

**Kentucky Retirement Systems Board of Trustees
Quarterly Board Meeting
November 16, 2021, 10:00 a.m. EST
Live Video Conference/Facebook Live
AGENDA**

- | | |
|---|--------------------------------|
| 1. Call to Order | Keith Peercy |
| 2. Legal Public Statement | Office of Legal Services |
| 3. Roll Call | Sherry Rankin |
| 4. Public Comment | Sherry Rankin |
| 5. Approval of Minutes – September 5, 2021* | Keith Peercy |
| 6. Draft of 2021 Actuarial Valuations | Danny White Janie Shaw |
| 7. Ratification of Investment Policy Statement* | Prewitt Lane Steven Herbert |
| 8. Ratification of Retiree Health Plan Committee Reports and Recommendations* | Connie Pettyjohn |
| 9. Ratification of Joint Audit Committee Reports and Recommendations* | Kristen Coffey |
| 10. Quarterly Financial Reports | Rebecca Adkins Connie Davis |
| a. Quarterly Financial Statements | |
| b. Quarterly Administrative Expenses to Budget | |
| c. Contribution Report | |
| d. Outstanding Invoices | |
| e. Penalty Waiver | |
| 11. Legislative Updates | David Eager Rebecca Adkins |
| a. House Bill 8 Appeals Process Update | |
| 12. CEO Report | John Chilton |
| 13. New Business | Keith Peercy |
| 14. Closed Session** | Keith Peercy |
| 15. Adjourn* | Keith Peercy |

**Board Action Required*

***Board Action May Be Required*

**MINUTES OF MEETING
BOARD OF TRUSTEES KENTUCKY RETIREMENT SYSTEMS
SPECIAL CALLED MEETING SEPTEMBER 9, 2021 AT 10:00 AM
VIA LIVE VIDEO TELECONFERENCE**

At the meeting of the Kentucky Retirement Systems Board of Trustees held on September 9, 2021 the following members were present: Keith Peercy (Chair), Bruce Brown, John Cheshire, Raymond Connell, Kelly Downard, Joseph Grossman, Lynn Hampton, Prewitt Lane and Larry Totten. Staff members present were David Eager, Rebecca Adkins, Erin Surratt, Michael Board, Steven Herbert, John Chilton KRS CEO, Carrie Bass, Victoria Hale, Ann Case, Connie Pettyjohn, Connie Davis, D’Juan Surratt, Jared Crawford, Shaun Case, Phillip Cook, Glenna Frasher and Sherry Rankin. Others in attendance included David Adkins, Dr. Crystal Miller, Jack Wright, Steve Shannon, Paul Harnice with Stoll Keenon Ogden, and Tracy Garrison, Larry Loew and Carla Whaley with Humana.

Mr. Peercy called the meeting to order.

Mr. Michael Board read the Legal Public Statement.

Ms. Sherry Rankin called roll. There being one *Public Comment*. Ms. Rankin read as follows, “My name is Edie Alexander. I am a sister to one of your Kentucky Police Retirement recipients. I am writing this because I would like this to be brought up on the agenda for one of your meetings. I have a situation that is a little different. I know that beneficiaries have been changed for people who want to have their beneficiary as their wife and then have divorced and remarried. I have a situation in which the couple was never married. They were together for 10+ years on and off. When he retired they moved in together. Was together a year and a few months and then they separated and are no longer together. With that being said, he did make her the beneficiary of retirement. He was a police officer and has a non-hazardous and a hazardous. He only made her the non-hazardous beneficiary. He now would like to change this. There was no divorce because they were never married they only lived together. He wants to change this. He is in stage four kidney disease failure. I believe she was aware of this and has done this on purpose and this man has been taken advantage of. Is there any way at all he can change things? Thank you for your time on this matter.”

Mr. Peercy indicated that this seemed like a benefit issue and asked if Ms. Surratt could follow up

on this request and she indicated that she would get with Ms. Rankin for the information and would follow-up. Mr. Eager stated that this prompts a legal question. He agrees that it is an administrative benefit issue, but wondered if it should have been brought in this manner. Mr. Eager asked a question of the Legal Department if the public comments can be filtered in any way. Ms. Bass answered that it is her belief that if a member or the public has stated that they wish a topic or statement to be read, then it needs to be read prior to the meeting. Mr. Board agreed with Ms. Bass' statement regarding the public comment.

Mr. Peercy introduced agenda item *Approval of Minutes – May 20, 2021*. Mr. Cheshire made a motion and Mr. Grossman seconded to approve the minutes as presented. The motion passed unanimously.

Mr. Peercy introduced agenda item *KERS Trustee Nominations and Election*. Ms. Coffey began by stating that the Board will be voting on the 6 candidates that will be placed on the official ballot for the upcoming KERS Trustee election. All of the candidates were invited to speak and each will have three minutes to introduce themselves and talk about why they are interested in serving on this Board. The eight candidates that are seeking the six positions on the official ballot are as follows: David Adkins, Campbell Connell, Dr. Crystal Miller, Teudis Perez, Robert Ramsey, Steve Shannon, Larry Totten and Jack Wright. Of these, the candidates who addressed the Board were David Adkins, Campbell Connell, Dr. Crystal Miller, Larry Totten and Jack Wright. A roll call vote was then taken where each Trustee was allowed to vote for up to three candidates, but must vote for at least one candidate per open position. After verifying the votes, the six candidates to be placed on the official ballot are David Adkins, Campbell Connell, Dr. Crystal Miller, Teudis Perez, Larry Totten, and Jack Wright. Mr. Cheshire made a motion and Mr. Downard seconded to approve the ballot as selected by the vote of the Trustees for the upcoming Trustee election. The motion passed unanimously.

Mr. Peercy introduced agenda item *Ratification of Investments Recommendations*. Mr. Herbert indicated that the KPPA Office of Investments had conducted a search, with the assistance of Wilshire Associates, for an external manager for the Non-US Small Cap Equity Mandate that we currently manage and would like Board to ratify the recommendation of the Investment Committee to hire Axiom Investors to fill that role. Mr. Prewitt Lane commented that it was an exhaustive and detailed search to narrow down the field of competitors to a five and the investment committee was pleased with the selection of Axiom. Mr. Lane recommended the

Board to ratify this vote of the Investment Committee. Ms. Hampton made and motion and Mr. Cheshire seconded to ratify the recommendation of the Investment Committee pertaining to the hiring of Axiom Investors to manage the Non-US Small Cap Equity mandate. Mr. Peercy opened the floor for discussion and asked Mr. Lane whether this was the vendor where the CEO announced his leaving shortly after the Investment Committee met. Mr. Lane indicated that it was and asked Mr. Herbert to provide more details. Mr. Herbert clarified that it was the President and not the CEO who announced his departure due to family obligations. Mr. Herbert explained that the responsibilities in this role were only operational and he had no investment duties. However, the motion brought before the Investment Committee was “pending a successful investment management agreement negotiations”, we lumped that into reviewing that departure in those management agreement negotiations, and those are ongoing. Mr. Herbert indicated that there is a slim possibility that this will not be successfully completed, but he does not anticipate that, only that it may cause a delay in the transfer of the assets to the manager. Mr. Herbert insured that a thorough investigation is ongoing to ensure that this does not affect other parts of business and the strategy itself, and for the record, this person was not managing this strategy. Mr. Grossman asked if the CERS Board acted on this recommendation. Mr. Herbert responded that the CERS Investment Committee did accept the recommendation and held a vote; it will be presented to their Board. Being no further discussion, a vote was taken and it passed unanimously.

Mr. Peercy introduced agenda item *Ratification of Retiree Health Plan Committee Reports and Recommendations*. Ms. Pettyjohn reported that the Joint Retiree Health Plan Committee met on September 2, 2021 to discuss the make recommendations regarding the non-Medicare and Medicare eligible health plans for KPPA retirees and the 2022 plan year. Ms. Pettyjohn reviewed the components of each of these plans. Mr. John Chilton asked if Ms. Pettyjohn could highlight the differences between the plans this year versus last year. Ms. Pettyjohn reviewed the values of each of the plans compared to the statutory requirements, and highlighted some of the differences in the plans, and indicated that the benefits are about the same as last year. She indicated that specifics about the premiums could not be discussed until later in the month, but said that the values indicate that they are a slightly better than last year. Mr. Cheshire made a motion and Ms. Hampton seconded to ratify the recommendations of the Retiree Health Plan Committee and to incorporate all of the components listed in the report regarding the non-Medicare and Medicare eligible health plans for the 2022 plan year. The motion passed unanimously.

Mr. Peercy introduced agenda item *Ratification of Joint Audit Committee Reports and Recommendations*. Ms. Coffey reported that the Joint Audit Committee met on August 26, 2021 and committee is bringing a few items to the Board for ratification. One of those items is the Charter for the Division of Internal Audit Administration which the committee which will need the Board’s approval. Ms. Coffey announced that the Charter for the Joint Audit Committee needs additional editing and will be taken back before the Joint Audit Committee for further review. Ms. Hampton added that at the Joint Audit Committee, the election of Chair and Vice-Chair for the committee was conducted, and she reported that Betty Pendergrass was elected as Chair, and that she had been elected as Vice-Chair. Ms. Hampton explained the reasoning behind the further review of the Joint Audit Charter in that the legal department had identified several edits that were needed before it was presented for a vote. This will be brought at a later time. Ms. Hampton made a motion and Mr. Cheshire seconded to ratify the recommendation of the Charter for the Division of Internal Audit Administration. The motion passed unanimously.

Mr. Peercy introduced agenda item *Hazardous Duty Position Requests*. Mr. D’Juan Surratt reported the following hazardous duty requests:

| <u>Agency</u> | <u>Position</u> | <u>Effective Date</u> |
|-----------------------|------------------------------------|------------------------------|
| Attorney General | Division Director | 10/01/2021 |
| Kentucky State Police | KSP Facilities Security Officer II | 10/01/2021 |
| Kentucky State Police | KSP Facilities Security Sergeant | 10/01/2021 |
| Kentucky State Police | KSP Facilities Security Lieutenant | 10/01/2021 |

Mr. Surratt indicated that KPPA has reviewed these requests and have determined that they meet the statutory guidelines for hazardous coverage. He is asking that the Board approve these requests for hazardous duty coverage for the October 1, 2021 effective date. Mr. Connell asked what qualifies the position of Division Director for the Attorney General as a hazardous position. Mr. Surratt answered that the Division Directors for that agency do meet the peace officer’s standards. Mr. Peercy indicated that by meeting peace officer’s standards, they would have arresting authority, therefore, would need a firearm. Mr. Grossman made a motion and Mr. Cheshire seconded to approve the hazardous duty requests as presented. The motion passed unanimously.

Mr. Peercy introduced agenda item *Quarterly Financial Reports*. Ms. Adkins reviewed the following Financial Reports for the KERS and SPRS Funds: Combining Statement of Fiduciary

Net Position for the Pension and Insurance Funds for the Fiscal Year ending June 30, 2021; Combining Statement of Changes in Fiduciary Net Position for the Pension and Insurance Funds for the Fiscal Year ending June 30, 2021; Fiscal Year 2021 Administrative Expenses to Budget; Contribution Reports for Pension and Insurance Funds; Outstanding Invoices; and Penalty Waivers.

Mr. Peercy introduced agenda item *Legislative Updates*. Mr. Eager started by saying that usually this time of the year the updates are typically brief, as discussion are beginning with the legislators regarding the upcoming legislative session. Mr. Eager announced that Representative Miller has agreed again this year to sponsor our housekeeping bill. He has indicated that he is not running for reelection, therefore, we will need to find another sponsor going forward. Mr. Eager stated that there are at least two bills that he is anticipating will have a meaningful impact on the systems. We have been in discussion with the two legislators who will be sponsoring these bills, but until those bills are introduced and made public, we are not allowed to comment on those at this time. Mr. Eager indicated that the topic of COLAs has come up from time to time in committee meetings. Jim Carroll, a retiree advocate, has written an appeal to the Public Pension Oversight Board to consider some type of COLA for the retirees. We have been asked to the October meeting of the Public Pension Oversight Board to have a discussion about COLAs and GRS will be participating with us at that meeting.

Ms. Adkins then gave an update regarding the appeals process to House Bill 8. Of those 178 employers who were eligible to appeal, 82 employers requested a list of persons included in their liability. And of those, 47 employers appealed on one of the following three basis: Not the last employer, contract with Executive Branch, or previous state mental health facility. Nine employers submitted a “protest letter” indicating that while they are paying the invoice, they are paying under protest and they reserve rights to challenge the constitutionality of House Bill 8.

Mr. Peercy introduced agenda item *Executive Director’s Report*. Mr. John Chilton reported on items he has been working on or will be working on in the future. There are some policy statements that are being dealt with by some Ad Hoc committees, most prominently the Investment Policy as it relates to CERS and KRS and those will be coming through for approval at some point in the future. There is also ongoing litigation that he is receiving regular briefing on, that will be brought up in a closed session for further discussions. Mr. Chilton announced

that he will be working with Mr. David Eager and legislators during the upcoming session on the housekeeping bill. He expects that the House Bill 8 appeals will bring some attention from the legislators, as well as the COLAs. Mr. Chilton stated his intent to work on the outstanding invoice issues in the near future. Mr. Chilton also announced that there will be some upcoming required Trustee Education and reminded the Trustees to be looking for more information that will be emailed to their KPPA email addresses.

Mr. Peercy introduced agenda item *New Business*. Mr. Peercy announced that he had no new business and unless anyone had new business, this agenda item would be passed. Since no new business, the meeting continued.

Mr. Peercy introduced agenda item *Closed Session*. A motion was made by Mr. Cheshire and Mr. Grossman seconded 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 a closed session for a specific purpose, and such motion having carried by majority vote in open, public session, the Board shall now enter closed session to consider litigation, pursuant to KRS 61.810(1)(c), because of the necessity of protecting the confidentiality of the Systems' litigation strategy and preserving any available attorney-client privilege. All public attendees exited the meeting.

Mr. Peercy called the meeting back to open session. There being no action taken during the closed session, Mr. Peercy opened the floor for a motion to adjourn. Mr. Downard made a motion and Mr. Connell seconded to adjourn the meeting. The motion passed unanimously.

Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held September 9, 2021 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 Trustees on the various items considered by it at this meeting. Further, I certify that all requirements of KRS 61.805-61.850 were met in conjunction with this meeting.

Recording Secretary

I, the Chair of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of Meeting held on September 9, 2021 were approved on November 16, 2021.

Chair of the Board of Trustees

I have reviewed the Minutes of the September 9, 2021 Board of Trustees Meeting for content, form, and legality.

