

**Kentucky Retirement Systems Board of Trustees
Quarterly Board Meeting
December 2, 2021, 10:00 a.m. ET
Live Video Conference/Facebook Live
AGENDA**

- | | |
|---|--|
| 1. Call to Order | Keith Peercy |
| 2. Legal Public Statement | Office of Legal Services |
| 3. Roll Call/Public Comment | Sherry Rankin |
| 4. Approval of Minutes – November 16, 2021* | Keith Peercy |
| 5. Approval of Annual Actuarial Valuations and Contribution Rates* | Danny White
Janie Shaw |
| 6. Wilshire Quarterly Investment Reports | Prewitt Lane
Wilshire |
| 7. External Audit* | Alan Norvell
Ryan Graham |
| 8. Joint Audit Committee Reports and Recommendations* | Lynn Hampton
Kristen Coffey |
| 9. Quarterly Financial Reports | Rebecca Adkins |
| a. Quarterly Administrative Expenses to Budget | |
| b. Contribution Report | |
| c. Outstanding Invoices | |
| d. Penalty Waiver | |
| 10. Biennial Budget Request | Rebecca Adkins |
| 11. Bylaw Amendments* | Michael Board |
| 12. Legislative Updates | David Eager |
| 13. House Bill 8 Appeals Decisions* | Rebecca Adkins |
| 14. CEO Report | John Chilton |
| 15. New Business | Keith Peercy |
| 16. Closed Session** | Keith Peercy |
| 17. Adjourn* | Keith Peercy |

**Board Action Required*

***Board Action May Be Required*

**MINUTES OF MEETING
BOARD OF TRUSTEES KENTUCKY RETIREMENT SYSTEMS
QUARTERLY MEETING NOVEMBER 16, 2021 AT 10:00 AM
VIA LIVE VIDEO TELECONFERENCE**

At the meeting of the Kentucky Retirement Systems Board of Trustees held on November 16, 2021 the following members were present: Keith Peercy (Chair), John Cheshire, Raymond Connell, Joseph Grossman, Lynn Hampton, Prewitt Lane, Pamela Thompson and Larry Totten. Staff members present were David Eager, Rebecca Adkins, Erin Surratt, Michael Board, Steven Herbert, John Chilton KRS CEO, Ed Owens, III, CERS CEO, Victoria Hale, Ann Case, Connie Pettyjohn, Connie Davis, D’Juan Surratt, Jared Crawford, Kristen Coffey, Elizabeth Smith, Steve Willer, Ashley Gabbard, Shaun Case, Phillip Cook, Glenna Frasher and Sherry Rankin. Others in attendance included Danny White and Janie Shaw with GRS Consulting, and Tracy Garrison, Larry Loew, Carrie Lovell 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 no public comment, Mr. Peercy introduced agenda item *Approval of Minutes – September 5, 2021*. Ms. Hampton made a motion and Mr. Grossman seconded to approve the minutes as presented. The motion passed unanimously.

Mr. Peercy introduced agenda item *Draft of 2021 Actuarial Valuations*. Mr. Eager began by providing an overview of the process in an attempt to assist the newer Trustees. He stated that GRS Consulting does a valuation each year based on the June 30 data. They present it to the Public Pension Oversight Board as well as the committees and both of the Boards in November. In December, the Boards approve them and they take effect in July. Therefore, we are currently in fiscal year 2022, using the valuation that is based on the 2020 data, which was approved in December of last year and took effect this past July. He agreed that it is confusing, but wanted to remind the Trustee that the contribution rate you approve in December will come into effect in July 2022 which will actually be Fiscal Year 2023.

Mr. Danny White with GRS Consulting presented the Draft 2021 Actuarial Valuation Results for the Kentucky Retirement Systems. He explained that this presentation is given as information only today and will be brought up again in the December Board meeting at which time the Board will adopt or approve the valuations. Mr. White began by providing an overview of legislation that passed in 2021. The first major legislation was House Bill 8, which was a huge, ground-breaking moment that was the beginning of the financial security of the KERS Non-Hazardous Fund. He explained that normal employer contribution is paid as a percentage of payroll, and with the decline in the number of KERS Non-Hazardous employees, it was causing the contribution rate to spiral upwards at an alarming rate. What House Bill 8 accomplished is that the amortization cost are going to be collected from each participating employer and then each participating employer will then pay a normal cost rate as a percentage of payroll. He explained that there is no longer an incentive for employers to reduce their covered payroll in order to reduce their pension costs. Mr. Grossman asked the question does the liability for each entity stay the same until it is a zero balance. Mr. White answered the allocation is fixed but the amortization cost that each employer pays floats up or down. Mr. Eager clarified that the entity is assigned a percentage of the total. The percentage stays the same but the amount changes year to year. Mr. White then spoke about Senate Bill 169 which provided some disability benefits improvements.

Mr. White spoke about the demographics and stated that the active membership declined across all of the funds. This resulted in the decrease in covered payroll for both KERS Hazardous and State Police Retirement Systems. Again, he stated that for KERS Non-Hazardous, the employer contribution is no longer tied to payroll. Mr. White then spoke about the Fiscal Year 2021 Investment Experience where there was between 21% and 25% return on market value and how this was a monumental year for our investments. He then reviewed the liability experience in both the retirement and insurance funds. He indicated that it is imperative to maintain or increase contribution effort for the KERS Non-Hazardous Retirement Fund. He reviewed the required employer contributions in percentage and dollar amounts for the KERS Non-Hazardous, KRS Hazardous and State Police, as well as, the amortization costs for the KERS Non-Hazardous fund. Mr. Chilton stated in terms of what the money is being used for, it's being used to provide money to cover the normal costs for active employees, and there is an add-on for the amortization under House Bill 8 for the unfunded liability. He asked where the administrative expenses for KPPA are imbedded in these contributions. Mr. White responded that the administrative expenses are

imbedded in the normal costs. Mr. Connell asked a question about the statement about with having the investment gains we realized that amortization costs to the agencies can go down. He asked if that is also the case that if the investments are not that great that the amortization costs go up. Mr. White answered that yes that is correct, they can go up. He stated it is in the Funding Policy that is put in Statute, so the Board has control over certain actuarial assumptions but it is the Funding Policy that is driving the amortization costs. Mr. Connell indicated that his concern is that we could experience and economic downturn occur in investment gains, can it be assumed that this 20 year amortization assumption would decrease somewhat the spike and costs to the agencies. He is concerned about a situation in which the economy goes down and our investment gains are hurt, but the costs to the agencies increase. It seems it will put pressure on the whole amortization schedule. Mr. White indicated that it could. This is a prime example of why we use a five-year smoothing in investment gains and losses. Understand that while we have 20 year amortizations and you have an investment event like you experience this past year, it actually gets recognized over more like a 25-year period. This is because you don't recognize all of that immediate gain this year, due to the amortization it is spread out over five years and then it is fully realized. Ms. Hampton asked for clarification on her understanding that there are two pools of money, one amortized over a 30 year period and one over a 20 year period. Mr. White stated that there are two bases that are recognized and we do track and maintain those pools separately, but it is just one net effect that the employers see and pay. Ms. Hampton then asked are these blended annually. Mr. White indicated that yes they are combined. Ms. Thompson then asked if this just goes on in perpetuity. Mr. White responded yes, it does. He stated that the only one that shouldn't go on in perpetuity is the 30 year base that is down to 28. That is your large funding base, the existing unfunded liability. Ms. Thompson then asked if there was a thought about having just a single 20 year period because, in theory, by the time you get 20 years out we are in a much healthier position and it is not going to be as serious of an impact. Mr. White stated that there was some thought about it, but we felt this was the more preferred approach because you are able to track and maintain to show how you are paying down each tranche or base. Mr. Totten stated that back on November 4, 2021, at the Joint Audit Committee meeting, it appeared that a draft of the AFCR and on page 71, there is a list of a schedule of employers' net pension liability and they are all the same. He indicated that he is focusing on the KERS Non-Hazardous and on the line of ratio of plan fiduciary net position the total pension liability gives a percentage amount of 18.48% and that is the figure that was picked up by the Lexington Herald Leader and broadcast

all over. Mr. Totten went on to say that here it seems we are saying our funded ratio is 16.8%. He questions if one of these figures is more real than the other, or which one are we going to rely upon and go forward with and he is looking for the difference in these two figures. Mr. White indicated that the most significant difference is the asset amount. The actuarial value of assets is a calculated asset value where investment gains and losses are factored in at 20% a year for the next five years, so that we are not overreacting either way when we get a great return in one year or a return that is less than expected, in terms of developing the contribution rate. So, this actuarial value of assets reflects the terms of calculating contribution rates. The figures used in the Annual Report are reflecting the GASB 67 accounting standards and those are the differences in the percentages you have pointed out. Both are correct but are used for different purposes. Mr. Totten then asked which one with we be using to determine the contribution rates. Mr. Eager indicated that while both figures are published, one in the Annual Report and one here in the valuation, we use the valuation figure in determining the contribution rates.

