN GENERAL. THIS POSITION WILL REPORT TO THE CAPTAIN, BUT WILL STILL REQUIRE THE MANAGEMENT OF PERSONNEL AND OTHER SOB ACTIVITIES AS DIRECTED BY THE EMPLOYER'S DIRECT SUPERVISOR.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

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\_\_\_\_\_

Agency Head Signature: [Signature]

Date: 9/30/20

Agency Head Title: Shelby County Judge Executive



## *Shelby County Fiscal Court*

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### **POSITION DESCRIPTION**

**POSITION TITLE:** Sergeant/  
Emergency Medical Technician (EMT)      **DEPARTMENT:** EMS

**CLASSIFICATION:** Technician      **SUBMITTED BY:** Human Resources

**SALARY RANGE:** Based on Experience      **APPROVED BY:** County Judge Executive

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### **REPORTING RELATIONSHIPS**

**POSITION REPORTS TO:** Shift Captain

**POSITIONS SUPERVISED:** EMS Personnel

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### **POSITION PURPOSE**

Identified as second in command on an assigned shift. Under limited supervision, performs highly responsible duties of rendering emergency care and transportation to the ill and injured person(s). The nature of the work requires extensive decision-making abilities under pressure and requires a calm, professional demeanor. Considerable health and physical strength requirements are necessary. Although safety and risk management measures are implemented wherever possible, there remains numerous unavoidable aspects of this class which may place the Sergeant/EMT at risk of personal harm or illness resulting from the performance of their duties. Situations which may result in such personnel harm or illness include but are not limited to: Driving of an emergency vehicle using lights and sirens, exposure to hostile or combative patients, response to violent crime scenes, response to accidents involving hazardous chemical spills, exposure to communicable disease(s), danger to moving traffic at highway/roadway accidents, response to hazardous environments, exposure to dirty needle sticks, and performance of certain high risk procedures in the delivery of basic life support.

### **ESSENTIAL FUNCTIONS AND BASIC DUTIES**

1. Responsible for duties assigned by the Shift Captain or upper command staff.
2. Responsible for scheduling of his/her shift at the discretion of the Shift Captain.
3. Will assume the duties of the Captain in his/her absence, supervising personnel on the shift.
4. Prepare daily reports.
5. Correcting any deficiencies found on the shift as soon as possible.
6. Assist the Shift Captain in preparing employee evaluations when directed to do so by the Chief.
7. Ensure all personnel maintain necessary certifications required to perform work responsibilities.
8. Drives an ambulance to scenes and facilities in a safe and expeditious manner while observing traffic ordinances and regulations concerning emergency vehicle operation.
9. Administers appropriate medications when required by clinical situations and local protocol.

*Sergeant/EMT*

*Rev. 12/2019*

10. Provides basic airway control utilizing acceptable methods following local protocol.
11. Performs other forms of basic life support as specified in State and Local Emergency Medical Technician Regulations and Policy.
12. Assumes the role of highest medical authority in the pre-hospital setting, unless a Paramedic is in attendance. If a Paramedic is in attendance, then the Paramedic will assume the highest medical authority. If a Paramedic is not in attendance and a physician is, the physician in attendance will assume the highest medical authority with the patient and remains so through transportation to the receiving medical facility.
13. Ensures appropriate personnel are on the scene.
14. Maintains adequate supply and control of medications carried on the ambulance.
15. Maintains radio contact with base at all times.
16. Reports (via radio or other method) to receiving hospitals on the nature and extent of injuries/illness of patient(s) being transported.
17. Presents a reassuring and professional attitude at all times.
18. Complies with guidelines and recommendations on the handling of medical waste. Assures all medical waste generated at the scene is removed from the scene and disposed of properly.
19. Employs techniques to minimize the risk of acquiring infection or spread of communicable diseases.
20. Prepares a detailed written medical report of each patient attended to and provides a copy of the report to the receiving facility.
21. Obtains and completes all necessary forms for billing purposes.
22. Performs other duties as established in the Emergency Medical Technician Job Description.
23. Maintains all credentials and required for certification.
24. Attends meetings, conferences and seminars as required.
25. Any and other related duties as required.

## QUALIFICATIONS

### EDUCATION/CERTIFICATION:

- Graduate of a 2-year college or trade school (desired)
- Current Emergency Medical Technician License in the State of Kentucky
- BLS Certification
- PHTLS or ITLS Certification
- CPR Instructor Certifications (desired)
- Maintenance of all required Certifications/Renewals

**EXPERIENCE REQUIRED:**

- 2 to 5 years progressive supervisory/administrative experience in EMS setting
- 5 to 10 years EMS experience
- 1 to 3 years OSHA training

**REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

1. Knowledge of Business Management Principles and Techniques.
2. Knowledge of Local, State and Federal Regulations applicable to the program.
3. Ability to analyze complex budget, inventory and agency issues.
4. Ability to maintain confidential information and exercises professional judgment.
5. Ability to deal with the public, government officials and other agencies professionally.
6. Ability to organize and administer the agency programs.
7. Ability to communicate orally and in writing.
8. Ability to react quickly and competently in an emergency situation.
9. Understands the healthcare delivery system.
10. Knowledge of fleet management.
11. Knowledge of Employee/Employer relationship.
12. Considerable knowledge of and training in the care and use of emergency equipment commonly accepted and employed by EMS agencies, such as oxygen, delivery systems, suction apparatus, anti-shock trousers, splinting devices, backboards, stretcher, etc.
13. Considerable knowledge in the use and care of basic life support equipment, including heart monitors, basic airway equipment, pulse oximeters, blood glucometers, and medications.
14. Considerable knowledge and skill in treatment of trauma, cardiac, cardiac arrest, childbirth, respiratory emergencies, pediatric emergencies, shock, etc.
15. Ability to manage stressful situations.
16. Ability to perform related duties as assigned.

**CONDITONS OF EMPLOYMENT:**

- Resident of Shelby County (desired)
- Direct Deposit Participation
- Background Check
- Drug Screening

**WORKING CONDITIONS PHYSICAL EFFORT:**

- Moderate to extreme physical/mental activity under extreme weather conditions.
- Potential for hostile environments.
- Ability to lift 75 pounds on a regular basis.

**OVERTIME REQUIREMENTS:** Non-exempt

**AVAILABILITY:** 24-hour shift every 3<sup>rd</sup> day. May be contacted on emergency basis.

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**Form 7025**  
Revised 09/2010

Print Form

**Position Questionnaire**

**Instructions**

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To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.  
To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: ANCHORAGE MIDDLETOWN FIRE AND EMS Position Title: Fire Recruit Career

Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No  
If no, is this position required to carry a firearm?  Yes  No  
Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: ANCHORAGE MIDDLETOWN FIRE AND EMS Position Title: Fire Recruit Career

Please select the appropriate classification and answer all that are applicable.

Police Officer  
 Firefighter Does this position require active fire suppression?  Yes  No  
 Paramedic  
 Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No  
 Other Specify: \_\_\_\_\_  
Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No  
If no, is this position required to carry a firearm?  Yes  No  
 Emergency Medical Technician (If this position is selected please complete the remainder of this page. if not skip to page 2.)  
Does this position require frequent exposure to a high degree of danger or peril?  Yes  No  
Does this position require a high degree of physical conditioning?  Yes  No  
Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: \_\_\_\_\_

**Description of Duties:**

Participates in the academic and physical recruit training of the AMFEMS Fire Academy. Participates in a battery of exams to determine suitability for the position of Firefighter. Lifts and carries items weighing in excess of 100 pounds in a team setting. Spends prolonged periods of time exposed to the elements. Endures extended periods of cardiovascular stress. Climbs ladders, hauls hoses, wears/carries off fire training suppression gear, and operates extrication equipment. Operates fire vehicles, Required to perform all job functions under hazardous or austere conditions.

Agency Head Signature: *Kevin J. Gandy*

Date: 10/16/2020

Agency Head Title: Fire Chief

Employer: ANCHORAGE MIDDLETOWN FIRE AND EMS

Position Title: Fire Recruit Career

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Training

Percentage of Time Spent: 90%

Description of Duties:

\*Participates in the academic and physical recruit training of the AMFEMS Fire Academy. Participates in a battery of exams to determine suitability for the position of Firefighter. Lifts and carries items weighing in excess of 100 pounds in a team setting. Spends prolonged periods of time exposed to the elements. Endures extended periods of cardiovascular stress. Climbs ladders, hauls hoses, wears/carries off fire training suppression gear, and operates extrication equipment. Operates fire vehicles, Required to perform all job functions under hazardous or austere conditions.

Position Duty: Administrative

Percentage of Time Spent: 10%

Description of Duties:

- A. Meets regular and punctual attendance standards and any special needs of the position as determined by management, including mandatory overtime and performing related work.
- B. Communicates with individuals in person and utilizes all types of communication media.

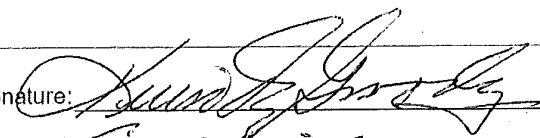
Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:


\_\_\_\_\_

Agency Head Signature: \_\_\_\_\_



Date: 10-16-2020

Agency Head Title: Fire Chief

	<b>Anchorage Middletown Fire &amp; EMS Administrative Policy Manual</b>		
Document ID 307.Fire.FireRecruit	Policy Title <b>Fire Recruit - Career</b>		
Date Effective 06/16/2020	Policy Category 307.00 Job Descriptions	Document Owner Kent Kruer Document Control Administrator	
Version 1	Related Documents:	Next Review Not Set	Page Page 1 of 3

Job Title: Fire Recruit - Career Job Reports To: Division Chief of Training

Division: Operations  Exempt  Non-Exempt


**I. Position purpose**

- A. Participates in the academic and physical recruit training programs of the Anchorage Middletown Fire and EMS Fire Academy.
- B. Participates in a battery of exams to determine suitability for the position of firefighter.

**II. Minimum Qualifications**

- A. High school diploma or G.E.D.
- B. Must be a minimum of 18 years old
- C. Must be of good moral character, with no criminal or felony record inconsistent with the provisions of this paragraph. Unacceptable will be persons who have been convicted of a felony, or who have any criminal action pending against them.
- D. An applicant may be disqualified for multiple misdemeanors, an unacceptable criminal record, or multiple traffic violations.
- E. Must submit to a pre-employment drug screening.
- F. Must pass a pre-employment physical agility test.
- G. Must wear personal protective and safety equipment as mandated by OSHA.
- H. Must have received an honorable discharge or a general discharge under honorable conditions if having served in any branch of the armed forces of The United States.

*Note: Nothing in this job description restricts managements right to assign or reassign duties and responsibilities to this job at any time.*

	<h2>Anchorage Middletown Fire &amp; EMS Administrative Policy Manual</h2>		
Document ID 307.Fire.FireRecruit	Policy Title <b>Fire Recruit - Career</b>		
Date Effective 06/16/2020	Policy Category 307.00 Job Descriptions	Document Owner Kent Kruer Document Control Administrator	
Version 1	Related Documents:	Next Review Not Set	Page Page 2 of 3

- I. Must be in excellent health based on department medical standards. Any job offer made will be contingent on passing a battery of medical examinations including a stress test.
- J. Must possess and maintain a valid driver's license.

**III. Responsibilities/Duties/Functions/Tasks**


- A. Meets regular and punctual attendance standards and any special needs of the position as determined by management, including mandatory overtime and performing related work.
- B. Communicates with individuals in person and utilizes all types of communication media.
- C. Lifts and carries items weighing in excess of 100 pounds in a team setting.
- D. Spends prolonged periods of time exposed to the elements.
- E. Endures extended periods of cardiovascular stress.
- F. Climbs ladders; hauls hose; wears/carries required protective clothing and gear in the course of training or fire suppression/rescue activities; and operates extrication equipment.
- G. Operates fire vehicles by both day and night; observes emergency scene actions taking place; observes traffic in the vicinity of an emergency scene; observes fire code violations; and reviews and prepares reports and correspondence.

**IV. Special Position Requirements**

- A. The employee may be required to perform all job functions under hazardous and/or austere conditions; while being exposed to all weather types and/or under extreme stress.

*Note: Nothing in this job description restricts managements right to assign or reassign duties and responsibilities to this job at any time.*



	<b>Anchorage Middletown Fire &amp; EMS Administrative Policy Manual</b>		
Document ID 307.Fire.FireRecruit	Policy Title <b>Fire Recruit - Career</b>		
Date Effective 06/16/2020	Policy Category 307.00 Job Descriptions	Document Owner Kent Kruer Document Control Administrator	
Version 1	Related Documents:	Next Review Not Set	Page Page 3 of 3

**V. Other Information**

- A. The employee will be continually evaluated and scored on their ability to perform job related skills and tasks based on IFSAC FF I and II job sheets. Failure to meet these standards may result in disciplinary action.
- B. Before completion of the Anchorage Middletown Fire and EMS Fire Academy the employee must successfully pass the Candidate Physical Ability Test (CPAT) administered by the Kentucky Fire Commission.
- C. Employees successfully completing the Anchorage Middletown Fire and EMS Fire Academy will then immediately be assigned to EMT Class.
- D. Upon completion of EMT class employees will be required to obtain and maintain a KY EMT-Basic certification.
- E. Upon successful completion of the Anchorage Middletown Fire and EMS Fire Academy and EMT Class the employee will be promoted to the rank of Firefighter/EMT.

*Note: Nothing in this job description restricts managements right to assign or reassign duties and responsibilities to this job at any time.*



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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.  
To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.  
To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: Office of the Attorney General Position Title: Forensic Computer Examiner I

- Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No
- If no, is this position required to carry a firearm?  Yes  No
- Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: \_\_\_\_\_ Position Title: \_\_\_\_\_

Please select the appropriate classification and answer all that are applicable.

- Police Officer
- Firefighter Does this position require active fire suppression?  Yes  No
- Paramedic
- Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No
- Other Specify: \_\_\_\_\_  
Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No  
If no, is this position required to carry a firearm?  Yes  No
- Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)  
Does this position require frequent exposure to a high degree of danger or peril?  Yes  No  
Does this position require a high degree of physical conditioning?  Yes  No  
Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner I

**Section 3: For All Positions**

- 1. List the exact position title as it appears on your job description.
- 2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
- 3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Forensic Examination

Percentage of Time Spent: 30

Description of Duties:

Under the direction of a Forensic Computer Examiner II & III, conducts forensic examinations of computers and other digital devices, including storage media using forensic examination software.

Position Duty: Criminal and Non-Criminal Investigations

Percentage of Time Spent: 20

Description of Duties:

Conducts, coordinates, leads and reviews complex time-consuming and sensitive criminal and non-criminal investigations. Conducts investigations individually as well as jointly with other investigators, forensic computer examiners, and law enforcement agencies.

Position Duty: Technical Consultant

Percentage of Time Spent: 20

Description of Duties:

Provides technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examinations of computers and other digital devices and storage media.

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner II

**Section 3: For All Positions**

- 1. List the exact position title as it appears on your job description.
- 2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
- 3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 81.592.

Position Duty: Evidence maintenance

Percentage of Time Spent: 15

Description of Duties:

Receives evidence and is responsible for its security until returned to the submitting agency. Compiles information and completes forensic reports on the forensic examinations conducted on the evidence received

Position Duty: Warrants and Summonses

Percentage of Time Spent: 5

Description of Duties:

Secures and serves warrants and summonses. Conducts surveillance and apprehends suspects, searches for physical evidence and makes arrests. Interview suspects. Prepares for, testifies and presents evidence to courts and administrative bodies. Testify as an expert witness regarding examination results.

Position Duty: Continuing Education

Percentage of Time Spent: 5

Description of Duties:

Attends training and reviews technical forensic information to stay current and maintain forensic licenses and certifications.

Agency Head Signature: Stacy Woodrum

Date: 10/16/2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner I

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Other duties

Percentage of Time Spent: 5

Description of Duties:

Performs other duties as assigned by management.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority



# COMMONWEALTH OF KENTUCKY JOB CLASS SPECIFICATION

## FORENSIC COMPUTER EXAMINER I

Job Number: 20000953

Job Code: 40750V201016

Job Group: 4000 - HEALTH SCIENCE AND LABORATORY

Job Established: 11/16/2006

Job Revised: 10/16/2020

Grade: 14 Salary (MIN - MID):

\$18,075-\$28,920 - Hourly

\$2,937.20-\$4,699.50 - 37.5 Hr. Monthly Salary

\$3,133.00-\$5,012.80 - 40 Hr. Monthly Salary

Special Entrance Rate:

NONE

NONE

NONE

### **PROBATIONARY PERIOD:**

This job has an initial and promotional probationary period of 12 months, except as provided in KRS 18A.111.

### **CHARACTERISTICS OF THE JOB:** *Characteristics of a job are general statements indicating the level of responsibility and discretion of positions in that job classification. These are not intended to be an exhaustive list.*

Under supervision, gains skills to perform forensic examinations of computers and digital devices, including digital storage media, for the purpose of identifying and collecting data for introduction as evidence in court or other legal proceedings; and performs other duties as assigned.

### **MINIMUM REQUIREMENTS:**

#### **EDUCATION:**

Graduate of a college or university with an associate's degree in computer science, information services, data communications and networks, digital forensic studies or a related field.

#### **EXPERIENCE, TRAINING, OR SKILLS:**

NONE

#### **Substitute EDUCATION for EXPERIENCE:**

Additional education (i.e. technical school, etc.) in the field of computer science, information services, data communications and networks, digital forensic studies or a related field will substitute for the associate's degree on a year for year basis.

#### **Substitute EXPERIENCE for EDUCATION:**

Experience working with computers and/or digital networking devices will substitute for the associate's degree on a year-for-year basis.

#### **SPECIAL REQUIREMENTS (AGE, LICENSURE, REGULATION, ETC.):**

Must possess and maintain a valid driver's license to qualify for appointment in this classification. Applicants for employment with the Office of the Attorney General must be 21 years of age and are subject to the provisions of KRS Chapter 15 and 503 KAR

1:140 relating to peace officer certification as administered by the Kentucky Law Enforcement Council. For additional information, please refer to KRS 15.382, <https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=48432> Must maintain any required licensure (s), certification(s), or other credentials for the length of employment in this classification. Employing agency is responsible for ensuring employee possesses and maintains required licensure(s), certification(s) or other credentials

**EXAMPLES OF DUTIES OR RESPONSIBILITIES OF THE JOB CLASSIFICATION:** *Examples of duties or responsibilities are not to be construed as describing what the duties or responsibilities of any position shall be and are not to be construed as limiting the appointing authority's ability to assign, or otherwise alter the duties and responsibilities of a position. This is not intended to be an exhaustive list.*

Gains skills to conduct forensic examinations of computers and other digital devices, including storage media. Learns to complete proper documentation for investigative reports. Assists in performing technical research on the internet regarding the application, configuration and operation of digital networking and storage devices. Researches and maintains knowledge of current development in the field of computer forensics by attending related training courses, seminars, and conferences. Learns to provide technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examination of computers and other digital devices and storage media. Trains for and participates in mock trials. Assists in preparing reports on the results of the computer/digital analyses for court purposes. Receives evidence and is responsible for its security until returned to the submitting officer or agency. Reviews technical forensic computer literature and attends conferences and training courses to maintain analytical techniques. Presence may be required at crime scenes to assist with evidence gathering and processing. Enforces departmental procedures as they relate to forensic computer laboratory operations. Prepares evidence for presentation in court and may testify in court as an "expert witness" regarding examination results.

**UNIQUE PHYSICAL REQUIREMENTS:**

May be required to lift 50 pounds or less.

**TYPICAL WORKING CONDITIONS:** *Incumbents in the job will typically perform their job duties under these conditions.*

Work is usually performed in a secure, office setting. Work is performed with computers and peripherals used for the forensic examination of digital evidence. May accompany investigators to crime scenes to perform digital forensic examinations on computers, networks, and media.

**ADDITIONAL REQUIREMENTS:**

Upon appointment, employees in this class may be required to maintain a valid driver's license and may be required to drive a licensed vehicle. This status may be necessary for the length of time in this class. If this is necessary, it will be listed in the specific position description for the position at issue. Applicants and employees in this job title maybe required to submit to a drug-screening test and background check. Applicants and employees in positions which perform job duties that may require contact with offenders in the custody or supervision of the Department of Corrections or with youth in the care, custody, or supervision of the Department of Juvenile Justice must meet qualifications pursuant to the federal Prison Rape Elimination Act, 28 C.F.R.115.17 and 115.317.

*The Commonwealth of Kentucky does not discriminate on the basis of race, color, sex, disability, age, national origin, religion, sexual orientation, gender identity or expression, pregnancy or related medical condition, marital or familial status, ancestry, political affiliation, genetic information, or veteran status in accordance with state and federal laws.*



KENTUCKY RETIREMENT SYSTEMS

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Form 7025
Revised 09/2010

Position Questionnaire

Instructions
To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.
To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008

Employer: Office of the Attorney General Position Title: Forensic Computer Examiner II

- Is this position required to have Peace Officer Professional Standards and Certification? Yes No
If no, is this position required to carry a firearm? Yes No
Does this position require active fire suppression or prevention? Yes No

Section 2: For Employees With a CERS Participation Date On or After September 1, 2008

Employer: Position Title:

- Please select the appropriate classification and answer all that are applicable.
Police Officer
Firefighter Does this position require active fire suppression? Yes No
Paramedic
Correctional Officer Does this position routinely require face to face contact with inmates? Yes No
Other Specify:
Is this position required to have Peace Officer Professional Standards and Certification? Yes No
If no, is this position required to carry a firearm? Yes No
Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)
Does this position require frequent exposure to a high degree of danger or peril? Yes No
Does this position require a high degree of physical conditioning? Yes No
Are the employee's duties primarily clerical or administrative? Yes No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):
Percentage of Time Spent:

Description of Duties:

Agency Head Signature: Stacy Woodrum Date: October 16, 2020

Agency Head Title: Designated Appointing Authority Page 1



Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner II

**Section 3: For All Positions**

- 1. List the exact position title as it appears on your job description.
- 2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
- 3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Forensic Examination

Percentage of Time Spent: 30

Description of Duties:

Under the direction of a Forensic Computer Examiner III, conducts the most complex and technical forensic examinations of computers and other digital devices, including storage media using forensic examination software.

Position Duty: Criminal and Non-Criminal Investigations

Percentage of Time Spent: 20

Description of Duties:

Conducts, coordinates, leads and reviews complex time-consuming and sensitive criminal and non-criminal investigations. Conducts investigations individually as well as jointly with other investigators, forensic computer examiners, and law enforcement agencies.

Position Duty: Technical Consultant

Percentage of Time Spent: 20

Description of Duties:

Provides technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examinations of computers and other digital devices and storage media.