Executive Director
Office of Legal Services



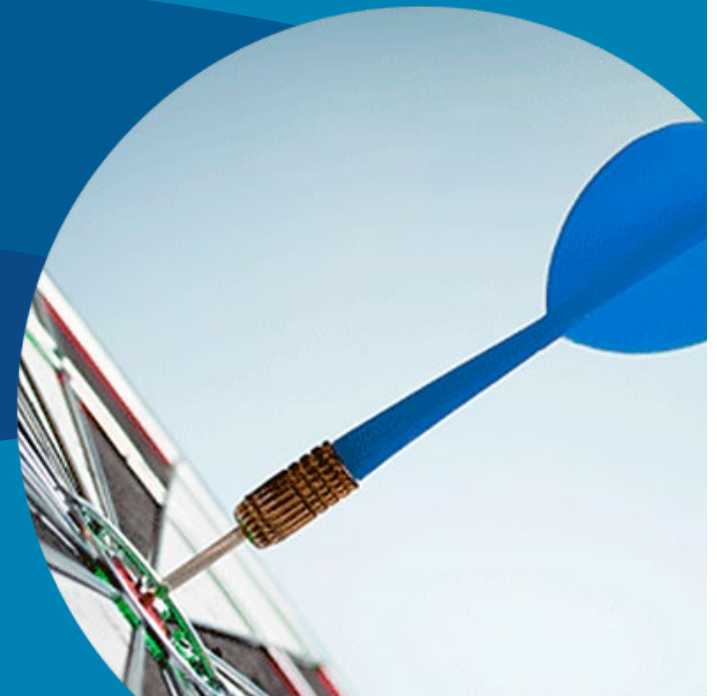
Kentucky Retirement System

2021 Actuarial Valuation Results

November 16, 2021

Janie Shaw, ASA, EA, MAAA

Danny White, FSA, EA, MAAA



Comments on Valuation Results

- Overview of legislation passed in 2021
 - HB 8: KERS Non-Hazardous employer contribution allocation
 - Amortization cost allocated based on each employer's accrued liability as of June 30, 2019
 - Amortization cost no longer dependent on covered payroll
 - Normal cost still paid as a percentage of payroll
 - SB 169: disability benefit improvements



Comments on Valuation Results

- Change in active membership and covered payroll
 - Active membership declined across all funds
 - KERS Hazardous: 4.7% decrease in covered payroll
 - SPRS: 1.7% decrease in covered payroll
 - Employer contribution no longer tied to payroll for KERS Non-Hazardous



Comments on Valuation Results

- FYE 2021 Investment Experience
 - 21% to 25% return on market value (varies by fund)
 - Assumed rate of return: 5.25% for KERS Non-Hazardous and SPRS retirement funds
 - Assumed rate of return: 6.25% for KERS Hazardous retirement fund and Insurance funds
 - Fund assets \$902M more than expected for KERS and SPRS (\$566M pension and \$336M insurance)
 - \$191M in asset gains recognized this year (\$128M pension and \$63M insurance)



Comments on Valuation Results

- Retirement Fund Liability Experience
 - \$34M gain for all KERS/SPRS retirement funds combined
 - Liability within 1.3% of expected
- Insurance Fund Liability Experience
 - \$111M gain for all KERS/SPRS insurance funds combined
 - Both the 2022 non-Medicare and Medicare premiums were lower than expected based on the prior year's actuarial assumptions



Comments on KERS Non-Haz Retirement Fund

- Imperative to maintain or increase contribution effort for the KERS Non-Hazardous Retirement Fund
 - June 30, 2021 plan assets were \$3,019 million
 - Fund distributed \$1,030 million in benefit payments and administrative expenses in FYE 2021
 - Actuarially determined employer contribution for FYE 2023 is \$1,129 million



Required Employer Contributions

| | KERS Non-Hazardous | | KERS Hazardous | | SPRS | |
|---|------------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2020 Val | 2021 Val | 2020 Val | 2021 Val | 2020 Val | 2021 Val |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Pension Fund | 7.90% | 7.82% | 33.43% | 31.82% | 127.99% | 126.44% |
| Insurance Fund | <u>2.20%</u> | <u>2.15%</u> | <u>0.00%</u> | <u>0.00%</u> | <u>18.07%</u> | <u>14.11%</u> |
| Actuarially Determined Contribution Rate, payable as a percentage of payroll | 10.10% | 9.97% | 33.43% | 31.82% | 146.06% | 140.55% |
| Difference | | (0.13)% | | (1.61)% | | (5.51)% |
| Amortization Cost – Pension | \$ 920M | \$ 906M | | | | |
| Amortization Cost – Insurance | <u>103M</u> | <u>88M</u> | | | | |
| Amortization Cost - Total | \$ 1,023M² | \$ 994M | N/A | N/A | N/A | N/A |
| Difference | | \$ (29) | | | | |

¹ 2020 Valuation set the contribution rates for FYE2022. 2021 Valuation will be used to set the contribution rates for FYE2023 and FYE2024.

² Amortization cost shown for the June 30, 2020 Valuation excludes amortization cost payable by employers that ceased participation after June 30, 2020.



Required Employer Contributions (\$millions)

| | KERS Non-Hazardous | | KERS Hazardous | | SPRS | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | 2020 Val FYE2022 | 2021 Val FYE2023 | 2020 Val FYE2022 | 2021 Val FYE2023 | 2020 Val FYE2022 | 2021 Val FYE2023 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Pension Fund | \$ 1,030 | \$ 1,012 | \$ 57 | \$ 52 | \$ 59 | \$ 57 |
| Insurance Fund | <u>133</u> | <u>117</u> | <u>0</u> | <u>0</u> | <u>8</u> | <u>6</u> |
| Total Actuarially Determined Employer Contribution | \$ 1,163 | \$ 1,129 | \$ 57 | \$ 52 | \$ 67 | \$ 63 |
| Change in Actuarially Determined Employer Contribution | | \$ (34) | | \$ (5) | | \$ (4) |



Change in Required Employer Contributions

KERS Non-Hazardous – Amortization Cost

| | KERS Non-Hazardous (\$millions) | | |
|--------------------------------------|------------------------------------|---------------|-----------------|
| | Pension | Insurance | Total |
| Amortization Cost – 2020 Val* | \$ 920 | \$ 103 | \$ 1,023 |
| Investment Experience | (13) | (7) | (20) |
| Demographic Experience | (1) | (8) | (9) |
| Plan Change – SB169 | <u><1</u> | <u><1</u> | <u><1</u> |
| Total Change | \$(14) | \$(15) | \$(29) |
| Amortization Cost – 2021 Val | \$ 906 | \$ 88 | \$ 994 |

Return on market value of assets
21% pension & 25% insurance

2022 health insurance premiums
lower than expected

*Amortization cost shown for the June 30, 2020 Valuation excludes amortization cost payable by employers that ceased participation since June 30, 2020.



Change in Required Employer Contributions

KERS Haz – Actuarially Determined Contribution Rate

| | KERS Hazardous (% of pay) | | |
|-------------------------------------|------------------------------|--------------|---------------|
| | Pension | Insurance* | Total |
| Contribution Rate – 2020 Val | 33.43% | 0.00% | 33.43% |
| Investment Experience | (1.81)% | N/A | (1.81)% |
| Demographic Experience | 0.19 % | N/A | 0.19 % |
| Plan Change – SB169 | <u>0.01 %</u> | <u>N/A</u> | <u>0.01 %</u> |
| Total Change | (1.61)% | N/A | (1.61)% |
| Contribution Rate – 2021 Val | 31.82% | 0.00% | 31.82% |

Return on market value of assets
25% pension & insurance

Covered payroll decreased by 4.7%

*Insurance contribution rate set to the greater of the actuarially determined amount and 0% of pay



Change in Required Employer Contributions SPRS – Actuarially Determined Contribution Rate

| | SPRS (% of pay) | | |
|-------------------------------------|--------------------|---------------|----------------|
| | Pension | Insurance | Total |
| Contribution Rate – 2020 Val | 127.99% | 18.07% | 146.06% |
| Investment Experience | (2.67)% | (1.62)% | (4.29)% |
| Demographic Experience | 1.07 % | (2.42)% | (1.35)% |
| Plan Change – SB169 | <u>0.05 %</u> | <u>0.08 %</u> | <u>0.13 %</u> |
| Total Change | (1.55)% | (3.96)% | (5.51)% |
| Contribution Rate – 2021 Val | 126.44% | 14.11% | 140.55% |

Return on market value of assets
21% pension, 25% insurance

Covered payroll decreased by 1.7%

2022 health insurance premiums
lower than expected

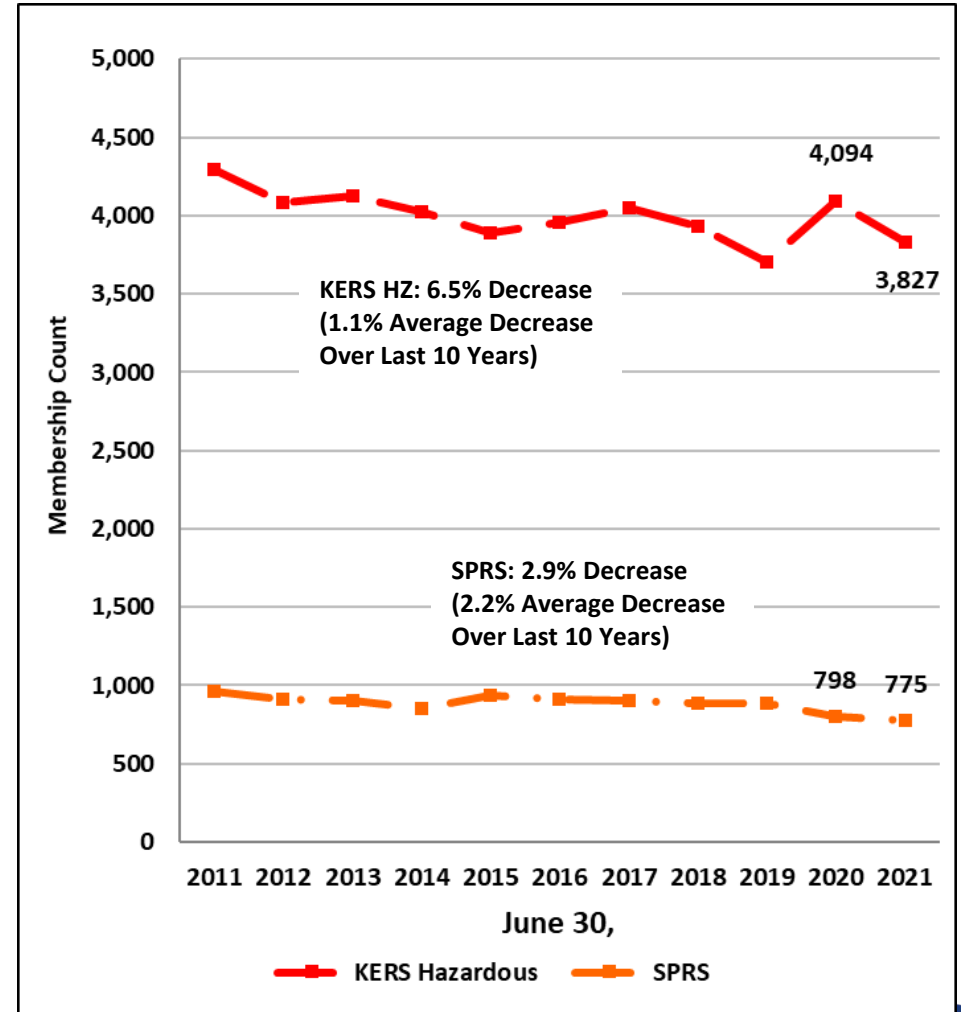
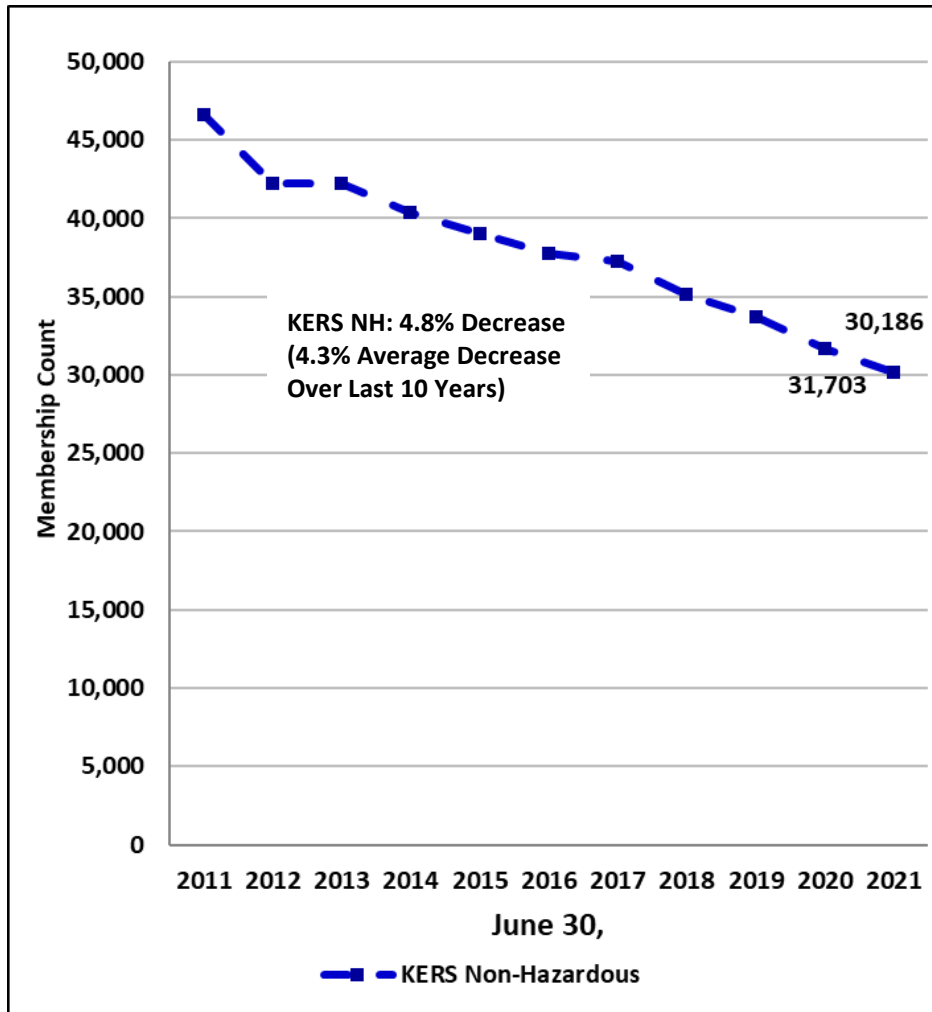


Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

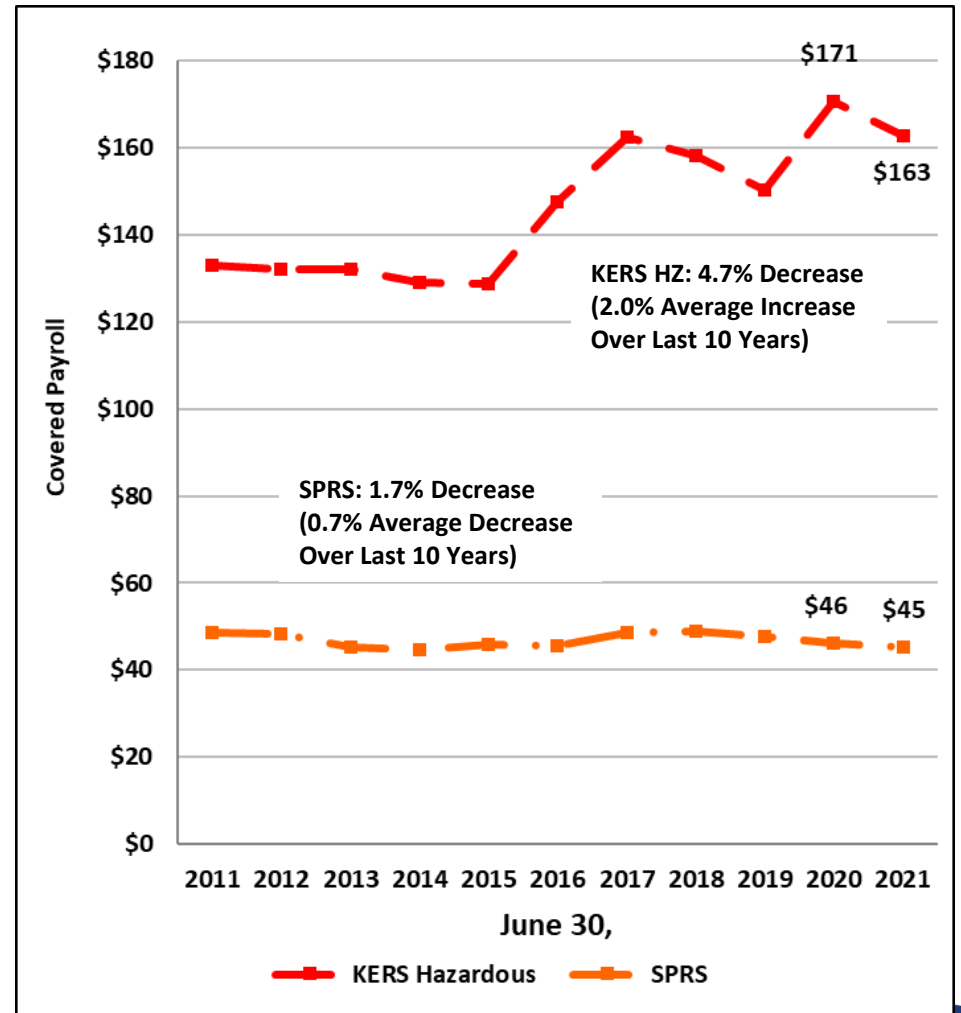
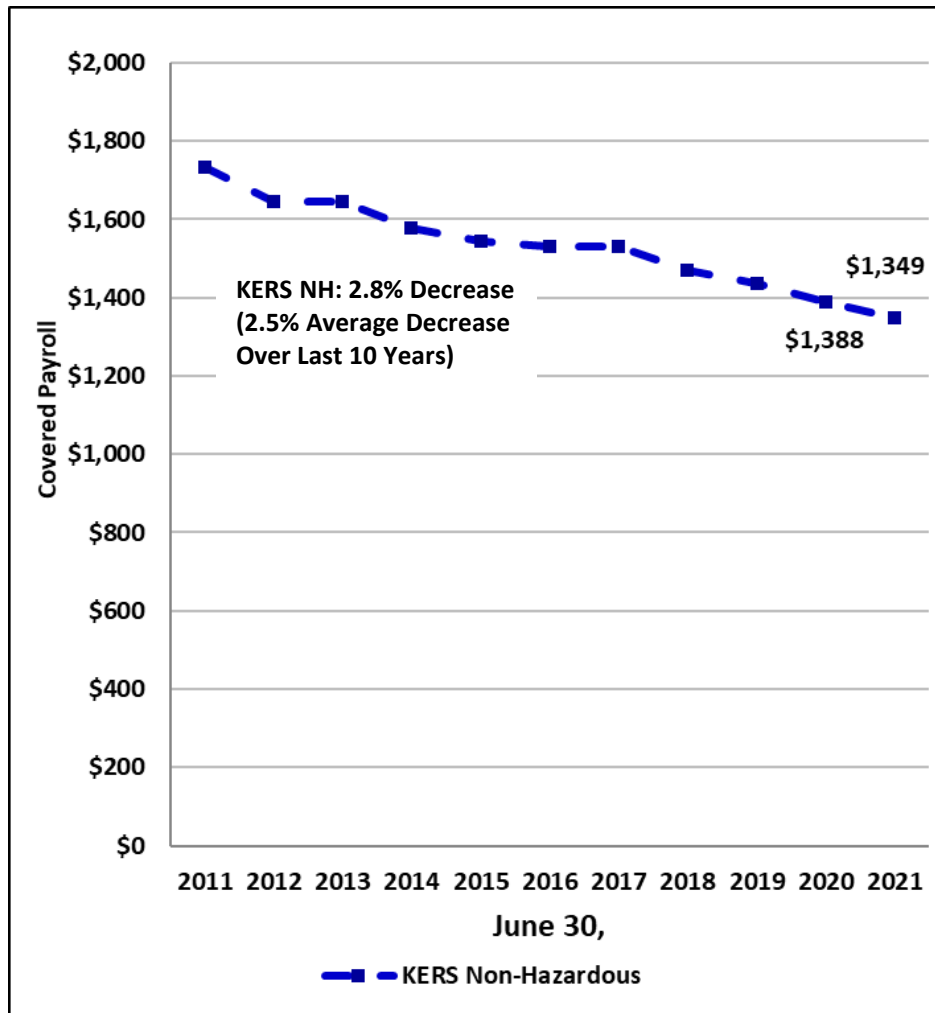
| (1) | KERS Non-Hazardous | | KERS Hazardous | | SPRS | |
|---|--------------------|------------------|----------------|------------------|----------------|------------------|
| | 2020 Val | 2021 Val | 2020 Val | 2021 Val | 2020 Val | 2021 Val |
| (2) | (3) | (4) | (5) | (6) | (7) | (7) |
| Pension Fund | \$ 14.03 | \$ 13.59 | \$ 0.57 | \$ 0.51 | \$ 0.76 | \$ 0.73 |
| Insurance Fund | <u>1.47</u> | <u>1.28</u> | <u>(0.11)</u> | <u>(0.15)</u> | <u>0.07</u> | <u>0.05</u> |
| Total Unfunded Actuarial Accrued Liability | \$ 15.50 | \$ 14.87 | \$ 0.46 | \$ 0.36 | \$ 0.83 | \$ 0.78 |
| Change in Unfunded Actuarial Accrued Liability | | \$ (0.63) | | \$ (0.10) | | \$ (0.05) |



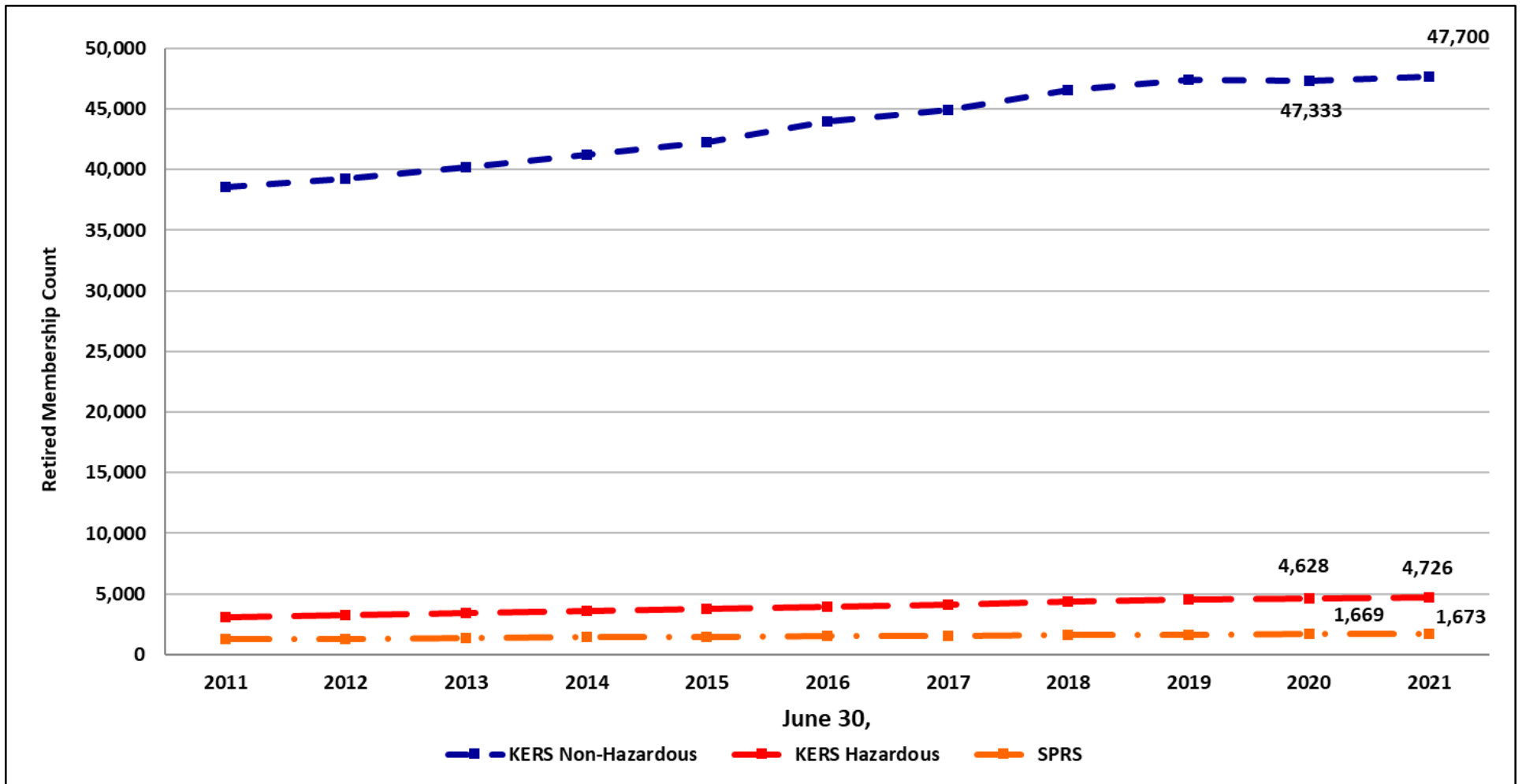
Active Membership Count



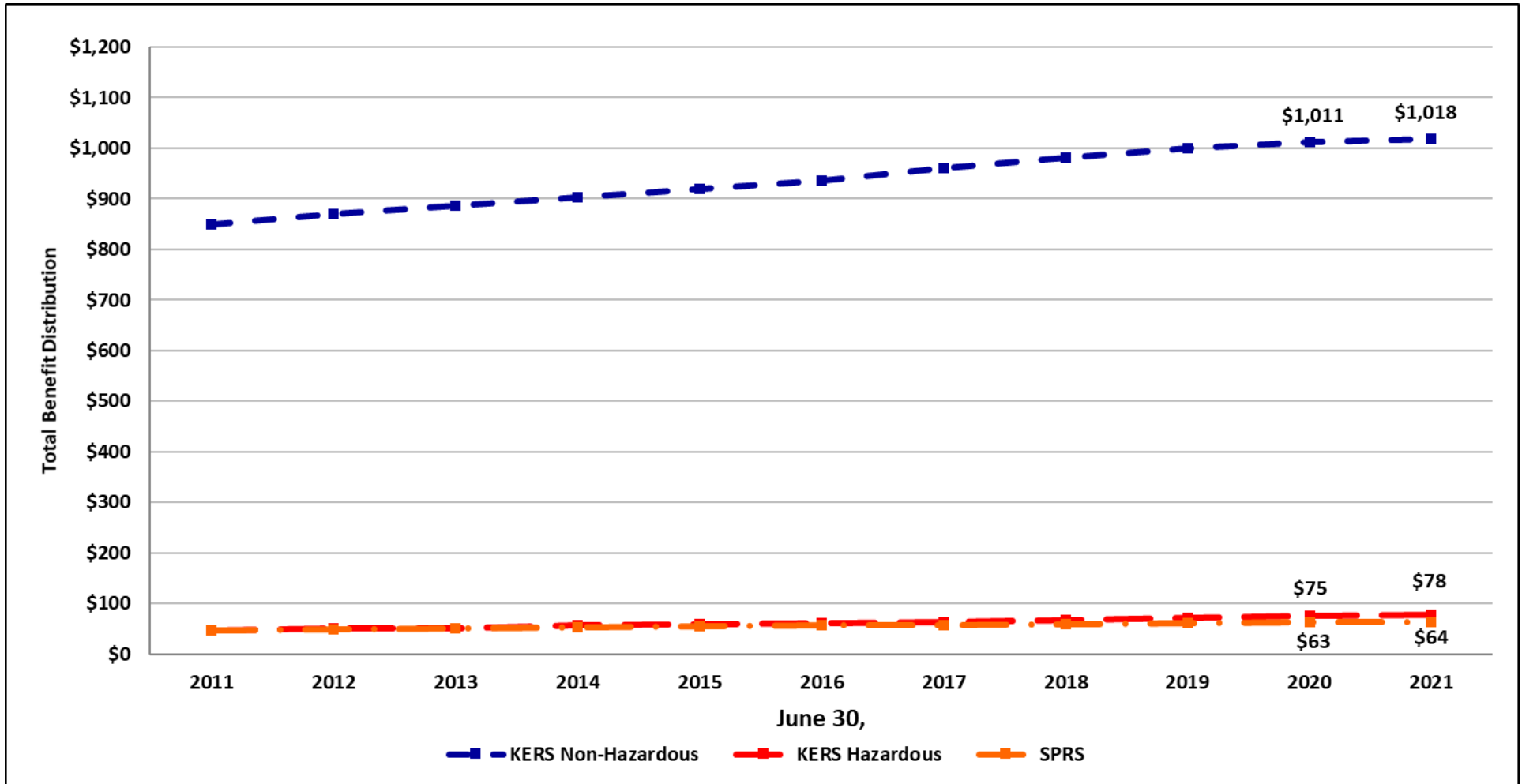
Covered Payroll (\$ in Millions)



Retired Membership Count



Pension Benefit Distributions (\$ in Millions)



Funding Results – KERS (\$ in millions)

| Item | Non-Hazardous System | | | | Hazardous System | | | |
|--|----------------------|-----------------|----------------|----------------|------------------|----------------|----------------|----------------|
| | Pension | | Insurance | | Pension | | Insurance | |
| | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Total Normal Cost Rate | 12.04% | 11.96% | 2.58% | 2.54% | 16.15% | 16.01% | 4.63% | 4.46% |
| Member Rate | <u>(5.00%)</u> | <u>(5.00%)</u> | <u>(0.44%)</u> | <u>(0.45%)</u> | <u>(8.00%)</u> | <u>(8.00%)</u> | <u>(0.64%)</u> | <u>(0.66%)</u> |
| Employer Normal Cost Rate | 7.04% | 6.96% | 2.14% | 2.09% | 8.15% | 8.01% | 3.99% | 3.80% |
| Administrative Expenses | 0.86% | 0.86% | 0.06% | 0.06% | 0.69% | 0.77% | 0.07% | 0.07% |
| Amortization Cost | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> | <u>24.59%</u> | <u>23.04%</u> | <u>(4.94%)</u> | <u>(7.59%)</u> |
| Total Actuarially Determined Rate | 7.90% | 7.82% | 2.20% | 2.15% | 33.43% | 31.82% | 0.00% | 0.00% |
| Amortization Cost to be Allocated | \$920 | \$906 | \$103 | \$88 | N/A | N/A | N/A | N/A |
| Actuarial Accrued Liability (AAL) | \$16,349 | \$16,321 | \$2,565 | \$2,574 | \$1,284 | \$1,295 | \$428 | \$424 |
| Actuarial Value of Assets | <u>2,323</u> | <u>2,736</u> | <u>1,096</u> | <u>1,296</u> | <u>710</u> | <u>782</u> | <u>539</u> | <u>575</u> |
| Unfunded AAL | \$14,026 | \$13,585 | \$1,469 | \$1,278 | \$574 | \$513 | (\$111) | (\$151) |
| Funded Ratio | 14.2% | 16.8% | 42.7% | 50.3% | 55.3% | 60.4% | 126.0% | 135.5% |

Funding Results – SPRS (\$ in millions)

| Item | Pension | | Insurance | |
|--|----------------|----------------|----------------|----------------|
| | 2020 | 2021 | 2020 | 2021 |
| (1) | (2) | (3) | (4) | (5) |
| Total Normal Cost Rate | 26.46% | 26.13% | 7.69% | 7.35% |
| Member Rate | <u>(8.00%)</u> | <u>(8.00%)</u> | <u>(0.44%)</u> | <u>(0.46%)</u> |
| Employer Normal Cost Rate | 18.46% | 18.13% | 7.25% | 6.89% |
| Administrative Expenses | 0.58% | 0.50% | 0.15% | 0.20% |
| Amortization Cost | <u>108.95%</u> | <u>107.81%</u> | <u>10.67%</u> | <u>7.02%</u> |
| Total Actuarially Determined Rate | 127.99% | 126.44% | 18.07% | 14.11% |
| Actuarial Accrued Liability (AAL) | \$1,053 | \$1,053 | \$276 | \$272 |
| Actuarial Value of Assets | <u>296</u> | <u>323</u> | <u>207</u> | <u>223</u> |
| Unfunded AAL | \$757 | \$730 | \$69 | \$49 |
| Funded Ratio | 28.1% | 30.7% | 75.0% | 82.0% |