Mr. White continued to review the change in required employer contributions and amortization cost, the unfunded actuarial accrued liability, active membership count chart, covered payroll chart, retired membership count chart, pension benefit distribution chart, and the funding results chart. Ms. Hampton asked for clarification that this does not include the tier 3 employees who do not have a liability. Mr. White answered that the tier 3 is built in there, there is a liability and everything is pooled together, for all members, including active, retired, tier 1, tier 2 and tier 3. It is just that their benefits are structured different as a cash balance, but it is all weighted in there. We can see a decrease every year in the normal cost rate, and as your tier 1 employees retire, you will continue to see that number decrease. They will be replaced with tier 3 employees and their benefit is relatively less expensive compared to the tier 1 employees.

Mr. White reviewed the projection assumption charts that reviewed the unfunded liability and funded ratio for both pension and insurance and charts showing the employer contributions and costs for the KERS Non-Hazardous, KERS Hazardous and State Police Retirement Systems. Mr. Totten questioned what attributes to the difference in the KERS Non-Hazardous chart showing the pension unfunded liability and the other two plans for the same chart. Mr. White explained that it all about your starting point. The KERS Hazardous plan, for instance, had a better starting point, and when you have an investment gain like we experience this past year, you are going to

get a bigger effect. The steep curve you see on this chart for the next four to five years is that investment gain being fully recognized in the funding calculations. Mr. White gave his closing comments on the 2021 valuation results and stated that the favorable investment experience improved the funded status and lowered the required contribution effort across all of the funds. He stated that it is imperative that the State and participating employers continue contributing the actuarially determined contributions in each future year to improve the Systems' financial security.

Mr. Peercy introduced agenda item *Ratification of Investment Policy Statement*. Mr. Lane began by stating changes were needed to the Investment Policy Statement essentially due to the separation, to correct terminology, and to do some fine tuning. He indicated that no significant policy shifts were made in this document this time. However, he did state that at some point we will be including some language about ESG (Environmental, Social and Governance). The Department of Labor has issued a directive to include this language and our legal and investment staffs are conducting research in how other organizations are dealing with this statement. We will have to make changes to keep in conformity with the Department of Labor at some point in the future. Mr. Lane introduced Mr. Herbert to give an overview of the policy statement and to answer any questions. Mr. Herbert reiterated that the changes made were very minor and reviewed a few of those changes throughout the policy. Mr. Chilton stated that because there is much discussion in the media and attention from the regulators on the ESG issue, can you provide an explanation of what that is so that we can understand it when we hear about it. Mr. Lane stated that he really doesn't think it is coming from the regulators, but rather the whole sensitivity of today's society. He stated that it is going to be rather difficult to incorporate this within our investment policy and feels that we just need to follow the Department of Labor's regulations and to insure that our managers are being sensitive to these and are in conformance. Mr. Grossman made a motion and Mr. Cheshire seconded to ratify the Investment Policy Statement. The motion passed unanimously.

Mr. Peercy introduced agenda item *Ratification of Retiree Health Plan Committee Reports and Recommendations*. Ms. Pettyjohn stated that the Joint CERS and KRS Retiree Health Plan Committee met on November 9, 2021. At this meeting, Mr. Larry Totten was elected by the committee to the office of Vice-Chair. The Committee does not have anything for the Board to

ratify at this time and the material provided is for informational purposes only. Ms. Pettyjohn reviewed the highlights of the information provided during the committee meeting. Mr. Totten stated that it was nice to see that the retirees are really taking advantage of their benefits. He feels that it is a big deal for Kentucky public retirees and it is good to see them take advantage of the benefits that are offered.

Mr. Percy introduced agenda item *Ratification of Joint Audit Committee Reports and Recommendations*. Ms. Lynn Hampton began by stating that the Joint Audit Committee met on November 4, 2021 where we met with the external auditors and we are meeting again on November 30, 2021 where we expect to see the final report, including the management letter and replies to the management letter. We also approved the Charter for the Joint Audit Committee. She formally thanked Ms. Coffey who always provides several articles that are on appropriate subjects for our committee and the Boards. Ms. Hampton introduced Ms. Coffey who indicated that the committee is requesting that the Board ratify a few actions taken by the Joint Audit Committee. She stated that the Committee approved the purchase of infrastructure and application security assessment. This is something that is done every year. Ms. Coffey stated that the committee also approved the Charter for the Joint Audit Committee and the Committee meeting dates and time for the next calendar year of 2022, as well as the Special Called meeting scheduled for November 30, 2021. Mr. Lane made a motion and Mr. Totten seconded to ratify the Joint Audit Committee reports and recommendations. The motion passed unanimously.

Mr. Percy 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 September 30, 2021; Combining Statement of Changes in Fiduciary Net Position for the Pension and Insurance Funds for the Fiscal Year ending September 30, 2021; First Quarter Fiscal Year 2022 Budget to Actual Analysis; Contribution Reports for Pension and Insurance Funds; Outstanding Invoices; and Penalty Waivers. Mr. Chilton asked a question concerning the Outstanding Invoices and wanted an explanation of the credit shown on the line item Refund to Employer. Ms. Adkins indicated that invoices can be credit or debit for the employer so this is just how we exchange funds back and forth with the employer. She provided an example where an employer miss keys an employee's salary and enters \$5000.00 instead of \$500.00 and they pay contributions on the

\$5000.00 amount. When they come back and correct it, then they are given a refund of the contributions that they incorrectly paid and they take it in credit that they can apply to existing invoices or simply take it back. Ms. Hampton asked for an explanation of the pension spiking line item that is listed on this report. Ms. Adkins explained that pension spiking as a concept where an employer increases one of their employee's salary who is getting close to retirement, and high five is in their retirement calculation and the employer gives them a raise for no other purpose than to say they want them to get more in retirement as a reward for being a great employee. The legislature attempts to stop that practice by placing a 10% cap on it. Therefore, a salary that increases more than 10% during a fiscal year is considered a spike. For a while, they were charging the employer for it, so we would calculate the actuarial amount and charge it back to the employer. This practice ended in 2018 and the figures included in the reports are the invoices of those employers who are either struggling to pay or that are included in litigation. Ms. Surratt added that when it shifted to the member pension spiking where they don't get the benefit of the salary above the 10%, any member contributions that were withheld out of that amount above 10% are refunded back to the employer to return to the member, which is the line item entitled member pension spiking refund you see in this report.

Mr. Peercy introduced agenda item *Legislative Updates*. Mr. Eager indicated that the General Assembly session is set to begin January 4, 2022 and since it is an even year, it will be a 60 day session as opposed to a 30 day session. Their primary function is to approve the biennium budget, but there will be a multitude of bills, many which will have an effect on Kentucky Public Pensions Authority and Kentucky Retirement Systems and County Employee Retirement System. Shawn Sparks in Communications does a fabulous job in tracking those bills. Mr. Eager stated that for the past six years, we have had a housekeeping bill that has been sponsored by Representative Jerry Miller. Representative Miller is sponsoring a bill that will add an exemption of overtime to the pension spiking issue, due to the excessive amount of overtime that was needed dealing with the State of Emergency declarations enacted by the Governor. This will eliminate a great deal of the current pension spiking issues. Another bill is sponsored by Representative Wheatley that proposes to retroactively move Tier 3 hazardous duty employees into Tier 2. The idea behind that is to make those positions more appealing to potential employees and to help keep the employees that are hired in those positions. As the session progresses, we will be monitoring and tracking the progression of any bill that affects any of the systems.

Mr. Peercy introduced agenda item *CEO Report*. Mr. Chilton began by stating that there is a process in play currently in dealing with expense allocations between the Kentucky plans and the County plans and this will be coming forward sometime in the near future. The actuarial assumptions will be discussed and the contribution rates will be voted on at the December meeting. Also at the next meeting, we will be approving the audit report. We have discussed the ESG issues, so be alert to the media about that issue that is affecting many organizations. Mr. Chilton advised that he recently sent an email out to all of the Trustees reminding them about the IT security awareness and the online training that all Trustees need to complete. Board Smart is another resource for the Trustees to gain more education. He stated that one subject that will be discussed in the upcoming legislative session is the COLA (cost of living adjustments). He indicated that as a Board, we should remain neutral on the subject as it is a legislative issue to change benefits in that manner. In the Statutes, it indicates that any change in benefits must be prefunded, therefore it will be a very costly measure. Nonetheless, it will be discussed during this session on some level. Mr. Chilton stated that other than himself, the Board can hire an outside counsel. The search is ongoing and he will be coming to the Board for approval in the near future.

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. Grossman and Mr. Connell 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. During the course of the closed session,

Mr. Peercy and Mr. Eager removed themselves for a portion of the meeting due to a conflict of interest. Also during the course of the meeting, Ms. Thompson and Mr. Lane left the meeting due to other prior commitments. A quorum was maintained throughout the closed session portion of this meeting.

There being no action taken during the closed session, Mr. Peercy opened the floor for a motion to adjourn. Mr. Connell made a motion and Mr. Totten 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 November 16, 2021 except documents provided during a closed session conducted pursuant to the open meetings act and exempt under the open records act.

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CERTIFICATION

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

Recording Secretary

I, the Chair of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of Meeting held on November 16, 2021 were approved on December 2, 2021.

Chair of the Board of Trustees

I have reviewed the Minutes of the November 16, 2021 Board of Trustees Meeting for content, form, and legality.