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner II

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.692.

Position Duty: Evidence maintenance

Percentage of Time Spent: 15

Description of Duties:

Receives evidence and is responsible for its security until returned to the submitting agency. Compiles information and completes forensic reports on the forensic examinations conducted on the evidence received

Position Duty: Warrants and Summonses

Percentage of Time Spent: 5

Description of Duties:

Secures and serves warrants and summonses. Conducts surveillance and apprehends suspects, searches for physical evidence and makes arrests. Interview suspects. Prepares for, testifies and presents evidence to courts and administrative bodies. Testify as an expert witness regarding examination results.

Position Duty: Continuing Education

Percentage of Time Spent: 5

Description of Duties:

Attends training and reviews technical forensic information to stay current and maintain forensic licenses and certifications.

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner II

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Other duties

Percentage of Time Spent: 5

Description of Duties:

Performs other duties as assigned by management.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority



## COMMONWEALTH OF KENTUCKY JOB CLASS SPECIFICATION

### FORENSIC COMPUTER EXAMINER II

Job Number: 20000954

Job Code: 40760V201016

Job Group: 4000 - HEALTH SCIENCE AND LABORATORY

Job Established: 11/16/2006

Job Revised: 10/16/2020

Grade: 15	<u>Salary (MIN - MID):</u>	<u>Special Entrance Rate:</u>
	\$19,882-\$31,812 - Hourly	NONE
	\$3,230.84-\$5,169.46 - 37.5 Hr. Monthly Salary	NONE
	\$3,446.22-\$5,514.08 - 40 Hr. Monthly Salary	NONE

#### **PROBATIONARY PERIOD:**

This job has an initial and promotional probationary period of 12 months, except as provided in KRS 18A.111.

#### **CHARACTERISTICS OF THE JOB:** *Characteristics of a job are general statements indicating the level of responsibility and discretion of positions in that job classification. These are not intended to be an exhaustive list.*

Performs forensic examinations of computers and digital devices, including digital storage media, for the purpose of identifying and collecting data for introduction as evidence in court or other legal proceedings. Assists Forensic Computer Examiner III as assigned; and performs other duties as assigned.

#### **MINIMUM REQUIREMENTS:**

##### **EDUCATION:**

Graduate of a college or university with an associate's degree in computer science, information services, data communications and networks, digital forensic studies or a related field.

##### **EXPERIENCE, TRAINING, OR SKILLS:**

Must have two years of experience performing forensic examination of computers, networks or other digital devices for a law enforcement agency.

##### **Substitute EDUCATION for EXPERIENCE:**

Additional education (i.e. technical school, etc.) in the field of computer science, information services, data communications and networks, digital forensic studies or a related field will substitute for the associate's degree on a year for year basis.

##### **Substitute EXPERIENCE for EDUCATION:**

Experience working with computers and /or digital networking devices will substitute for the education on a year for year basis.

##### **SPECIAL REQUIREMENTS (AGE, LICENSURE, REGULATION, ETC.):**

Must possess and maintain a valid driver's license to qualify for appointment in this classification. Within six months of appointment into this classification, an employee must obtain the Computing Technology Industry Association (CompTIA) A+

10/13/20

Page 1 of 2

certification ([www.comptia.org](http://www.comptia.org)) OR other equivalent industry certifications. Applicants for employment with the Office of the Attorney General must be 21 years of age and are subject to the provisions of KRS Chapter 15 and 503 KAR 1:140 relating to peace officer certification as administered by the Kentucky Law Enforcement Council. For additional information, please refer to KRS 15.382, <https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=48432> Must maintain any required licensure(s), certification(s), or other credentials for the length of employment in this classification. Employing agency is responsible for ensuring employee possesses and maintains required licensure(s), certification(s) or other credentials.

**EXAMPLES OF DUTIES OR RESPONSIBILITIES OF THE JOB CLASSIFICATION:** *Examples of duties or responsibilities are not to be construed as describing what the duties or responsibilities of any position shall be and are not to be construed as limiting the appointing authority's ability to assign, or otherwise alter the duties and responsibilities of a position. This is not intended to be an exhaustive list.*

Conducts forensic examinations of computers and other digital devices, including storage media. Responsible for documenting investigative reports. Performs technical research on the internet regarding the application, configuration and operation of digital networking and storage devices. Researches and maintains knowledge of current development in the field of computer forensics by attending related training courses, seminars, and conferences. Provides technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examination of computers and other digital devices and storage media. Trains for and participates in mock trials. Prepares reports on the results of the computer/digital analyses for court purposes. Receives evidence and is responsible for its security until returned to the submitting officer or agency. Reviews technical forensic computer literature and attends conferences and training courses to maintain analytical techniques. Provides technical assistance to agency personnel. Presence may be required at crime scenes to assist with evidence gathering and processing. Enforces departmental procedures as they relate to forensic computer laboratory operations. Prepares evidence for presentation in court and may testify in court as an "expert witness" regarding examination results.

**UNIQUE PHYSICAL REQUIREMENTS:**

May be required to lift 50 pounds or less.

**TYPICAL WORKING CONDITIONS:** *Incumbents in the job will typically perform their job duties under these conditions.*

Work is usually performed in a secure, office setting. Work is performed with computers and peripherals used for the forensic examination of digital evidence. May accompany investigators to crime scenes to perform digital forensic examinations on computers, networks, and media.

**ADDITIONAL REQUIREMENTS:**

Upon appointment, employees in this class may be required to maintain a valid driver's license and may be required to drive a licensed vehicle. This status may be necessary for the length of time in this class. If this is necessary, it will be listed in the specific position description for the position at issue. Applicants and employees in this job title maybe required to submit to a drug-screening test and background check. Applicants and employees in positions which perform job duties that may require contact with offenders in the custody or supervision of the Department of Corrections, or with youth in the care, custody, or supervision of the Department of Juvenile Justice, must meet qualifications pursuant to the federal Prison Rape Elimination Act, 28 C.F.R.115.17 and 115.317.

*The Commonwealth of Kentucky does not discriminate on the basis of race, color, sex, disability, age, national origin, religion, sexual orientation, gender identity or expression, pregnancy or related medical condition, marital or familial status, ancestry, political affiliation, genetic information, or veteran status in accordance with state and federal laws.*



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**Form 7025**  
Revised 09/2010

**Position Questionnaire**

**Instructions**

To petition the Board for approval of hazardous duty positions for KERS employees, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date prior to 9/1/2008, complete Sections 1 and 3.

To petition for CERS employees with a CERS participation date on or after 9/1/2008, complete Sections 2 and 3.

**Section 1: For KERS Employees or Employees With a CERS Participation Date Prior to September 1, 2008**

Employer: Office of the Attorney General Position Title: Forensic Computer Examiner III

- Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No
- If no, is this position required to carry a firearm?  Yes  No
- Does this position require active fire suppression or prevention?  Yes  No

**Section 2: For Employees With a CERS Participation Date On or After September 1, 2008**

Employer: \_\_\_\_\_ Position Title: \_\_\_\_\_

Please select the appropriate classification and answer all that are applicable.

- Police Officer
- Firefighter Does this position require active fire suppression?  Yes  No
- Paramedic
- Correctional Officer Does this position routinely require face to face contact with inmates?  Yes  No
- Other Specify: \_\_\_\_\_
- Is this position required to have Peace Officer Professional Standards and Certification?  Yes  No
- If no, is this position required to carry a firearm?  Yes  No
- Emergency Medical Technician (If this position is selected please complete the remainder of this page, if not skip to page 2.)
- Does this position require frequent exposure to a high degree of danger or peril?  Yes  No
- Does this position require a high degree of physical conditioning?  Yes  No
- Are the employee's duties primarily clerical or administrative?  Yes  No

Position Duty: Clerical or Administrative (Complete only if EMT is selected):

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner III

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Forensic Examination

Percentage of Time Spent: 30

Description of Duties:

Conducts the most complex and technical forensic examinations of computers and other digital devices, including storage media using forensic examination software.

Position Duty: Criminal and Non-Criminal Investigations

Percentage of Time Spent: 20

Description of Duties:

Conducts, coordinates, leads and reviews highly complex time-consuming and sensitive criminal and non-criminal investigations. Conducts investigations individually as well as jointly with other investigators, forensic computer examiners, and law enforcement agencies.

Position Duty: Technical Consultant

Percentage of Time Spent: 20

Description of Duties:

Provides technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examinations of computers and other digital devices and storage media.

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority

Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner III

**Section 3: For All Positions**

1. List the exact position title as it appears on your job description.
2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Evidence maintenance

Percentage of Time Spent: 15

Description of Duties:

Receives evidence and is responsible for its security until returned to the submitting agency. Compiles information and completes forensic reports on the forensic examinations conducted on the evidence received

Position Duty: Warrants and Summonses

Percentage of Time Spent: 5

Description of Duties:

Secures and serves warrants and summonses. Conducts surveillance and apprehends suspects, searches for physical evidence and makes arrests. Interview suspects. Prepares for, testifies and presents evidence to courts and administrative bodies. Testify as an expert witness regarding examination results.

Position Duty: Continuing Education

Percentage of Time Spent: 5

Description of Duties:

Attends training and reviews technical forensic information to stay current and maintain forensic licenses and certifications.

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority



Employer: Office of the Attorney General

Position Title: Forensic Computer Examiner III

**Section 3: For All Positions**

- 1. List the exact position title as it appears on your job description.
- 2. List the position's duties (i.e. training, field duties, etc.), the percentage of time spent performing each duty (percentages must equal 100% including the clerical/administrative duties on the first page (for EMT positions), and a description of each duty in the box provided.
- 3. BE AS DETAILED AS POSSIBLE. The Board of Trustees will use this document in determining if the position meets the definition of hazardous duty per KRS 61.592.

Position Duty: Other duties

Percentage of Time Spent: 5

Description of Duties:

Performs other duties as assigned by management.

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Position Duty: \_\_\_\_\_

Percentage of Time Spent: \_\_\_\_\_

Description of Duties:

\_\_\_\_\_

Agency Head Signature: Stacy Woodrum

Date: October 16, 2020

Agency Head Title: Designated Appointing Authority



## COMMONWEALTH OF KENTUCKY JOB CLASS SPECIFICATION

### FORENSIC COMPUTER EXAMINER III

Job Number: 20000955

Job Code: 40770V201016

Job Group: 4000 - HEALTH SCIENCE AND LABORATORY

Job Established: 11/16/2006

Job Revised: 10/16/2020

Grade: 16 Salary (MIN - MID):

\$21,870-\$34,992 - Hourly

\$3,553.88-\$5,686.20 - 37.5 Hr. Monthly Salary

\$3,790.80-\$6,065.28 - 40 Hr. Monthly Salary

Special Entrance Rate:

NONE

NONE

NONE

#### **PROBATIONARY PERIOD:**

This job has an initial and promotional probationary period of 12 months, except as provided in KRS 18A.111.

#### **CHARACTERISTICS OF THE JOB: *Characteristics of a job are general statements indicating the level of responsibility and discretion of positions in that job classification. These are not intended to be an exhaustive list.***

Performs advanced forensic examinations of computers, networks and digital devices, including digital storage media, for the purpose of identifying and collecting data for introduction as evidence in court or other legal proceedings. Acts as an advisor in the specialty area of computer forensics and coordinates the work of Forensic Computer Examiners; and performs other duties as assigned.

#### **MINIMUM REQUIREMENTS:**

##### **EDUCATION:**

Graduate of a college or university with a bachelor's degree in computer science, information services, data communications and networks or digital forensic studies, or a related field.

##### **EXPERIENCE, TRAINING, OR SKILLS:**

Must have four years of experience performing forensic examinations of computers, networks or other digital devices for a law enforcement agency.

##### **Substitute EDUCATION for EXPERIENCE:**

Additional education (i.e. associate's degree plus technical school, etc.) in the field of computer science, information services, data communications and networks, digital forensic studies or a related field will substitute for the bachelor's degree on a year for year basis.

##### **Substitute EXPERIENCE for EDUCATION:**

Experience working with computers and /or digital networking devices will substitute for the education on a year for year basis.

##### **SPECIAL REQUIREMENTS (AGE, LICENSURE, REGULATION, ETC.):**

10/13/20

Page 1 of 2

Must possess and maintain a valid driver's license to qualify for appointment in this classification. Must possess Computing Technology Industry Association (CompTIA) A+ certification or other equivalent industry certifications ([www.comptia.org](http://www.comptia.org)). Within six months of appointment into this classification, an employee must obtain the Computing Technology Industry Association (CompTIA) Network+ certification ([www.comptia.org](http://www.comptia.org)) OR other equivalent industry certifications. Applicants for employment with the Office of the Attorney General must be 21 years of age and are subject to the provisions of KRS Chapter 15 and 503 KAR 1:140 relating to peace officer certification as administered by the Kentucky Law Enforcement Council. For additional information, please refer to KRS 15.382, <https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=48432> Must maintain any required licensure (s), certification(s), or other credentials for the length of employment in this classification. Employing agency is responsible for ensuring employee possesses and maintains required licensure(s), certification(s) or other credentials.

**EXAMPLES OF DUTIES OR RESPONSIBILITIES OF THE JOB CLASSIFICATION:** *Examples of duties or responsibilities are not to be construed as describing what the duties or responsibilities of any position shall be and are not to be construed as limiting the appointing authority's ability to assign, or otherwise alter the duties and responsibilities of a position. This is not intended to be an exhaustive list.*

Conducts the most complex and technical forensic examinations of computers and other digital devices, including storage media. Responsible for documenting investigative reports. Uses forensic examination software, such as Encase and FTK, conducts complex digital forensic examinations, performs duties in breaking advanced encryption techniques and performs analysis on digital devices with volatile memory capacities. Performs technical research on the internet regarding the application, configuration and operation of digital networking and storage devices. Researches and maintains knowledge of current development in the field of computer forensics by attending related training courses, seminars, and conferences. Provides technical expertise and support to state and local law enforcement agencies on issues relating to the seizure, operation and forensic examination of computers and other digital devices and storage media. Trains for and participates in mock trials. Prepares reports on the results of the computer/digital analyses for court purposes. Receives evidence and is responsible for its security until returned to the submitting officer or agency. Reviews technical forensic computer literature and attends conferences and training courses to maintain analytical techniques. Provides technical assistance to agency personnel. Presence may be required at crime scenes to assist with evidence gathering and processing. Enforces departmental procedures as they relate to forensic computer laboratory operations. Prepares evidence for presentation in court and may testify in court as an "expert witness" regarding examination results.

**UNIQUE PHYSICAL REQUIREMENTS:**

May be required to lift 50 pounds or less.

**TYPICAL WORKING CONDITIONS:** *Incumbents in the job will typically perform their job duties under these conditions.*

Work is usually performed in a secure, office setting. Work is performed with computers and peripherals used for the forensic examination of digital evidence. May accompany investigators to crime scenes to perform digital forensic examinations on computers, networks, and media.

**ADDITIONAL REQUIREMENTS:**

Upon appointment, employees in this class may be required to maintain a valid driver's license and may be required to drive a licensed vehicle. This status may be necessary for the length of time in this class. If this is necessary, it will be listed in the specific position description for the position at issue. Applicants and employees in this job title maybe required to submit to a drug-screening test and background check. Applicants and employees in positions which perform job duties that may require contact with offenders in the custody or supervision of the Department of Corrections, or with youth in the care, custody, or supervision of the Department of Juvenile Justice, must meet qualifications pursuant to the federal Prison Rape Elimination Act, 28 C.F.R.115.17 and 115.317.

*The Commonwealth of Kentucky does not discriminate on the basis of race, color, sex, disability, age, national origin, religion, sexual orientation, gender identity or expression, pregnancy or related medical condition, marital or familial status, ancestry, political affiliation, genetic information, or veteran status in accordance with state and federal laws.*



COMMONWEALTH OF KENTUCKY  
OFFICE OF THE ATTORNEY GENERAL

DANIEL CAMERON  
ATTORNEY GENERAL

CAPITOL BUILDING, SUITE 118  
700 CAPITOL AVENUE  
FRANKFORT, KY 40601  
(502) 696-5300  
FAX: (502) 564-2894

October 19, 2020

Kentucky Retirement Systems  
1260 Louisville Road  
Frankfort, KY 40601  
Attn: Board of Trustees

Dear Board Members:

As the Chief Law Enforcement Agency, the Office of the Attorney General (OAG) has a deep responsibility to protect the citizens of the Commonwealth of Kentucky. One of those responsibilities is to investigate and prosecute perpetrators of crimes against the elderly and, especially children, via internet and other electronic device usage. The OAG office has seen great success in this arena and the Cyber Crimes Branch has been instrumental in these activities.

To better serve our clients, the OAG requested and have received approval for amendments to the Forensic Computer Examiner I, job number 20000953, Forensic Computer Examiner II, job number 20000954 and Forensic Computer Examiner III, job number 20000955 class specifications. These amendments afford our office the opportunity to recruit investigators who not only have experience in law enforcement, but also, an aptitude in information technology which will aid them in their endeavors. It also allows these staff members to be appropriately classified for the specific work in which they engage.

One of their responsibilities is providing surveillance of alleged perpetrators of cyber-crimes, and approach and arrest suspects for further investigation and prosecution. The Forensic Computer Examiners in the OAG Cyber Crimes Branch will have certifications specific to their trade, as well as, meeting all of the Peace Office Professional Standards as defined in KRS 61.592.

There will be one position immediately impacted by this request. Position number 31032749, Investigator III, Grade 14, currently occupied by \_\_\_\_\_ This position will be reclassified to a Forensic Computer Examiner II, Grade 15, with a salary increase consistent with the requirements found in 101 KAR 2:034, Section 3 (3). If approved, the OAG will also create at least one additional Forensic Computer Examiner II position in the Cyber Crimes Branch. Other Forensic Computer Examiner positions may be created in the future based on need and available funding.

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KRS Letter October 19, 2020

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The impact of the salary increase for position 31032749 as well as the increases in benefits and retirement contributions have been considered by our budget staff. We are confident that our current and proposed budgets will handle the increases for these two positions.

For these reasons, the Office of the Attorney General respectfully requests the KERS Board of Trustees consider to have these titles, when used by our office, designated as hazardous retirement eligible positions. Should our request be approved, our office will abide by all regulations related to hazardous duty designations.

Thank you for your consideration.

*Stacy Woodrum*

Stacy Woodrum  
OAG/OAS Executive Director  
Appointing Authority Designee

cc: Daniel Cameron, Attorney General  
Barry Dunn, Deputy Attorney General  
Amy Burke, Assistant Deputy Attorney General  
Greg Wolf, Acting Commissioner, DCI

Board Meeting - November 12, 2020 - Audit Committee Report

**KENTUCKY RETIREMENT SYSTEMS**  
**COMBINING STATEMENTS OF FIDUCIARY NET POSITION**  
**PENSION FUNDS**  
**As of September 30, 2020**  
**(Unaudited)(In Whole Dollars)**

	CERS	CHAZ	KERS	KHAZ	SPRS	2020	2019		
<b>ASSETS</b>									
Cash and Short-term Investments									
Cash Deposits	1,274,220	374,801	1,249,868	146,565	108,712	3,154,166	5,186,701	-39%	1
Short-term Investments	375,561,007	128,015,912	208,415,492	39,017,357	28,113,404	779,123,172	631,550,178	23%	2
<b>Total Cash and Short-term Investments</b>	<b>\$ 376,835,227</b>	<b>\$ 128,390,712</b>	<b>\$ 209,665,360</b>	<b>\$ 39,163,922</b>	<b>\$ 28,222,116</b>	<b>\$ 782,277,338</b>	<b>\$ 636,736,879</b>		
<b>RECEIVABLES</b>									
Accounts Receivable	51,969,580	25,198,825	48,710,436	4,233,211	9,250,261	139,362,312	130,236,128	7%	
Accounts Receivable - Investments	207,046,739	71,078,040	81,166,976	20,929,599	9,080,794	389,302,148	152,157,456	156%	3
<b>Total Receivables</b>	<b>\$ 259,016,319</b>	<b>\$ 96,276,865</b>	<b>\$ 129,877,412</b>	<b>\$ 25,162,810</b>	<b>\$ 18,331,055</b>	<b>\$ 528,664,460</b>	<b>\$ 282,393,584</b>		
<b>INVESTMENTS, AT FAIR VALUE</b>									
Fixed Income	1,262,453,319	433,699,909	565,225,831	131,624,225	72,465,835	2,465,469,119	2,381,748,632	4%	
Public Equities	2,926,239,470	987,030,122	767,414,556	288,713,489	99,067,619	5,068,465,257	4,796,570,508	6%	
Specialty Credit	1,221,937,886	418,395,609	435,873,924	127,191,538	47,688,903	2,251,087,860	2,006,735,121	12%	4
Private Equities	638,299,411	214,654,670	190,326,404	58,910,626	18,118,290	1,120,309,401	1,153,844,068	-3%	
Absolute Return	87,110,175	27,593,370	27,992,958	7,303,527	3,030,316	153,030,346	200,213,255	-24%	5
Real Estate	326,730,259	104,547,046	100,452,325	30,743,115	12,846,717	575,319,462	546,773,760	5%	
Real Return	437,731,208	148,270,356	138,273,523	42,209,701	17,061,496	783,546,284	1,095,092,347	-28%	6
Opportunistic	184,935,817	61,136,916	54,077,852	16,765,704	6,679,668	323,595,957	139,104,289	133%	7
Derivatives	1,093,540	374,403	359,390	107,341	41,715	1,976,388	1,424,775	39%	8
<b>Total Investments, at Fair Value</b>	<b>\$ 7,086,531,084</b>	<b>\$ 2,395,702,400</b>	<b>\$ 2,279,996,763</b>	<b>\$ 703,569,266</b>	<b>\$ 277,000,560</b>	<b>\$ 12,742,800,073</b>	<b>\$ 12,321,506,754</b>		
<b>CAPITAL/INTANGIBLE ASSETS</b>									
Capital Assets	1,700,704	153,235	929,074	91,375	11,003	2,885,391	2,885,391		
Intangible Assets	9,960,922	826,734	5,919,584	493,581	100,005	17,300,826	17,300,826		
Accumulated Depreciation	(1,677,870)	(150,944)	(915,962)	(89,877)	(11,536)	(2,846,189)	(2,765,954)		
Accumulated Amortization	(9,212,814)	(784,060)	(5,395,718)	(459,603)	(109,789)	(15,961,984)	(15,008,062)		
<b>Total Capital Assets</b>	<b>\$ 770,943</b>	<b>\$ 44,966</b>	<b>\$ 536,978</b>	<b>\$ 35,475</b>	<b>\$ (10,317)</b>	<b>\$ 1,378,044</b>	<b>\$ 2,412,201</b>	-43%	9
<b>Total Assets</b>	<b>\$ 7,723,153,573</b>	<b>\$ 2,620,414,943</b>	<b>\$ 2,620,076,512</b>	<b>\$ 767,931,473</b>	<b>\$ 323,543,414</b>	<b>\$ 14,055,119,915</b>	<b>\$ 13,243,049,417</b>		
<b>LIABILITIES</b>									
Accounts Payable	4,096,037	700,547	2,110,897	160,010	211,228	7,278,719	10,562,227	-31%	10
Investment Accounts Payable	332,630,998	115,937,428	140,957,655	34,870,098	14,984,801	639,380,980	203,131,940	215%	11
<b>Total Liabilities</b>	<b>\$ 336,727,035</b>	<b>\$ 116,637,975</b>	<b>\$ 143,068,552</b>	<b>\$ 35,030,108</b>	<b>\$ 15,196,029</b>	<b>\$ 646,659,699</b>	<b>\$ 213,694,167</b>		
<b>Total Fiduciary Net Position Restricted for Pensions</b>	<b>\$ 7,386,426,538</b>	<b>\$ 2,503,776,968</b>	<b>\$ 2,477,007,960</b>	<b>\$ 732,901,364</b>	<b>\$ 308,347,385</b>	<b>\$ 13,408,460,215</b>	<b>\$ 13,029,355,251</b>		

**NOTE - Variance Explanation**

- 1 Variance is a result of continuous fluctuation of deposits and transactions that flow through the cash account.
- 2 Short Term Investments is primarily comprised of the cash on hand with the custodial bank along with any small amounts of cash managers and brokers may have; therefore, the variance is driven by cash flow.
- 3 Variance is a result of transaction activity which is based on each individual manager.
- 4 The increase in Specialty Credit is due to additional funds invested in current managers and funding of five (5) new managers.
- 5 The decline in Absolute Return is due to the continued redemption of the entire portfolio.
- 6 The assets declined in Real Return is a result of redemption of PIMCO, Nuveen and the Internal TIPS account.
- 7 The increase in Opportunistic is due to additional funds invested in current manager.
- 8 Variance is a result of hedging and arbitration of risk within the portfolios
- 9 The decrease in total Fixed Assets is due to the increase in the amortization of the fixed assets.
- 10 The decrease in Accounts Payable is due to a decrease in outstanding credit invoices in KERS, KERH, CERH and SPRS.
- 11 Variance is a result of transaction activity which is based on each individual manager.