PROJECTION INFORMATION PENSION AND INSURANCE



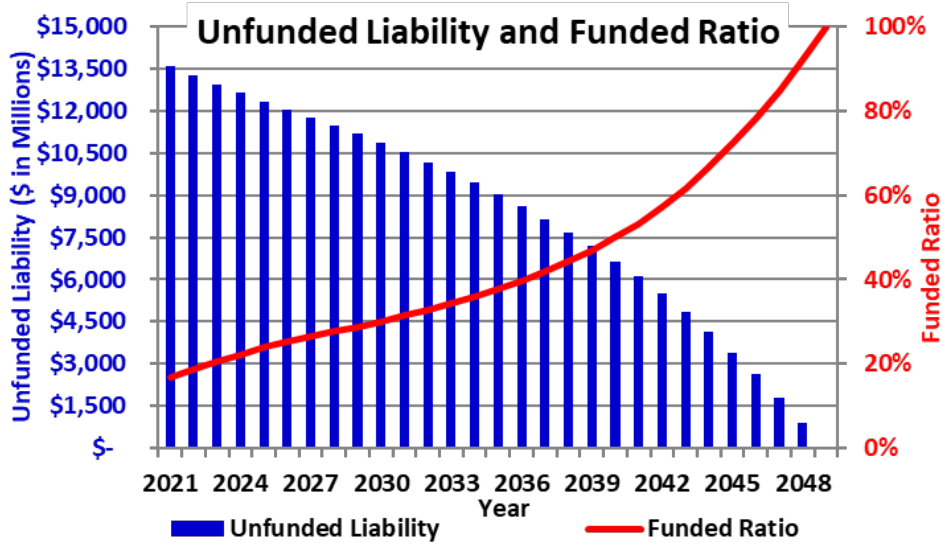
Projection Assumptions

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

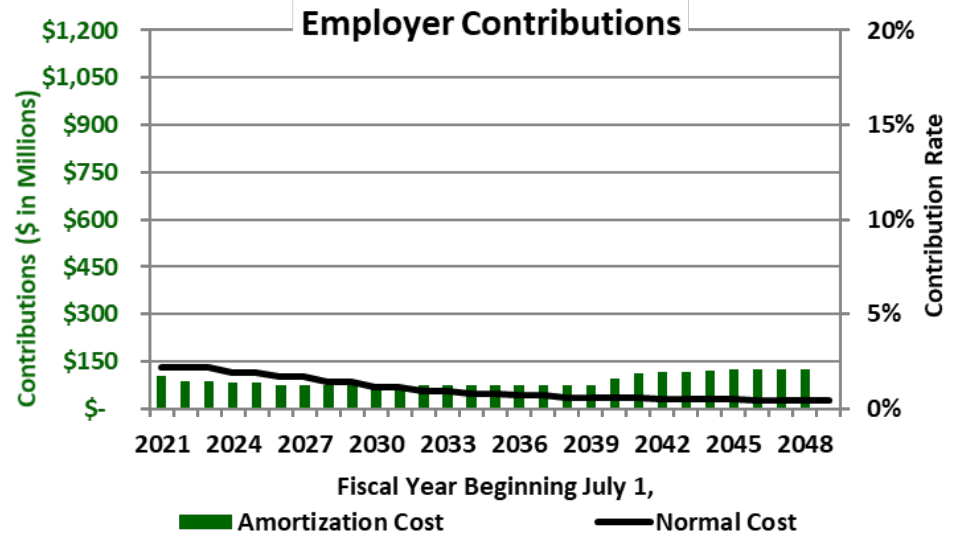
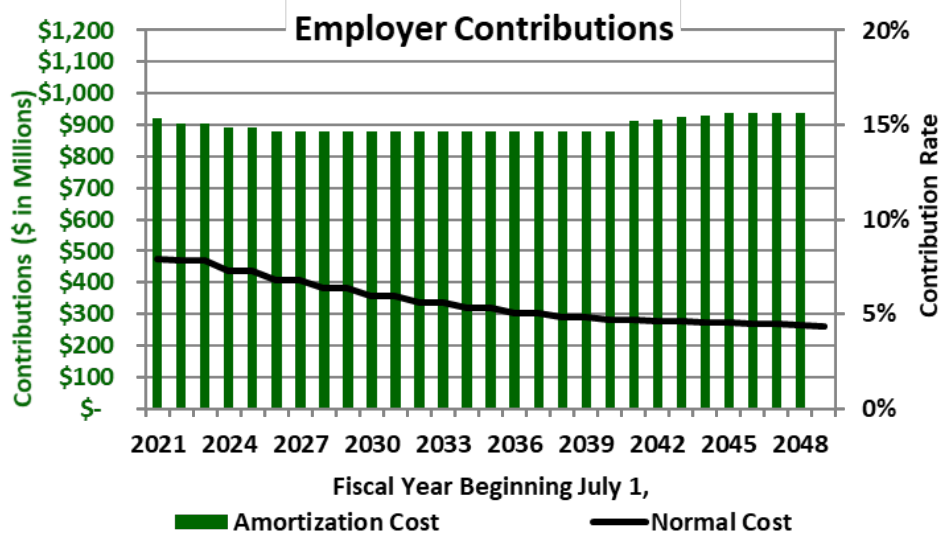
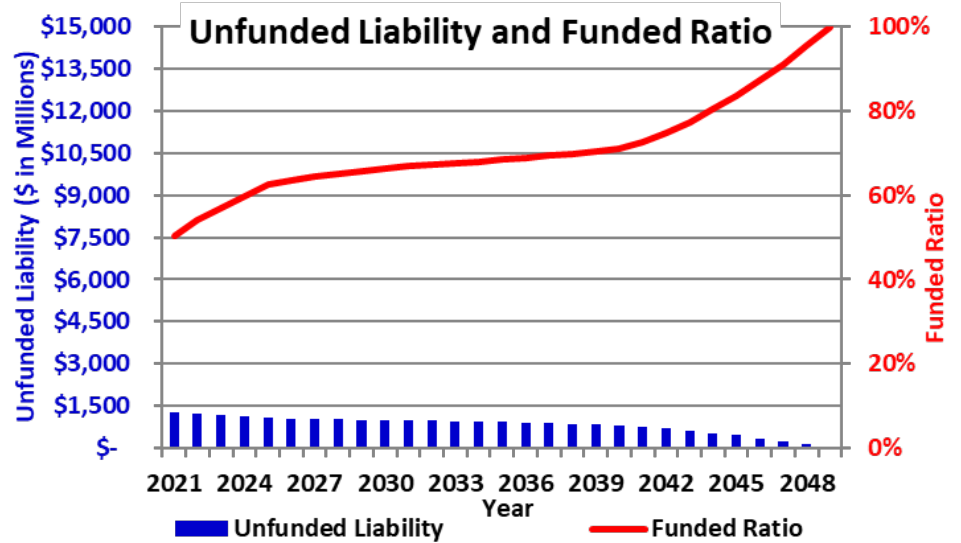


KERS Non-Hazardous Projection

Pension

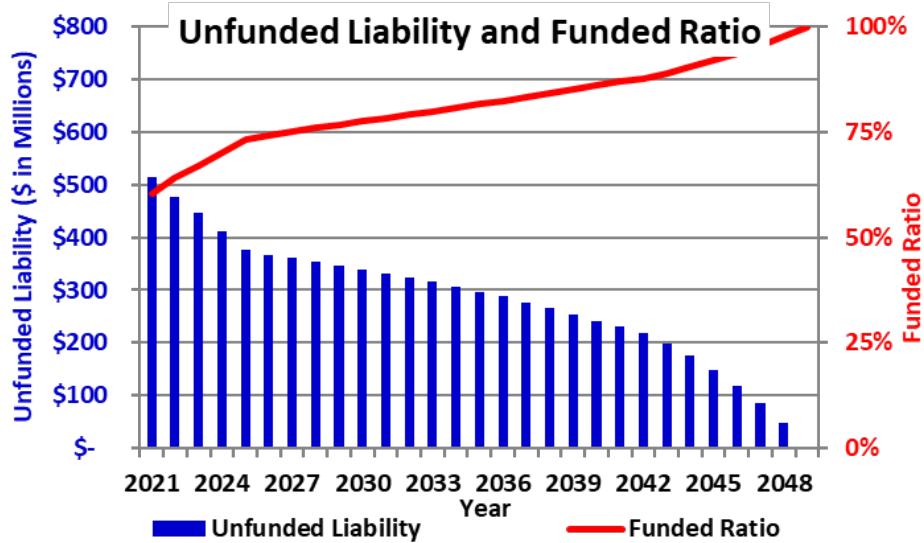


Insurance

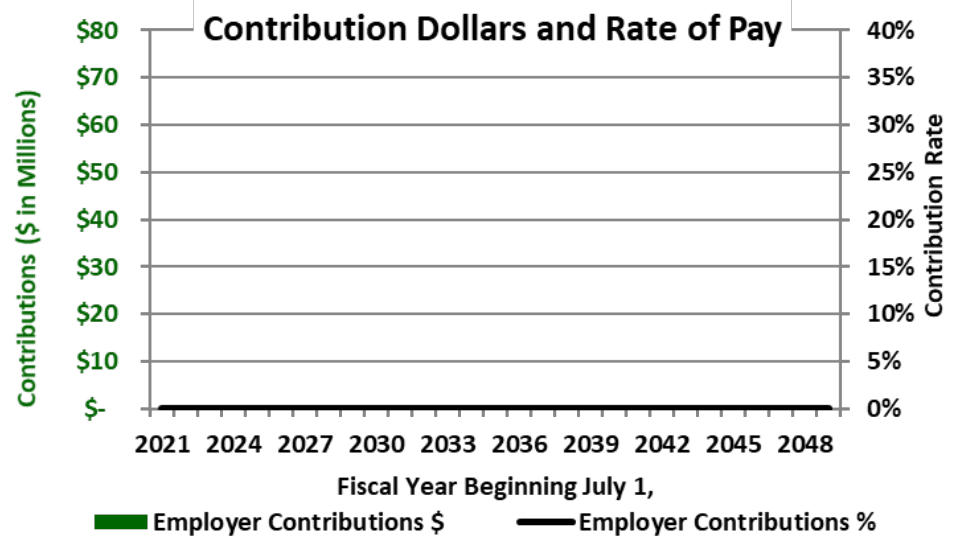
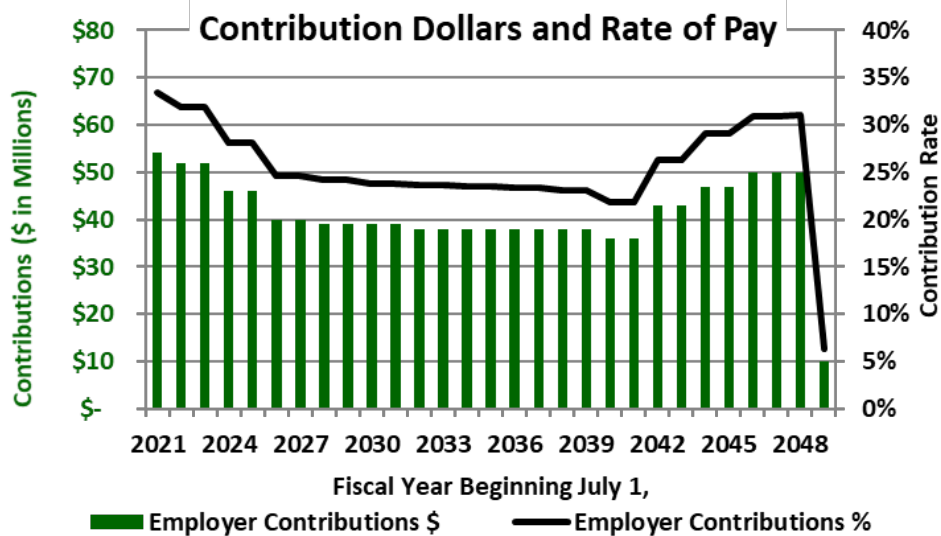
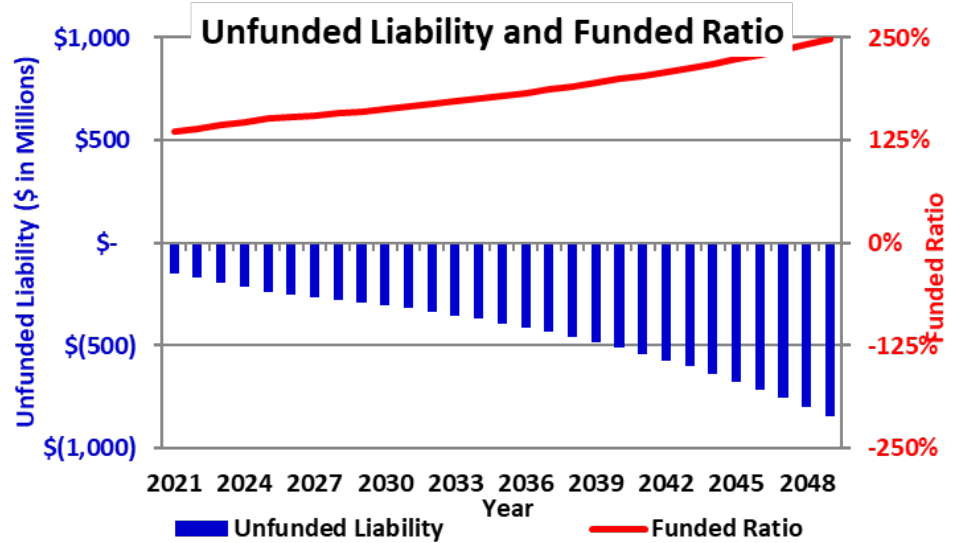


KERS Hazardous Projection

Pension

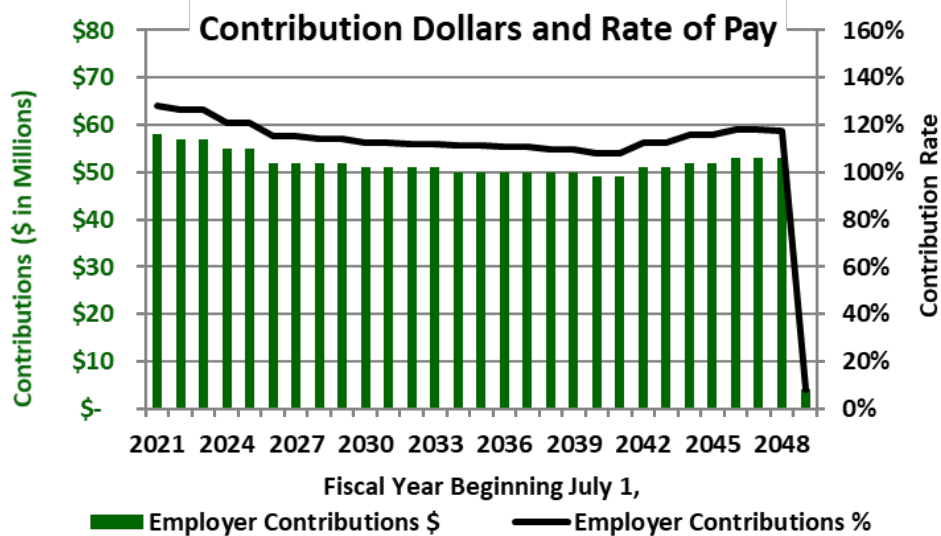
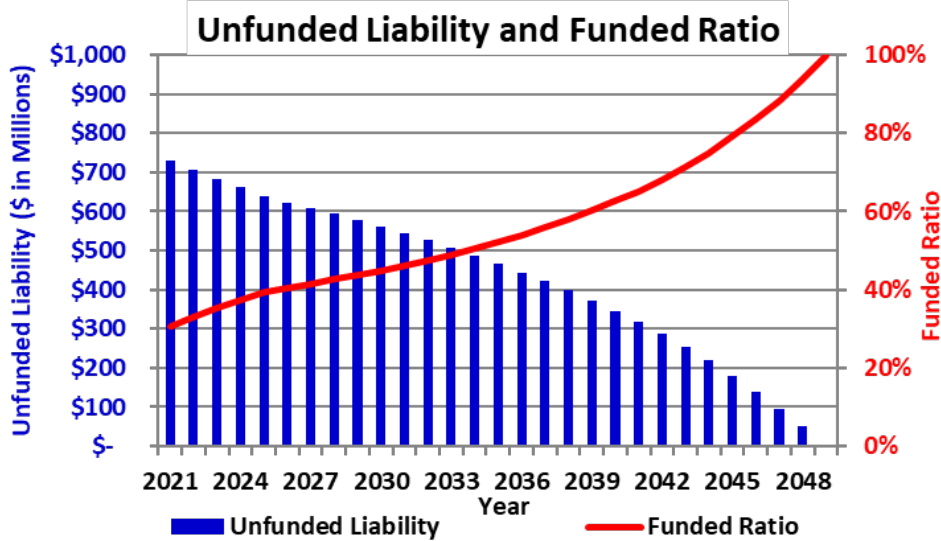