Executive Director
Office of Legal Services



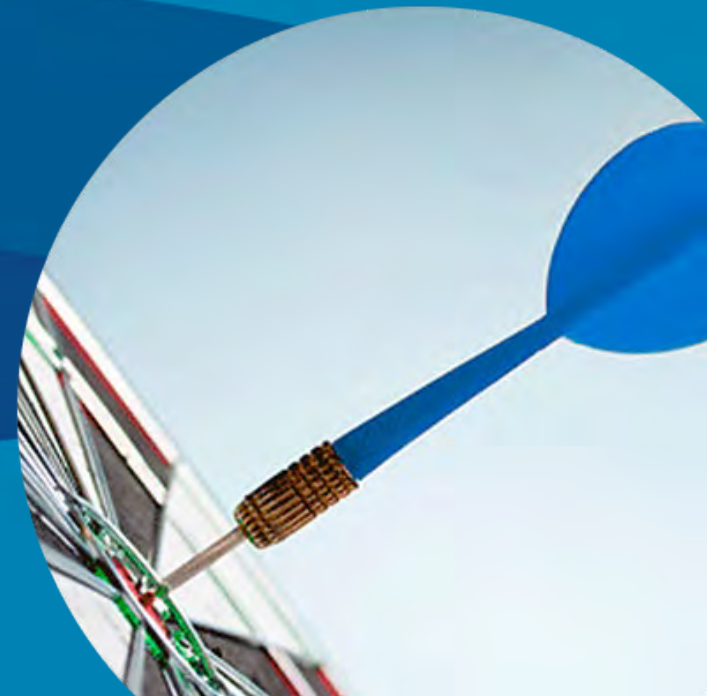
Kentucky Retirement System

2021 Actuarial Valuation Results

December 2, 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%	126.40%
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%	140.51%
Difference		(0.13)%		(1.61)%		(5.55)%
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	(2.68)%	(1.62)%	(4.30)%
Demographic Experience	1.04 %	(2.42)%	(1.38)%
Plan Change – SB169	<u>0.05 %</u>	<u>0.08 %</u>	<u>0.13 %</u>
Total Change	(1.59)%	(3.96)%	(5.55)%
Contribution Rate – 2021 Val	126.40%	14.11%	140.51%

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

Covered payroll decreased by 1.7%

2022 health insurance premiums
lower than expected

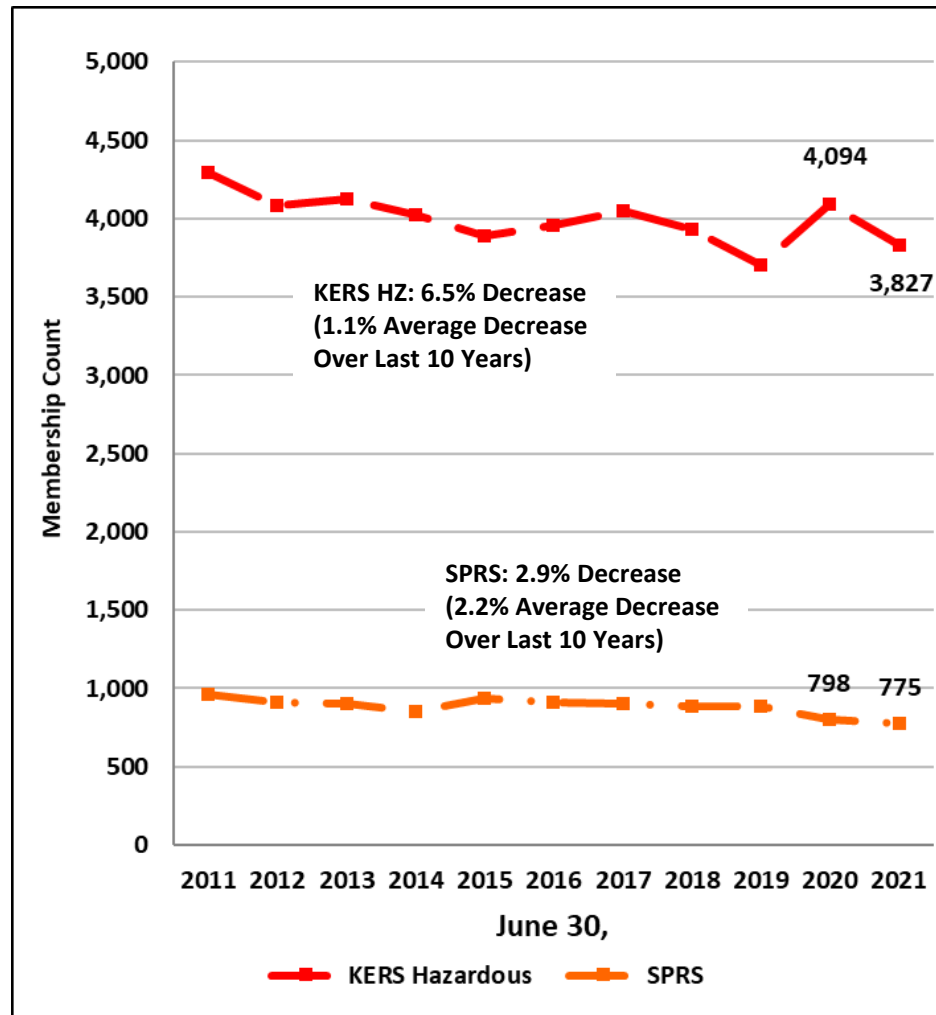
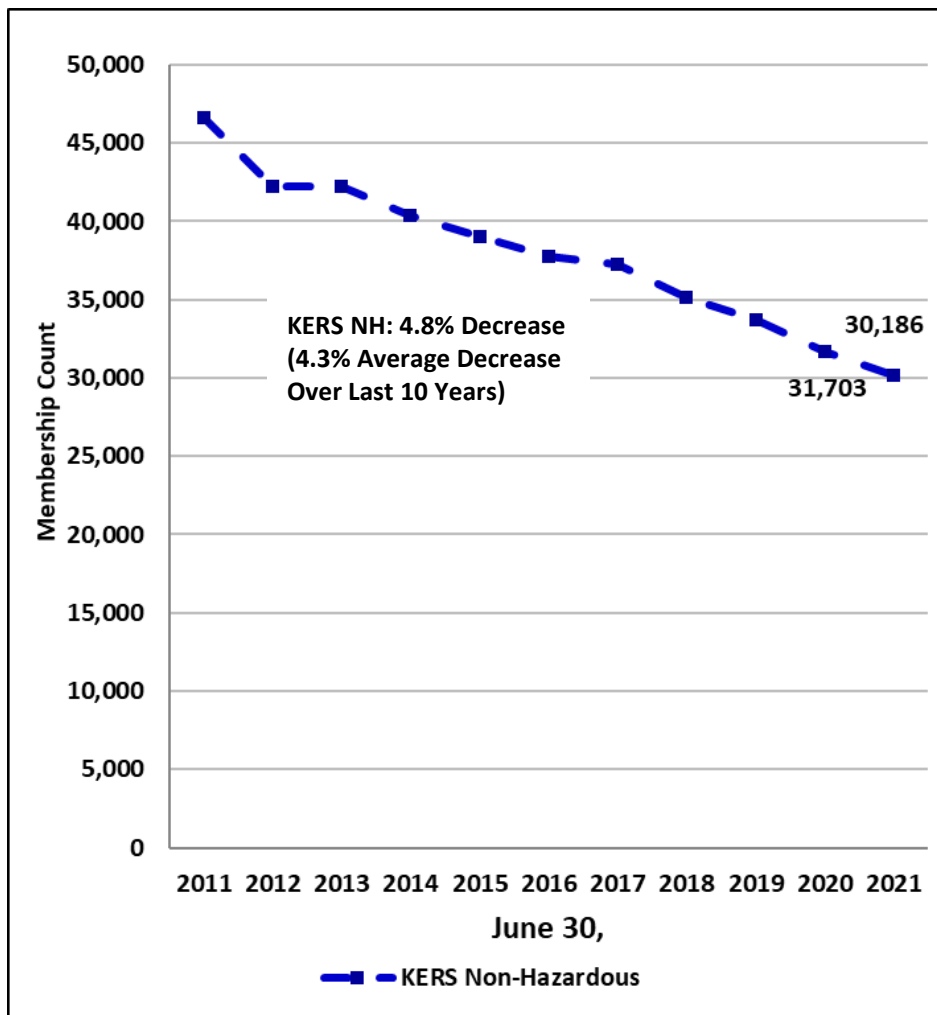


Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

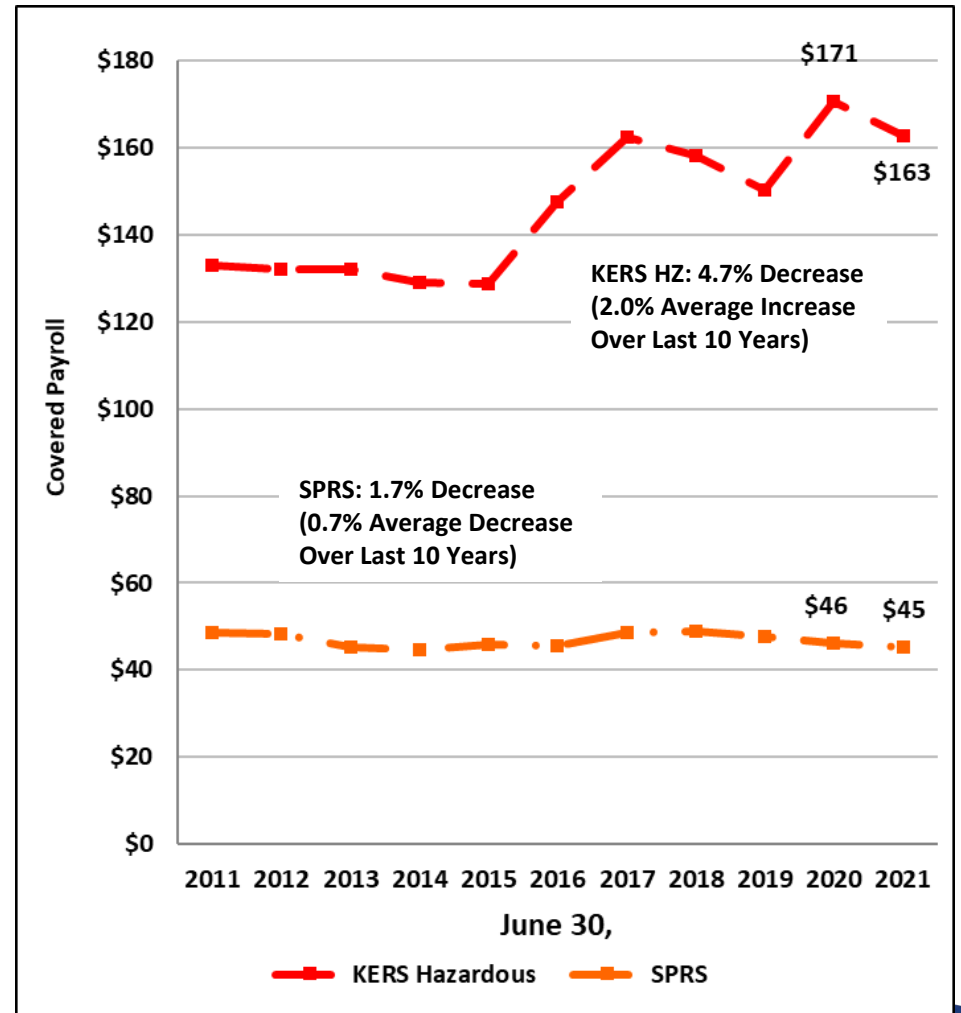
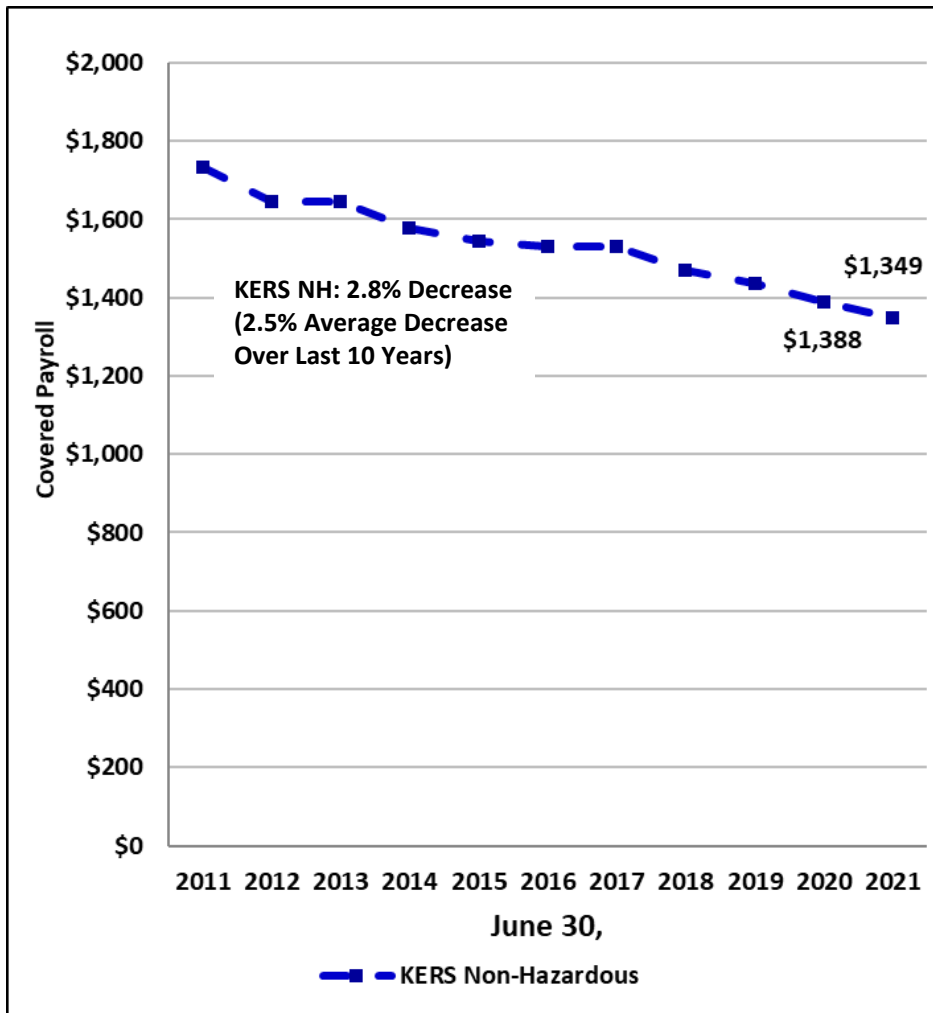
	KERS Non-Hazardous		KERS Hazardous		SPRS	
	2020 Val	2021 Val	2020 Val	2021 Val	2020 Val	2021 Val
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pension Fund	\$ 14.03	\$ 13.59	\$ 0.57	\$ 0.51	\$ 0.76	\$ 0.73
Insurance Fund	<u>1.47</u>	<u>1.28</u>	<u>(0.11)</u>	<u>(0.15)</u>	<u>0.07</u>	<u>0.05</u>
Total Unfunded Actuarial 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)