Board Meeting - November 12, 2020 - Audit Committee Report

**KENTUCKY RETIREMENT SYSTEMS**  
**COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION**  
**PENSION FUNDS**  
**For the Year Ended September 30, 2020**  
**(Unaudited)(In Whole Dollars)**

	CERS	CHAZ	KERS	KHAZ	SPRS	2021	2020		
<b>ADDITIONS</b>									
Member Contributions	37,769,371	17,333,136	22,111,692	5,140,074	1,206,138	83,560,412	84,154,936	-1%	
Employer Contributions	106,074,431	47,871,235	240,111,374	15,858,812	15,238,060.55	425,153,913	415,883,985	2%	
General Fund Appropriations	-	-	-	-	-	-	1,086,200	-100%	1
Pension Spiking Contributions	19,128	19,479	34,388	140	1,009	74,143	86,367	-14%	2
Health Insurance Contributions (HB1)	(273)	273	(629)	629	-	-	12,121	-100%	3
<b>Total Contributions</b>	<b>\$ 143,862,658</b>	<b>\$ 65,224,122</b>	<b>\$ 262,256,824</b>	<b>\$ 20,999,656</b>	<b>\$ 16,445,208</b>	<b>\$ 508,788,468</b>	<b>\$ 501,223,610</b>		
<b>INVESTMENT INCOME</b>									
<b>From Investing Activities</b>									
Net Appreciation in FV of Investments	314,525,282	105,993,547	99,702,111	30,926,591	11,419,761	562,567,291	94,405,591	496%	4
Interest/Dividends	43,061,809	14,479,157	13,415,727	4,208,920	1,718,730	76,884,342	92,887,409	-17%	5
<b>Total Investing Activities Income</b>	<b>\$ 357,587,091</b>	<b>\$ 120,472,704</b>	<b>\$ 113,117,838</b>	<b>\$ 35,135,511</b>	<b>\$ 13,138,490</b>	<b>\$ 639,451,633</b>	<b>\$ 187,293,000</b>		
<b>Investment Expense</b>									
Performance Fee/Carried Interest	9,497,593	3,126,609	2,745,179	895,495	325,590	16,590,467	15,487,161	7%	
	3,555,427	1,348,946	917,782	312,237	39,634	6,174,027	12,968,911	-52%	6
<b>Net Income from Investing Activities</b>	<b>\$ 344,534,071</b>	<b>\$ 115,997,148</b>	<b>\$ 109,454,876</b>	<b>\$ 33,927,779</b>	<b>\$ 12,773,266</b>	<b>\$ 616,687,140</b>	<b>\$ 158,836,928</b>		
<b>From Securities Lending Activities</b>									
Securities Lending Income	119,916	40,888	39,321	12,073	5,048	217,245	2,487,277		
Securities Lending Expense									
Securities Lending Borrower Rebates	(100,259)	(34,072)	(29,077)	(9,944)	(3,683)	(177,035)	1,665,650		
Securities Lending Agent Fee	32,999	11,235	10,251	3,299	1,309	59,094	94,354		
<b>Net Income from Securities Lending</b>	<b>\$ 187,176</b>	<b>\$ 63,726</b>	<b>\$ 58,146</b>	<b>\$ 18,717</b>	<b>\$ 7,421</b>	<b>\$ 335,186</b>	<b>\$ 727,272</b>	<b>-54%</b>	<b>7</b>
<b>Total Investment Income</b>	<b>\$ 344,721,247</b>	<b>\$ 116,060,874</b>	<b>\$ 109,513,022</b>	<b>\$ 33,946,496</b>	<b>\$ 12,780,687</b>	<b>\$ 617,022,326</b>	<b>\$ 159,564,201</b>		
<b>Total Additions</b>	<b>\$ 488,583,905</b>	<b>\$ 181,284,996</b>	<b>\$ 371,769,846</b>	<b>\$ 54,946,152</b>	<b>\$ 29,225,895</b>	<b>\$ 1,125,810,794</b>	<b>\$ 660,787,810</b>		
<b>DEDUCTIONS</b>									
Benefit Payments	203,786,196	71,269,622	252,049,767	18,251,675	15,773,769	561,131,029	546,687,715	3%	
Refunds	3,837,061	1,448,304	2,132,251	843,893	88,380	8,349,889	10,425,937	-20%	8
Administrative Expenses	5,423,250	478,491	2,810,453	314,818	60,261	9,087,273	8,651,168	5%	
<b>Total Deductions</b>	<b>\$ 213,046,508</b>	<b>\$ 73,196,417</b>	<b>\$ 256,992,471</b>	<b>\$ 19,410,386</b>	<b>\$ 15,922,410</b>	<b>\$ 578,568,191</b>	<b>\$ 565,764,820</b>		
<b>Net Increase (Decrease) in Fiduciary Net Position</b>	<b>\$ 275,537,397</b>	<b>\$ 108,088,579</b>	<b>\$ 114,777,375</b>	<b>\$ 35,535,767</b>	<b>\$ 13,303,485</b>	<b>\$ 547,242,603</b>	<b>\$ 95,022,990</b>		
<b>FIDUCIARY NET POSITION HELD IN TRUST FOR PENSION BENEFITS</b>									
Beginning of Period	\$ 7,110,889,139	\$ 2,395,688,389	\$ 2,362,230,585	\$ 697,365,599	\$ 295,043,909	\$ 12,861,217,621	\$ 12,934,332,269		
End of Period	\$ 7,386,426,536	\$ 2,503,776,968	\$ 2,477,007,960	\$ 732,901,366	\$ 308,347,395	\$ 13,408,460,225	\$ 13,029,355,260		

**NOTE - Variance Explanation**

- 1 General Fund Appropriations have significantly decreased in FY 2021. We expect to receive \$384,000 for SPRS from the General Fund.
- 2 Pension Spiking contributions decreased due to a change in statute. Pension spiking is now the member's responsibility.
- 3 Health Insurance Contributions will continue to decrease in the Pension Funds, as they are now qualified in the Insurance Fund.
- 4 The increase in Net Appreciation in Fair Value of Investments is a result of favorable market conditions, particularly in the public equity portfolio.
- 5 The decline in Interest/Dividends is due to a decrease in income from Private Equity due to the payout of the funds.
- 6 The decline in Performance fees is a result of the redemption of the Absolute Return managers and the payout of Private Equity funds. A decline in assets of \$81.1 M for these two portfolios since this time last year.
- 7 Variance is a result of the demand of the Securities Lending Program.
- 8 Refunds taken by members who terminated employment and were not eligible for a retirement benefit decreased in CERS, KERS, KHAZ and SPRS.

Board Meeting - November 12, 2020 - Audit Committee Report

**KENTUCKY RETIREMENT SYSTEMS**  
**COMBINING STATEMENTS OF FIDUCIARY NET POSITION**  
**INSURANCE FUNDS**  
**As of September 30, 2020**  
**(Unaudited)(In Whole Dollars)**

	CERS	CHAZ	KERS	KHAZ	SPRS	2020	2019		
<b>ASSETS</b>									
Cash and Short-Term Investments									
Cash Deposits	531,882	8,144	210,800	22,291	8,202	781,318	453,528	72%	1
Short-term Investments	132,004,490	69,725,820	52,537,531	26,819,566	9,073,241	290,160,648	157,547,690	84%	2
<b>Total Cash and Short-term Investments</b>	<b>\$ 132,536,372</b>	<b>\$ 69,733,964</b>	<b>\$ 52,748,331</b>	<b>\$ 26,841,858</b>	<b>\$ 9,081,442</b>	<b>\$ 290,941,967</b>	<b>\$ 158,001,218</b>		
<b>RECEIVABLES</b>									
Accounts Receivable	14,148,797	7,076,921	15,512,560	442,318	1,000,198	38,180,794	36,863,322	4%	
Investment Accounts Receivable	73,997,365	38,261,250	32,190,862	15,012,371	5,843,665	165,305,513	53,803,454	207%	3
<b>Total Receivables</b>	<b>\$ 88,146,163</b>	<b>\$ 45,338,172</b>	<b>\$ 47,703,421</b>	<b>\$ 15,454,689</b>	<b>\$ 6,843,862</b>	<b>\$ 203,486,307</b>	<b>\$ 90,666,776</b>		
<b>INVESTMENTS, AT FAIR VALUE</b>									
Fixed Income	437,935,642	232,682,885	181,246,307	89,335,771	36,041,783	977,242,387	1,010,757,222	-3%	
Public Equities	1,009,224,175	517,346,846	459,738,450	203,635,258	81,584,107	2,271,528,836	2,138,766,637	6%	
Specialty Credit	455,942,573	224,821,572	188,533,012	96,976,186	31,870,808	998,144,153	827,397,591	21%	4
Private Equities	249,892,538	140,455,145	57,685,407	47,571,616	21,739,456	517,344,161	554,094,931	-7%	
Absolute Return	27,979,328	15,675,895	9,856,241	6,544,749	2,454,317	62,510,530	82,085,422	-24%	5
Real Estate	111,421,643	61,065,190	34,928,502	25,685,831	9,812,848	242,914,014	227,114,222	7%	
Real Return	154,561,325	80,738,873	62,359,407	31,842,849	12,363,512	341,865,965	466,050,924	-27%	6
Opportunistic	74,673,142	40,681,053	26,697,663	16,596,604	6,128,592	164,777,054	70,832,760	133%	7
Derivatives	310,329	161,459	135,363	63,903	24,615	695,670	653,904	-6%	
<b>Total Investments, at Fair Value</b>	<b>\$ 2,521,940,696</b>	<b>\$ 1,313,628,918</b>	<b>\$ 1,021,180,351</b>	<b>\$ 518,252,769</b>	<b>\$ 202,020,038</b>	<b>\$ 5,577,022,770</b>	<b>\$ 5,377,753,614</b>		
<b>Total Assets</b>	<b>\$ 2,742,623,230</b>	<b>\$ 1,428,701,054</b>	<b>\$ 1,121,632,103</b>	<b>\$ 560,549,315</b>	<b>\$ 217,945,342</b>	<b>\$ 6,071,451,044</b>	<b>\$ 5,626,421,608</b>		
<b>LIABILITIES</b>									
Accounts Payable	281,802	53,824	157,089	6,906	9,069	508,691	501,960	1%	
Investment Accounts Payable	129,653,421	64,319,650	55,040,998	25,454,148	9,252,996	283,721,212	78,795,754	260%	8
<b>Total Liabilities</b>	<b>\$ 129,935,223</b>	<b>\$ 64,373,474</b>	<b>\$ 55,198,087</b>	<b>\$ 25,461,054</b>	<b>\$ 9,262,065</b>	<b>\$ 284,229,904</b>	<b>\$ 79,297,713</b>		
<b>Total Fiduciary Net Position Restricted for Insurance</b>	<b>\$ 2,612,688,007</b>	<b>\$ 1,364,327,580</b>	<b>\$ 1,066,434,016</b>	<b>\$ 535,088,261</b>	<b>\$ 208,683,277</b>	<b>\$ 5,787,221,141</b>	<b>\$ 5,547,123,895</b>		

**NOTE - Variance Explanation**

- 1 Variance is a result of continuous fluctuation of deposits and transactions that flow through the cash account.
- 2 Short Term Investments is primarily comprised of the cash on hand with the custodial bank along with any small amounts of cash managers and brokers may have; therefore, the variance is driven by cash flow.
- 3 Variance is a result of transaction activity which is based on each individual manager.
- 4 The increase in Specialty Credit is due to additional funds invested in current managers and funding of five (5) new managers.
- 5 The decline in Absolute Return is due to the continued redemption of the entire portfolio.
- 6 The assets declined in Real Return is a result of redemption of PIMCO, Nuveen and the Internal TIPS account.
- 7 The increase in Opportunistic is due to additional funds invested in current manager.
- 8 Variance is a result of transaction activity which is based on each individual manager.



Board Meeting - November 12, 2020 - Audit Committee Report

**KENTUCKY RETIREMENT SYSTEMS**  
**COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION**  
**INSURANCE FUNDS**  
**For the Year Ended September 30, 2020**  
**(Unaudited)(In Whole Dollars)**

	CERS	CHAZ	KERS	KHAZ	SPRS	2020	2019	
<b>ADDITIONS</b>								
Employer Contributions	28,207,412	16,801,215	38,797,442	52,210	2,444,062	86,302,340	89,748,173	-4%
Medicare Drug Reimbursement	529	-	2	-	-	531	2,605	-80% 1
Insurance Premiums	142,530	(14,004)	43,480	3,144	(1,501)	173,649	208,795	-17% 2
Retired Reemployed Healthcare	1,753,906	310,790	1,077,865	330,143	-	3,472,704	3,369,760	3%
Health Insurance Contributions (HB1)	2,829,020	751,549	1,563,720	291,381	52,291	5,487,960	5,250,160	5%
<b>Total Contributions</b>	<b>\$ 32,933,397</b>	<b>\$ 17,849,550</b>	<b>\$ 41,482,510</b>	<b>\$ 676,878</b>	<b>\$ 2,494,851</b>	<b>\$ 95,437,185</b>	<b>\$ 98,579,494</b>	
<b>INVESTMENT INCOME</b>								
From Investing Activities								
Net Appreciation in FV of Investments	108,015,341	56,688,242	46,514,872	22,736,998	8,851,686	242,807,139	36,871,686	559% 3
Interest/Dividends	15,115,215	7,899,028	5,968,897	3,018,168	1,180,380	33,181,688	37,476,760	-11% 4
<b>Total From Investing Activities</b>	<b>\$ 123,130,556</b>	<b>\$ 64,587,269</b>	<b>\$ 52,483,769</b>	<b>\$ 25,755,167</b>	<b>\$ 10,032,066</b>	<b>\$ 275,988,827</b>	<b>\$ 74,348,446</b>	
Investment Expense	\$2,559,803	\$1,368,418	\$932,871	\$506,916	\$208,973	\$5,576,981	6,728,053	-17% 5
Performance Fee	\$1,944,218	\$1,179,689	\$840,213	\$500,158	\$186,412	\$4,650,689	6,516,267	-29% 6
<b>Net Income from Investing Activities</b>	<b>\$ 118,626,535</b>	<b>\$ 62,039,162</b>	<b>\$ 50,710,686</b>	<b>\$ 24,748,093</b>	<b>\$ 9,636,681</b>	<b>\$ 265,761,157</b>	<b>\$ 61,104,126</b>	
From Securities Lending								
Securities Lending Income	43,222	22,368	18,351	8,350	3,239	95,531	1,086,833	
Securities Lending Expense								
Security Lending Borrower Rebates	(\$32,951)	(\$17,128)	(\$14,736)	(\$6,598)	(\$2,593)	(\$74,006)	795,474	
Security Lending Agent Fees	\$11,410	\$5,917	\$4,955	\$2,239	\$873	\$25,394	43,655	
<b>Net Income from Securities Lending</b>	<b>\$ 64,764</b>	<b>\$ 33,579</b>	<b>\$ 28,132</b>	<b>\$ 12,708</b>	<b>\$ 4,959</b>	<b>\$ 144,143</b>	<b>\$ 247,703</b>	-42% 7
<b>Total Net Income from Investments</b>	<b>\$ 118,691,299</b>	<b>\$ 62,072,741</b>	<b>\$ 50,738,818</b>	<b>\$ 24,760,801</b>	<b>\$ 9,641,640</b>	<b>\$ 265,905,300</b>	<b>\$ 61,351,830</b>	
<b>Total Additions</b>	<b>\$ 151,624,695</b>	<b>\$ 79,922,291</b>	<b>\$ 92,221,328</b>	<b>\$ 25,437,680</b>	<b>\$ 12,136,491</b>	<b>\$ 361,342,485</b>	<b>\$ 159,931,323</b>	
<b>DEDUCTIONS</b>								
Healthcare Premiums Subsidies	\$35,937,279	\$20,544,942	\$31,789,878	\$5,050,925	\$3,678,904	\$97,001,929	91,207,083	6%
Administrative Expense	\$221,359	\$109,664	\$202,101	\$29,265	\$17,575	\$579,963	591,672	-2%
Self Funded Healthcare Costs	\$829,039	\$72,388	\$293,319	\$8,455	\$2,286	\$1,205,486	1,647,662	-27% 8
<b>Total Deductions</b>	<b>\$ 36,987,677</b>	<b>\$ 20,726,994</b>	<b>\$ 32,285,298</b>	<b>\$ 5,088,645</b>	<b>\$ 3,698,765</b>	<b>\$ 98,787,378</b>	<b>\$ 93,446,418</b>	
<b>Net Increase (Decrease) in Fiduciary Net Position</b>	<b>\$ 114,637,018</b>	<b>\$ 59,195,297</b>	<b>\$ 59,936,030</b>	<b>\$ 20,349,035</b>	<b>\$ 8,437,726</b>	<b>\$ 262,555,107</b>	<b>\$ 66,484,906</b>	
<b>FIDUCIARY NET POSITION HELD IN TRUST FOR INSURANCE BENEFITS</b>								
Beginning of Period	\$ 2,498,050,987	\$ 1,305,132,283	\$ 1,006,497,976	\$ 514,739,226	\$ 200,245,552	\$ 5,524,666,024	\$ 5,480,638,979	
End of Period	\$ 2,612,688,006	\$ 1,364,327,580	\$ 1,066,434,006	\$ 535,088,261	\$ 208,683,278	\$ 5,787,221,131	\$ 5,547,123,885	

**NOTE - Variance Explanation**

- 1 Medicare drug reimbursement payments fluctuate year to year based on claims reviewed.
- 2 The decrease in Insurance Premiums received is due to refunds processed to hazardous retirees for premiums paid for dependents that should have been covered by KRS.
- 3 The increase in Net Appreciation in Fair Value of Investments is a result of favorable market conditions, particularly in the public equity portfolio.
- 4 The decline in Interest/Dividends is due to a decrease in income from Private Equity due to the payout of the funds.
- 5 & 6 The decline in Management Fees and Performance fees are a result of the redemption of the Absolute Return managers and the payout of Private Equity funds. A decline in assets of \$56.5 M for these two portfolios since this time last year.
- 7 Variance is a result of the demand of the program.
- 8 The decrease in Self Funded Healthcare Claims is due to a decrease in claims billed from the self funded insurance plan.