Insurance

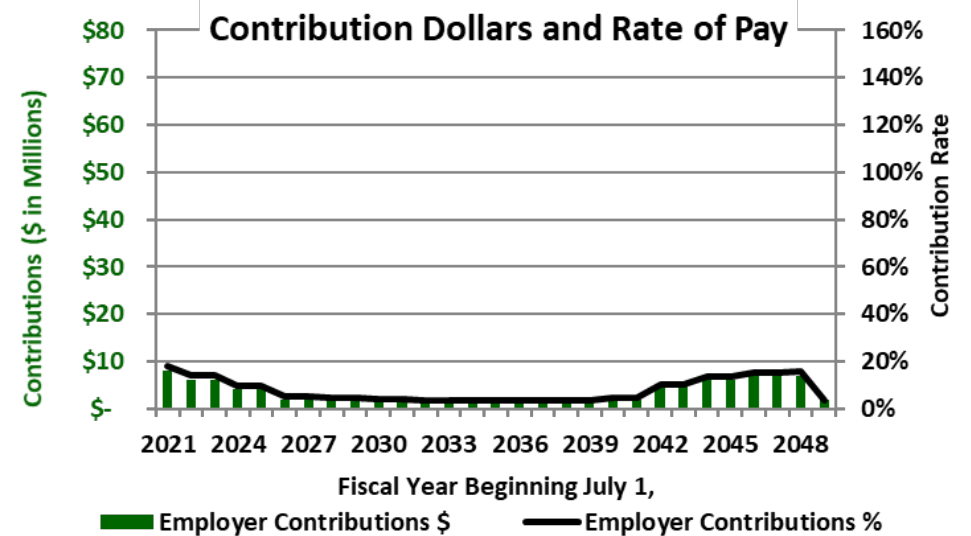
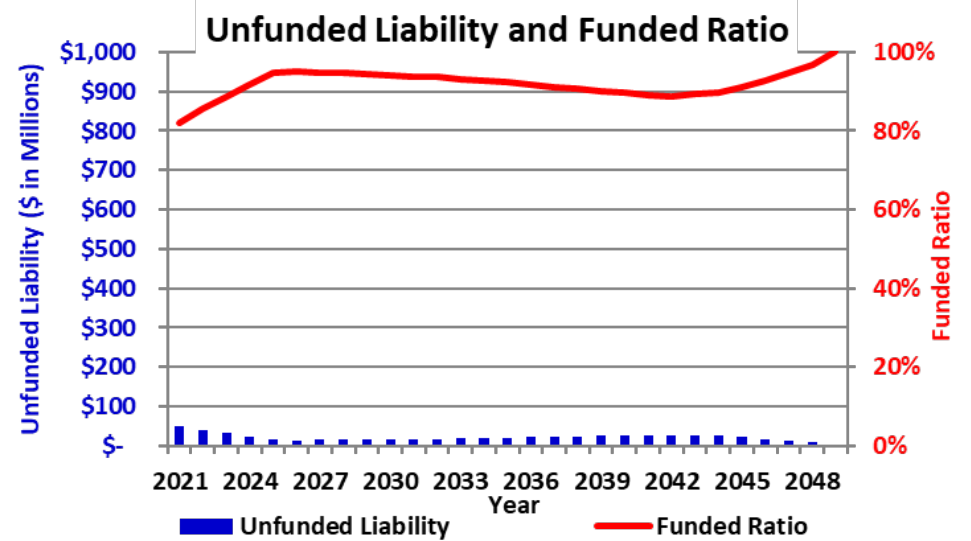


SPRS Projection

Pension



Insurance



Closing Comments on 2021 Valuation Results

- Favorable investment experience improved the funded status and lowered the required contribution effort across all funds
- It is imperative the State and participating employers continue contributing the actuarially determined contributions in each future year to improve the System's financial security



Disclaimers

- This presentation is intended to be used in conjunction with the actuarial valuation as of June 30, 2021. 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.



DRAFT
Kentucky Retirement Systems
Investment Policy Statement
Adopted November 16, 2021

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 assets of the Kentucky Employees Retirement System (“KERS”) 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 of the Systems. This IPS is intended to provide general principles for establishing the goals, the allocation of assets, employment of outside asset management, and monitoring the results of the Systems.

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, 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 plans.

B. Philosophy

The Trustees of KRS recognize their fiduciary duty not only to invest the Systems' assets in formal compliance with the Prudent Person Rule, but also to manage those assets 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 represent a strategic decision, with the primary aim that the portfolios meet their performance objectives in the long- term while understanding that this may not necessarily occur in the short term.

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 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, 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-term returns 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, 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 Staff and 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 (Prudent Person Rule);
- (4) impartially;
- (5) incurring and paying appropriate and reasonable expenses of administration and management 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) - Prohibited Transactions.

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 document. The Board Chair authorizes and appoints members to an Investment Committee with full power to act for the Board in the acquisition, sale and management of the assets of the Systems in accordance with the provisions of any applicable statutes, and policies of the Board. 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 at least three (3) Trustees appointed by the Governor to the Board pursuant to Kentucky Revised Statutes 61.645(1)(c). Additional members may be appointed 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 Systems consistent with policies and guidelines.
- ii. Assessing and reporting 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. Recommending changes to service providers, statutes, policies or guidelines as needed to maintain a productive relationship between the investment program and its goals; acting as liaison on all investment related matters.
- v. Identifying issues for consideration by the Investment Committee and preparing 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.

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 the IPS and any investment related decisions of the Board, the, 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 by the Chief Investment Officer, agree to serve as

- a fiduciary to the Systems, and should be of institutional quality as deemed by Staff in consultation 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 per KRS 61.650(5).
 - 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, as well as 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 databases, 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 plan and any underlying fund* have their own capacity to tolerate investment volatility, or risk. The asset allocation guidelines of each Fund will be reviewed annually.

Based on the asset liability study, which analyzes 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 November 12, 2020. 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.

*KERS Hazardous and Non-hazardous

| KERS Hazardous Pension Fund and the KRS Insurance Trust Fund - 6.25% Assumed Rate of Return | | | | |
|--|---------------|----------------------|---------------|---------------|
| Asset Class | Target | Relative Range (+/-) | Minimum | Maximum |
| Growth | 68.50% | 15% | 58.23% | 78.78% |
| 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% |
| Liquidity | 11.50% | 20% | 9.20% | 13.80% |
| Core Fixed Income | 10.00% | 20% | 8.00% | 12.00% |
| Cash | 1.50% | 100% | 0.00% | 3.00% |
| Diversifying | 20.00% | 15% | 17.00% | 23.00% |
| Real Estate | 10.00% | 30% | 7.00% | 13.00% |
| Real Return | 10.00% | 30% | 7.00% | 13.00% |
| Opportunistic | 0.00% | n/a | 0.00% | 5.00% |

| KERS Non-Hazardous Pension Fund and SPRS Pension Plan - 5.25% Assumed Rate of Return | | | | |
|---|---------------|----------------------|---------------|---------------|
| Asset Class | Target | Relative Range (+/-) | Minimum | Maximum |
| Growth | 54.50% | 15% | 46.33% | 62.68% |
| 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% |
| Liquidity | 25.50% | 20% | 20.40% | 30.60% |
| Core Fixed Income | 20.50% | 20% | 16.40% | 24.60% |
| Cash | 5.00% | 100% | 0.00% | 10.00% |
| Diversifying | 20.00% | 15% | 17.00% | 23.00% |
| Real Estate | 10.00% | 30% | 7.00% | 13.00% |
| Real Return | 10.00% | 30% | 7.00% | 13.00% |
| Opportunistic | 0.00% | n/a | 0.00% | 5.00% |

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 asset allocations of each Pension and Insurance Trust Fund constituent will be reviewed monthly by Staff relative to its target asset class allocation, taking into account any tactical policy 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 policy 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/over weights 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 System'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, 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 Systems.

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 can be allocated to non-US investments. These non-U.S. investments are not restricted by geography.

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 overall Systems' Pension or Insurance Trust Fund 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

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 include, 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. 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.
- 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. 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 allocations 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 indexes 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 |
|-------------------------------|---|
| Growth | |
| 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 |
| Liquidity | |
| Core Fixed Income | Bloomberg Barclays US Aggregate |
| Cash | Citi Grp 3-mos Treasury Bill |
| Diversifying | |
| Real Estate | NCREIF ODCE |
| Opportunistic | Highest Assumed Discount Rate of Participating Plans |
| Real Return | US CPI + 3% |

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.

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.

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

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 Systems 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 is and hereby incorporated by this reference.

- A. Investment Procurement Policy, as amended, is hereby incorporated by reference.
- B. KPPA Investment Brokerage Policy, as amended, is hereby incorporated by reference.
- C. KPPA Transactions Procedures Policy, as amended, is hereby incorporated by reference.
- D. KPPA Securities Litigation Policy and Procedures, as amended, is hereby incorporated by reference.
- E. KPPA Investment Securities Lending Guidelines, as amended, is hereby incorporated by reference.
- F. KPPA Securities Trading Policy for Trustees and Employees, as amended, is hereby incorporated by reference.
- G. KPPA Manager and Placement Agent Statement of Disclosure Policy, as amended, is hereby incorporated by reference.
- H. KPPA Real Estate Policy as amended and hereby incorporated by reference.
- I. KPPA Proxy Voting Policy as amended and hereby incorporated by reference.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Trustees

Date: _____

Date: _____

Signature: _____

Signature: _____

C. Prewitt Lane

Keith Percy

Chair, Investment Committee

Chair, Board of Trustees



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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TO: Members of the KRS Board of Trustees

FROM: Joint CERS & KRS Retiree Health Plan Committee

DATE: November 16, 2021

SUBJECT: Joint CERS & KRS Retiree Health Plan Committee Report

The Joint CERS & KRS Retiree Health Plan Committee met on Tuesday, November 9, 2021, and reviewed an informational presentation from Humana regarding 2020 Plan Compass Reports, the KPPA Medicare Eligible Pharmacy Review for 2022, the 2023 STAR Ratings, 2021 Customer Service Snap Shot and 2022 Go365 Updates.

2022 Formulary changes:

- Prior authorization changes impact 163 members.
- Negative tier changes impact 78 members.
- Positive tier changes impact 316 members.
- Step therapy changes impact 162 members.

The Committee also reviewed the 2021 J.D. Power Award received by Humana for ranking highest in the U.S. Pharmacy Study, 4 years in a row. Humana continues to lead the industry in quality as demonstrated by having the highest percentage of members in a Centers for Medicare and Medicaid Services (CMS) 4-Star rated plan among the national carriers, it is 97.35%. The Humana Voice-of-Consumer (VOC) metric used to understand the drivers of customer loyalty, advocacy, and satisfaction is the Net Promoter Score (NPS). Humana has boosted NPS with a 15 point gain compared to 2019.

The Division of Retiree Health Care (RHC) sent several member outreach emails regarding Open Enrollment. Emails were sent to 59,595 individuals with a nearly 99% delivery rate. Additionally, RHC staff has answered 7,230 phone calls and 324 emails thus far. Webinars have also 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. 453 members have participated in these webinars. RHC also implemented "Virtual Visits" for this year's Open Enrollment which allows a counselor and retiree to meet via Zoom.



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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To: Kentucky Retirement Systems Board of Trustees

From: Betty Pendergrass, CPA, CGFM, Chair
Joint Audit Committee
Kristen N. Coffey, CICA *KNC*
Division Director, Internal Audit Administration

Date: November 16, 2022

Subject: Summary of Joint Audit Committee Meeting

The County Employees Retirement System and Kentucky Retirement Systems Joint Audit Committee held a regularly scheduled meeting on November 4, 2021.

1. **The following items were approved by the Joint Audit Committee and are being forwarded to the Kentucky Retirement Systems Board of Trustees for ratification***
 - a. Purchase of Infrastructure and Application Security Assessment – *passed unanimously.*
 - b. Updates to the Charter for the Joint Audit Committee – *passed unanimously.*
 - c. Joint Audit Committee meeting dates and starting time for calendar year 2022 as well as a Special Called Joint Audit Committee meeting on November 30, 2021 at 9:30 a.m. Eastern Time. – *passed unanimously.*

RECOMMENDATION: The Joint Audit Committee requests the Kentucky Retirement Systems Board of Trustees ratify the actions taken by the Audit Committee.

2. **The following items were also discussed during the Joint Audit Committee meeting:**
 - a. Status of external audit.
 - b. Financial statements for the quarter ended September 20, 2021.
 - c. Management's response to Government Finance Officers Association letter.
 - d. Information disclosures – *Seven disclosures identified, effecting 138 members.*
 - e. Anonymous Tips – *Three open cases.*
 - f. Internal Audit Budget – *74% of budget remaining.*
 - g. Status of current internal audits – *18 current projects and six completed projects.*
 - h. Audits/memorandums issued since last meeting – *One report issued.*

***Board of Trustees Action Requested**

County Employees Retirement System and Kentucky Retirement Systems

Charter for the Joint Audit Committee

I. Charter

This Charter establishes the authority and responsibility of the Joint Audit Committee of the County Employees Retirement System (CERS) and the Kentucky Retirement Systems (KRS).

II. Purpose

The purpose of the Joint Audit Committee is to assist the Board of Trustees (Board) and Executive Management teams of the CERS and the KRS as well as the Kentucky Public Pensions Authority (KPPA) in fulfilling their oversight responsibilities for the:

1. System of internal controls,
2. Internal and external audit processes, and
3. Process for monitoring compliance with laws and regulations and the code of conduct as described in the appropriate entity bylaws.

As defined by the Institute of Internal Auditors, internal auditing is *an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. The goal of internal auditing is to help the organization accomplish its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control, and governance processes.*

Consistent with this definition, internal auditing within KPPA can be defined as *the independent appraisal of the various operations and systems of control within KPPA, CERS, and, KRS to determine whether acceptable policies and procedures are followed, legislative requirements and established standards are met, resources are used efficiently and economically, planned missions are accomplished effectively, and the objectives of KPPA, CERS, and KRS are being achieved.*

III. Authority

The Joint Audit Committee has authority to conduct or authorize investigations into any matters within its scope of responsibility. The Joint Audit Committee is empowered to:

1. Oversee the work of any registered Certified Public Accounting (CPA) firm employed by KPPA;
2. Resolve any disagreements between KPPA, CERS, and/or KRS management and the internal auditor regarding internal audit reports;
3. Resolve any disagreements between KPPA, CERS, and/or KRS management and the external auditor regarding financial reporting;
4. Pre-approve the scope of all financial audit and non-financial audit services;
5. Oversee independent counsel, accountants, or others retained by KPPA to advise the Joint Audit Committee or assist in conducting an investigation;
6. Seek and obtain any necessary information from person(s) employed by KPPA, CERS, or KRS (all of whom are directed to cooperate with the Joint Audit Committee's requests) or external parties; and
7. Meet with officers, internal and/or external auditor, or outside counsel as necessary.