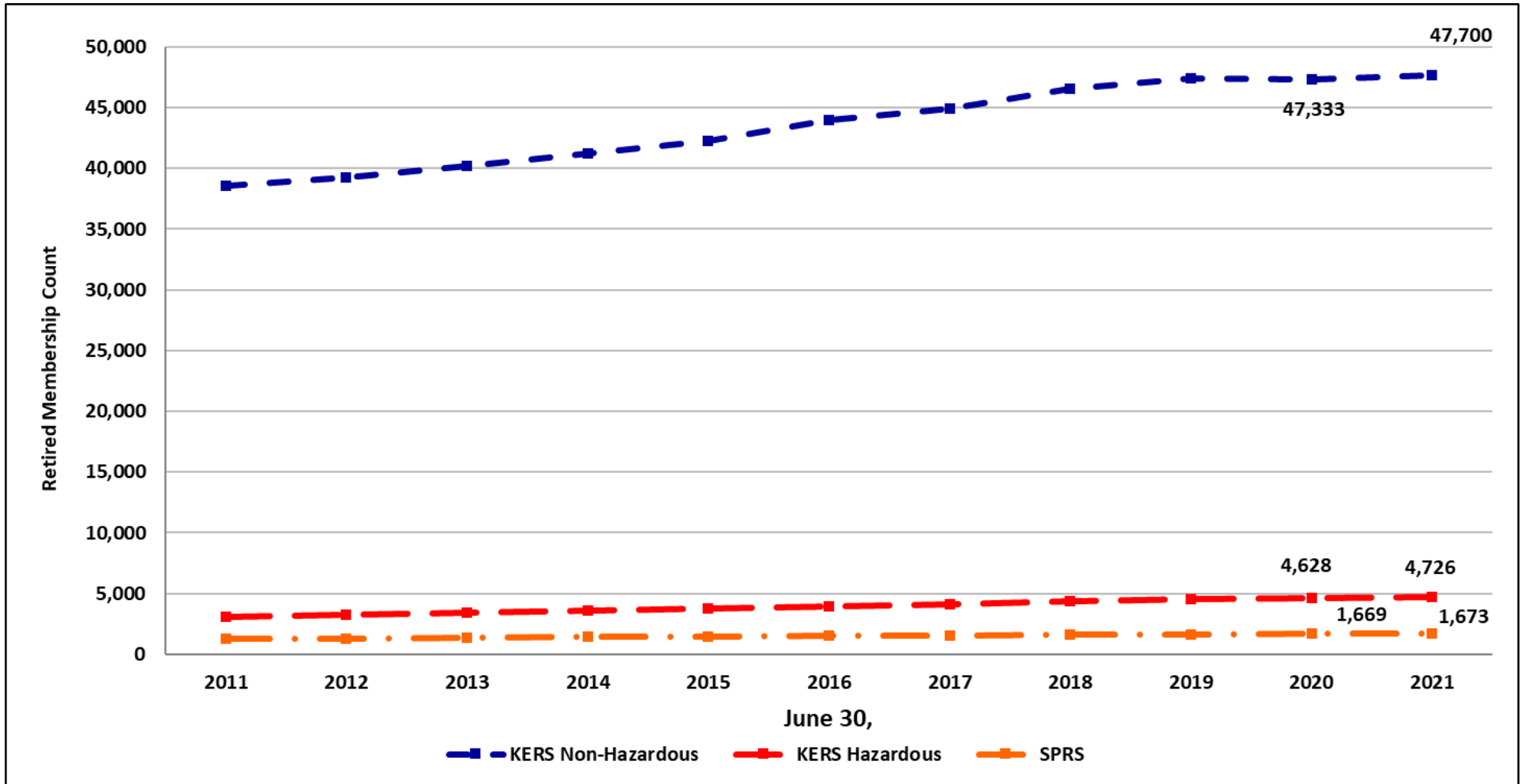
Active Membership Count



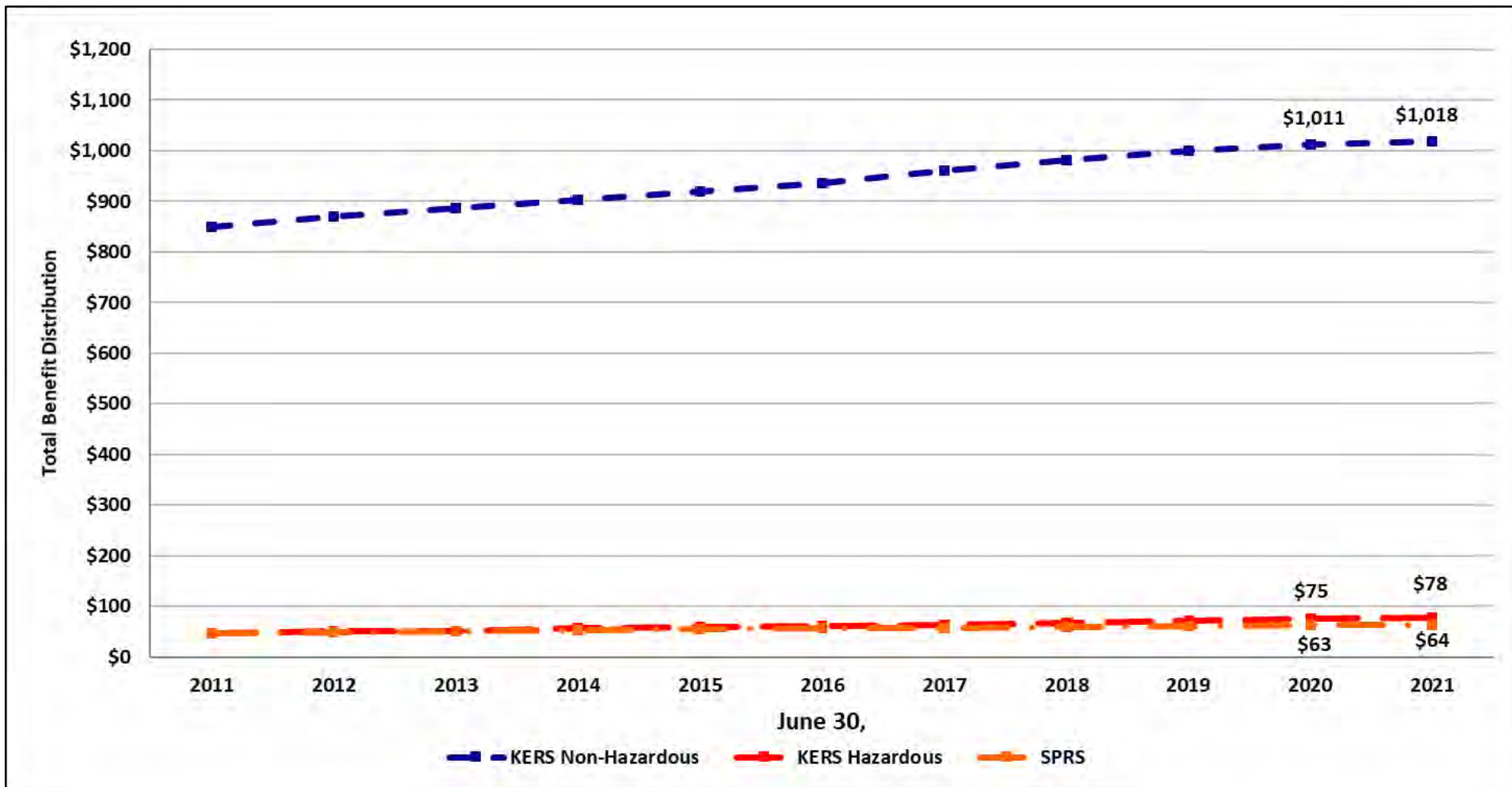
Covered Payroll (\$ in Millions)



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>1,291</u>	<u>710</u>	<u>782</u>	<u>539</u>	<u>575</u>
Unfunded AAL	\$14,026	\$13,585	\$1,469	\$1,283	\$574	\$513	(\$111)	(\$151)
Funded Ratio	14.2%	16.8%	42.7%	50.2%	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%	0.47%	0.15%	0.20%
Amortization Cost	<u>108.95%</u>	<u>107.80%</u>	<u>10.67%</u>	<u>7.02%</u>
Total Actuarially Determined Rate	127.99%	126.40%	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