**KRS ADMINISTRATIVE BUDGET 2020-21**  
**FIRST QUARTER BUDGET-TO-ACTUAL ANALYSIS**

Fiscal 21

Acc't #	Account Name	Budgeted	Actual Expenditures	Remaining	% Remaining
	<b>PERSONNEL</b>				
111	Salaries	\$15,500,000	\$4,231,883	\$11,268,117	72.70%
115	Wages (Overtime)	\$265,000	\$9,321	\$255,679	96.48%
119	Wages (Block 50)	\$28,500	\$0	\$28,500	100.00%
121	Emp Paid FICA	\$1,135,000	\$302,360	\$832,640	73.36%
122	Emp Paid Retirement	\$13,086,645	\$3,406,894	\$9,679,751	73.97%
123	Emp Paid Health Ins	\$2,550,000	\$730,662	\$1,819,338	71.35%
124	Emp Paid Life Ins	\$3,500	\$1,002	\$2,498	71.37%
128	Emp Paid Sick Leave	\$75,000	\$0	\$75,000	100.00%
131	Workers Compensation	\$13,200	\$75,163	(\$61,963)	-469.42%
132	Unemployment	\$10,000	\$0	\$10,000	100.00%
133	Tuition Assistance	\$13,100	\$2,421	\$10,679	81.52%
133I	Investment Tuition Assistance	\$5,000	\$0	\$5,000	100.00%
133T	Audit Tuition Assistance	\$2,500	\$0	\$2,500	100.00%
141	<b>LEGAL &amp; AUDITING SERVICES</b>				
141A	Legal Hearing Officers	\$91,200	\$12,595	\$78,605	86.19%
141B	Legal (Stoll, Keenon)	\$340,500	\$20,537	\$319,964	93.97%
141D	Frost Brown	\$114,300	\$1,146	\$113,155	99.00%
141E	Reinhart	\$444,000	\$0	\$444,000	100.00%
141F	Ice Miller	\$187,200	\$25,559	\$161,641	86.35%
141L	Legal Expense	\$125,500	\$0	\$125,500	100.00%
142	Auditing	\$176,500	\$8,401	\$168,099	95.24%
146	<b>CONSULTING SERVICES</b>				
146A	Medical Reviewers	\$273,865	\$0	\$273,865	100.00%
146E	Escrow for Actuary Fees	\$12,000	\$0	\$12,000	100.00%
150	<b>CONTRACTUAL SERVICES</b>				
150C	Miscellaneous Contracts	\$22,750	(\$3,600)	\$26,350	115.82%
150G	Human Resources Consulting	\$7,500	\$5,794	\$1,706	22.75%
159	Actuarial Services	\$612,000	\$43,072	\$568,928	92.96%
162	Facility Security Charges	\$80,500	\$17,679	\$62,821	78.04%
	<b>PERSONNEL SUBTOTAL</b>	<b>\$35,175,260</b>	<b>\$8,890,888</b>	<b>\$26,284,372</b>	<b>74.72%</b>

**KRS ADMINISTRATIVE BUDGET 2020-21**  
**FIRST QUARTER BUDGET-TO-ACTUAL ANALYSIS**

Acc't #	Account Name	Budgeted	Actual Expenditures	Remaining	% Remaining
	<b>OPERATIONAL</b>				
211	Natural Gas	\$22,500	\$2,109	\$20,391	90.63%
212	Electric	\$176,500	\$30,980	\$145,520	82.45%
221	Rent-NonState Building	\$71,600	\$28,921	\$42,679	59.61%
222	Building Rental - PPW	\$1,100,000	\$266,742	\$833,258	75.75%
223	Equipment Rental	\$0	\$7,163	(\$7,163)	
224	Copier Rental	\$73,000	\$9,438	\$63,562	87.07%
226	Rental Carpool	\$9,100	\$970	\$8,130	89.34%
232	Vehicle/Equip. Mainten.	\$1,350	\$0	\$1,350	100.00%
241	Postage	\$455,000	\$28,484	\$426,516	93.74%
242	Freight	\$46	\$0	\$46	100.00%
251	Printing (State)	\$11,700	\$2,425	\$9,276	79.28%
252	Printing (non-state)	\$102,700	\$0	\$102,700	100.00%
254	Insurance	\$11,650	\$3,591	\$8,059	69.18%
256	Garbage Collection	\$5,500	\$1,324	\$4,176	75.94%
259	Conference Expense	\$18,250	\$2,897	\$15,353	84.13%
259I	Conference Exp. Investment	\$6,000	\$0	\$6,000	100.00%
259T	Conference Exp. Audit	\$1,500	\$0	\$1,500	100.00%
300	MARS Usage	\$51,300	\$11,912	\$39,388	76.78%
302	COVID-19 Expenses	\$146,800	\$89,100.35	\$57,700	39.30%
321	Office Supplies	\$89,125	\$3,197	\$85,928	96.41%
346	Furniture & Office Equipment	\$25,075	\$0	\$25,075	100.00%
361	Travel (In-State)	\$30,000	\$61	\$29,939	99.80%
361I	Travel (In-State) Investment	\$300	\$0	\$300	100.00%
361T	Travel (In-State) Audit	\$500	\$0	\$500	100.00%
362	Travel (Out of State)	\$20,150	\$0	\$20,150	100.00%
362I	Travel (Out of State) Invest	\$38,700	(\$169)	\$38,869	100.44%
362T	Travel (Out of State) Audit	\$450	\$0	\$450	100.00%
381	Dues & Subscriptions	\$60,250	\$9,816	\$50,434	83.71%
381I	Dues & Subscriptions Invest	\$1,375	\$0	\$1,375	100.00%
381T	Dues & Subscriptions Audit	\$5,000	\$0	\$5,000	100.00%
399	Miscellaneous	\$2,700	\$0	\$2,700	100.00%
399I	Miscellaneous Investment	\$200	\$0	\$200	100.00%
399T	Miscellaneous Audit	\$200	\$0	\$200	100.00%
802	COT Charges	\$22,225	\$2,540	\$19,685	88.57%
814	Telephone - Wireless	\$5,100	\$1,184	\$3,916	76.79%
815	Telephone - Other	\$119,000	\$22,195	\$96,805	81.35%
847	Computer Equip./Software	\$3,325,500	\$722,402	\$2,603,098	78.28%
	Contingent	\$7,702,594			
	<b>OPERATIONAL SUBTOTAL</b>	<b>\$13,712,940</b>	<b>\$1,247,280</b>	<b>\$4,763,066</b>	<b>34.73%</b>
	<b>TOTALS</b>	<b>\$48,888,200</b>	<b>\$10,138,167</b>	<b>\$31,047,439</b>	<b>63.51%</b>



Kentucky Retirement Systems

# Audit Committee

November 5, 2020



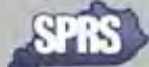


**Pension Fund Contribution Report**  
**(CERS-Non Hazardous and CERS-Hazardous)**  
**September 30, 2020 (compared to September 30, 2019)**  
 (\$ in millions)

<b>Contributions</b>	<b>FY20</b>	<b>FY21</b>	<b>FY20</b>	<b>FY21</b>
<i>Member Contributions</i>	\$37.6	\$37.8	\$15.5	\$17.3
<i>Employer Contributions</i>	104.8	106.1	42.4	47.9
<b>Contribution Inflows</b>	<b>142.4</b>	<b>143.9</b>	<b>57.9</b>	<b>65.2</b>
<i>Benefit Payments/Refunds</i>	201.9	207.6	68.1	72.7
<i>Administrative Expenses</i>	5.1	5.5	0.5	0.5
<b>Contribution Outflows</b>	<b>207.0</b>	<b>213.1</b>	<b>68.6</b>	<b>73.2</b>
<b>NET Contributions</b>	<b>(64.6)</b>	<b>(69.2)</b>	<b>(10.7)</b>	<b>(8.0)</b>
<i>Net Investment Income</i>	36.4	30.2	12.4	10.1
<i>Realized Gain/(Loss)</i>	74.6	34.5	25.1	11.9
<i>Unrealized Gain/(Loss)</i>	<b>(23.8)</b>	280.0	<b>(8.5)</b>	94.1
<b>NET Investment Activity</b>	<b>87.2</b>	<b>344.7</b>	<b>29.0</b>	<b>116.1</b>
<b>Change in Net Position</b>	<b>22.6</b>	<b>275.5</b>	<b>18.3</b>	<b>108.1</b>
<i>Beginning of Period</i>	7,243.0	7,110.9	2,429.6	2,395.7
<i>End of Period</i>	<b>\$7,265.6</b>	<b>\$7,386.4</b>	<b>\$2,447.9</b>	<b>\$2,503.8</b>





**Pension Fund Contribution Report**  
**(KERS Non Hazardous, KERS Hazardous & SPRS)**  
**September 30, 2020 (compared to September 30, 2019)**  
**(\$ in millions)**

						
<b>Contributions</b>	<b>FY20</b>	<b>FY21</b>	<b>FY20</b>	<b>FY21</b>	<b>FY20</b>	<b>FY21</b>
<i>Member Contributions</i>	\$25.6	\$22.1	\$4.2	\$5.1	\$1.3	\$1.2
<i>Employer Contributions</i>	240.2	240.2	13.9	15.9	14.7	15.2
<b>Contribution Inflows</b>	<b>265.8</b>	<b>262.3</b>	<b>18.1</b>	<b>21.0</b>	<b>16.0</b>	<b>16.4</b>
<i>Benefit Payments/Refunds</i>	253.0	254.2	18.7	19.1	15.5	15.9
<i>Administrative Expenses</i>	2.7	2.8	0.3	0.3	0.0	0.0
<b>Contribution Outflows</b>	<b>255.7</b>	<b>257.0</b>	<b>19.0</b>	<b>19.4</b>	<b>15.5</b>	<b>15.9</b>
<b>NET Contributions</b>	<b>10.1</b>	<b>5.3</b>	<b>(0.9)</b>	<b>1.6</b>	<b>0.5</b>	<b>0.5</b>
<i>Net Investment Income</i>	11.4	9.8	3.6	3.0	1.4	1.4
<i>Realized Gain/(Loss)</i>	20.2	11.2	6.9	3.4	2.7	1.3
<i>Unrealized Gain/(Loss)</i>	<b>(0.8)</b>	88.5	<b>(1.7)</b>	27.5	<b>(0.3)</b>	10.1
<b>NET Investment Activity</b>	<b>30.8</b>	<b>109.5</b>	<b>8.8</b>	<b>33.9</b>	<b>3.8</b>	<b>12.8</b>
<b>Change in Net Position</b>	<b>40.9</b>	<b>114.8</b>	<b>7.9</b>	<b>35.5</b>	<b>4.3</b>	<b>13.3</b>
<i>Beginning of Period</i>	2,286.6	2,362.2	687.9	697.4	287.2	295.0
<i>End of Period</i>	<b>\$2,327.4</b>	<b>\$2,477.0</b>	<b>\$695.8</b>	<b>\$732.9</b>	<b>\$291.5</b>	<b>\$308.3</b>






**Insurance Fund Contribution Report**  
**(CERS Non Hazardous and CERS Hazardous)**  
**September 30, 2020 (compared to September 30, 2019)**  
**(in \$millions)**

				
	FY20	FY21	FY20	FY21
<b>Contributions</b>				
<i>Employer Contributions</i>	\$27.5	\$28.2	\$15.4	\$16.8
<i>Insurance Premiums</i>	0.2	0.1	0.0	0.0
<i>Retired Reemployed Healthcare</i>	1.7	1.8	0.3	0.3
<i>Health Insurance Contributions (HB1)</i>	2.7	2.8	0.7	0.7
<b>Contribution Inflows</b>	<b>32.1</b>	<b>32.9</b>	<b>16.4</b>	<b>17.8</b>
<i>Healthcare Premiums</i>	33.8	36.8	19.7	20.6
<i>Administrative Expenses</i>	0.2	0.2	0.1	0.1
<b>Contribution Outflows</b>	<b>34.0</b>	<b>37.0</b>	<b>19.8</b>	<b>20.7</b>
<b>NET Contributions</b>	<b>(1.9)</b>	<b>(4.1)</b>	<b>(3.4)</b>	<b>(2.9)</b>
<i>Net Investment Income</i>	10.6	10.7	5.6	5.4
<i>Realized Gain/(Loss)</i>	26.5	10.2	14.4	5.4
<i>Unrealized Gain/(Loss)</i>	<b>(7.8)</b>	97.8	<b>(5.5)</b>	51.3
<b>NET Investment Activity</b>	<b>29.3</b>	<b>118.7</b>	<b>14.5</b>	<b>62.1</b>
<b>Change in Net Position</b>	<b>27.4</b>	<b>114.6</b>	<b>11.1</b>	<b>59.2</b>
<i>Beginning of Period</i>	<b>2,486.5</b>	<b>2,498.1</b>	<b>1,324.8</b>	<b>1,305.1</b>
<i>End of Period</i>	<b>\$2,513.9</b>	<b>\$2,612.7</b>	<b>\$1,335.9</b>	<b>\$1,364.3</b>



**CASH FLOW – Insurance Fund**  
**(KERS Non-Haz, KERS Haz & SPRS)**  
**September 30, 2020 (compared to September 30, 2019)**  
 (\$ in millions)

						
<b>Contributions</b>	<b>FY20</b>	<b>FY21</b>	<b>FY20</b>	<b>FY21</b>	<b>FY20</b>	<b>FY21</b>
<i>Employer Contributions</i>	\$43.4	\$38.8	\$1.0	\$0.1	\$2.3	\$2.4
<i>Insurance Premiums</i>	0.0	0.0	0.0	0.0	0.0	0.0
<i>Retired Reemployed Healthcare</i>	1.1	1.1	0.3	0.3	0.0	0.0
<i>Health Insurance Contributions (HB1)</i>	1.5	1.6	0.3	0.3	0.1	0.1
<b>Contribution Inflow</b>	<b>46.0</b>	<b>41.5</b>	<b>1.6</b>	<b>0.7</b>	<b>2.4</b>	<b>2.5</b>
<i>Healthcare Premiums</i>	31.0	32.1	4.9	5.1	3.5	3.7
<i>Administrative Expenses</i>	0.2	0.2	0.0	0.0	0.0	0.0
<b>Contribution Outflow</b>	<b>31.2</b>	<b>32.3</b>	<b>4.9</b>	<b>5.1</b>	<b>3.5</b>	<b>3.7</b>
<b>NET Contributions</b>	<b>14.8</b>	<b>9.2</b>	<b>(3.3)</b>	<b>(4.4)</b>	<b>(1.1)</b>	<b>(1.2)</b>
<i>Net Investment Income</i>	5.1	4.2	2.4	2.0	0.8	0.8
<i>Realized Gain/(Loss)</i>	6.6	3.6	5.3	2.0	2.1	0.8
<i>Unrealized Gain/(Loss)</i>	(1.7)	42.9	(2.4)	20.8	(0.6)	8.0
<b>NET Investment Activity</b>	<b>10.0</b>	<b>50.7</b>	<b>5.3</b>	<b>24.8</b>	<b>2.3</b>	<b>9.6</b>
<b>Change in Net Position</b>	<b>24.8</b>	<b>59.9</b>	<b>2.0</b>	<b>20.4</b>	<b>1.2</b>	<b>8.4</b>
<b>Beginning of Period</b>	<b>942.1</b>	<b>1,006.5</b>	<b>527.1</b>	<b>514.7</b>	<b>200.1</b>	<b>200.3</b>
<b>Ending of Period</b>	<b>\$966.9</b>	<b>\$1,066.4</b>	<b>\$529.1</b>	<b>\$535.1</b>	<b>\$201.3</b>	<b>\$208.7</b>



**KENTUCKY RETIREMENT SYSTEMS**  
**Outstanding Invoices by Type and Employer**

Invoice Type	9/30/2020	6/30/2020	Change H/(L)
Averaging Refund to Employer	\$ (371,437)	\$ (57,909)	541%
Employer Free Military and Decompression Service	\$ 471,374	\$ 390,962	21%
Member Pension Spiking Refund	\$ (22,674)	\$ (22,950)	-1%
Monthly Reporting Invoice	\$ (208,280)	\$ (258,589)	-19%
Penalty – Monthly Reporting	\$ 306,492	\$ 275,446	11%
Reinstatement	\$ 327,867	\$ 231,935	41%
<b>Total</b>	\$ 547,445	\$ 602,908	-9%
Health Insurance Reimbursement	\$ 2,226,910	\$ 1,652,346	35%
Omitted Employer	\$ 1,322,862	\$ 1,017,840	30%
Pension Spiking*	\$ 1,875,039	\$ 1,825,433	3%
Standard Sick Leave	\$ 9,555,688	\$ 8,835,323	8%
<b>Total</b>	\$ 14,980,500	\$ 13,330,942	12%
<b>Grand Total</b>	\$ 15,527,945	\$ 13,933,850	11%

\*By statute Pension Spiking invoices are due 12 months from invoice date. Of the 324 outstanding invoices, 300 of them (totaling \$1,819,758) are greater than 12 months old.

Employer Name (Top Ten)	9/30/2020	6/30/2020	
Kentucky State Police	\$ 8,976,851	\$ 8,557,656	5%
Department of Highways	\$ 500,457	\$ 338,054	48%
City of Covington	\$ 366,646	\$ 363,402	1%
Kenton County Airport Board	\$ 306,648	\$ 301,163	2%
Department for Community Based Services	\$ 235,148	\$ 134,983	74%
Kentucky River Regional Jail	\$ 230,955	\$ 230,955	0%
Judicial Department Admin Office of the Courts	\$ 215,873	\$ 2,902	7339%
City of Villa Hills	\$ 212,533	\$ 212,533	0%
City of Fort Thomas	\$ 208,336	\$ 204,499	2%
Henry County Fiscal Court	\$ 205,135	\$ 205,201	0%

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**Kentucky Retirement Systems  
Penalty/Open Invoices Report  
From: 7/1/2020 To: 9/30/2020**

**Note: Delinquent Interest amounts are included in the totals for the invoice**

<u>Invoice Amount</u>	<u>Invoice Remaining Balance</u>	<u>Delinquent Interest</u>	<u>Invoice Status Date</u>	<u>Invoice Due Date</u>	<u>Invoice Status</u>	<u>Employer Classification</u>	<u>Plan</u>	<u>Comments</u>
\$1,000.00	\$0.00	\$0.00	8/12/2020	4/4/2020	CANC	Riverport Authorities	CERS	New employer reporting official
\$1,000.00	\$0.00	\$0.00	8/10/2020	4/25/2020	CANC	County Attorneys	CERS	Circumstances outside of agency control
\$1,000.00	\$0.00	\$0.00	8/6/2020	7/3/2020	CANC	Master Commissioner	KERS	New employer reporting official
\$1,000.00	\$0.00	\$0.00	8/28/2020	8/5/2020	CANC	Utility Boards	CERS	Agency in good standing with KRS
\$1,000.00	\$0.00	\$0.00	8/5/2020	8/22/2020	CANC	Cities	CERS	Agency in good standing with KRS
\$1,000.00	\$0.00	\$0.00	8/6/2020	9/2/2020	CANC	Master Commissioner	KERS	KRS at fault
\$1,000.00	\$0.00	\$0.00	8/6/2020	9/2/2020	CANC	Master Commissioner	KERS	KRS at fault
\$1,000.00	\$0.00	\$0.00	9/4/2020	9/26/2020	CANC	Utility Boards	CERS	Agency in good standing with KRS
\$1,000.00	\$0.00	\$0.00	8/28/2020	9/26/2020	CANC	Non-P1 State Agencies	KERS	Agency in good standing with KRS
\$1,000.00	\$0.00	\$0.00	9/3/2020	9/28/2020	CANC	County Attorneys	CERS	KRS at fault
\$1,000.00	\$0.00	\$0.00	9/3/2020	9/28/2020	CANC	County Attorneys	CERS	KRS at fault
\$1,000.00	\$0.00	\$0.00	9/23/2020	10/22/2020	CANC	Utility Boards	CERS	Agency in good standing with KRS
<b>TOTAL</b>	<b><u>\$12,000.00</u></b>							
\$1,081.90	\$1,081.90	\$0.00	7/2/2020	8/1/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/7/2020	8/6/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/10/2020	8/9/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/10/2020	8/9/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/10/2020	8/9/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/10/2020	8/9/2020	CRTD	Fiscal Courts	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/10/2020	8/9/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/21/2020	8/20/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/23/2020	8/22/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/23/2020	8/22/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/24/2020	8/23/2020	CRTD	County Attorneys	CERS	
\$1,000.00	\$1,000.00	\$0.00	7/24/2020	8/23/2020	CRTD	Libraries	CERS	
\$1,000.00	\$1,000.00	\$0.00	8/18/2020	9/17/2020	CRTD	County Attorneys	CERS	
\$1,000.00	\$1,000.00	\$0.00	8/18/2020	9/17/2020	CRTD	Non-P1 State Agencies	KERS	
\$1,000.00	\$1,000.00	\$0.00	8/19/2020	9/18/2020	CRTD	Planning Commissions	CERS	
\$1,000.00	\$1,000.00	\$0.00	8/20/2020	9/19/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	8/21/2020	9/20/2020	CRTD	Cities	CERS	

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**Kentucky Retirement Systems  
 Penalty/Open Invoices Report  
 From: 7/1/2020 To: 9/30/2020**

**Note: Delinquent Interest amounts are included in the totals for the invoice**

<u>Invoice Amount</u>	<u>Invoice Remaining Balance</u>	<u>Delinquent Interest</u>	<u>Invoice Status Date</u>	<u>Invoice Due Date</u>	<u>Invoice Status</u>	<u>Employer Classification</u>	<u>Plan</u>	<u>Comments</u>
\$1,000.00	\$1,000.00	\$0.00	8/24/2020	9/23/2020	CRTD	Cities	CERS	
\$3,262.32	\$3,262.32	\$0.00	8/27/2020	9/26/2020	CRTD	Community Action Agencies	CERS	
\$1,000.00	\$1,000.00	\$0.00	8/29/2020	9/28/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/1/2020	10/1/2020	CRTD	Riverport Authorities	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/10/2020	10/10/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/15/2020	10/15/2020	CRTD	Ambulance Services	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/15/2020	10/15/2020	CRTD	Ambulance Services	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/17/2020	10/17/2020	CRTD	Cities	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/21/2020	10/21/2020	CRTD	Cities	CERS	
\$1,410.96	\$1,410.96	\$0.00	9/21/2020	10/21/2020	CRTD	Fire Departments	CERS	
\$1,000.00	\$1,000.00	\$0.00	9/21/2020	10/21/2020	CRTD	Cities	CERS	
\$2,290.20	\$2,290.20	\$0.00	9/22/2020	10/22/2020	CRTD	Community Action Agencies	CERS	
<b>TOTAL</b>	<b><u>\$33,045.38</u></b>							

\$1,000.00	\$0.00	\$0.00	8/10/2020	3/29/2017	PAID	Cities	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/14/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	9/28/2020	10/8/2020	PAID	Non-P1 State Agencies	KERS	
\$1,000.00	\$0.00	\$0.00	7/14/2020	5/3/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	7/14/2020	5/14/2020	PAID	Ambulance Services	CERS	
\$1,273.92	\$0.00	\$0.00	7/1/2020	6/17/2020	PAID	Fire Departments	CERS	
\$1,000.00	\$0.00	\$0.00	7/7/2020	7/17/2020	PAID	Libraries	CERS	
\$1,075.92	\$0.00	\$0.00	8/3/2020	7/17/2020	PAID	Fire Departments	CERS	
\$1,000.00	\$0.00	\$0.00	7/10/2020	7/17/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	8/31/2020	7/18/2020	PAID	Cities	CERS	

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**Kentucky Retirement Systems  
 Penalty/Open Invoices Report  
 From: 7/1/2020 To: 9/30/2020**