Commented [CK(1)]: Legal believes that any outside entity used by the Audit Committee would have to be hired through KPPA utilizing 45A.

IV. Composition

The Joint Audit Committee will consist of four (4) members – two CERS members appointed by the Chair of the CERS Board and two KRS members appointed by the Chair of the KRS Board. The members of the Joint Audit Committee will elect a Joint Audit Committee Chair and Vice-Chair.

A quorum to conduct business is satisfied if a majority of the Joint Audit Committee members are present. Each Joint Audit Committee member will be [free of conflicts of interest with respect to the projects under the scope of the Joint Audit Committee](#). ~~independent~~¹ For the purposes of the Joint Audit Committee, independent shall mean those individuals who do not report directly to KPPA, CERS, or KRS management and also those persons who are not directly responsible for the day-to-day operations of KPPA, CERS or KRS. At least one member of the Joint Audit Committee will be designated as the “financial expert.”² A financial expert is an individual who possesses, among other attributes:

1. An understanding of generally accepted accounting principles (GAAP) – in this case, the accounting standards issued by the Governmental Accounting Standards Board (GASB) or the Federal Accounting Standards Advisory Board (FASAB) and financial statements.
2. The ability to assess the general application of such principles in connection with the accounting for estimates, accruals, and reserves.
3. Experience preparing, auditing, analyzing, or evaluating financial statements that present a breadth, depth, and level of complexity of accounting issues that can reasonably be expected to be raised by the government entity’s financial statements or experience actively supervising one or more persons engaged in such activities.
4. An understanding of internal control and the procedures for financial reporting.
5. An understanding of audit committee functions.

V. Meetings

Joint Audit Committee meetings must comply with Kentucky’s Open Meetings Act contained in Kentucky Revised Statutes Chapter 61.800, et seq. The Joint Audit Committee will meet at least four (4) times a year, with authority to convene additional meetings, as circumstances require. The regular quarterly meetings shall be held on the first Thursday of February, May, and November and the fourth Thursday of August. All Joint Audit Committee members and the Director of the Division of Internal Audit Administration (Internal Audit) are expected to attend each meeting. The Joint Audit Committee will invite KPPA, CERS, and/or KRS staff; auditors; or others to attend meetings and provide pertinent information, as deemed necessary. The Joint Audit Committee may conduct closed session when legally authorized under Kentucky’s Open Meetings Act. Meeting agendas will be provided to members of the Joint Audit Committee, along with appropriate briefing materials. Minutes will also be prepared and approved by the Joint Audit Committee. Agendas and minutes will also be posted in compliance with Kentucky’s Open Meetings Act.

¹Merriam-Webster Dictionary defines “independent” as “not subject to control by others; not requiring or relying on something else; not looking to others for one’s opinions or for guidance in conduct; and not bound by or committed to a political party.”²

¹ See Sarbanes-Oxley Act of 2002 § 407.

VI. Responsibilities

The Joint Audit Committee is responsible for the following activities.

Internal Controls and Compliance for KPPA, CERS, and KRS

1. Evaluate the effectiveness of the internal controls system, including information technology security and control.
2. Understand the scope of internal and external auditors' review of internal controls over financial reporting and obtain reports on significant findings and recommendations, together with management's responses.
3. Evaluate the effectiveness of the system used to monitor compliance with laws and regulation.
4. Evaluate the results of management's investigations and follow-up (including disciplinary action) of any instances of noncompliance.
5. Review the findings of any examinations by regulatory agencies and any auditor observations.
6. Evaluate the effectiveness of the system used to monitor noncompliance with entity code of conduct and/or bylaws as well as evaluate the process in which the code of conduct and bylaws are communicated to personnel.
7. Obtain regular updates from management and legal counsel regarding compliance matters.

Internal Audit

1. ~~Review and m~~Make recommendations to the KPPA Executive Director regarding the appointment, dismissal, and replacement of the Internal Audit Director. Since the Internal Audit Director is a non-merit position under Kentucky Revised Statute 18A, request for appointment must come from the KPPA Executive Director and receive final approval from the Governor.
2. ~~Review and m~~Make recommendations to the KPPA Executive Director on the salary for the Internal Audit Director. Since the Internal Audit Director is a non-merit position under Kentucky Revised Statute 18A, the salary recommendations must come from the KPPA Executive Director and receive with the understanding that final salary approval from is at the discretion of the Governor.
3. Review the Internal Audit staffing and organizational structure with the KPPA Executive Management team and the Internal Audit Director.
4. Annually, review and approve the Charter for Internal Audit Administration, Audit Plan, and Internal Audit Budget.
5. Ensure there are no unjustified restrictions or limitations placed on Internal Audit in relation to the completion of audit projects.
6. Evaluate the effectiveness of the internal audit function, including compliance with the Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing.
7. On a regular basis meet with the Internal Audit Director, including closed session discussions, pursuant to Kentucky's Open Meeting Act in Kentucky Revised Statutes Chapter 61.800, et seq.

Commented [CK(2): Since the Internal Audit Director position is non-merit, the rules for hiring are different than the rules for merit staff. The Joint Audit Committee can be involved in the process, including recruiting, interviewing, recommending, etc.

External Audit

1. Receive communications from external auditors that are required by the AICPA Standards to be received by "Governing Boards."

Commented [CK(3): Verified wording with external auditors. Confirmation that this is sufficient received on 8/27/2021.

2. Evaluate the external auditors' proposed audit scope and approach, including coordination of audit effort with internal audit.
3. Evaluate the performance of the external auditors and exercise final approval on the appointment or discharge of the auditors.
4. Evaluate and confirm the independence of the external auditors by obtaining statements from the auditors on relationships between the auditors and KPPA, CERS, and KRS, including non-audit services. Discuss the relationships with the auditors.
5. Annually, meet separately with the external auditors to discuss any matters that the Joint Audit Committee or auditors believe should be discussed privately.

Reporting

1. Regularly report Joint Audit Committee activities, issues, and related recommendations to the Boards of Trustees for CERS and KRS for ratification.
2. As needed, report Joint Audit Committee recommendations to the KPPA for implementation.
3. Review any other reports issued by the KPPA staff that relate to the responsibilities of the Joint Audit Committee.

Other

1. Facilitate open channels of communication between internal auditor, external auditors, and the KPPA.
2. Perform other activities related to this Charter as requested by the Boards of Trustees of CERS or KRS; KPPA; or the Executive Management teams of the KPPA, CERS, or KRS.
3. Institute and oversee special investigations, as needed.
4. Annually, review and assess the adequacy of the Charter for the Joint Audit Committee.
5. Confirm annually that all responsibilities outlined in this Charter have been completed.
6. Evaluate the Joint Audit Committee's and individual members' performance on a regular basis.

VII. Responsibilities of Other Parties

1. The auditors (internal and external) are responsible for planning and conducting audits.
2. The Boards of Trustees for CERS and KRS are responsible for ratifying actions taken by the Joint Audit Committee.
3. KPPA management personnel are responsible for implementing recommendations approved by the Joint Audit Committee and ratified by Boards of Trustees for CERS and/or KRS.
4. KPPA is responsible for the selection and hiring of the external auditor.
5. KPPA management personnel are responsible for preparing and fairly presenting the financial statements in accordance with GAAP [for governmental entities as issued by GASE](#), maintaining effective internal control over financial reporting, and ensuring KPPA complies with applicable laws, regulations, and other requirements.
6. The Boards of Trustees for CERS and KRS are responsible for approval of the Annual Report.
7. KPPA is responsible for final approval and publishing of the Annual Report.

VIII. Approvals

We, the undersigned of the Joint Audit Committee, CERS Board of Trustees, and KRS Board of Trustees do certify that this Charter was approved on the 16th day of November, 2021.

Joint Audit Committee Chair Date

Board Chair Date
County Employees Retirement System

Board Chair Date
Kentucky Retirement Systems

History: Approval Date: November 16, 2021
Amended:

DRAFT



Kentucky Public Pensions Authority

Internal Audit Administration



To: Members of the Joint Audit Committee

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

Date: November 4, 2021

Subject: Establishment of Joint Audit Committee Meeting Dates

As stated in the Charter for the Joint Audit Committee, Section V, "The Joint Audit Committee will meet at least four (4) times a year, with authority to convene additional meetings, as circumstances require. The regular quarterly meetings shall be held on the first Thursday of February, May, and November, and the fourth Thursday of August."

All Joint Audit Committee meetings are scheduled to begin at 10:00 a.m. Eastern Time (ET). The meeting dates for calendar year 2022 are below:

February 3, 2022

August 25, 2022

May 5, 2022

November 3, 2022

In addition, a Special Called Joint Audit Committee meeting is needed at 9:30 a.m. ET on November 30, 2021. The agenda will be prepared at a later date, but topics to discuss will include the fiscal year 2021 external audit and any internal audits released since the previous Joint Audit Committee meeting.

Action Needed: We request the Joint Audit Committee approve the starting time and dates for the calendar year 2022 Audit Committee meetings as well as the Special Called meeting for November 30, 2021.



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

1260 Louisville Road • Frankfort, Kentucky 40601
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To: Members of the Audit Committee

Through: Rebecca H Adkins
Executive Director, Office of Operations

From: Dominique McKinley
Director, Enterprise and Technology Services

Date: November 4, 2021

Subject: Cyber Security – Infrastructure Assessment by external vendor

The technology and security staff of KPPA request approval to contract an external vendor to perform an infrastructure security assessment. These are generally performed annually and are a critical component of the cyber security stance adopted by KPPA.

The cyber threat landscape is always changing. According to the FBI, the top five types of cybercrime in 2020 were phishing, non-payment/non-delivery, extortion (including ransomware), data breaches, and identity theft. Phishing is likely to remain the top threat in 2021. To combat these threats and others, KPPA's security and tech teams are always looking for ways to protect the systems. An infrastructure assessment by an external vendor is an excellent way to identify new vulnerabilities.

Action Needed: We request the Audit Committee approve the expenditure of up to \$70,000 on an infrastructure assessment.



Combining Statement of Fiduciary Net Position - Pension Funds

As of September 30, 2021 with Comparative Totals as of September 30, 2020 (\$ in Thousands)

| ASSETS | KERS | | SPRS | KRS TOTAL | | Percentage of Change | Note |
|---|--------------------|------------------|------------------|--------------------|--------------------|----------------------|------|
| | Non-Hazardous | Hazardous | | 2022 | 2021 | | |
| CASH AND SHORT-TERM INVESTMENTS | | | | | | | |
| Cash Deposits | \$1,605 | \$148 | \$111 | \$1,865 | \$1,505 | 23.89% | 1 |
| Short-term Investments | 438,176 | 57,283 | 35,125 | 530,584 | 275,546 | 92.56% | 2 |
| Total Cash and Short-term Investments | 439,781 | 57,431 | 35,236 | 532,448 | 277,051 | | |
| RECEIVABLES | | | | | | | |
| Accounts Receivable | 161,873 | 3,518 | 8,416 | 173,807 | 62,194 | 179.46% | 3 |
| Accounts Receivable - Investments | 29,932 | 7,604 | 3,652 | 41,188 | 111,177 | -62.95% | 4 |
| Total Receivables | 191,805 | 11,121 | 12,068 | 214,994 | 173,371 | | |
| INVESTMENTS, AT FAIR VALUE | | | | | | | |
| Core Fixed Income | 665,380 | 110,620 | 76,629 | 852,629 | 762,483 | 11.82% | 5 |
| Public Equities | 971,227 | 391,083 | 121,009 | 1,483,319 | 1,155,196 | 28.40% | 6 |
| Private Equities | 208,133 | 69,390 | 20,293 | 297,816 | 267,355 | 11.39% | 7 |
| Specialty Credit | 523,924 | 152,756 | 61,136 | 737,815 | 610,754 | 20.80% | 8 |
| Derivatives | 816 | 208 | 100 | 1,123 | 522 | 115.35% | 9 |
| Absolute Return | - | - | - | - | 38,327 | -100.00% | 10 |
| Real Return | 170,275 | 49,782 | 20,251 | 240,308 | 204,364 | 17.59% | 11 |
| Opportunistic | 72,441 | 22,459 | 8,948 | 103,847 | 77,523 | 33.96% | 12 |
| Real Estate | 122,295 | 35,753 | 15,170 | 173,218 | 144,042 | 20.26% | 13 |
| Total Investments, at Fair Value | 2,734,491 | 832,049 | 323,535 | 3,890,076 | 3,260,567 | | |
| Securities Lending Collateral Invested | 89,921 | 25,357 | 10,163 | 125,441 | 67,848 | 84.89% | 14 |
| CAPITAL/INTANGIBLE ASSETS | | | | | | | |
| Capital Assets | 929 | 91 | 11 | 1,031 | 1,031 | 0.00% | |
| Intangible Assets | 5,920 | 494 | 100 | 6,513 | 6,513 | 0.00% | |
| Accumulated Depreciation | (929) | (91) | (11) | (1,031) | (1,017) | 1.38% | |
| Accumulated Amortization | (5,611) | (482) | (100) | (6,193) | (5,965) | 3.82% | |
| Total Capital Assets | 309 | 11 | 0 | 320 | 562 | | |
| Total Assets | 3,456,307 | 925,971 | 381,002 | 4,763,280 | 3,779,400 | | |
| LIABILITIES | | | | | | | |
| Accounts Payable | 2,117 | 216 | 42 | 2,375 | 2,482 | -4.32% | |
| Investment Accounts Payable | 77,164 | 17,819 | 9,298 | 104,281 | 190,813 | -45.35% | 15 |
| Securities Lending Collateral | 89,921 | 25,357 | 10,163 | 125,441 | 67,848 | 84.89% | 16 |
| Total Liabilities | 169,202 | 43,392 | 19,503 | 232,097 | 261,143 | | |
| Total Fiduciary Net Position Restricted for Pension Benefits | \$3,287,105 | \$882,579 | \$361,499 | \$4,531,183 | \$3,518,257 | | |

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) The increase in Accounts Receivable is due to the timing of the generation of the AALC invoices (generated around the 26th of the month, not due until the 10th of the following month).

4) The variance in Accounts Receivable is a result of pending trades.

NOTE - Variance Explanation continued on next page.

5) *The increase in Core Fixed Income is a result of a rebalance to move money to Core Fixed Income for KERS and SPRS as a result of the revised IPS.*

6) *The increase in Public Equities is due to positive market conditions resulting in increased market values.*

7) *The increase in Private Equity is a result of positive market conditions resulting in increased market values.*

8) *The increase in Specialty Credit is due to additional funding and positive market conditions increasing market values.*

9) *Variance is a result of hedging and arbitration of risk within the portfolios.*

10) *The decline in Absolute Return is a result of the merging of the Absolute Return asset class with the Real Return asset class.*

11) *The increase in Real Return is a result of the merging of the Absolute Return asset class with the Real Return asset class and positive market conditions resulting in increased market values.*

12) *The increase in Opportunistic is due to additional funding and positive market conditions increasing market values.*

13) *The increase in Real Estate is due to additional funding and positive market conditions increasing market values.*

14) *Variance is a result of the demands of the Securities Lending Program.*

15) *The variance in Accounts Receivables is a result of pending trades.*

16) *Variance is a result of the demands of the Securities Lending Program.*

Differences due to rounding.