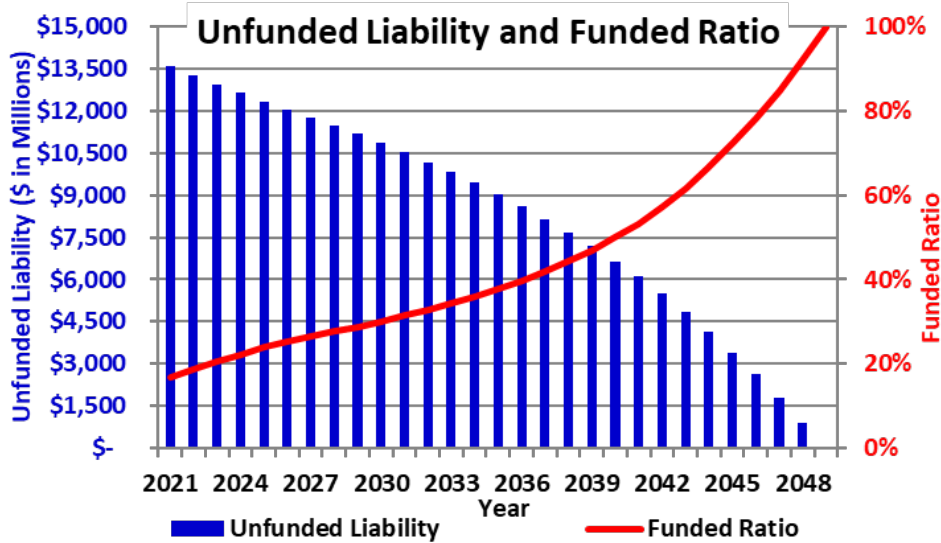
Projection Assumptions

- 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

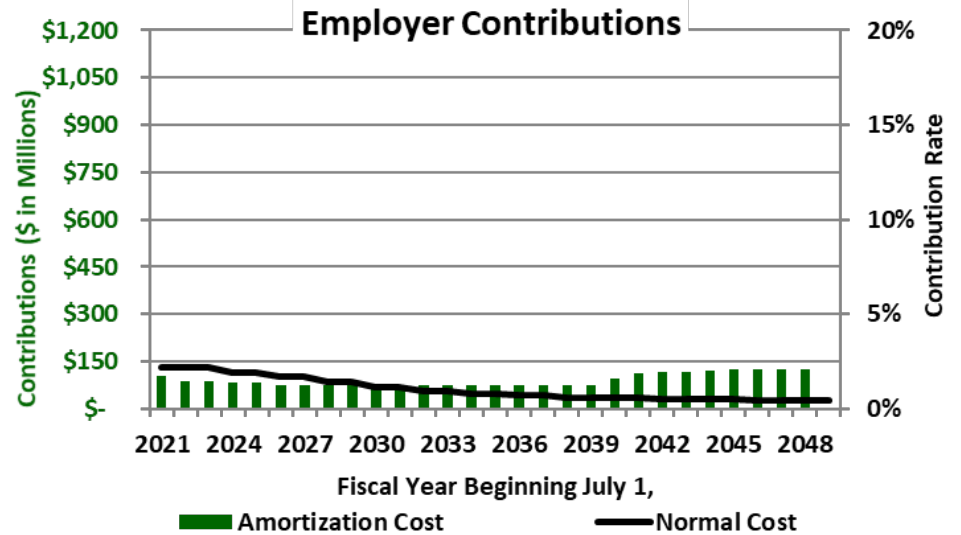
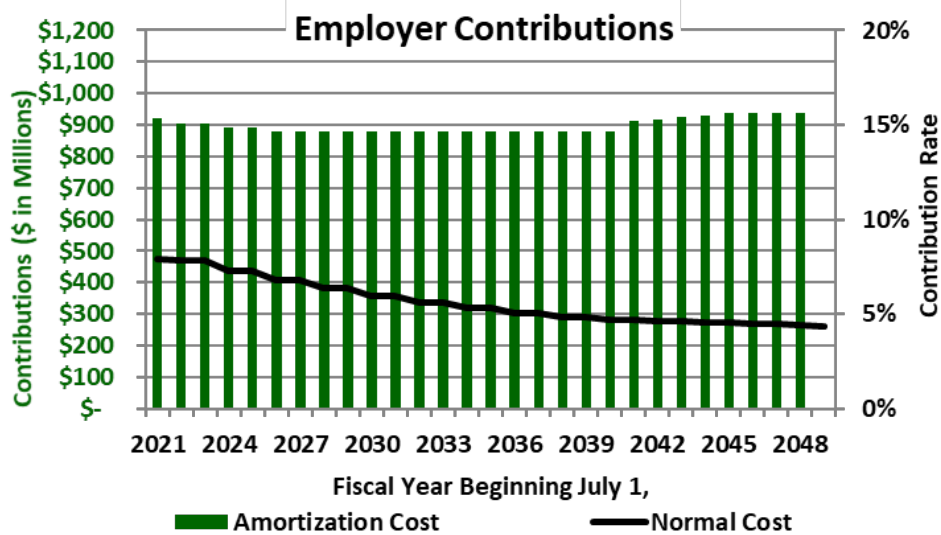
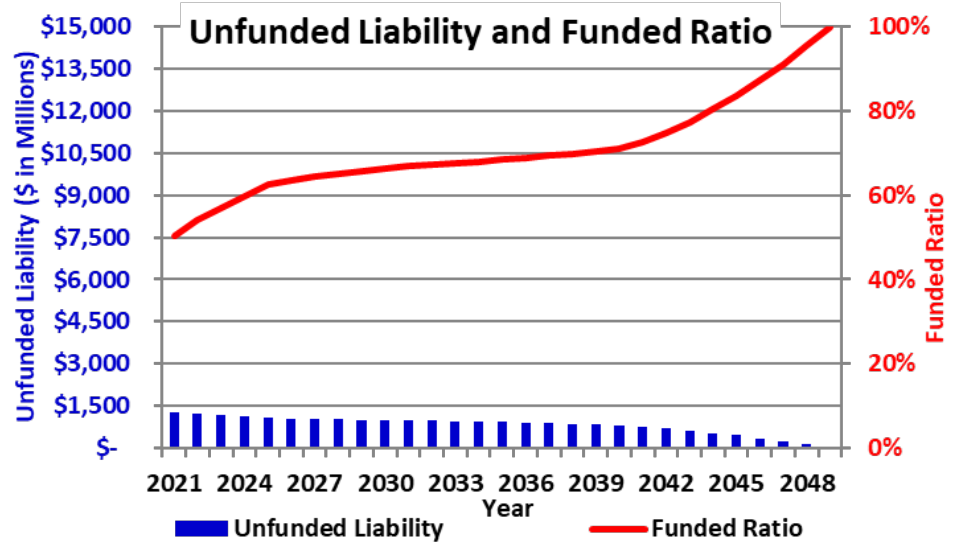


KERS Non-Hazardous Projection

Pension

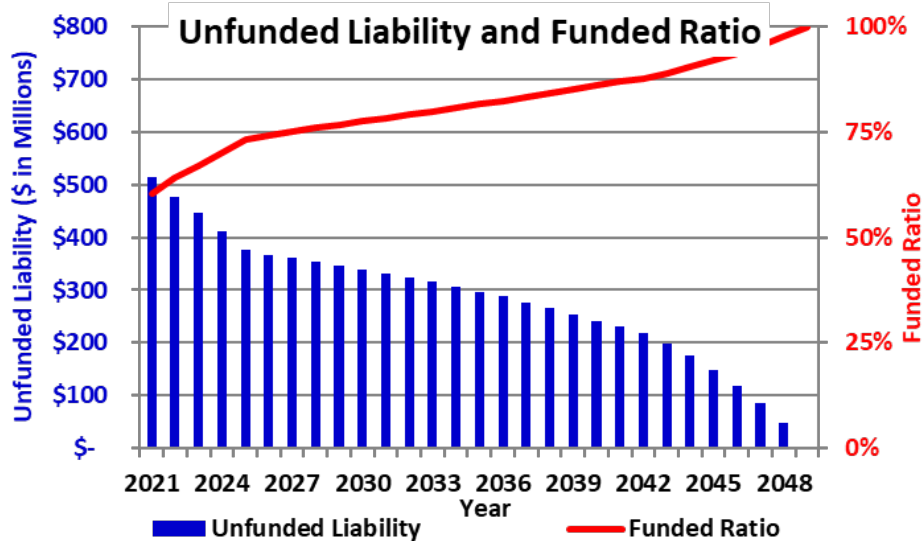


Insurance

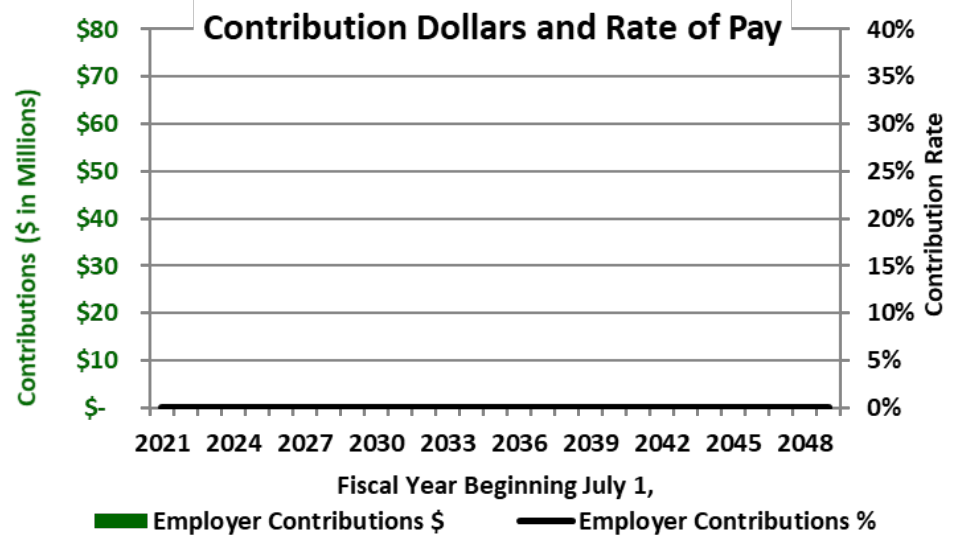
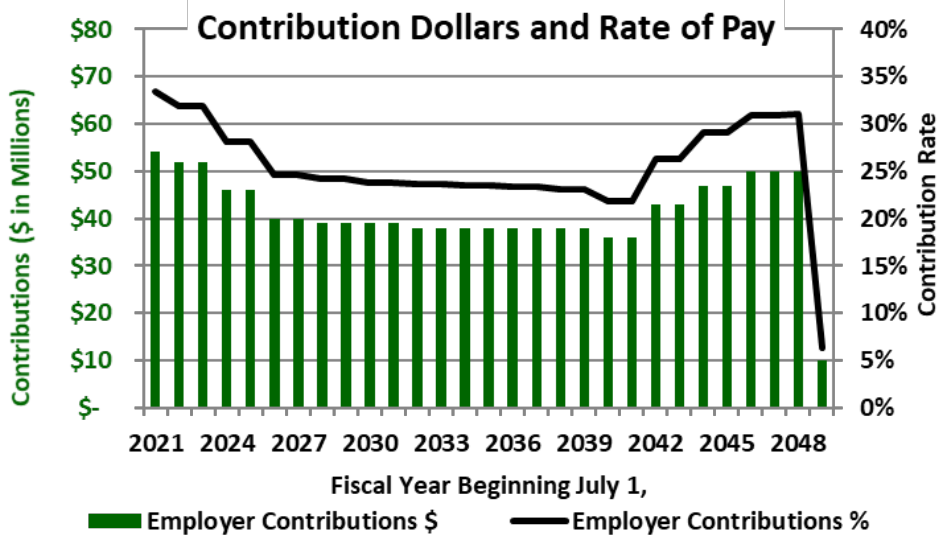
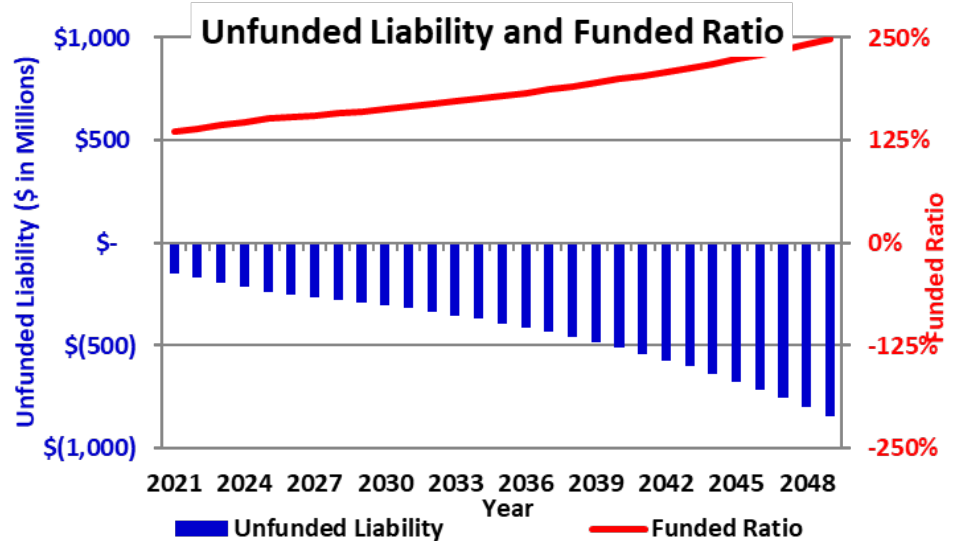