**Note: Delinquent Interest amounts are included in the totals for the invoice**

<u>Invoice Amount</u>	<u>Invoice Remaining Balance</u>	<u>Delinquent Interest</u>	<u>Invoice Status Date</u>	<u>Invoice Due Date</u>	<u>Invoice Status</u>	<u>Employer Classification</u>	<u>Plan</u>	<u>Comments</u>
\$1,000.00	\$0.00	\$0.00	7/15/2020	7/30/2020	PAID	Community Action Agencies	CERS	
\$1,000.00	\$0.00	\$0.00	9/15/2020	8/13/2020	PAID	Ambulance Services	CERS	
\$1,000.00	\$0.00	\$0.00	8/4/2020	8/13/2020	PAID	Libraries	CERS	
\$1,000.00	\$0.00	\$0.00	9/15/2020	8/13/2020	PAID	Ambulance Services	CERS	
\$1,000.00	\$0.00	\$0.00	7/23/2020	8/14/2020	PAID	Community Action Agencies	CERS	
\$1,129.25	\$0.00	\$0.00	9/1/2020	8/19/2020	PAID	Fire Departments	CERS	
\$1,000.00	\$0.00	\$0.00	9/10/2020	9/20/2020	PAID	Housing Authorities	CERS	
\$1,013.19	\$0.00	\$0.00	8/3/2020	8/22/2020	PAID	Community Action Agencies	CERS	
\$1,000.00	\$0.00	\$0.00	8/6/2020	8/27/2020	PAID	Fiscal Courts	CERS	
\$1,000.00	\$0.00	\$0.00	8/10/2020	8/30/2020	PAID	Health Departments	KERS	
\$1,000.00	\$0.00	\$0.00	8/7/2020	9/2/2020	PAID	Community Action Agencies	CERS	
\$1,707.56	\$0.00	\$0.00	9/30/2020	9/18/2020	PAID	Fire Departments	CERS	
\$1,000.00	\$0.00	\$0.00	9/25/2020	10/5/2020	PAID	Utility Boards	CERS	
\$1,000.00	\$0.00	\$0.00	9/10/2020	9/20/2020	PAID	Housing Authorities	CERS	
\$1,000.00	\$0.00	\$0.00	9/9/2020	9/30/2020	PAID	Utility Boards	CERS	
\$1,000.00	\$0.00	\$0.00	9/10/2020	9/30/2020	PAID	Cities	CERS	
<b>TOTAL</b>	<b><u>\$34,199.84</u></b>							

**Notes:**

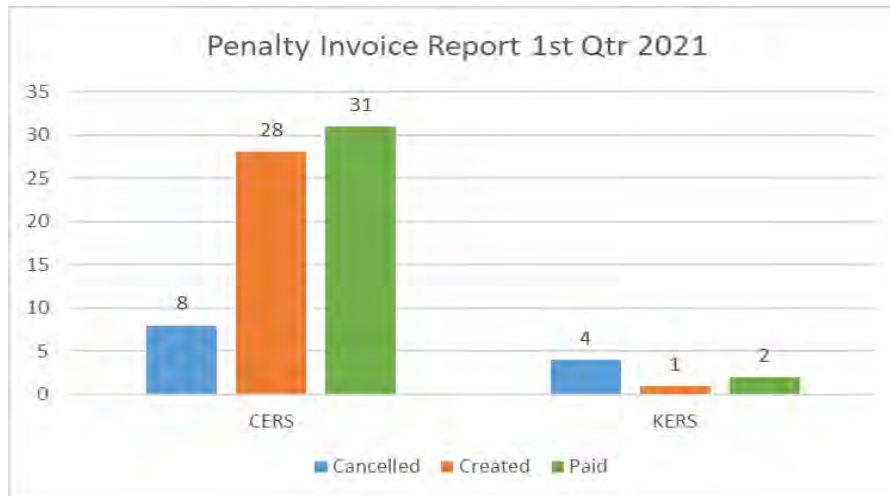
**Invoice Status:** CANC - Cancelled  
 CRTD - Created  
 PAID - Paid

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**Kentucky Retirement Systems  
 Penalty/Open Invoices Report  
 From: 7/1/2020 To: 9/30/2020**

**Note: Delinquent Interest amounts are included in the totals for the invoice**

<u>Invoice Amount</u>	<u>Invoice Remaining Balance</u>	<u>Delinquent Interest</u>	<u>Invoice Status Date</u>	<u>Invoice Due Date</u>	<u>Invoice Status</u>	<u>Employer Classification</u>	<u>Plan</u>	<u>Comments</u>
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September 4, 2020

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

**Re: GASB 67 Reporting – Actuarial Information**

Dear Members of the Board:

The reports provided herein contain certain information for the Kentucky Employees Retirement System (KERS), the County Employees Retirement System (CERS), and the State Police Retirement System (SPRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2020. Separate reports will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

Basis of Calculations

The liability calculations presented in the reports were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results.

The total pension liability, net pension liability, and sensitivity information are based on an actuarial valuation date of June 30, 2019. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020 using generally accepted actuarial principles.

Assumptions

There have been no changes in actuarial assumptions since June 30, 2019.

Plan Provisions

House Bill 1 passed during the 2019 Special Legislative Session and allowed certain agencies in the KERS Non-Hazardous plan to elect to cease participating in the System as of June 30, 2020 under different provisions than were previously established. Senate Bill 249 passed during the 2020 Legislative Session delayed the effective date of cessation for these provisions to June 30, 2021. Since each employer’s election is unknown at this time, we did not make any adjustment to the Total Pension Liability to reflect this legislation.

Board of Trustees  
September 4, 2020  
Page 2

Senate Bill 249 also changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate, 20-year amortization bases. This change does not impact the calculation of Total Pension Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020.

Additionally, House Bill 271 passed during the 2020 Legislative Session and removed provisions that reduce the monthly payment to a surviving spouse of a member whose death was due to a duty-related injury upon remarriage of the spouse. It also increased benefits for a very small number of beneficiaries. This did not have a material (or measurable) impact on the liability of the plans and therefore, we did not make any adjustment to the Total Pension Liability to reflect this legislation. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

#### Discount Rates

A single discount rate of 5.25% was used for the KERS Non-Hazardous Fund and SPRS and a single discount rate of 6.25% was used for the KERS Hazardous Fund, the CERS Non-Hazardous Fund and the CERS Hazardous Fund to measure the total pension liability for the fiscal year ending June 30, 2020. These single discount rates were based on the expected rate of return on pension plan investments for each system. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plan's 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 system.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session. This includes the phase-in provisions from House Bill 362 (passed in 2018) that applies to the CERS Funds as well as the provisions from Senate Bill 249 (passed in 2020) which kept CERS contributions level for fiscal year ending 2021.

If there is a pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 42 of GASB Statement No. 67). Legislation has been enacted three times (for FY 18/19, FY 19/20, and FY 20/21) that allowed certain employers (referred to as "Quasi" agencies) in the KERS Non-Hazardous Fund to contribute 41.06% of pay into the retirement fund, which is significantly less than the actuarially determined contribution rate. We believe this constitutes a pattern and as such, the projection for the KERS Non-Hazardous Fund assumes these Quasi agencies contribute no more than 41.06% of pay throughout the entire projection.



Board of Trustees  
September 4, 2020  
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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 as 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

The reports are based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

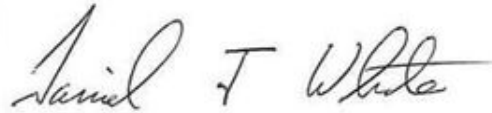
To the best of our knowledge, the reports are complete and accurate and are in accordance with generally recognized actuarial practices and methods. Mr. Newton and Mr. White are Enrolled Actuaries. All three of the undersigned are independent actuaries and consultants and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. They are also experienced in performing valuations for large public retirement system. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

**Gabriel, Roeder, Smith & Co.**



Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary



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



Janie Shaw, ASA, MAAA  
Consultant and Actuary





# Kentucky County Employees Retirement System

GASB No. 67 Accounting Valuation Report  
As of June 30, 2020

DRAFT





September 15, 2020

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

**Re: GASB 67 Reporting – Actuarial Information – County Employees Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the County Employees Retirement System (CERS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board.

The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020 using generally accepted actuarial principles. GASB 67 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

There have been no plan provision or actuarial assumption changes since June 30, 2019. Senate Bill 249 passed during the 2020 Legislative Session and changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of Total Pension Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020.

Board of Trustees  
September 15, 2020  
Page 2

Additionally, House Bill 271 passed during the 2020 Legislative Session and removed provisions that reduce the monthly payment to a surviving spouse of a member whose death was due to a duty-related injury upon remarriage of the spouse. It also increased benefits for a very small number of beneficiaries. This did not have a material (or measurable) impact on the liability of the plans and therefore, we did not make any adjustment to the Total Pension Liability to reflect this legislation. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

A single discount rate of 6.25% was used for both the non-hazardous and hazardous system to measure the total pension liability for the fiscal year ending June 30, 2020. This single discount rate was based on the expected rate of return on pension plan investments for each system. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plan's 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 system.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session. This includes the phase-in provisions from House Bill 362 (passed in 2018) that applies to the CERS Funds as well as the provisions from Senate Bill 249 (passed in 2020) which kept CERS contributions level for fiscal year ending 2021.

If there is a future pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 42 of GASB Statement No. 67).

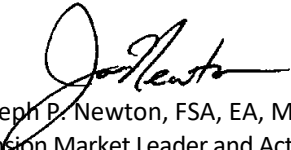
Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net positions as of June 30, 2017 and later are net of the 401(h) asset balance.



Board of Trustees  
September 15, 2020  
Page 2

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

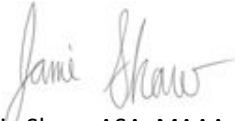
Sincerely,



Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary



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



Janie Shaw, ASA, MAAA  
Consultant and Actuary

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## SECTION 1

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**EXHIBIT 1a****Schedule of the Employers' Net Pension Liability – CERS Non-Hazardous Plan**  
(\$ thousands)

Fiscal Year Ending June 30,	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	Covered Employee Payroll <sup>1</sup>	Net Pension Liability as a Percentage of Covered Employee Payroll
(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)	
2020	\$ 14,697,244	\$ 7,027,327	\$ 7,669,917	47.81%	\$ 2,462,752	311.44%
2019	14,192,966	7,159,921	7,033,045	50.45%	2,424,796	290.05%
2018	13,109,268	7,018,963	6,090,305	53.54%	2,454,927	248.08%
2017	12,540,545	6,687,237	5,853,308	53.32%	2,376,290	246.32%
2016	11,065,013	6,141,395	4,923,618	55.50%	2,417,187	203.69%
2015	10,740,325	6,440,800	4,299,525	59.97%	2,296,716	187.20%
2014	9,772,522	6,528,146	3,244,376	66.80%	2,272,270	142.78%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

**EXHIBIT 1b****Schedule of the Employers' Net Pension Liability – CERS Hazardous Plan**  
(\$ thousands)

Fiscal Year Ending June 30,	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	Covered Employee Payroll <sup>1</sup>	Net Pension Liability as a Percentage of Covered Employee Payroll
(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)	
2020	\$ 5,394,732	\$ 2,379,704	\$ 3,015,028	44.11%	\$ 559,551	538.83%
2019	5,176,003	2,413,708	2,762,295	46.63%	553,541	499.02%
2018	4,766,794	2,348,337	2,418,457	49.26%	562,853	429.68%
2017	4,455,275	2,217,996	2,237,279	49.78%	526,559	424.89%
2016	3,726,115	2,010,174	1,715,941	53.95%	526,334	326.02%
2015	3,613,308	2,078,202	1,535,106	57.52%	483,641	317.41%
2014	3,288,826	2,087,002	1,201,824	63.46%	479,164	250.82%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



## EXHIBIT 2a

### Schedule of the Employers' Net Pension Liability – CERS Non-Hazardous Plan (\$ thousands)

Change in the Net Pension Liability	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service Cost	\$ 280,092	\$ 254,643	\$ 254,169	\$ 193,082	\$ 209,101	\$ 207,400	\$ 192,482
Interest	861,720	794,935	760,622	803,555	780,587	733,002	710,526
Benefit Changes	0	0	15,708	0	0	0	0
Difference between actual and expected experience	173,345	87,377	279,401	(208,015)	0	49,966	0
Assumption Changes	0	727,351	0	1,388,800	0	606,293	0
Benefit Payments	(810,879)	(780,608)	(741,177)	(701,891)	(665,000)	(628,858)	(597,136)
<b>Net Change in Total Pension Liability</b>	<b>\$ 504,278</b>	<b>\$ 1,083,698</b>	<b>\$ 568,723</b>	<b>\$ 1,475,532</b>	<b>\$ 324,687</b>	<b>\$ 967,803</b>	<b>\$ 305,872</b>
<b>Total Pension Liability - Beginning</b>	<b>\$ 14,192,966</b>	<b>\$ 13,109,268</b>	<b>\$ 12,540,545</b>	<b>\$ 11,065,013</b>	<b>\$ 10,740,325</b>	<b>\$ 9,772,522</b>	<b>\$ 9,466,650</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 14,697,244</b>	<b>\$ 14,192,966</b>	<b>\$ 13,109,268</b>	<b>\$ 12,540,545</b>	<b>\$ 11,065,013</b>	<b>\$ 10,740,325</b>	<b>\$ 9,772,522</b>
<b>Plan Fiduciary Net Position<sup>1</sup></b>							
Contributions - Employer	\$ 475,416	\$ 393,453	\$ 358,017	\$ 333,554	\$ 284,105	\$ 298,565	\$ 324,231
Contributions - Member <sup>2</sup>	168,994	159,064	160,370	150,715	141,674	140,311	128,568
Refunds of contributions to members	(14,919)	(14,387)	(14,608)	(14,430)	(13,753)	(13,523)	(14,286)
Retirement benefits	(795,960)	(766,221)	(726,569)	(687,461)	(651,246)	(615,335)	(582,850)
Net Investment Income <sup>2</sup>	56,180	390,664	573,829	825,900	(40,800)	110,568	895,530
Administrative Expense	(22,305)	(21,659)	(19,592)	(19,609)	(19,385)	(18,212)	(18,615)
Other	0	44 <sup>5</sup>	361 <sup>5</sup>	(42,827) <sup>4</sup>	0	10,280	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ (132,594)</b>	<b>\$ 140,958</b>	<b>\$ 331,808</b>	<b>\$ 545,843</b>	<b>\$ (299,405)</b>	<b>\$ (87,346)</b>	<b>\$ 732,578</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 7,159,921</b>	<b>\$ 7,018,963</b>	<b>\$ 6,687,237</b>	<b>\$ 6,141,395</b>	<b>\$ 6,440,800</b>	<b>\$ 6,528,146</b>	<b>\$ 5,795,568</b>
Prior Year Adjustment	-	-	(82)	-	-	-	-
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 7,027,327</b>	<b>\$ 7,159,921</b>	<b>\$ 7,018,963</b>	<b>\$ 6,687,237</b>	<b>\$ 6,141,395</b>	<b>\$ 6,440,800</b>	<b>\$ 6,528,146</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$ 7,669,917</b>	<b>\$ 7,033,045</b>	<b>\$ 6,090,305</b>	<b>\$ 5,853,308</b>	<b>\$ 4,923,618</b>	<b>\$ 4,299,525</b>	<b>\$ 3,244,376</b>
<b>Plan Fiduciary Net Position as a Percentage</b>	<b>47.81%</b>	<b>50.45%</b>	<b>53.54%</b>	<b>53.32%</b>	<b>55.50%</b>	<b>59.97%</b>	<b>66.80%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 2,462,752</b>	<b>\$ 2,424,796</b>	<b>\$ 2,454,927</b>	<b>\$ 2,376,290</b>	<b>\$ 2,417,187</b>	<b>\$ 2,296,716</b>	<b>\$ 2,272,270</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>311.44%</b>	<b>290.05%</b>	<b>248.08%</b>	<b>246.32%</b>	<b>203.69%</b>	<b>187.20%</b>	<b>142.78%</b>

## Notes:

<sup>1</sup> Does not include 401(h) assets for fiscal years 2017 and later

<sup>2</sup> Does not include 401(h) contributions and investment income on 401(h) contributions for fiscal years 2017 and later

<sup>3</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

<sup>4</sup> Adjustment due to 401(h) plan asset balance that is considered an OPEB asset under GASB 74 for fiscal years 2017 and later

<sup>5</sup> Northern Trust Settlement



## EXHIBIT 2b

### Schedule of the Employers' Net Pension Liability – CERS Hazardous Plan (\$ thousands)

Change in the Net Pension Liability	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service Cost	\$ 109,887	\$ 77,426	\$ 81,103	\$ 58,343	\$ 66,249	\$ 71,934	\$ 66,761
Interest	314,762	289,741	270,694	270,860	262,886	247,008	238,665
Benefit Changes	0	0	2,172	0	0	0	0
Difference between actual and expected experience	73,696	27,364	205,882	92,588	0	41,935	0
Assumption Changes	0	276,541	0	536,667	0	166,849	0
Benefit Payments	(279,616)	(261,863)	(248,332)	(229,299)	(216,327)	(203,244)	(192,299)
<b>Net Change in Total Pension Liability</b>	<b>\$ 218,729</b>	<b>\$ 409,209</b>	<b>\$ 311,519</b>	<b>\$ 729,159</b>	<b>\$ 112,807</b>	<b>\$ 324,482</b>	<b>\$ 113,127</b>
<b>Total Pension Liability - Beginning</b>	<b>\$ 5,176,003</b>	<b>\$ 4,766,794</b>	<b>\$ 4,455,275</b>	<b>\$ 3,726,115</b>	<b>\$ 3,613,308</b>	<b>\$ 3,288,826</b>	<b>\$ 3,175,699</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 5,394,732</b>	<b>\$ 5,176,003</b>	<b>\$ 4,766,794</b>	<b>\$ 4,455,275</b>	<b>\$ 3,726,115</b>	<b>\$ 3,613,308</b>	<b>\$ 3,288,826</b>
<b>Plan Fiduciary Net Position<sup>1</sup></b>							
Contributions - Employer	\$ 168,443	\$ 138,053	\$ 127,660	\$ 115,947	\$ 105,713	\$ 108,071	\$ 115,240
Contributions - Member <sup>2</sup>	63,236	58,661	61,089	60,101	52,972	47,692	43,722
Refunds of contributions to members	(3,814)	(2,854)	(4,214)	(2,315)	(2,879)	(3,111)	(2,664)
Retirement benefits	(275,802)	(259,009)	(244,118)	(226,984)	(213,448)	(200,134)	(189,635)
Net Investment Income <sup>2</sup>	15,914	132,232	191,324	270,473	(9,020)	37,104	288,490
Administrative Expense	(1,981)	(1,726)	(1,504)	(1,421)	(1,366)	(1,288)	(1,721)
Other	0	14 <sup>5</sup>	111 <sup>5</sup>	(7,979) <sup>4</sup>	0	2,865	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ (34,004)</b>	<b>\$ 65,371</b>	<b>\$ 130,348</b>	<b>\$ 207,822</b>	<b>\$ (68,028)</b>	<b>\$ (8,801)</b>	<b>\$ 253,432</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 2,413,708</b>	<b>\$ 2,348,337</b>	<b>\$ 2,217,996</b>	<b>\$ 2,010,174</b>	<b>\$ 2,078,202</b>	<b>\$ 2,087,002</b>	<b>\$ 1,833,570</b>
Prior Year Adjustment	-	-	(7)	-	-	-	-
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 2,379,704</b>	<b>\$ 2,413,708</b>	<b>\$ 2,348,337</b>	<b>\$ 2,217,996</b>	<b>\$ 2,010,174</b>	<b>\$ 2,078,202</b>	<b>\$ 2,087,002</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$ 3,015,028</b>	<b>\$ 2,762,295</b>	<b>\$ 2,418,457</b>	<b>\$ 2,237,279</b>	<b>\$ 1,715,941</b>	<b>\$ 1,535,106</b>	<b>\$ 1,201,824</b>
<b>Plan Fiduciary Net Position as a Percentage</b>	<b>44.11%</b>	<b>46.63%</b>	<b>49.26%</b>	<b>49.78%</b>	<b>53.95%</b>	<b>57.52%</b>	<b>63.46%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 559,551</b>	<b>\$ 553,541</b>	<b>\$ 562,853</b>	<b>\$ 526,559</b>	<b>\$ 526,334</b>	<b>\$ 483,641</b>	<b>\$ 479,164</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>538.83%</b>	<b>499.02%</b>	<b>429.68%</b>	<b>424.89%</b>	<b>326.02%</b>	<b>317.41%</b>	<b>250.82%</b>

## Notes:

<sup>1</sup> Does not include 401(h) assets for fiscal years 2017 and later

<sup>2</sup> Does not include 401(h) contributions and investment income on 401(h) contributions for fiscal years 2017 and later

<sup>3</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

<sup>4</sup> Adjustment due to 401(h) plan asset balance that is considered an OPEB asset under GASB 74 for fiscal years 2017 and later

<sup>5</sup> Northern Trust Settlement



**EXHIBIT 3a****Schedule of Employers' Contributions – CERS Non-Hazardous Plan**  
(\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution <sup>1</sup>	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>2</sup>	Actual Contributions as a Percentage of Covered Payroll
2020	\$ 554,612	\$ 475,416	\$ 79,196	\$ 2,462,752	19.30%
2019	529,575	393,453	136,122	2,424,796	16.23%
2018	355,473	358,017	(2,544)	2,454,927	14.58%
2017	331,492	333,554	(2,062)	2,376,290	14.04%
2016	282,767	284,106	(1,339)	2,417,187	11.75%
2015	297,715	298,566	(851)	2,296,716	13.00%
2014	324,231	324,231	-	2,272,270	14.27%
2013	294,914	294,914	-	2,236,277	13.19%
2012	261,764	275,736	(13,972)	2,236,546	12.33%
2011	218,985	248,519	(29,534)	2,276,596	10.92%

## Notes:

<sup>1</sup> Actuarially determined contribution rate for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2018 actuarial valuation.

<sup>2</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later



**EXHIBIT 3b****Schedule of Employers' Contributions – CERS Hazardous Plan**  
(\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution <sup>1</sup>	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>2</sup>	Actual Contributions as a Percentage of Covered Payroll
2020	\$ 206,922	\$ 168,443	\$ 38,479	\$ 559,551	30.10%
2019	197,559	138,053	59,506	553,541	24.94%
2018	124,953	127,660	(2,707)	562,853	22.68%
2017	114,316	115,947	(1,631)	526,559	22.02%
2016	104,952	105,713	(761)	526,334	20.08%
2015	107,514	108,071	(557)	483,641	22.35%
2014	115,240	115,240	-	479,164	24.05%
2013	120,140	120,140	-	461,673	26.02%
2012	83,589	89,329	(5,740)	464,229	19.24%
2011	78,796	85,078	(6,282)	466,964	18.22%

## Notes:

<sup>1</sup> Actuarially determined contribution rate for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2018 actuarial valuation.

<sup>2</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later



## Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rates effective for fiscal year ending 2020 that are documented in the schedule on the previous pages were calculated as of June 30, 2018. Based on the June 30, 2018 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	CERS Non-Hazardous	CERS Hazardous
Determined by the Actuarial Valuation as of:	June 30, 2018	June 30, 2018
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay	Level Percent of Pay
Amortization Period:	25 Years, Closed	25 Years, Closed
Payroll Growth Rate	2.00%	2.00%
Investment Return:	6.25%	6.25%
Inflation:	2.30%	2.30%
Salary Increases:	3.30% to 11.55%, varies by service	3.05% to 18.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)
Phase-In provision	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.