Combining Statement of Changes In Fiduciary Net Position - Pension Funds

For the fiscal year ending September 30, 2021, with Comparative Totals as of September 30, 2020 (\$ in Thousands)

| ASSETS | KERS | | SPRS | KPPA Total | | Percentage of Change | Note |
|---|--------------------|------------------|------------------|--------------------|--------------------|----------------------|------|
| | Non-Hazardous | Hazardous | | 2022 | 2021 | | |
| Member Contributions | \$22,186 | \$4,705 | \$1,231 | \$28,122 | \$28,458 | -1.18% | |
| Employer Contributions | 366,482 | 14,038 | 15,395 | 395,914 | 271,208 | 45.98% | 1 |
| General Fund Appropriations | - | - | - | - | - | - | |
| Pension Spiking Contributions | 3 | 0 | - | 3 | 36 | -90.52% | 2 |
| Health Insurance Contributions (HB1) | 2 | 0 | - | 2 | - | - | |
| Employer Cessation Contributions | 50,464 | - | - | 50,464 | - | - | |
| Total Contributions | 439,137 | 18,743 | 16,625 | 474,505 | 299,702 | | |
| INVESTMENT INCOME | | | | | | | |
| From Investing Activities | | | | | | | |
| Net Appreciation (Depreciation) in FV of Investments | 15,542 | 5,884 | 1,879 | 23,304 | 142,048 | -83.59% | 3 |
| Interest/Dividends | 18,553 | 6,525 | 2,225 | 27,303 | 19,343 | 41.15% | 4 |
| Total Investing Activities Income | 34,095 | 12,408 | 4,104 | 50,607 | 161,392 | | |
| Less: Investment Expense | 2,964 | 966 | 354 | 4,284 | 3,966 | 8.02% | |
| Less: Performance Fees | 3,401 | 1,920 | 490 | 5,812 | 1,270 | 357.75% | 5 |
| Net Income from Investing Activities | 27,729 | 9,522 | 3,260 | 40,511 | 156,156 | | |
| From Securities Lending Activities | | | | | | | |
| Securities Lending Income | 49 | 15 | 6 | 70 | 56 | | |
| Less: Securities Lending Borrower Rebates | (105) | (39) | (13) | (156) | (43) | | |
| Less: Securities Lending Agent Fees | 23 | 8 | 3 | 34 | 15 | | |
| Net Income from Securities Lending | 131 | 45 | 16 | 192 | 84 | 127.89% | 6 |
| Net Investment Income | 27,860 | 9,567 | 3,275 | 40,703 | 156,240 | | |
| Total Additions | 466,997 | 28,310 | 19,901 | 515,208 | 455,942 | | |
| DEDUCTIONS | | | | | | | |
| Benefit Payments | 258,199 | 18,818 | 15,973 | 292,989 | 286,075 | 2.42% | |
| Refunds | 3,114 | 1,471 | 17 | 4,602 | 3,065 | 50.17% | 7 |
| Administrative Expenses | 3,594 | 371 | 72 | 4,036 | 3,186 | 26.71% | 8 |
| Total Deductions | 264,906 | 20,659 | 16,062 | 301,627 | 292,325 | | |
| Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits | | | | | | | |
| | 202,091 | 7,651 | 3,839 | 213,581 | 163,617 | | |
| Total Fiduciary Net Position Restricted for Pension Benefits | | | | | | | |
| Beginning of Period | 3,085,014 | 874,928 | 357,660 | 4,317,602 | 3,354,640 | | |
| End of Period | \$3,287,105 | \$882,579 | \$361,499 | \$4,531,183 | \$3,518,257 | | |

NOTE - Variance Explanation

1) Employer Contributions increased due to Actuarial Accrued Liability (AAL) contributions received in KERS.

2) Pension Spiking contributions increased in KERS due to a correction processed in FY 2020.

3) The decrease in Net Appreciation in Fair Value of Investments is a result of unfavorable market conditions resulting in unrealized losses in public equity for the first quarter of FY22.

NOTE - Variance Explanation continued on next page.

4) *The increase in Interest/Dividends is due to increased income from Private Equity, Core Fixed Income, and Specialty Credit asset classes.*

5) *The increase in Performance fees is due to favorable market conditions resulting in higher performance fees primarily within private equity.*

6) *Variance is a result of the demand of the Securities Lending Program.*

7) *The increase in Refunds is due to an increase in refunds taken by KERS and KERH members who terminated employment and were not eligible for a retirement benefit.*

8) *Administrative Expenses increased for the first quarter of FY2022 due to increases in staff and the employer retirement contribution.*

Differences due to rounding.



Combining Statement of Fiduciary Net Position - Insurance Fund

As of September 30, Current Year, with Comparative Totals as of September 30, Prior Year (\$ In Thousands)

| ASSETS | KERS | | SPRS | KPPA Total | | Percentage of Change | Note |
|---|--------------------|------------------|------------------|--------------------|--------------------|----------------------|------|
| | Non-Hazardous | Hazardous | | 2022 | 2021 | | |
| CASH AND SHORT-TERM INVESTMENTS | | | | | | | |
| Cash Deposits | \$283 | \$52 | \$49 | \$384 | \$241 | 59.35% | 1 |
| Short-term Investments | 246,634 | 31,582 | 18,350 | 296,566 | 88,430 | 235.37% | 2 |
| Total Cash and Short-term Investments | 246,917 | 31,635 | 18,399 | 296,951 | 88,672 | | |
| RECEIVABLES | | | | | | | |
| Accounts Receivable | 21,851 | 540 | 787 | 23,178 | 16,955 | 36.70% | 3 |
| Investment Accounts Receivable | 11,974 | 5,369 | 2,045 | 19,387 | 53,047 | -63.45% | 4 |
| Total Receivables | 33,825 | 5,908 | 2,832 | 42,565 | 70,002 | -26.75% | |
| INVESTMENTS, AT FAIR VALUE | | | | | | | |
| Core Fixed Income | 170,083 | 74,510 | 29,239 | 273,831 | 305,148 | -10.26% | 5 |
| Public Equities | 608,244 | 273,785 | 106,464 | 988,493 | 744,958 | 32.69% | 6 |
| Specialty Credit | 226,841 | 116,901 | 42,196 | 385,937 | 317,380 | 21.60% | 7 |
| Private Equities | 75,010 | 56,331 | 25,653 | 156,993 | 126,996 | 23.62% | 8 |
| Derivatives | 269 | 138 | 52 | 459 | 220 | 108.87% | 9 |
| Absolute Return | - | - | - | 0 | 18,855 | -100.00% | 10 |
| Real Return | 72,334 | 36,974 | 14,202 | 123,510 | 108,045 | 14.31% | 11 |
| Opportunistic | 35,763 | 22,232 | 8,210 | 66,205 | 49,423 | 33.96% | 12 |
| Real Estate | 41,280 | 30,304 | 11,583 | 83,166 | 70,427 | 18.09% | 13 |
| Total Investments, at Fair Value | 1,229,824 | 611,174 | 237,599 | 2,078,596 | 1,741,453 | | |
| Securities Lending Collateral Invested | 26,235 | 12,050 | 4,738 | 43,022 | 32,681 | 31.64% | 14 |
| Total Assets | 1,536,801 | 660,767 | 263,567 | 2,461,135 | 1,932,808 | | |
| LIABILITIES | | | | | | | |
| Accounts Payable | 98 | 9 | 2 | 110 | 173 | -36.63% | 15 |
| Investment Accounts Payable | 123,686 | 19,694 | 10,333 | 153,713 | 89,748 | 71.27% | 16 |
| Securities Lending Collateral | 26,235 | 12,050 | 4,738 | 43,022 | 32,681 | 31.64% | 17 |
| Total Liabilities | 150,019 | 31,753 | 15,073 | 196,845 | 122,603 | | |
| Total Fiduciary Net Position Restricted for OPEB | \$1,386,781 | \$629,014 | \$248,495 | \$2,264,290 | \$1,810,206 | | |

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) The increase in Accounts Receivable is due to the timing of the generation of the AALC invoices (generated around the 26th of the month, not due until the 10th of the following month).
- 4) The variance in Investment Accounts Receivables is due to pending trades.
- 5) The decline in Core Fixed Income is a result of a rebalance to move money from Core Fixed Income to Public Equities and Specialty Credit as a result of the revised IPS.
- 6) The increase in Public Equities is due to additional funding and positive market conditions resulting in increased market values.
- 7) The increase in Specialty Credit is due to additional funding and positive market conditions increasing market values.
- 8) The increase in Private Equity is due to positive market conditions resulting in increased market values
- 9) Variance is a result of hedging and arbitration of risk within the portfolios.
- 10) The decline in Absolute Return is a result of the merging of the Absolute Return asset class with the Real Return asset class.
- 11) The increase in Real Return is a result of the merging of the Absolute Return asset class with the Real Return asset class and positive market conditions resulting in increased market values.

NOTE - Variance Explanation continued on next page.

12) *The increase in Opportunistic is due to additional funding and positive market conditions increasing market values.*

13) *The increase in Real Estate is due to additional funding and positive market conditions increasing market values.*

14) *Variance is a result of the demands of the Securities Lending Program.*

15) *The variance in Accounts Payable is due to an increase in outstanding employer reporting (insurance) invoices.*

16) *The variance In Investment Accounts Payable is due to pending trades.*

17) *Variance is a result of the demands of the Securities Lending Program.*

Differences due to rounding.



Combining Statement of Changes In Fiduciary Net Position - Insurance Fund

For the fiscal year ending September 30, 2021, with Comparative Totals as of September 30, 2020 (\$ In Thousands)

| | KERS | | SPRS | KRS Total | | Percentage of Change | Note |
|---|--------------------|------------------|------------------|--------------------|--------------------|----------------------|------|
| | Non-Hazardous | Hazardous | | 2022 | 2021 | | |
| ADDITIONS | | | | | | | |
| Employer Contributions | \$41,922 | \$184 | \$2,248 | \$44,355 | \$41,294 | 7.41% | |
| Medicare Drug Reimbursement | - | 0 | - | 0 | 0 | 8018.94% | 1 |
| Insurance Premiums | 41 | 3 | (1) | 43 | 45 | -5.44% | |
| Humana Gain Share Payment | - | - | - | - | - | | |
| Retired Re-employed Healthcare | 1,216 | 314 | - | 1,530 | 1,408 | 8.65% | |
| Health Insurance Contributions (HB1) | 1,587 | 281 | 53 | 1,921 | 1,907 | 0.72% | |
| Northern Trust Settlement | - | - | - | - | - | | |
| Employer Cessation Contributions | 9,536 | - | - | 9,536 | - | | |
| Total Contributions | 54,303 | 782 | 2,300 | 57,385 | 44,654 | | |
| INVESTMENT INCOME | | | | | | | |
| From | | | | | | | |
| Net Appreciation (Depreciation) in FV of Investments | 4,206 | 6,769 | 3,139 | 14,115 | 78,104 | -81.93% | 2 |
| Interest/Dividends | 8,658 | 4,552 | 1,759 | 14,968 | 10,167 | 47.22% | 3 |
| Total Investing Activities Income | 12,863 | 11,321 | 4,898 | 29,083 | 88,271 | | |
| Less: Investment Expense | 1,530 | 781 | 307 | 2,618 | 1,649 | 58.78% | 4 |
| Less: Performance Fees | 2,580 | 1,974 | 842 | 5,397 | 1,527 | 253.49% | 5 |
| Net Income from Investing Activities | 8,753 | 8,565 | 3,749 | 21,068 | 85,095 | | |
| From | | | | | | | |
| Securities Lending Income | 22 | 10 | 4 | 35 | 30 | | |
| Less: Securities Lending Borrower Rebates | (53) | (25) | (10) | (88) | (24) | | |
| Less: Securities Lending Agent Fees | 11 | 5 | 2 | 19 | 8 | | |
| Net Income from Securities Lending | 64 | 30 | 12 | 105 | 46 | 129.15% | 6 |
| Net Investment Income | 8,817 | 8,595 | 3,761 | 21,173 | 85,141 | | |
| Total Additions | 63,120 | 9,377 | 6,061 | 78,558 | 129,795 | | |
| DEDUCTIONS | | | | | | | |
| Healthcare Premiums Subsidies | 28,819 | 5,195 | 3,548 | 37,563 | 40,520 | -7.30% | |
| Administrative Expenses | 208 | 32 | 18 | 258 | 249 | 3.59% | |
| Self-Funded Healthcare Costs | 431 | 25 | 4 | 460 | 304 | 51.36% | 7 |
| Total Deductions | 29,458 | 5,253 | 3,570 | 38,281 | 41,073 | | |
| Net Increase (Decrease) in Fiduciary Net Position Restricted for OPEB | 33,662 | 4,124 | 2,491 | 40,277 | 88,723 | | |
| Total Fiduciary Net Position Restricted for OPEB | | | | | | | |
| Beginning of Period | 1,357,268 | 624,889 | 246,004 | 2,228,162 | 1,721,483 | | |
| End of Period | \$1,390,930 | \$629,014 | \$248,495 | \$2,268,438 | \$1,810,206 | | |

NOTE - Variance Explanation

- 1) Medicare drug reimbursement payments fluctuate year to year based on claims reviewed.
- 2) The decrease in Net Appreciation in Fair Value of Investments is a result of unfavorable market conditions resulting in unrealized losses in public equity for the first quarter of FY22.
- 3) The increase in Interest/Dividends is due to increased income from Private Equity, Core Fixed Income, and Specialty Credit asset classes.
- 4) The management fees are up due to the increase in market values across all asset classes.
- 5) The increase in Performance fees is due to favorable market conditions resulting in higher performance fees primarily within private equity.
- 6) Variance is a result of the demand of the Securities Lending Program.
- 7) Self-Funded Healthcare Costs fluctuate year to year based on actual claims paid for a small group of retirees.

Differences due to rounding.