KERS Hazardous Projection

Pension

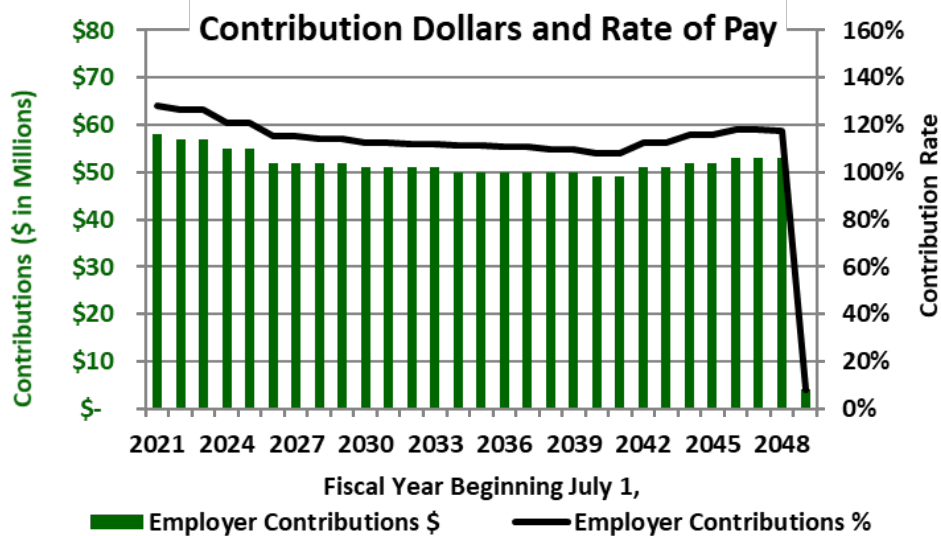
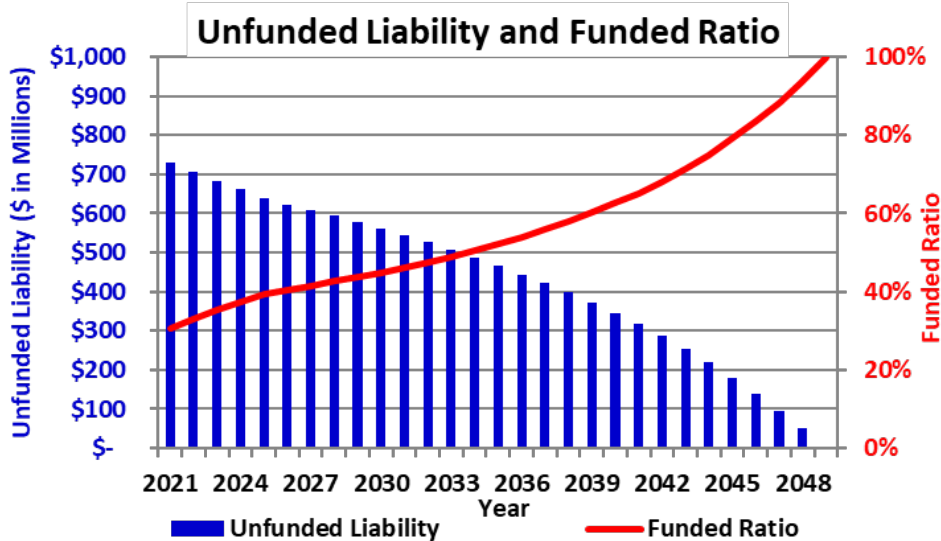


Insurance

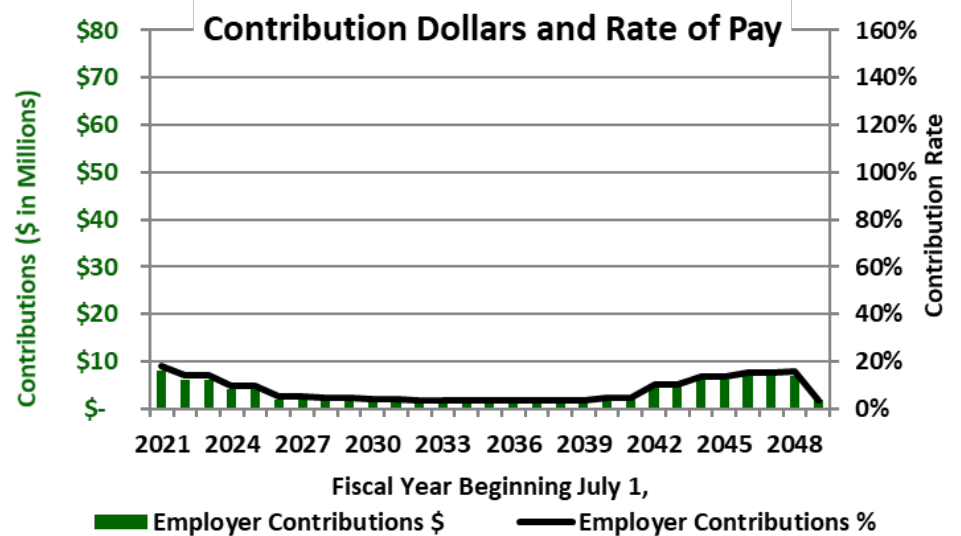
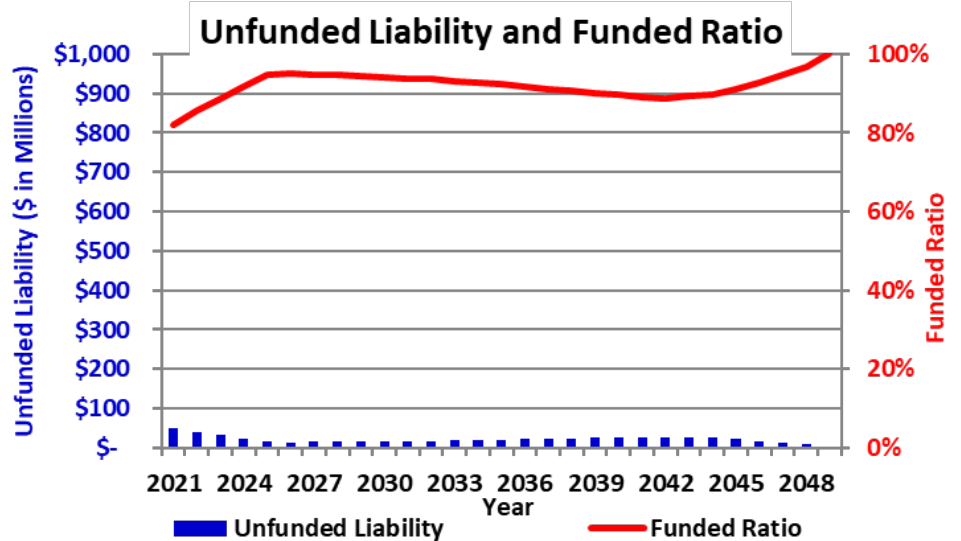


SPRS Projection

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.





November 23, 2021

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

Re: Sensitivity Analysis Based on Results of the June 30, 2021 Actuarial Valuation

Dear Members of the Board:

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

Background

Investment Assumption

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

Inflation Assumption

The inflation assumption underlies most of the other economic assumptions, including the investment return, salary increases, and payroll growth rate. This is a macroeconomic assumption and as such the same assumption is used in the valuation of each of the retirement systems. The current assumption is 2.30% for all funds. The sensitivity analysis shows the financial impact of a 0.25% increase and a 0.25% decrease in the inflation assumption. Note, the change in the inflation assumption results in a corresponding change in the investment return assumption, the individual salary increase assumption for projecting members' benefit amounts, the payroll growth rate assumption, and the healthcare trend assumption that is used in the valuation of the health insurance funds.