## EXHIBIT 4

### Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ thousands)

**Table 1. Sensitivity of the Net Pension Liability to Changes in the Discount Rate for CERS (Non-Hazardous)**

1.00% Decrease (5.25%)	Current Discount Rate (6.25%)	1.00% Increase (7.25%)
\$ 9,458,677	\$ 7,669,917	\$ 6,188,756

**Table 2. Sensitivity of the Net Pension Liability to Changes in the Discount Rate for CERS (Hazardous)**

1.00% Decrease (5.25%)	Current Discount Rate (6.25%)	1.00% Increase (7.25%)
\$ 3,726,146	\$ 3,015,028	\$ 2,434,569

# Kentucky Employees Retirement System

GASB No. 67 Accounting Valuation Report  
As of June 30, 2020

DRAFT





September 4, 2020

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

**Re: GASB 67 Reporting – Actuarial Information – Kentucky Employees Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the Kentucky Employees Retirement System (KERS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board.

The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020 using generally accepted actuarial principles. GASB 67 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

There have been no assumption changes since June 30, 2019. House Bill 1 passed during the 2019 Special Legislative Session and allowed certain agencies in the Non-Hazardous plan to elect to cease participating in the System as of June 30, 2020 under different provisions than were previously established. Senate Bill 249 passed during the 2020 Legislative Session and delayed the effective date of cessation for these provisions to June 30, 2021. Since each employer’s election is unknown at this time, we did not make any adjustment to the Total Pension Liability to reflect this legislation.



Board of Trustees  
September 4, 2020  
Page 2

Senate Bill 249 also changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of Total Pension Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020.

Additionally, House Bill 271 passed during the 2020 Legislative Session and removed provisions that reduce the monthly payment to a surviving spouse of a member whose death was due to a duty-related injury upon remarriage of the spouse. It also increased benefits for a very small number of beneficiaries. This did not have a material (or measurable) impact on the liability of the plans and therefore, we did not make any adjustment to the Total Pension Liability to reflect this legislation. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

Single discount rates of 5.25% for the non-hazardous system and 6.25% for the hazardous system were used to measure the total pension liability for the fiscal year ending June 30, 2020. This single discount rate was based on the expected rate of return on pension plan investments for each system. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plan's 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 system.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session.

If there is a pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 42 of GASB Statement No. 67). Legislation has been enacted three times (for FY 18/19, FY 19/20, and FY 20/21) that allowed certain employers (referred to as "Quasi" agencies) in the KERS Non-Hazardous Fund to contribute 41.06% of pay into the retirement fund, which is significantly less than the actuarially determined contribution rate. We believe this constitutes a pattern and as such, the projection for the KERS Non-Hazardous Fund assumes these Quasi agencies contribute no more than 41.06% of pay throughout the entire projection.



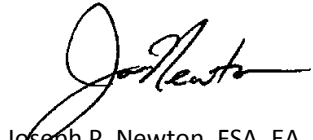
Board of Trustees  
September 4, 2020  
Page 2

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 as 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.

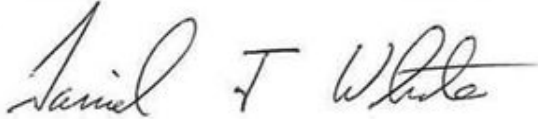
To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. Newton and Mr. White are Enrolled Actuaries. All three of the undersigned are independent actuaries and consultants and members of the American Academy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

Sincerely,

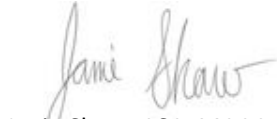
**Gabriel Roeder Smith & Co.**



Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary



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



Janie Shaw, ASA, MAAA  
Consultant and Actuary



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## SECTION 1

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DRAFT

**EXHIBIT 1a****Schedule of the Employers' Net Pension Liability – KERS Non-Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending June 30,	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	Covered Employee Payroll <sup>1</sup>	Net Pension Liability as a Percentage of Covered Employee Payroll
	(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)
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%
2014	11,550,110	2,578,291	8,971,819	22.32%	1,577,496	568.74%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

**EXHIBIT 1b**

**Schedule of the Employers' Net Pension Liability – KERS Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending June 30,	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	Covered Employee Payroll <sup>1</sup>	Net Pension Liability as a Percentage of Covered Employee Payroll
	(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)
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%
2014	816,850	561,484	255,366	68.74%	129,076	197.84%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



## EXHIBIT 2a

### Schedule of the Employers' Net Pension Liability – KERS Non-Hazardous Plan (\$ in thousands)

Change in the Net Pension Liability	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service Cost	\$ 179,702	\$ 184,988	\$ 195,681	\$ 143,858	\$ 139,631	\$ 143,847	\$ 133,361
Interest	832,178	793,163	785,123	870,725	891,897	859,509	853,653
Benefit Changes	0	0	9,624	0	0	0	0
Difference between actual and expected experience	115,515	70,529	153,565	(134,379)	0	30,958	0
Assumption Changes	0	700,464	0	2,145,530	923,999	694,592	0
Benefit Payments	(1,011,336)	(1,000,691)	(980,978)	(960,309)	(935,419)	(919,343)	(903,564)
<b>Net Change in Total Pension Liability</b>	<b>\$ 116,059</b>	<b>\$ 748,453</b>	<b>\$ 163,015</b>	<b>\$ 2,065,425</b>	<b>\$ 1,020,108</b>	<b>\$ 809,563</b>	<b>\$ 83,450</b>
<b>Total Pension Liability - Beginning</b>	<b>\$ 16,356,674</b>	<b>\$ 15,608,221</b>	<b>\$ 15,445,206</b>	<b>\$ 13,379,781</b>	<b>\$ 12,359,673</b>	<b>\$ 11,550,110</b>	<b>\$ 11,466,660</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 16,472,733</b>	<b>\$ 16,356,674</b>	<b>\$ 15,608,221</b>	<b>\$ 15,445,206</b>	<b>\$ 13,379,781</b>	<b>\$ 12,359,673</b>	<b>\$ 11,550,110</b>
<b>Plan Fiduciary Net Position<sup>1</sup></b>							
Contributions - Employer	\$ 948,592	\$ 1,035,462	\$ 689,143	\$ 757,121	\$ 513,084	\$ 521,691	\$ 296,836
Contributions - Member <sup>2</sup>	96,594	93,759	104,972	100,543	106,495	104,606	97,487
Refunds of contributions to members	(11,523)	(12,342)	(13,603)	(11,819)	(12,130)	(13,552)	(13,627)
Retirement benefits	(999,813)	(988,349)	(967,375)	(948,490)	(923,288)	(905,791)	(889,937)
Net Investment Income <sup>2</sup>	52,499	112,371	144,881	220,985	(20,663)	44,570	337,923
Administrative Expense	(11,941)	(11,712)	(10,692)	(10,957)	(10,989)	(10,474)	(11,145)
Other	0	37 <sup>5</sup>	301 <sup>5</sup>	(30,805) <sup>4</sup>	0	8,442	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 74,408</b>	<b>\$ 229,226</b>	<b>\$ (52,373)</b>	<b>\$ 76,578</b>	<b>\$ (347,491)</b>	<b>\$ (250,508)</b>	<b>\$ (182,463)</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 2,233,672</b>	<b>\$ 2,004,446</b>	<b>\$ 2,056,870</b>	<b>\$ 1,980,292</b>	<b>\$ 2,327,783</b>	<b>\$ 2,578,291</b>	<b>\$ 2,760,754</b>
Prior Year Adjustment	-	-	(51)	-	-	-	-
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 2,308,080</b>	<b>\$ 2,233,672</b>	<b>\$ 2,004,446</b>	<b>\$ 2,056,870</b>	<b>\$ 1,980,292</b>	<b>\$ 2,327,783</b>	<b>\$ 2,578,291</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$ 14,164,653</b>	<b>\$ 14,123,002</b>	<b>\$ 13,603,775</b>	<b>\$ 13,388,336</b>	<b>\$ 11,399,489</b>	<b>\$ 10,031,890</b>	<b>\$ 8,971,819</b>
<b>Plan Fiduciary Net Position as a Percentage</b>	<b>14.01%</b>	<b>13.66%</b>	<b>12.84%</b>	<b>13.32%</b>	<b>14.80%</b>	<b>18.83%</b>	<b>22.32%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 1,476,156</b>	<b>\$ 1,485,854</b>	<b>\$ 1,509,955</b>	<b>\$ 1,602,396</b>	<b>\$ 1,631,025</b>	<b>\$ 1,544,234</b>	<b>\$ 1,577,496</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>959.56%</b>	<b>950.50%</b>	<b>900.94%</b>	<b>835.52%</b>	<b>698.92%</b>	<b>649.64%</b>	<b>568.74%</b>

## Notes:

<sup>1</sup> Does not include 401(h) assets for fiscal years 2017 and later

<sup>2</sup> Does not include 401(h) contributions and investment income on 401(h) contributions for fiscal years 2017 and later

<sup>3</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

<sup>4</sup> Adjustment due to 401(h) plan asset balance that is considered an OPEB asset under GASB 74 for fiscal years 2017 and later

<sup>5</sup> Northern Trust Settlement



## EXHIBIT 2b

### Schedule of the Employers' Net Pension Liability – KERS Hazardous Plan (\$ in thousands)

Change in the Net Pension Liability	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service Cost	\$ 25,568	\$ 27,117	\$ 28,641	\$ 21,081	\$ 20,751	\$ 18,729	\$ 16,880
Interest	74,357	69,657	66,536	66,589	64,851	61,005	59,594
Benefit Changes	0	0	705	0	0	0	0
Difference between actual and expected experience	(1,095)	1,395	24,215	26,902	0	6,067	0
Assumption Changes	0	50,658	0	127,878	0	52,165	0
Benefit Payments	(75,029)	(72,211)	(68,117)	(63,338)	(61,518)	(59,383)	(57,151)
<b>Net Change in Total Pension Liability</b>	<b>\$ 23,801</b>	<b>\$ 76,616</b>	<b>\$ 51,980</b>	<b>\$ 179,112</b>	<b>\$ 24,084</b>	<b>\$ 78,583</b>	<b>\$ 19,323</b>
<b>Total Pension Liability - Beginning</b>	<b>\$ 1,227,226</b>	<b>\$ 1,150,610</b>	<b>\$ 1,098,630</b>	<b>\$ 919,517</b>	<b>\$ 895,433</b>	<b>\$ 816,850</b>	<b>\$ 797,527</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 1,251,027</b>	<b>\$ 1,227,226</b>	<b>\$ 1,150,610</b>	<b>\$ 1,098,630</b>	<b>\$ 919,517</b>	<b>\$ 895,433</b>	<b>\$ 816,850</b>
<b>Plan Fiduciary Net Position<sup>1</sup></b>							
Contributions - Employer	\$ 59,115	\$ 55,259	\$ 43,661	\$ 52,974	\$ 23,759	\$ 28,536	\$ 11,670
Contributions - Member <sup>2</sup>	19,769	17,118	17,891	17,524	15,739	13,207	12,546
Refunds of contributions to members	(3,168)	(2,684)	(2,501)	(2,106)	(2,211)	(2,610)	(2,830)
Retirement benefits	(71,861)	(69,527)	(65,616)	(61,231)	(59,306)	(56,773)	(54,320)
Net Investment Income <sup>2</sup>	6,739	36,380	51,467	70,994	(1,653)	8,701	80,724
Administrative Expense	(1,176)	(1,103)	(975)	(919)	(916)	(844)	(897)
Other	0	4 <sup>5</sup>	33 <sup>5</sup>	(3,586) <sup>4</sup>	0	767	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 9,418</b>	<b>\$ 35,447</b>	<b>\$ 43,960</b>	<b>\$ 73,650</b>	<b>\$ (24,588)</b>	<b>\$ (9,016)</b>	<b>\$ 46,893</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 680,932</b>	<b>\$ 645,485</b>	<b>\$ 601,529</b>	<b>\$ 527,879</b>	<b>\$ 552,468</b>	<b>\$ 561,484</b>	<b>\$ 514,591</b>
Prior Year Adjustment	-	-	(4)	-	-	-	-
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 690,350</b>	<b>\$ 680,932</b>	<b>\$ 645,485</b>	<b>\$ 601,529</b>	<b>\$ 527,879</b>	<b>\$ 552,468</b>	<b>\$ 561,484</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$ 560,677</b>	<b>\$ 546,294</b>	<b>\$ 505,125</b>	<b>\$ 497,101</b>	<b>\$ 391,638</b>	<b>\$ 342,965</b>	<b>\$ 255,366</b>
<b>Plan Fiduciary Net Position as a Percentage</b>	<b>55.18%</b>	<b>55.49%</b>	<b>56.10%</b>	<b>54.75%</b>	<b>57.41%</b>	<b>61.70%</b>	<b>68.74%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 171,840</b>	<b>\$ 160,600</b>	<b>\$ 152,936</b>	<b>\$ 178,511</b>	<b>\$ 158,828</b>	<b>\$ 128,680</b>	<b>\$ 129,076</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>326.28%</b>	<b>340.16%</b>	<b>330.29%</b>	<b>278.47%</b>	<b>246.58%</b>	<b>266.53%</b>	<b>197.84%</b>

## Notes:

<sup>1</sup> Does not include 401(h) assets for fiscal years 2017 and later

<sup>2</sup> Does not include 401(h) contributions and investment income on 401(h) contributions for fiscal years 2017 and later

<sup>3</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

<sup>4</sup> Adjustment due to 401(h) plan asset balance that is considered an OPEB asset under GASB 74 for fiscal years 2017 and later

<sup>5</sup> Northern Trust Settlement





**EXHIBIT 3a****Schedule of Employers' Contributions – KERS Non-Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending	Actuarially Determined Contribution <sup>1</sup>	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>2</sup>	Actual Contributions as a Percentage of Covered Payroll
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%
2014	520,765	296,836	223,929	1,577,496	18.82%
2013	485,396	280,874	204,522	1,644,409	17.08%
2012	441,094	214,786	226,308	1,644,897	13.06%
2011	381,915	193,754	188,161	1,731,633	11.19%

## Notes:

<sup>1</sup> Actuarially determined contribution rate for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>2</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later



**EXHIBIT 3b****Schedule of Employers' Contributions – KERS Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending	Actuarially Determined Contribution <sup>1</sup>	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>2</sup>	Actual Contributions as a Percentage of Covered Payroll
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%
2014	13,570	11,670	1,900	129,076	9.04%
2013	21,502	27,334	(5,832)	131,015	20.86%
2012	20,265	20,809	(544)	131,977	15.77%
2011	20,605	19,141	1,464	133,054	14.39%

## Notes:

<sup>1</sup> Actuarially determined contribution rate for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>2</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later



## Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rates effective for fiscal year ending 2020 that are documented in the schedule on the previous pages were calculated as of June 30, 2017. Based on the June 30, 2017 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	KERS Non-Hazardous	KERS Hazardous
Determined by the Actuarial Valuation as of:	June 30, 2017	June 30, 2017
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay	Level Percent of Pay
Amortization Period:	26 Years, Closed	26 Years, Closed
Payroll Growth Rate	0.00%	0.00%
Investment Return:	5.25%	6.25%
Inflation:	2.30%	2.30%
Salary Increases:	3.55% to 15.55%, varies by service	3.55% to 19.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)



## EXHIBIT 4

### Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ in thousands)

**Table 1. Sensitivity of the Net Pension Liability to Changes in the Discount Rate for KERS (Non-Hazardous)**

1.00% Decrease (4.25%)	Current Discount Rate (5.25%)	1.00% Increase (6.25%)
\$ 16,223,729	\$ 14,164,653	\$ 12,472,483

**Table 2. Sensitivity of the Net Pension Liability to Changes in the Discount Rate for KERS (Hazardous)**

1.00% Decrease (5.25%)	Current Discount Rate (6.25%)	1.00% Increase (7.25%)
\$ 717,449	\$ 560,677	\$ 433,056



# Kentucky State Police Retirement System

GASB No. 67 Accounting Valuation Report  
As of June 30, 2020

DRAFT





September 15, 2020

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

**Re: GASB 67 Reporting – Actuarial Information – State Police Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the State Police Retirement System (SPRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board.

The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020 using generally accepted actuarial principles. GASB 67 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

There have been no plan provision or actuarial assumption changes since June 30, 2019. Senate Bill 249 passed during the 2020 Legislative Session and changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over a separate 20-year amortization bases. This change does not impact the calculation of Total Pension Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020.

Board of Trustees  
September 15, 2020  
Page 2

Additionally, House Bill 271 passed during the 2020 Legislative Session and removed provisions that reduce the monthly payment to a surviving spouse of a member whose death was due to a duty-related injury upon remarriage of the spouse. It also increased benefits for a very small number of beneficiaries. This did not have a material (or measurable) impact on the liability of the plans and therefore, we did not make any adjustment to the Total Pension Liability to reflect this legislation. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

A single discount rate of 5.25% was used to measure the total pension liability for the fiscal year ending June 30, 2020. This single discount rate was based on the expected rate of return on pension plan investments for the system. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plan's 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 system.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. The future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session.

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 as 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.



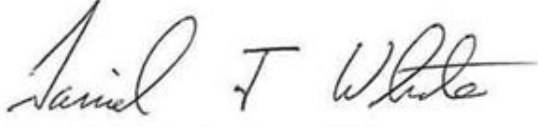
Board of Trustees  
September 15, 2020  
Page 2

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

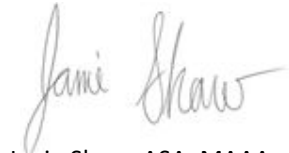
Sincerely,



Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary



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



Janie Shaw, ASA, MAAA  
Consultant and Actuary

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## SECTION 1

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**EXHIBIT 1****Schedule of the Employers' Net Pension Liability – SPRS**  
(\$ thousands)

<b>Fiscal Year Ending June 30,</b>	<b>Total Pension Liability</b>	<b>Plan Fiduciary Net Position</b>	<b>Employers' Net Pension Liability (Asset)</b>	<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>Covered Employee Payroll<sup>1</sup></b>	<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>
(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)	
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%
2014	681,118	260,974	420,144	38.32%	44,616	941.69%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

## EXHIBIT 2

### Schedule of the Employers' Net Pension Liability – SPRS (\$ thousands)

Change in the Net Pension Liability	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service Cost	\$ 13,192	\$ 11,726	\$ 11,890	\$ 8,297	\$ 8,402	\$ 7,695	\$ 7,142
Interest	52,697	49,301	47,978	51,769	52,951	50,661	50,391
Benefit Changes	0	0	184	0	0	0	0
Difference between actual and expected experience	10,859	20,952	25,126	8,143	0	9,331	0
Assumption Changes	0	44,510	0	136,602	56,191	40,201	0
Benefit Payments	(62,511)	(61,111)	(58,827)	(56,960)	(56,279)	(54,850)	(53,239)
<b>Net Change in Total Pension Liability</b>	<b>\$ 14,237</b>	<b>\$ 65,378</b>	<b>\$ 26,351</b>	<b>\$ 147,850</b>	<b>\$ 61,265</b>	<b>\$ 53,038</b>	<b>\$ 4,294</b>
<b>Total Pension Liability - Beginning</b>	<b>\$ 1,035,000</b>	<b>\$ 969,622</b>	<b>\$ 943,271</b>	<b>\$ 795,421</b>	<b>\$ 734,156</b>	<b>\$ 681,118</b>	<b>\$ 676,824</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 1,049,237</b>	<b>\$ 1,035,000</b>	<b>\$ 969,622</b>	<b>\$ 943,271</b>	<b>\$ 795,421</b>	<b>\$ 734,156</b>	<b>\$ 681,118</b>
<b>Plan Fiduciary Net Position<sup>1</sup></b>							
Contributions - Employer	\$ 59,453	\$ 60,048	\$ 46,877	\$ 63,239	\$ 25,822	\$ 31,990	\$ 20,279
Contributions - Member <sup>2</sup>	4,767	5,062	5,522	5,348	5,263	5,244	5,075
Refunds of contributions to members	(88)	(162)	(22)	(26)	(11)	(85)	(213)
Retirement benefits	(62,423)	(60,949)	(58,805)	(56,934)	(56,268)	(54,765)	(53,026)
Net Investment Income <sup>2</sup>	6,341	14,816	18,437	26,795	(3,843)	3,426	40,374
Administrative Expense	(266)	(225)	(194)	(181)	(178)	(201)	(215)
Other	0	3 <sup>5</sup>	21 <sup>5</sup>	(517) <sup>4</sup>	0	645	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 7,784</b>	<b>\$ 18,593</b>	<b>\$ 11,836</b>	<b>\$ 37,724</b>	<b>\$ (29,215)</b>	<b>\$ (13,746)</b>	<b>\$ 12,274</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 286,165</b>	<b>\$ 267,572</b>	<b>\$ 255,737</b>	<b>\$ 218,012</b>	<b>\$ 247,228</b>	<b>\$ 260,974</b>	<b>\$ 248,700</b>
Prior Year Adjustment	-	-	(1)	-	-	-	-
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 293,949</b>	<b>\$ 286,165</b>	<b>\$ 267,572</b>	<b>\$ 255,737</b>	<b>\$ 218,012</b>	<b>\$ 247,228</b>	<b>\$ 260,974</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$ 755,288</b>	<b>\$ 748,835</b>	<b>\$ 702,050</b>	<b>\$ 687,534</b>	<b>\$ 577,409</b>	<b>\$ 486,928</b>	<b>\$ 420,144</b>
<b>Plan Fiduciary Net Position as a Percentage</b>	<b>28.02%</b>	<b>27.65%</b>	<b>27.60%</b>	<b>27.11%</b>	<b>27.41%</b>	<b>33.68%</b>	<b>38.32%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 49,019</b>	<b>\$ 49,515</b>	<b>\$ 50,346</b>	<b>\$ 54,065</b>	<b>\$ 46,685</b>	<b>\$ 45,765</b>	<b>\$ 44,616</b>
<b>Net Pension Liability as a Percentage of</b>							
<b>Covered Employee Payroll</b>	<b>1540.81%</b>	<b>1512.34%</b>	<b>1394.45%</b>	<b>1271.68%</b>	<b>1236.82%</b>	<b>1063.97%</b>	<b>941.69%</b>

## Notes:

<sup>1</sup> Does not include 401(h) assets for fiscal years 2017 and later

<sup>2</sup> Does not include 401(h) contributions and investment income on 401(h) contributions for fiscal years 2017 and later

<sup>3</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

<sup>4</sup> Adjustment due to 401(h) plan asset balance that is considered an OPEB asset under GASB 74 for fiscal years 2017 and later

<sup>5</sup> Northern Trust Settlement



**EXHIBIT 3****Schedule of Employers' Contributions – SPRS**  
(\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution <sup>1</sup>	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>2</sup>	Actual Contributions as a Percentage of Covered Payroll
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%
2014	25,808	20,279	5,529	44,616	45.45%
2013	23,117	18,501	4,616	45,256	40.88%
2012	20,498	15,362	5,136	48,373	31.76%
2011	18,463	12,657	5,806	48,693	25.99%

**Notes:**

<sup>1</sup> Actuarially determined contribution rate for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>2</sup> Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later



### Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rate effective for fiscal year ending 2020 that is documented in the schedule on the previous pages was calculated as of June 30, 2017. Based on the June 30, 2017 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	SPRS
Determined by the Actuarial Valuation as of:	June 30, 2017
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay
Amortization Period:	26 Years, Closed
Payroll Growth Rate	0.00%
Investment Return:	5.25%
Inflation:	2.30%
Salary Increases:	3.05% to 15.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)

## EXHIBIT 4

### Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ thousands)

1.00% Decrease (4.25%)	Current Discount Rate (5.25%)	1.00% Increase (6.25%)
\$ 891,868	\$ 755,288	\$ 644,122

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September 8, 2020

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

**Re: GASB No. 74 Reporting – Actuarial Information**

Dear Members of the Board:

The reports provided herein contain certain information for the Kentucky Employees Retirement System (KERS), the County Employees Retirement System (CERS), and the State Police Retirement System (SPRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other than Pension Plans" for the fiscal year ending June 30, 2020. Separate reports will be provided 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 liability calculations presented in the reports were performed for the purpose of satisfying the requirements of GASB No. 74 and are not applicable for other purposes, such as determining the plans' funding requirements. The plan's liability for other purposes may produce significantly different results.