KPPA ADMINISTRATIVE BUDGET 2021-2022
FOURTH QUARTER BUDGET-TO-ACTUAL ANALYSIS
Fiscal Year 2022

| Account Name | Budgeted | Actual Expenses | Remaining | Percent Remaining | KERS NH | KHAZ | SPRS | KRS Total |
|--------------------------------------|---------------------|--------------------|---------------------|-------------------|--------------------|------------------|-----------------|--------------------|
| | | | | | Actual Expense | Actual | Actual | |
| PERSONNEL | | | | | 30.88% | 3.41% | 0.67% | |
| Salaries | \$16,900,000 | \$4,316,718 | \$12,583,282 | 74.46% | \$1,333,003 | \$147,200 | \$28,922 | \$1,509,125 |
| Wages (Overtime) | 342,000 | 48,884 | 293,116 | 85.71% | 15,095 | 1,667 | 328 | 17,090 |
| Emp Paid Retirement | 14,478,107 | 3,426,929 | 11,051,178 | 76.33% | 1,058,236 | 116,858 | 22,960 | 1,198,054 |
| Emp Paid Health Ins | 2,500,000 | 735,904 | 1,764,096 | 70.56% | 227,247 | 25,094 | 4,931 | 257,272 |
| Emp Paid Sick Leave | 115,650 | - | 115,650 | 100.00% | - | - | - | - |
| Workers Compensation | 77,100 | 75,163 | 1,937 | 2.51% | 23,210 | 2,563 | 504 | 26,277 |
| Unemployment | 3,600 | - | 3,600 | 100.00% | - | - | - | - |
| Other Personnel | 1,130,250 | 309,998 | 820,252 | 72.57% | 95,727 | 10,571 | 2,077 | 108,375 |
| Employee Training | 18,400 | 2,421 | 15,979 | 86.84% | 748 | 83 | 16 | 846 |
| LEGAL & AUDITING SERVICES | | | | | | | | |
| Legal Hearing Officers | 84,600 | 16,665 | 67,935 | 80.30% | 5,146 | 568 | 112 | 5,826 |
| Legal (Stoll, Keenon) | 180,000 | 9,199 | 170,801 | 94.89% | 2,841 | 314 | 62 | 3,216 |
| Frost Brown (Tax Advisor) | 173,000 | (11,335) | 184,335 | 106.55% | (3,500) | (387) | (76) | (3,963) |
| Reinhart | 24,000 | - | 24,000 | 100.00% | - | - | - | - |
| Ice Miller | 336,000 | 303 | 335,697 | 99.91% | 94 | 10 | 2 | 106 |
| Legal Expense | 12,000 | - | 12,000 | 100.00% | - | - | - | - |
| Auditing | 118,350 | 41,385 | 76,965 | 65.03% | 12,780 | 1,411 | 277 | 14,468 |
| CONSULTING SERVICES | | | | | | | | |
| Medical Reviewers | 1,200,000 | 300,493 | 899,507 | 74.96% | 92,792 | 10,247 | 2,013 | 105,052 |
| Escrow for Actuary Fees | 12,000 | - | 12,000 | 100.00% | - | - | - | - |
| CONTRACTUAL SERVICES | | | | | | | | |
| Miscellaneous Contracts | 22,750 | 8,850 | 13,900 | 61.10% | 2,733 | 302 | 59 | 3,094 |
| Human Resources Consulting | 6,600 | 5,794 | 806 | 12.21% | 1,789 | 198 | 39 | 2,026 |
| Actuarial Services | 700,000 | 81,179 | 618,821 | 88.40% | 25,068 | 2,768 | 544 | 28,380 |
| Facility Security Charges | 112,000 | 17,887 | 94,113 | 84.03% | 5,524 | 610 | 120 | 6,253 |
| PERSONNEL SUBTOTAL | \$38,546,407 | \$9,386,436 | \$29,159,971 | 75.65% | \$2,898,532 | \$320,078 | \$62,889 | \$3,281,498 |
| OPERATIONAL | | | | | | | | |
| Natural Gas | 25,200 | 1,227 | \$23,973 | 18.51% | \$379 | \$42 | \$8 | \$429 |
| Electric | 138,000 | 30,238 | \$107,762 | 38.19% | 9,337 | 1,031 | 203 | 10,571 |
| Rent-NonState Building | 52,000 | 12,661 | \$39,339 | 40.25% | 3,910 | 432 | 85 | 4,426 |
| Building Rental - PPW | 1,100,000 | 240,524 | \$859,476 | 30.43% | 74,274 | 8,202 | 1,612 | 84,087 |
| Copier Rental | 122,587 | 15,890 | \$106,697 | 43.17% | 4,907 | 542 | 106 | 5,555 |
| Rental Carpool | 4,800 | 970 | \$3,830 | 68.02% | 300 | 33 | 6 | 339 |
| Vehicle/Equip. Mainten. | 1,350 | 249 | \$1,101 | 100.00% | 77 | 8 | 2 | 87 |

| KPPA ADMINISTRATIVE BUDGET 2020-21 FOURTH QUARTER BUDGET-TO-ACTUAL ANALYSIS | | | | | | | | | |
|--|---------------------|-----------------------|---------------------|-------------------|------------------------|------------------|--------------------------------------|--------------------|--|
| Account Name | Budgeted | Actual | Remaining | Percent Remaining | KERS NH Actual Expense | KHAZ Actual | SPRS Actual | KRS Total | |
| Postage | 610,000 | 24,300 | \$585,700 | -1.80% | 7,504 | 829 | 163 | 8,495 | |
| Freight | 600 | 114 | \$486 | 100.00% | 35 | 4 | 1 | 40 | |
| Printing (State) | 6,000 | 320 | \$5,680 | 74.00% | 99 | 11 | 2 | 112 | |
| Printing (non-state) | 112,500 | 4,219 | \$108,281 | 24.84% | 1,303 | 144 | 28 | 1,475 | |
| Insurance | 6,000 | 5,422 | \$578 | 69.18% | 1,674 | 185 | 36 | 1,896 | |
| Garbage Collection | 6,000 | 1,324 | \$4,676 | 19.79% | 409 | 45 | 9 | 463 | |
| Conference Expense | 25,750 | 4,307 | 21,444 | 83.28% | 1,330 | 147 | 29 | 1,506 | |
| MARS Usage | 52,800 | 6,775 | \$46,025 | 30.34% | \$2,092 | \$231 | \$45 | \$2,369 | |
| COVID-19 Expenses | 168,000 | 3,716 | \$164,284 | 2.85% | 1,147 | 127 | 25 | 1,299 | |
| Office Supplies | 42,600 | 16,170 | \$26,430 | 72.61% | 4,993 | 551 | 108 | 5,653 | |
| Furniture & Office Equipment | 9,600 | - | \$9,600 | 100.00% | - | - | - | - | |
| Travel (In-State) | 12,600 | 1,565 | 11,035 | 87.58% | 483 | 53 | 10 | 547 | |
| Travel (Out of State) | 45,150 | - | 45,150 | 100.00% | - | - | - | - | |
| Dues & Subscriptions | 61,600 | 15,872 | 45,728 | 74.23% | 4,901 | 541 | 106 | 5,549 | |
| Miscellaneous | 1,600 | 128 | 1,472 | 92.00% | 40 | 4 | 1 | 45 | |
| COT Charges | 24,000 | 3,940 | 20,060 | 54.29% | 1,217 | 134 | 26 | 1,377 | |
| Telephone - Wireless | 5,400 | 1,368 | 4,032 | 37.83% | 422 | 47 | 9 | 478 | |
| Telephone - Other | 120,000 | 26,541 | 93,459 | 34.70% | 8,196 | 905 | 178 | 9,279 | |
| Computer Equip./Software | 2,640,000 | 696,646 | 1,943,354 | 55.00% | 215,124 | 23,756 | 4,668 | 243,547 | |
| OPERATIONAL SUBTOTAL | \$1,756,499 | \$1,114,484 | \$642,015 | 75.36% | \$344,153 | \$38,004 | \$7,467 | \$389,624 | |
| SUBTOTAL | 40,302,906 | 10,500,920 | 29,801,986 | 73.95% | 3,242,685 | 358,081 | 70,356 | 3,671,123 | |
| Major Legislative Implementation | 4,064,956 | - | 4,064,956 | 100.00% | - | - | - | - | |
| TOTAL | \$48,005,500 | \$10,500,921 | \$37,504,579 | 43.23% | \$3,242,685 | \$358,081 | \$70,356 | \$3,671,123 | |
| Differences due to rounding | | | | | | | | | |
| Plan | Budgeted | Actual Expense | | | | | % of Total KRS Actual Expense | | |
| KERS | \$14,824,098 | \$3,242,684 | | | | | 30.88% | | |
| KHAZ | \$1,636,988 | \$358,081 | | | | | 3.41% | | |
| SPRS | \$321,637 | \$70,356 | | | | | 0.67% | | |
| TOTAL | \$16,782,723 | \$3,671,122 | | | | | | | |
| Plan - Specific Expenses | | | | | | | | | |
| | KERS | KHAZ | SPRS | | | Amount | | | |
| CERS Adjustment | \$- | \$- | \$- | | | \$1,069 | | | |
| CERS Actual | - | - | - | | | - | | | |
| KERS Adjustment | - | - | - | | | 14,522 | | | |
| KERS Actual | - | - | - | | | - | | | |
| Subtotal Plan Specific | - | - | - | | | 15,591 | | | |
| Total Expenses | \$14,824,098 | \$1,636,988 | \$70,356 | | | | | | |

Pension Fund Contribution Report

For the period ending September 30, 2021, with Comparative Totals as of September 30, 2020 (\$ in Millions)

| | Kentucky Employees Retirement System | | | | State Police Retirement System | |
|-------------------------------|--------------------------------------|------------------|----------------|----------------|--------------------------------|----------------|
| | Non-Hazardous | | Hazardous | | FY22 | FY21 |
| | FY22 | FY21 | FY22 | FY21 | | |
| Member Contributions | \$22.2 | \$22.1 | \$4.7 | \$5.1 | \$1.2 | \$1.2 |
| Employer Contributions | 416.9 | 240.1 | 14.0 | 15.9 | 15.4 | 15.2 |
| Net Investment Income | 12.3 | 9.8 | 3.7 | 3.0 | 1.4 | 1.4 |
| Total Inflows | 451.4 | 272.0 | 22.4 | 24.0 | 18.0 | 17.8 |
| Benefit Payments/ Refund | 261.3 | 254.2 | 20.3 | 19.1 | 16.0 | 15.8 |
| Administrative Expenses | 3.6 | 2.8 | 0.4 | 0.3 | 0.1 | 0.1 |
| Total Outflows | 264.9 | 257.0 | 20.7 | 19.4 | 16.1 | 15.9 |
| NET Contributions | 186.5 | 15.0 | 1.7 | 4.6 | 1.9 | 1.9 |
| Realized Gain/(Loss) | 11.6 | 11.2 | 7.2 | 3.5 | 2.2 | 1.3 |
| Unrealized Gain/(Loss) | 3.9 | 88.5 | (1.3) | 27.5 | (0.4) | 10.1 |
| Change in Net Position | 202.0 | 114.7 | 7.6 | 35.6 | 3.7 | 13.3 |
| Beginning of Period | 3,085.0 | 2,362.2 | 874.9 | 697.4 | 357.7 | 295.0 |
| End of Period | \$3,287.0 | \$2,476.9 | \$882.5 | \$733.0 | \$361.4 | \$308.3 |

Insurance Fund Contribution Report

For the period ending September 30, 2021, with Comparative Totals as of September 30, 2020 (\$ in Millions)

| | Kentucky Employees Retirement System | | | | State Police Retirement System | |
|-----------------------------------|--------------------------------------|------------------|----------------|----------------|--------------------------------|----------------|
| | Non-Hazardous | | Hazardous | | FY22 | FY21 |
| | FY22 | FY21 | FY22 | FY21 | | |
| Employer Contributions | \$51.5 | \$38.8 | \$0.2 | \$0.1 | \$2.2 | \$2.4 |
| Insurance Premiums | - | - | - | - | - | - |
| Retired Reemployed Healthcare | 1.2 | 1.1 | 0.3 | 0.3 | - | - |
| Health Insurance Contributions | 1.6 | 1.6 | 0.3 | 0.3 | 0.1 | 0.1 |
| Net Investment Income | 4.6 | 4.2 | 1.8 | 2.0 | 0.6 | 0.8 |
| Total Inflows | 58.9 | 45.7 | 2.6 | 2.7 | 2.9 | 3.3 |
| Healthcare Premiums | 29.3 | 32.1 | 5.2 | 5.1 | 3.6 | 3.7 |
| Administrative Expenses | 0.2 | 0.2 | - | - | - | - |
| Total Outflows | 29.5 | 32.3 | 5.2 | 5.1 | 3.6 | 3.7 |
| NET Contributions | 29.4 | 13.4 | (2.6) | (2.4) | (0.6) | (0.4) |
| Realized Gain/(Loss) | 9.0 | 3.7 | 6.5 | 1.9 | 2.9 | 0.8 |
| Unrealized Gain/(Loss) | (4.8) | 42.9 | 0.2 | 20.8 | 0.2 | 8.0 |
| Change in Net Position | 33.6 | 60.0 | 4.1 | 20.4 | 2.4 | 8.4 |
| Beginning of Period | 1,357.3 | 1,006.5 | 624.9 | 514.7 | 246.0 | 200.2 |
| End of Period | \$1,390.9 | \$1,066.5 | \$629.0 | \$535.0 | \$248.4 | \$208.6 |

Differences in the charts above are due to rounding.



KENTUCKY PUBLIC PENSIONS AUTHORITY

Outstanding Invoices by Type and Employer

| Invoice Type | 9/30/2021 | 6/30/2021 | Change H/(L) |
|--|---------------------|---------------------|---------------|
| Averaging Refund to Employer | \$(431,762) | \$(459,730) | -6% |
| Employer Free Military and Decompression Service | 280,778 | 58,861 | 377% |
| Member Pension Spiking Refund | (28,486) | (25,546) | 12% |
| Monthly Reporting Invoice | (50,017) | (74,761) | -33% |
| Penalty – Monthly Reporting | 249,807 | 234,473 | 7% |
| Reinstatement | 275,235 | 244,823 | 12% |
| Actuarially Accrued Liability Contribution | 428,570 | - | |
| Total | \$724,125 | \$(21,879) | -3410% |
| Health Insurance Reimbursement | \$1,484,849 | \$1,198,562 | 24% |
| Omitted Employer | 1,658,929 | 1,576,232 | 5% |
| Employer Pension Spiking* | 1,371,944 | 1,760,350 | -22% |
| Standard Sick Leave | 8,578,095 | 8,253,827 | 4% |
| Total | \$13,093,817 | \$12,788,971 | 2% |
| Grand Total | \$13,817,942 | \$12,767,091 | 8% |

**Pension Spiking invoices on this report are Employer Pension Spiking. By statute these invoices are due 12 months from invoice date. Employer Pension Spiking is in effect only for retirements prior to July 1, 2018, therefore, unless there has been a recently created invoice for a backdated retirement, all of these invoices are greater than 12 months old..*

| Employer Name (Top Ten) | 9/30/2021 | 6/30/2021 | Change H/(L) |
|---|-------------|-------------|--------------|
| Kentucky State Police | \$7,398,671 | \$7,011,463 | 6% |
| Kentucky River Regional Jail | 979,925 | 979,925 | 0% |
| Department of Highways | 795,367 | 826,323 | -4% |
| City of Covington | 375,368 | 371,872 | 1% |
| Department for Community Based Services | 370,767 | 218,148 | 70% |
| Kentucky River Community Care | 361,582 | 361,582 | 0% |
| Kenton County Airport Board | 329,030 | 322,897 | 2% |
| City of Fort Thomas | 224,422 | 220,287 | 2% |
| TARC - Transit Authority River City | 209,713 | 178,211 | 18% |
| Henry County Fiscal Court | \$206,088 | \$205,792 | 0% |

| | Total Unpaid Balance | Number of Invoices |
|---------------------|------------------------|--------------------|
| CERS | \$1,644,590.41 | 2,039 |
| CERH | \$1,612,753.19 | 361 |
| KERS | \$2,441,195.22 | 1,113 |
| KERH | \$665,119.35 | 228 |
| SPRS | \$7,398,670.73 | 131 |
| Grand Total: | \$13,762,328.90 | 3,872 |

| | Total Unpaid Balance | Number of Invoices |
|---------------------|------------------------|--------------------|
| CERS/CERH | \$3,257,343.60 | 2,400 |
| KERS/KERH | \$3,106,314.57 | 1,341 |
| SPRS | \$7,398,670.73 | 131 |
| Grand Total: | \$13,762,328.90 | 3,872 |



KENTUCKY PUBLIC PENSIONS AUTHORITY

**Penalty Waivers Report
From: 7/1/2021 To: 9/30/2021**

Note: Delinquent Interest amounts are included in the totals for the invoice

| | Invoice Amount | Delinquent Interest | Delinquent Interest | Invoice Status Date | Invoice Due Date | Invoice Status | Employer Classification | Comments |
|--------------|----------------|---------------------|---------------------|---------------------|------------------|----------------|-------------------------|-----------------------------------|
| | \$1,000 | \$- | \$- | 8/24/2021 | 9/16/2021 | CANC | County Attorneys | Agency in good standing with KPPA |
| Total | \$1,000 | | | | | | | |
| | \$1,000 | \$- | \$- | 7/23/2021 | 8/2/2021 | PAID | Non-P1 State Agencies | |
| | 1,000 | - | - | 7/9/2021 | 7/19/2021 | PAID | Non-P1 State Agencies | |
| | 1,000 | - | - | 9/21/2021 | 10/1/2021 | PAID | Health Departments | |
| Total | \$3,000 | | | | | | | |

Notes:

Invoice Status:

CANC - Cancelled

CRTD - Created

PAID - Paid