The total OPEB liability, net OPEB liability, and sensitivity information are based on an actuarial valuation date of June 30, 2019. The total OPEB liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2020 using generally accepted actuarial principles.

Assumptions

The discount rates used to calculate the total OPEB liability decreased for all Funds (see further discussion on the calculation of the single discount rate later in this letter). The assumed increase in future health care costs, or trend assumption, was reviewed during the June 30, 2019 valuation process and was updated to better reflect more current expectations relating to anticipated future increases in the medical costs. Also, the June 30, 2020 GASB No. 74 actuarial information reflects the anticipated savings from the repeal of the "Cadillac Tax" and "Health Insurer Fee", which occurred in December of 2019. The assumed load on pre-Medicare premiums to reflect the cost of the Cadillac Tax was removed and the Medicare premiums were reduced by 11% to reflect the repeal of the Health Insurer Fee. There were no other material assumption changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.



Board of Trustees  
 September 8, 2020  
 Page 2

Plan Provisions

House Bill 1 passed during the 2019 Special Legislative Session and allowed certain agencies in the KERS Non-Hazardous plan to elect to cease participating in the System as of June 30, 2020 under different provisions than were previously established. Senate Bill 249 passed during the 2020 Legislative Session and delayed the effective date of cessation for these provisions to June 30, 2021. Since each employer’s election is unknown at this time, we did not make any adjustment to the Total OPEB Liability to reflect this legislation.

Senate Bill 249 also changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of the Total OPEB Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

Implicit Employer Subsidy for non-Medicare retirees

The fully-insured premiums KRS pays 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, 2020.

KERS Non-Hazardous	5.43%
KERS Hazardous	5.28%
CERS Non-Hazardous	5.34%
CERS Hazardous	5.30%
SPRS	5.40%

The single discount rates are based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 2.45%, as reported in Fidelity Index’s “20-Year Municipal GO AA Index” as of June 30, 2020. 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 System’s actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the System’s trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.



Board of Trustees  
September 8, 2020  
Page 2

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session. This includes the phase-in provisions from House Bill 362 (passed in 2018) that applies to the CERS Funds as well as the provisions from Senate Bill 249 (passed in 2020) which kept CERS contributions level for fiscal year ending 2021.

If there is a pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 50 of GASB Statement No. 74). Legislation has been enacted three times (for FY 18/19, FY 19/20, and FY 20/21) that allowed certain employers (referred to as “Quasi” agencies) in the KERS Non-Hazardous Fund to contribute 8.41% of pay into the insurance fund, which is less than the actuarially determined contribution rate. We believe this constitutes a pattern and as such, the projection for the KERS Non-Hazardous Fund assumes these Quasi agencies contribute no more than 8.41% of pay throughout the entire projection.

#### 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 as an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income are included in the reconciliation of the fiduciary net position.

#### Additional Disclosures

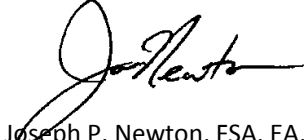
The reports are based upon information, furnished to us by the Retirement System, which includes benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by the Retirement System. Please see the “Actuarial Valuation Report as of June 30, 2019” 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 KRS’s fiscal year ending June 30, 2020.



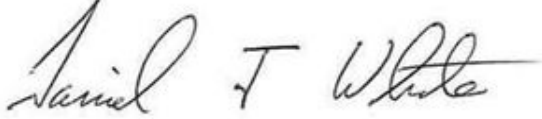
Board of Trustees  
September 8, 2020  
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To the best of our knowledge, the reports are complete and accurate and are in accordance with generally recognized actuarial practices and methods. Mr. Newton, Mr. Riazi, and Mr. White are Enrolled Actuaries. All of the undersigned are independent actuaries and consultants and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. They are also experienced in performing valuations for large public retirement system. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,



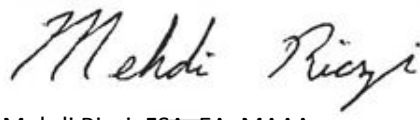
Joseph P. Newton, FSA, EA, MAAA  
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Daniel J. White, FSA, EA, MAAA  
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Janie Shaw, ASA, MAAA  
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Mehdi Riazi, FSA, EA, MAAA  
Consultant and Actuary

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# Kentucky County Employees Retirement System

GASB No. 74 Accounting Valuation Report  
As of June 30, 2020

DRAFT





September 8, 2020

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

**Re: GASB No. 74 Reporting – Actuarial Information – County Employees’ Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the Kentucky County Employees’ Retirement System (CERS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans Other than Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided 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”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 74 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The total OPEB liability, net OPEB liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total OPEB liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020, using generally accepted actuarial principles. GASB No. 74 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

The discount rate used to calculate the total OPEB liability decreased from 5.68% to 5.34% for the Non-Hazardous Fund and from 5.69% to 5.30% for the Hazardous Fund (see further discussion on the calculation of the single discount rate later in this letter). The assumed increase in future health care costs, or trend assumption, was reviewed during the June 30, 2019 valuation process and was updated to better reflect more current expectations relating to anticipated future increases in the medical costs. Also, the June 30, 2020 GASB No. 74 actuarial information reflects the anticipated savings from the repeal of the “Cadillac Tax” and “Health Insurer Fee”, which occurred in December of 2019. The assumed load on pre-Medicare premiums to reflect the cost of the Cadillac Tax was removed and the Medicare premiums were reduced by 11% to reflect the repeal of the Health Insurer Fee. There were no other material assumption changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

Board of Trustees  
September 8, 2020  
Page 2

Senate Bill 249 changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of the Total OPEB Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

The fully-insured premiums KRS pays 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.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

Single discount rates of 5.34% for the non-hazardous system and 5.30% for hazardous system were used to measure the total OPEB liability as of June 30, 2020. The single discount rates are based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 2.45%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2020. 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 System's actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the System'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. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session. This includes the phase-in provisions from House Bill 362 (passed in 2018) that applies to the CERS Funds as well as the provisions from Senate Bill 249 (passed in 2020) which kept CERS contributions level for fiscal year ending 2021.

If there is future legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 50 of GASB Statement No. 74).



Board of Trustees  
September 8, 2020  
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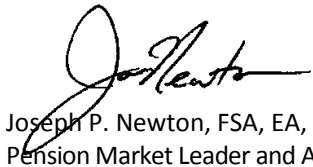
Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income are included in the reconciliation of the fiduciary net position.

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; and changes in plan provisions or applicable law.

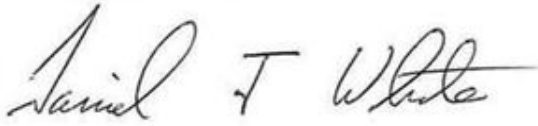
To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. Newton, Mr. White, and Mr. Riazi are Enrolled Actuaries. All of the undersigned are independent actuaries and consultants and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. They are also 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,

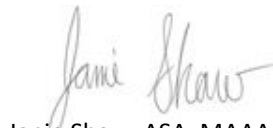
**Gabriel Roeder Smith & Co.**




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Consultant and Actuary



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Consultant and Actuary



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## SECTION 1

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**EXHIBIT 1a****Schedule of the Employers' Net OPEB Liability – CERS Non-Hazardous Plan**  
(\$ in thousands)

Year	Total OPEB Liability (1)	Plan Fiduciary Net Position (2)	Net OPEB Liability/(Asset) (3) = (1) - (2)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability (4) = (2) / (1)	Covered Employee Payroll <sup>1</sup> (5)	Net OPEB Liability as a Percentage of Covered Employee Payroll (6) = (3) / (5)
2020	\$ 4,996,309	\$ 2,581,613	\$ 2,414,696	51.67%	\$ 2,620,585	92.14%
2019	4,251,466	2,569,511	1,681,955	60.44%	2,577,378	65.26%
2018	4,189,606	2,414,126	1,775,480	57.62%	2,570,156	69.08%
2017	4,222,878	2,212,536	2,010,342	52.39%	2,480,130	81.06%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information.

**EXHIBIT 1b****Schedule of the Employers' Net OPEB Liability – CERS Hazardous Plan**  
(\$ in thousands)

Year	Total OPEB Liability (1)	Plan Fiduciary Net Position (2)	Net OPEB Liability/(Asset) (3) = (1) - (2)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability (4) = (2) / (1)	Covered Employee Payroll <sup>1</sup> (5)	Net OPEB Liability as a Percentage of Covered Employee Payroll (6) = (3) / (5)
2020	\$ 2,245,222	\$ 1,321,117	\$ 924,105	58.84%	\$ 596,001	155.05%
2019	2,080,574	1,340,714	739,860	64.44%	583,632	126.77%
2018	1,993,941	1,280,982	712,959	64.24%	588,526	121.14%
2017	2,015,673	1,189,001	826,672	58.99%	542,710	152.32%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information.

## EXHIBIT 2

### Development of Single Discount Rate

	<u>CERS Non-Hazardous</u>	<u>CERS Hazardous</u>
Single Discount Rate	5.34%	5.30%
Long-Term Expected Rate of Return	6.25%	6.25%
Long-Term Municipal Bond Rate <sup>1</sup>	2.45%	2.45%

Notes:

<sup>1</sup> 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, 2020.

**EXHIBIT 3a****Schedule of the Employers' Net OPEB Liability – CERS Non-Hazardous Plan**  
( \$ in thousands )

<u>Change in the Net OPEB Liability</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>				
Service Cost	\$ 131,289	\$ 119,011	\$ 122,244	\$ 85,468
Interest on the total OPEB liability	236,126	240,352	242,048	240,854
Benefit Changes	0	0	4,306	0
Difference between actual and expected experience	505,843	(404,301)	(240,568)	(6,641)
Assumption Changes	60,225	268,842	(4,876)	520,286
Benefit Payments <sup>1</sup>	(188,640)	(162,044)	(156,426)	(140,120)
<b>Net Change in Total OPEB Liability</b>	<b>744,843</b>	<b>61,860</b>	<b>(33,272)</b>	<b>699,847</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 4,251,466</b>	<b>\$ 4,189,606</b>	<b>\$ 4,222,878</b>	<b>\$ 3,523,031</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 4,996,309</b>	<b>\$ 4,251,466</b>	<b>\$ 4,189,606</b>	<b>\$ 4,222,878</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer <sup>2</sup>	\$ 179,521	\$ 168,905	\$ 145,809	\$ 133,326
Contributions - Member	12,964	11,801	10,825	9,158
Benefit Payments <sup>1</sup>	(188,640)	(162,044)	(156,426)	(140,120)
OPEB Plan Net Investment Income	9,160	137,591	202,068	264,782
OPEB Plan Administrative Expense	(903)	(877)	(761)	(789)
Other	0	9 <sup>4</sup>	75 <sup>4</sup>	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>12,102</b>	<b>155,385</b>	<b>201,590</b>	<b>266,357</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 2,569,511</b>	<b>\$ 2,414,126</b>	<b>\$ 2,212,536</b>	<b>\$ 1,946,179</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 2,581,613</b>	<b>\$ 2,569,511</b>	<b>\$ 2,414,126</b>	<b>\$ 2,212,536</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>2,414,696</b>	<b>1,681,955</b>	<b>1,775,480</b>	<b>2,010,342</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b>				
Covered Employee Payroll <sup>3</sup>	\$ 51.67%	\$ 60.44%	\$ 57.62%	\$ 52.39%
<b>Net OPEB Liability as a Percentage of Covered Employee Payroll</b>				
	92.14%	65.26%	69.08%	81.06%

## Notes:

<sup>1</sup> Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

<sup>2</sup> Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

<sup>3</sup> Based on derived compensation using the provided employer contribution information.

<sup>4</sup> Northern Trust Settlement



**EXHIBIT 3b****Schedule of the Employers' Net OPEB Liability – CERS Hazardous Plan**  
(\$ in thousands)

<u>Change in the Net OPEB Liability</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>				
Service Cost	\$ 47,443	\$ 32,623	\$ 33,948	\$ 20,493
Interest on the total OPEB liability	115,998	116,768	118,009	113,166
Benefit Changes	0	0	484	0
Difference between actual and expected experience	38,156	(103,317)	(100,348)	(2,470)
Assumption Changes	46,925	116,618	(2,500)	391,061
Benefit Payments <sup>1</sup>	(83,874)	(76,059)	(71,325)	(63,656)
<b>Net Change in Total OPEB Liability</b>	<b>164,648</b>	<b>86,633</b>	<b>(21,732)</b>	<b>458,594</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 2,080,574</b>	<b>\$ 1,993,941</b>	<b>\$ 2,015,673</b>	<b>\$ 1,557,079</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 2,245,222</b>	<b>\$ 2,080,574</b>	<b>\$ 1,993,941</b>	<b>\$ 2,015,673</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer <sup>2</sup>	\$ 59,662	\$ 60,445	\$ 51,615	\$ 44,325
Contributions - Member	2,762	2,458	2,173	1,708
Benefit Payments <sup>1</sup>	(83,874)	(76,059)	(71,325)	(63,656)
OPEB Plan Net Investment Income	2,315	73,317	109,854	143,892
OPEB Plan Administrative Expense	(462)	(434)	(376)	(381)
Other	0	5 <sup>4</sup>	40 <sup>4</sup>	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(19,597)</b>	<b>59,732</b>	<b>91,981</b>	<b>125,888</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 1,340,714</b>	<b>\$ 1,280,982</b>	<b>\$ 1,189,001</b>	<b>\$ 1,063,113</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 1,321,117</b>	<b>\$ 1,340,714</b>	<b>\$ 1,280,982</b>	<b>\$ 1,189,001</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>924,105</b>	<b>739,860</b>	<b>712,959</b>	<b>826,672</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b>	<b>58.84%</b>	<b>64.44%</b>	<b>64.24%</b>	<b>58.99%</b>
<b>Covered Employee Payroll<sup>3</sup></b>	<b>\$ 596,001</b>	<b>\$ 583,632</b>	<b>\$ 588,526</b>	<b>\$ 542,710</b>
<b>Net OPEB Liability as a Percentage of Covered Employee Payroll</b>	<b>155.05%</b>	<b>126.77%</b>	<b>121.14%</b>	<b>152.32%</b>

## Notes:

<sup>1</sup> Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

<sup>2</sup> Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

<sup>3</sup> Based on derived compensation using the provided employer contribution information.

<sup>4</sup> Northern Trust Settlement



**EXHIBIT 4a****Schedule of Employers' Contributions – CERS Non-Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending <sup>1</sup>	Actuarially Determined Contribution <sup>2</sup>	Total Employer Contributions <sup>3</sup>	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>4</sup>	Actual Contributions as a Percentage of Covered Payroll
2020	\$ 124,740	\$ 129,267	\$ (4,527)	\$ 2,620,585	4.93%
2019	160,055	139,655	20,400	2,577,378	5.42%
2018	120,797	124,619	(3,822)	2,570,156	4.85%
2017	122,270	120,712	1,558	2,480,130	4.87%
2016	110,987	111,836	(849)	2,352,762	4.75%
2015	119,511	119,444	67	2,296,716	5.20%
2014	130,652	123,278	7,374	2,272,270	5.43%
2013	195,561	159,993	35,568	2,236,277	7.15%
2012	214,421	171,925	42,496	2,236,546	7.69%
2011	213,429	186,886	26,543	2,276,596	8.21%

## Notes:

<sup>1</sup> Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

<sup>2</sup> Actuarially determined contribution for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2018 actuarial valuation.

<sup>3</sup> Employer contributions do not include the expected implicit subsidy included in exhibit 3.

<sup>4</sup> Based on derived compensation using the provided employer contribution information.



**EXHIBIT 4b****Schedule of Employers' Contributions – CERS Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending <sup>1</sup>	Actuarially Determined Contribution <sup>2</sup>	Total Employer Contributions <sup>3</sup>	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>4</sup>	Actual Contributions as a Percentage of Covered Payroll
2020	\$ 56,739	\$ 57,897	\$ (1,158)	\$ 596,001	9.71%
2019	71,028	62,272	8,756	583,632	10.67%
2018	55,027	56,002	(975)	588,526	9.52%
2017	53,131	51,537	1,594	542,710	9.50%
2016	64,253	67,619	(3,366)	492,851	13.72%
2015	69,103	71,778	(2,675)	483,641	14.84%
2014	74,360	74,792	(432)	479,164	15.61%
2013	102,011	85,319	16,692	461,673	18.48%
2012	110,763	92,564	18,199	464,229	19.94%
2011	109,227	98,592	10,635	466,964	21.11%

## Notes:

<sup>1</sup> Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

<sup>2</sup> Actuarially determined contribution for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2018 actuarial valuation.

<sup>3</sup> Employer contributions do not include the expected implicit subsidy included in exhibit 3.

<sup>4</sup> Based on derived compensation using the provided employer contribution information.





### Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rates effective for fiscal year ending 2020 that are documented in the schedule on the previous pages were calculated as of June 30, 2018. Based on the June 30, 2018 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	CERS Non-Hazardous	CERS Hazardous
Determine by the Actuarial Valuation as of:	June 30, 2018	June 30, 2018
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay	Level Percent of Pay
Amortization Period:	25 Years, Closed	25 Years, Closed
Payroll Growth Rate:	2.00%	2.00%
Investment Return:	6.25%	6.25%
Inflation:	2.30%	2.30%
Salary Increases:	3.30% to 11.55%, varies by service	3.05% to 18.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)
Healthcare Trend Rates:		
Pre-65	Initial trend starting at 7.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 12 years. The 2019 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 7.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 12 years. The 2019 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 5.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 10 years. The 2019 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 5.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 10 years. The 2019 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Phase-In provision	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.



## EXHIBIT 5a

### Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate CERS Non-Hazardous Plan (\$ in thousands)

**Table 1. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

1.00% Decrease, 4.34%	Current Discount Rate, 5.34%	1.00% Increase, 6.34%
\$ 3,102,175	\$ 2,414,696	\$ 1,850,046

**Table 2. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate**

1.00% Decrease	Current Healthcare Cost Trend Rate	1.00% Increase
\$ 1,869,578	\$ 2,414,696	\$ 3,076,209



**EXHIBIT 5b**

**Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate  
CERS Hazardous Plan  
(\$ in thousands)**

**Table 1. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

<b>1.00% Decrease, 4.30%</b>	<b>Current Discount Rate, 5.30%</b>	<b>1.00% Increase, 6.30%</b>
\$ 1,254,449	\$ 924,105	\$ 657,916

**Table 2. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate**

<b>1.00% Decrease</b>	<b>Current Healthcare Cost Trend Rate</b>	<b>1.00% Increase</b>
\$ 660,393	\$ 924,105	\$ 1,248,318



## APPENDIX 1

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## Appendix 1

### Development of Baseline Claims Cost

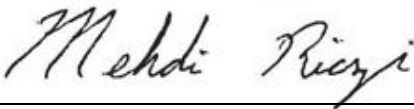
For non-Medicare retirees, the initial per capita costs were developed using retiree claims experience for calendar year 2019. The claims were projected on an incurred claim basis, adjusted for prescription drug rebates, and loaded for administrative expense. The per capita costs shown in the table below also include HRA contributions for retirees on the CDHP plans. 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 fully-insured premiums KRS pays 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.

For Medicare retirees, the initial per capita costs were estimated based on the plan premiums effective January 1, 2020, 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 by this valuation. 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.

FOR THOSE NOT ELIGIBLE FOR MEDICARE			FOR THOSE ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE	AGE	MALE	FEMALE
40	\$337.39	\$548.24	65	\$186.68	\$176.08
50	546.91	673.74	75	218.42	213.13
60	929.50	915.24	85	230.96	233.68
64	1,130.30	1,066.69			

Mehdi Riazi 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.



Mehdi Riazi, FSA, EA, MAAA



# Kentucky Employees Retirement System

GASB No. 74 Accounting Valuation Report  
As of June 30, 2020

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September 8, 2020  
Board of Trustees  
Kentucky Retirement Systems  
Perimeter Park West  
1260 Louisville Road  
Frankfort, KY 40601

**Re: GASB No. 74 Reporting – Actuarial Information – Kentucky Employees’ Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the Kentucky Employees’ Retirement System (KERS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans Other than Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided 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”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 74 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The total OPEB liability, net OPEB liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total OPEB liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020, using generally accepted actuarial principles. GASB No. 74 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

The discount rate used to calculate the total OPEB liability decreased from 5.73% to 5.43% for the Non-Hazardous Fund and from 5.66% to 5.28% for the Hazardous Fund (see further discussion on the calculation of the single discount rate later in this letter). The assumed increase in future health care costs, or trend assumption, was reviewed during the June 30, 2019 valuation process and was updated to better reflect more current expectations relating to anticipated future increases in the medical costs. Also, the June 30, 2020 GASB No. 74 actuarial information reflects the anticipated savings from the repeal of the “Cadillac Tax” and “Health Insurer Fee”, which occurred in December of 2019. The assumed load on pre-Medicare premiums to reflect the cost of the Cadillac Tax was removed and the Medicare premiums were reduced by 11% to reflect the repeal of the Health Insurer Fee. There were no other material assumption changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

Board of Trustees  
September 8, 2020  
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House Bill 1 passed during the 2019 Special Legislative Session and allowed certain agencies in the Non-Hazardous plan to elect to cease participating in the System as of June 30, 2020 under different provisions than were previously established. Senate Bill 249 passed during the 2020 Legislative Session and delayed the effective date of cessation for these provisions to June 30, 2021. Since each employer's election is unknown at this time, we did not make any adjustment to the Total OPEB Liability to reflect this legislation.

Senate Bill 249 also changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of the Total OPEB Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

The fully-insured premiums KRS pays 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.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

Single discount rates of 5.43% for the non-hazardous system and 5.28% for hazardous system were used to measure the total OPEB liability as of June 30, 2020. The single discount rates are based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 2.45%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2020. 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 System's actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the System'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. Except where noted below, the future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session.





Board of Trustees  
September 8, 2020  
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If there is a pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 50 of GASB Statement No. 74). Legislation has been enacted three times (for FY 18/19, FY 19/20, and FY 20/21) that allowed certain employers (referred to as “Quasi” agencies) in the KERS Non-Hazardous Fund to contribute 8.41% of pay into the insurance fund, which is less than the actuarially determined contribution rate. We believe this constitutes a pattern and as such, the projection for the KERS Non-Hazardous Fund assumes these Quasi agencies contribute no more than 8.41% of pay throughout the entire projection.

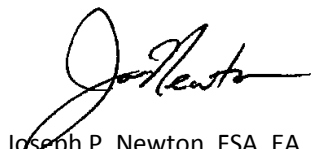
Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income are included in the reconciliation of the fiduciary net position.

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; and changes in plan provisions or applicable law.

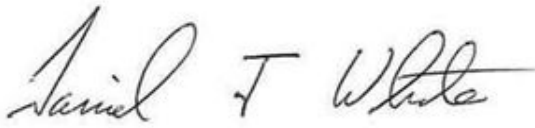
To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. Newton, Mr. White, and Mr. Riazi are Enrolled Actuaries. All of the undersigned are independent actuaries and consultants and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. They are also 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 & Co.**



Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary



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



Janie Shaw, ASA, MAAA  
Consultant and Actuary



Mehdi Riazi, FSA, EA, MAAA  
Consultant and Actuary



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## SECTION 1

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**EXHIBIT 1a**

**Schedule of the Employers' Net OPEB Liability – KERS Non-Hazardous Plan**  
(\$ 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 Employee Payroll <sup>1</sup>	Net OPEB Liability as a Percentage of Covered Employee Payroll
	(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)
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%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information.



**EXHIBIT 1b**

**Schedule of the Employers' Net OPEB Liability – KERS Hazardous Plan**  
(\$ 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 Employee Payroll <sup>1</sup>	Net OPEB Liability as a Percentage of Covered Employee Payroll
	(1)	(2)	(3) = (1) - (2)	(4) = (2) / (1)	(5)	(6) = (3) / (5)
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%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information.



## EXHIBIT 2

### Development of Single Discount Rate

	<u>KERS Non-Hazardous</u>	<u>KERS Hazardous</u>
Single Discount Rate	5.43%	5.28%
Long-Term Expected Rate of Return	6.25%	6.25%
Long-Term Municipal Bond Rate <sup>1</sup>	2.45%	2.45%

Notes:

<sup>1</sup> 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, 2020.



**EXHIBIT 3a****Schedule of the Employers' Net OPEB Liability – KERS Non-Hazardous Plan**  
( \$ in thousands )

<u>Change in the Net OPEB Liability</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>				
Service Cost	\$ 59,600	\$ 61,345	\$ 66,360	\$ 46,992
Interest on the total OPEB liability	179,811	186,820	191,178	192,911
Benefit Changes	0	0	1,865	0
Difference between actual and expected experience	288,235	(302,189)	(191,147)	(3,921)
Assumption Changes	13,767	158,004	(11,235)	414,835
Benefit Payments <sup>1</sup>	(159,841)	(148,112)	(148,236)	(139,601)
<b>Net Change in Total OPEB Liability</b>	<b>381,572</b>	<b>(44,132)</b>	<b>(91,215)</b>	<b>511,216</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 3,217,985</b>	<b>\$ 3,262,117</b>	<b>\$ 3,353,332</b>	<b>\$ 2,842,116</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 3,599,557</b>	<b>\$ 3,217,985</b>	<b>\$ 3,262,117</b>	<b>\$ 3,353,332</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer <sup>2</sup>	\$ 208,300	\$ 201,155	\$ 152,985	\$ 162,636
Contributions - Member	6,128	5,963	5,786	5,156
Benefit Payments <sup>1</sup>	(159,841)	(148,112)	(148,236)	(139,601)
OPEB Plan Net Investment Income	11,820	45,749	64,028	94,239
OPEB Plan Administrative Expense	(847)	(875)	(760)	(861)
Other	0	4 <sup>4</sup>	32 <sup>4</sup>	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>65,560</b>	<b>103,884</b>	<b>73,835</b>	<b>121,569</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 995,089</b>	<b>\$ 891,205</b>	<b>\$ 817,370</b>	<b>\$ 695,801</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 1,060,649</b>	<b>\$ 995,089</b>	<b>\$ 891,205</b>	<b>\$ 817,370</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>2,538,908</b>	<b>2,222,896</b>	<b>2,370,912</b>	<b>2,535,962</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b>	29.47%	30.92%	27.32%	24.37%
<b>Covered Employee Payroll<sup>3</sup></b>	\$ 1,482,431	\$ 1,515,953	\$ 1,573,898	\$ 1,593,097
<b>Net OPEB Liability as a Percentage of Covered Employee Payroll</b>	171.27%	146.63%	150.64%	159.18%

## Notes:

<sup>1</sup> Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

<sup>2</sup> Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

<sup>3</sup> Based on derived compensation using the provided employer contribution information.

<sup>4</sup> Northern Trust Settlement



**EXHIBIT 3b****Schedule of the Employers' Net OPEB Liability – KERS Hazardous Plan**  
(\$ in thousands)

<u>Change in the Net OPEB Liability</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>				
Service Cost	\$ 11,548	\$ 12,337	\$ 12,893	\$ 8,002
Interest on the total OPEB liability	28,101	27,990	28,500	27,591
Benefit Changes	0	0	167	0
Difference between actual and expected experience	27,668	(30,947)	(31,240)	(1,029)
Assumption Changes	11,428	31,687	(581)	89,401
Benefit Payments <sup>1</sup>	(21,425)	(19,767)	(18,704)	(16,618)
<b>Net Change in Total OPEB Liability</b>	<b>57,320</b>	<b>21,300</b>	<b>(8,965)</b>	<b>107,347</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 507,204</b>	<b>\$ 485,904</b>	<b>\$ 494,869</b>	<b>\$ 387,522</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 564,524</b>	<b>\$ 507,204</b>	<b>\$ 485,904</b>	<b>\$ 494,869</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer <sup>2</sup>	\$ 7,441	\$ 5,556	\$ 5,165	\$ 4,579
Contributions - Member	1,105	934	909	811
Benefit Payments <sup>1</sup>	(21,425)	(19,767)	(18,704)	(16,618)
OPEB Plan Net Investment Income	704	28,373	42,950	59,614
OPEB Plan Administrative Expense	(123)	(117)	(104)	(105)
Other	0	2 <sup>4</sup>	18 <sup>4</sup>	0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(12,298)</b>	<b>14,981</b>	<b>30,234</b>	<b>48,281</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 534,053</b>	<b>\$ 519,072</b>	<b>\$ 488,838</b>	<b>\$ 440,557</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 521,755</b>	<b>\$ 534,053</b>	<b>\$ 519,072</b>	<b>\$ 488,838</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>42,769</b>	<b>(26,849)</b>	<b>(33,168)</b>	<b>6,031</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b>				
Covered Employee Payroll <sup>3</sup>	\$ 182,209	\$ 151,448	\$ 190,317	\$ 171,087
<b>Net OPEB Liability as a Percentage of Covered Employee Payroll</b>	<b>23.47%</b>	<b>-17.73%</b>	<b>-17.43%</b>	<b>3.53%</b>

## Notes:

<sup>1</sup> Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

<sup>2</sup> Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

<sup>3</sup> Based on derived compensation using the provided employer contribution information.

<sup>4</sup> Northern Trust Settlement





**EXHIBIT 4a****Schedule of Employers' Contributions – KERS Non-Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending <sup>1</sup>	Actuarially Determined Contribution <sup>2</sup>	Total Employer Contributions <sup>3</sup>	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>4</sup>	Actual Contributions as a Percentage of Covered Payroll
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%
2014	208,881	166,610	42,271	1,577,496	10.56%
2013	286,143	165,331	120,812	1,644,409	10.05%
2012	297,904	156,057	141,847	1,644,897	9.49%
2011	294,898	129,336	165,562	1,731,633	7.47%

## Notes:

<sup>1</sup> Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

<sup>2</sup> Actuarially determined contribution for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>3</sup> Employer contributions do not include the expected implicit subsidy included in exhibit 3.

<sup>4</sup> Based on derived compensation using the provided employer contribution information.



**EXHIBIT 4b****Schedule of Employers' Contributions – KERS Hazardous Plan**  
(\$ in thousands)

Fiscal Year Ending <sup>1</sup>	Actuarially Determined Contribution <sup>2</sup>	Total Employer Contributions <sup>3</sup>	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>4</sup>	Actual Contributions as a Percentage of Covered Payroll
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%
2014	15,627	23,874	(8,247)	129,076	18.50%
2013	26,253	25,682	571	132,015	19.45%
2012	28,326	24,538	3,788	131,977	18.59%
2011	29,585	19,953	9,632	133,054	15.00%

## Notes:

<sup>1</sup> Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

<sup>2</sup> Actuarially determined contribution for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>3</sup> Employer contributions do not include the expected implicit subsidy included in exhibit 3.

<sup>4</sup> Based on derived compensation using the provided employer contribution information.



## Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rates effective for fiscal year ending 2020 that are documented in the schedule on the previous pages were calculated as of June 30, 2017. Based on the June 30, 2017 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	KERS Non-Hazardous	KERS Hazardous
Determine by the Actuarial Valuation as of:	June 30, 2017	June 30, 2017
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay	Level Percent of Pay
Amortization Period:	26 Years, Closed	26 Years, Closed
Payroll Growth Rate:	0.00%	0.00%
Investment Return:	6.25%	6.25%
Inflation:	2.30%	2.30%
Salary Increases:	3.55% to 15.55%, varies by service	3.55% to 19.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)
Healthcare Trend Rates:		
Pre-65	Initial trend starting at 7.25% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 7.25% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 5.10% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 11 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.	Initial trend starting at 5.10% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 11 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.



**EXHIBIT 5a**

**Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate  
KERS Non-Hazardous Plan  
(\$ in thousands)**

**Table 1. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

<b>1.00% Decrease, 4.43%</b>	<b>Current Discount Rate, 5.43%</b>	<b>1.00% Increase, 6.43%</b>
\$ 3,026,103	\$ 2,538,908	\$ 2,139,021

**Table 2. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate**

<b>1.00% Decrease</b>	<b>Current Healthcare Cost Trend Rate</b>	<b>1.00% Increase</b>
\$ 2,136,914	\$ 2,538,908	\$ 3,025,819



## EXHIBIT 5b

### Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate KERS Hazardous Plan (\$ in thousands)

**Table 1. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

1.00% Decrease, 4.28%	Current Discount Rate, 5.28%	1.00% Increase, 6.28%
\$ 126,165	\$ 42,769	\$ (24,330)

**Table 2. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate**

1.00% Decrease	Current Healthcare Cost Trend Rate	1.00% Increase
\$ (20,042)	\$ 42,769	\$ 119,675



## APPENDIX 1

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## Appendix 1

### Development of Baseline Claims Cost

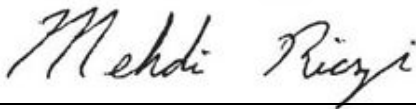
For non-Medicare retirees, the initial per capita costs were developed using retiree claims experience for calendar year 2019. The claims were projected on an incurred claim basis, adjusted for prescription drug rebates, and loaded for administrative expense. The per capita costs shown in the table below also include HRA contributions for retirees on the CDHP plans. 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 fully-insured premiums KRS pays 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.

For Medicare retirees, the initial per capita costs were estimated based on the plan premiums effective January 1, 2020, 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 by this valuation. 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.

FOR THOSE NOT ELIGIBLE FOR MEDICARE			FOR THOSE ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE	AGE	MALE	FEMALE
40	\$337.39	\$548.24	65	\$186.68	\$176.08
50	546.91	673.74	75	218.42	213.13
60	929.50	915.24	85	230.96	233.68
64	1,130.30	1,066.69			

Mehdi Riazi 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.



Mehdi Riazi, FSA, EA, MAAA



# Kentucky State Police Retirement System

GASB No. 74 Accounting Valuation Report  
As of June 30, 2020

DRAFT







September 8, 2020

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

**Re: GASB No. 74 Reporting – Actuarial Information – State Police Retirement System**

Dear Members of the Board:

This report provided herein contains certain information for the Kentucky State Police Retirement System (SPRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans Other than Pension Plans” for the fiscal year ending June 30, 2020. A separate report will be provided 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”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 74 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The total OPEB liability, net OPEB liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total OPEB liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2020, using generally accepted actuarial principles. GASB No. 74 requires Kentucky Retirement Systems to disclose a 10-year history of certain information in the Required Supplementary Information within their comprehensive annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by KRS’s prior actuary.

The discount rate used to calculate the total OPEB liability decreased from 5.76% to 5.40% (see further discussion on the calculation of the single discount rate later in this letter). The assumed increase in future health care costs, or trend assumption, was reviewed during the June 30, 2019 valuation process and was updated to better reflect more current expectations relating to anticipated future increases in the medical costs. Also, the June 30, 2020 GASB No. 74 actuarial information reflects the anticipated savings from the repeal of the “Cadillac Tax” and “Health Insurer Fee”, which occurred in December of 2019. The assumed load on pre-Medicare premiums to reflect the cost of the Cadillac Tax was removed and the Medicare premiums were reduced by 11% to reflect the repeal of the Health Insurer Fee. There were no other material assumption changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74

Board of Trustees  
September 8, 2020  
Page 2

Senate Bill 249 changed the funding period for the amortization of the unfunded liability to 30 years as of June 30, 2019. Gains and losses incurring in future years will be amortized over separate 20-year amortization bases. This change does not impact the calculation of the Total OPEB Liability and only impacts the calculation of the contribution rates that would be payable starting July 1, 2020. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74.

The fully-insured premiums KRS pays 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.

This report is based upon information, furnished to us by the Retirement System, 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 the Retirement System. Please see the "Actuarial Valuation Report as of June 30, 2019" 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 KRS's fiscal year ending June 30, 2020.

A Single discount rate of 5.40% was used to measure the total OPEB liability as of June 30, 2020. The single discount rate is based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 2.45%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2020. 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 System's actuarial determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the System'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. The future contributions are projected assuming that each participating employer in the System contribute the actuarially determined employer contribution rate each future year calculated in accordance with the current funding policy, as most recently revised by Senate Bill 249, passed during the 2020 Legislative Session.

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 as an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income are included in the reconciliation of the fiduciary net position.




Board of Trustees  
September 8, 2020  
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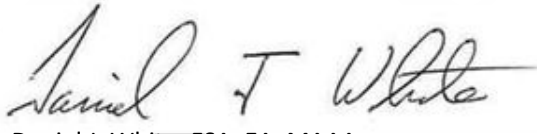
Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

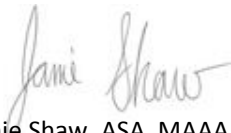
To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. Newton, Mr. White, and Mr. Riazi are Enrolled Actuaries. All of the undersigned are independent actuaries and consultants and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. They are also 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 & Co.**

  
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## SECTION 1

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**EXHIBIT 1****Schedule of the Employers' Net OPEB Liability**  
(\$ in thousands)

Year	Total OPEB Liability (1)	Plan Fiduciary Net Position (2)	Net OPEB Liability/(Asset) (3) = (1) - (2)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability (4) = (2) / (1)	Covered Employee Payroll <sup>1</sup> (5)	Net OPEB Liability as a Percentage of Covered Employee Payroll (6) = (3) / (5)
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%

Note:

<sup>1</sup> Based on derived compensation using the provided employer contribution information.

## EXHIBIT 2

### Development of Single Discount Rate

	<u>SPRS</u>
Single Discount Rate	5.40%
Long-Term Expected Rate of Return	6.25%
Long-Term Municipal Bond Rate <sup>1</sup>	2.45%

Notes:

<sup>1</sup> 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, 2020.

### EXHIBIT 3

## Schedule of the Employers' Net OPEB Liability

(\$ in thousands)

Change in the Net OPEB Liability	2020	2019	2018	2017
<b>Total OPEB liability</b>				
Service Cost	\$ 5,389	\$ 4,816	\$ 6,087	\$ 4,147
Interest on the total OPEB liability	17,600	17,724	18,432	17,993
Benefit Changes	0	0	34	0
Difference between actual and expected experience	13,810	(14,295)	(23,320)	(573)
Assumption Changes	4,578	16,483	(358)	57,312
Benefit Payments <sup>1</sup>	<u>(13,988)</u>	<u>(13,187)</u>	<u>(13,097)</u>	<u>(12,123)</u>
<b>Net Change in Total OPEB Liability</b>	<b>27,389</b>	<b>11,541</b>	<b>(12,222)</b>	<b>66,756</b>
<b>Total OPEB Liability - Beginning</b>	<b>\$ 312,553</b>	<b>\$ 301,012</b>	<b>\$ 313,234</b>	<b>\$ 246,478</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 339,942</b>	<b>\$ 312,553</b>	<b>\$ 301,012</b>	<b>\$ 313,234</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer <sup>2</sup>	\$ 12,873	\$ 12,623	\$ 8,535	\$ 7,862
Contributions - Member	196	176	155	131
Benefit Payments <sup>1</sup>	(13,988)	(13,187)	(13,097)	(12,123)
OPEB Plan Net Investment Income	1,124	10,815	16,470	21,627
OPEB Plan Administrative Expense	(71)	(69)	(62)	(66)
Other	<u>0</u>	<u>1</u> <sup>4</sup>	<u>8</u> <sup>4</sup>	<u>0</u>
<b>Net Change in Plan Fiduciary Net Position</b>	<b>134</b>	<b>10,359</b>	<b>12,009</b>	<b>17,431</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>\$ 201,206</b>	<b>\$ 190,847</b>	<b>\$ 178,838</b>	<b>\$ 161,407</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 201,340</b>	<b>\$ 201,206</b>	<b>\$ 190,847</b>	<b>\$ 178,838</b>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<b>138,602</b>	<b>111,347</b>	<b>110,165</b>	<b>134,396</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b>				
Covered Employee Payroll <sup>3</sup>	\$ 48,231	\$ 48,780	\$ 50,064	\$ 48,873
<b>Net OPEB Liability as a Percentage of Covered Employee Payroll</b>	<b>287.37%</b>	<b>228.26%</b>	<b>220.05%</b>	<b>274.99%</b>

## Notes:

<sup>1</sup> Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

<sup>2</sup> Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

<sup>3</sup> Based on derived compensation using the provided employer contribution information.

<sup>4</sup> Northern Trust Settlement





**EXHIBIT 4**  
**Schedule of Employers' Contributions**  
(\$ in thousands)

Fiscal Year Ending <sup>1</sup>	Actuarially Determined Contribution <sup>2</sup>	Total Employer Contributions <sup>3</sup>	Contribution Deficiency (Excess)	Covered Employee Payroll <sup>4</sup>	Actual Contributions as a Percentage of Covered Payroll
2020	\$ 13,133	\$ 13,133	\$ 0	\$ 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	0	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%
2014	20,879	14,493	6,386	44,616	32.48%
2013	27,234	16,829	10,405	45,256	37.19%
2012	28,247	11,960	16,287	48,373	24.72%
2011	25,773	11,051	14,722	48,693	22.70%

## Notes:

<sup>1</sup> Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

<sup>2</sup> Actuarially determined contribution for fiscal year ending 2020 is based on the contribution rate calculated with the June 30, 2017 actuarial valuation.

<sup>3</sup> Employer contributions do not include the expected implicit subsidy included in exhibit 3.

<sup>4</sup> Based on derived compensation using the provided employer contribution information.



## Notes to Schedule of Employers' Contributions for FYE 2020

The actuarially determined contribution rate effective for fiscal year ending 2020 that is documented in the schedule on the previous pages was calculated as of June 30, 2017. Based on the June 30, 2017 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

Item	SPRS
Determine by the Actuarial Valuation as of:	June 30, 2017
Actuarial Cost Method:	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
Amortization Method:	Level Percent of Pay
Amortization Period:	26 Years, Closed
Payroll Growth Rate:	0.00%
Investment Return:	6.25%
Inflation:	2.30%
Salary Increases:	3.05% to 15.55%, varies by service
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)
Healthcare Trend Rates:	
Pre-65	Initial trend starting at 7.25% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 5.10% at January 1, 2019 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 11 years. The 2018 premiums were known at the time of the valuation and were incorporated into the liability measurement.



## EXHIBIT 5

### Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate (\$ in thousands)

**Table 1. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

1.00% Decrease, 4.40%	Current Discount Rate, 5.40%	1.00% Increase, 6.40%
\$ 187,528	\$ 138,602	\$ 99,093

**Table 2. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate**

1.00% Decrease	Current Healthcare Cost Trend Rate	1.00% Increase
\$ 98,159	\$ 138,602	\$ 188,131



## APPENDIX 1

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## Appendix 1

### Development of Baseline Claims Cost

For non-Medicare retirees, the initial per capita costs were developed using retiree claims experience for calendar year 2019. The claims were projected on an incurred claim basis, adjusted for prescription drug rebates, and loaded for administrative expense. The per capita costs shown in the table below also include HRA contributions for retirees on the CDHP plans. 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 fully-insured premiums KRS pays 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.

For Medicare retirees, the initial per capita costs were estimated based on the plan premiums effective January 1, 2020, 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 by this valuation. 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.

FOR THOSE NOT ELIGIBLE FOR MEDICARE			FOR THOSE ELIGIBLE FOR MEDICARE		
AGE	MALE	FEMALE	AGE	MALE	FEMALE
40	\$337.39	\$548.24	65	\$186.68	\$176.08
50	546.91	673.74	75	218.42	213.13
60	929.50	915.24	85	230.96	233.68
64	1,130.30	1,066.69			

Mehdi Riazi 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.



Mehdi Riazi, FSA, EA, MAAA