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November 23, 2021
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Payroll Growth Assumption

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

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

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

Certification

The information provided in this letter compliments the information provided in the June 30, 2021 actuarial valuation report. Please refer to the June 30, 2021 actuarial valuation report for additional discussion of the actuarial valuation, including the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

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

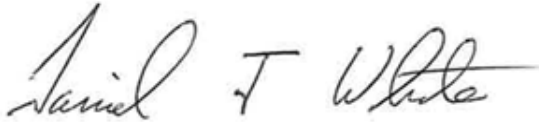


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November 23, 2021
Page 3

The undersigned are independent actuaries and consultants. Both of the undersigned are Enrolled Actuaries, Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. Both of the undersigned are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

Gabriel, Roeder, Smith & Company



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



Jamie Shaw, ASA, EA, MAAA
Consultant

DRAFT



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

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	4.25%	5.25%	6.25%
Discount Rate - Insurance	5.25%	6.25%	7.25%
Retirement			
Actuarial Accrued Liability	\$ 18,344,613	\$ 16,321,372	\$ 14,655,807
Actuarial Value of Assets	2,735,876	2,735,876	2,735,876
Unfunded Actuarial Accrued Liability	15,608,737	13,585,496	11,919,931
Funded Ratio	14.9%	16.8%	18.7%
Normal Cost Rate	11.31%	7.82%	5.41%
Amortization Cost	\$ 969,447	\$ 906,020	\$ 851,816
Insurance			
Actuarial Accrued Liability	\$ 2,922,389	\$ 2,574,112	\$ 2,289,072
Actuarial Value of Assets	1,291,472	1,291,472	1,291,472
Unfunded Actuarial Accrued Liability	1,630,917	1,282,640	997,600
Funded Ratio	44.2%	50.2%	56.4%
Normal Cost Rate	2.96%	2.15%	1.56%
Amortization Cost	\$ 108,804	\$ 88,402	\$ 69,580
Combined			
Actuarial Accrued Liability	\$ 21,267,002	\$ 18,895,484	\$ 16,944,879
Actuarial Value of Assets	4,027,348	4,027,348	4,027,348
Unfunded Actuarial Accrued Liability	17,239,654	14,868,136	12,917,531
Funded Ratio	18.9%	21.3%	23.8%
Normal Cost Rate	14.27%	9.97%	6.97%
Amortization Cost	\$ 1,078,251	\$ 994,422	\$ 921,396



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

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.05%	2.30%	2.55%
Discount Rate - Retirement	5.00%	5.25%	5.50%
Discount Rate - Insurance	6.00%	6.25%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 16,759,612	\$ 16,321,372	\$ 15,903,291
Actuarial Value of Assets	2,735,876	2,735,876	2,735,876
Unfunded Actuarial Accrued Liability	14,023,736	13,585,496	13,167,415
Funded Ratio	16.3%	16.8%	17.2%
Normal Cost Rate	8.29%	7.82%	7.39%
Amortization Cost	\$ 941,717	\$ 906,020	\$ 871,875
Insurance			
Actuarial Accrued Liability	\$ 2,594,161	\$ 2,574,112	\$ 2,555,191
Actuarial Value of Assets	1,291,472	1,291,472	1,291,472
Unfunded Actuarial Accrued Liability	1,302,689	1,282,640	1,263,719
Funded Ratio	49.8%	50.2%	50.5%
Normal Cost Rate	2.23%	2.15%	2.08%
Amortization Cost	\$ 90,101	\$ 88,402	\$ 86,800
Combined			
Actuarial Accrued Liability	\$ 19,353,773	\$ 18,895,484	\$ 18,458,482
Actuarial Value of Assets	4,027,348	4,027,348	4,027,348
Unfunded Actuarial Accrued Liability	15,326,425	14,868,136	14,431,134
Funded Ratio	20.8%	21.3%	21.8%
Normal Cost Rate	10.52%	9.97%	9.47%
Amortization Cost	\$ 1,031,818	\$ 994,422	\$ 958,675



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

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	5.25%	5.25%	5.25%
Discount Rate - Insurance	6.25%	6.25%	6.25%
Retirement			
Actuarial Accrued Liability	\$ 16,321,372	\$ 16,321,372	\$ 16,321,372
Actuarial Value of Assets	2,735,876	2,735,876	2,735,876
Unfunded Actuarial Accrued Liability	13,585,496	13,585,496	13,585,496
Funded Ratio	16.8%	16.8%	16.8%
Normal Cost Rate	7.82%	7.82%	7.82%
Amortization Cost	\$ 999,804	\$ 906,020	\$ 817,234
Insurance			
Actuarial Accrued Liability	\$ 2,574,112	\$ 2,574,112	\$ 2,574,112
Actuarial Value of Assets	1,291,472	1,291,472	1,291,472
Unfunded Actuarial Accrued Liability	1,282,640	1,282,640	1,282,640
Funded Ratio	50.2%	50.2%	50.2%
Normal Cost Rate	2.15%	2.15%	2.15%
Amortization Cost	\$ 97,919	\$ 88,402	\$ 79,350
Combined			
Actuarial Accrued Liability	\$ 18,895,484	\$ 18,895,484	\$ 18,895,484
Actuarial Value of Assets	4,027,348	4,027,348	4,027,348
Unfunded Actuarial Accrued Liability	14,868,136	14,868,136	14,868,136
Funded Ratio	21.3%	21.3%	21.3%
Normal Cost Rate	9.97%	9.97%	9.97%
Amortization Cost	\$ 1,097,723	\$ 994,422	\$ 896,584



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

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	5.25%	6.25%	7.25%
Discount Rate - Insurance	5.25%	6.25%	7.25%
Retirement			
Actuarial Accrued Liability	\$ 1,456,984	\$ 1,295,243	\$ 1,163,824
Actuarial Value of Assets	782,496	782,496	782,496
Unfunded Actuarial Accrued Liability	674,488	512,747	381,328
Funded Ratio	53.7%	60.4%	67.2%
Actuarially Determined Contribution Rate	41.89%	31.82%	23.38%
Insurance			
Actuarial Accrued Liability	\$ 482,624	\$ 424,455	\$ 377,419
Actuarial Value of Assets	575,025	575,025	575,025
Unfunded Actuarial Accrued Liability	(92,401)	(150,570)	(197,606)
Funded Ratio	119.1%	135.5%	152.4%
Actuarially Determined Contribution Rate	1.55%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,939,608	\$ 1,719,698	\$ 1,541,243
Actuarial Value of Assets	1,357,521	1,357,521	1,357,521
Unfunded Actuarial Accrued Liability	582,087	362,177	183,722
Funded Ratio	70.0%	78.9%	88.1%
Actuarially Determined Contribution Rate	43.44%	31.82%	23.38%



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

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.05%	2.30%	2.55%
Discount Rate - Retirement	6.00%	6.25%	6.50%
Discount Rate - Insurance	6.00%	6.25%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 1,329,512	\$ 1,295,243	\$ 1,262,660
Actuarial Value of Assets	782,496	782,496	782,496
Unfunded Actuarial Accrued Liability	547,016	512,747	480,164
Funded Ratio	58.9%	60.4%	62.0%
Actuarially Determined Contribution Rate	34.35%	31.82%	29.44%
Insurance			
Actuarial Accrued Liability	\$ 428,678	\$ 424,455	\$ 420,489
Actuarial Value of Assets	575,025	575,025	575,025
Unfunded Actuarial Accrued Liability	(146,347)	(150,570)	(154,536)
Funded Ratio	134.1%	135.5%	136.8%
Actuarially Determined Contribution Rate	0.00%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,758,190	\$ 1,719,698	\$ 1,683,149
Actuarial Value of Assets	1,357,521	1,357,521	1,357,521
Unfunded Actuarial Accrued Liability	400,669	362,177	325,628
Funded Ratio	77.2%	78.9%	80.7%
Actuarially Determined Contribution Rate	34.35%	31.82%	29.44%



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

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	6.25%	6.25%	6.25%
Discount Rate - Insurance	6.25%	6.25%	6.25%
Retirement			
Actuarial Accrued Liability	\$ 1,295,243	\$ 1,295,243	\$ 1,295,243
Actuarial Value of Assets	782,496	782,496	782,496
Unfunded Actuarial Accrued Liability	512,747	512,747	512,747
Funded Ratio	60.4%	60.4%	60.4%
Actuarially Determined Contribution Rate	34.35%	31.82%	29.45%
Insurance			
Actuarial Accrued Liability	\$ 424,455	\$ 424,455	\$ 424,455
Actuarial Value of Assets	575,025	575,025	575,025
Unfunded Actuarial Accrued Liability	(150,570)	(150,570)	(150,570)
Funded Ratio	135.5%	135.5%	135.5%
Actuarially Determined Contribution Rate	0.00%	0.00%	0.00%
Combined			
Actuarial Accrued Liability	\$ 1,719,698	\$ 1,719,698	\$ 1,719,698
Actuarial Value of Assets	1,357,521	1,357,521	1,357,521
Unfunded Actuarial Accrued Liability	362,177	362,177	362,177
Funded Ratio	78.9%	78.9%	78.9%
Actuarially Determined Contribution Rate	34.35%	31.82%	29.45%





November 23, 2021

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

Re: Sensitivity Analysis Based on Results of the June 30, 2021 Actuarial Valuation

Dear Members of the Board:

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

Background

Investment Assumption

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

Inflation Assumption

The inflation assumption underlies most of the other economic assumptions, including the investment return, salary increases, and payroll growth rate. This is a macroeconomic assumption and as such the same assumption is used in the valuation of each of the retirement systems. The current assumption is 2.30% for all funds. The sensitivity analysis shows the financial impact of a 0.25% increase and a 0.25% decrease in the inflation assumption. Note, the change in the inflation assumption results in a corresponding change in the investment return assumption, the individual salary increase assumption for projecting members' benefit amounts, the payroll growth rate assumption, and the healthcare trend assumption that is used in the valuation of the health insurance funds.

Board of Trustees
November 23, 2021
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Payroll Growth Assumption

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

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

Certification

The information provided in this letter compliments the information provided in the June 30, 2021 actuarial valuation report. Please refer to the June 30, 2021 actuarial valuation report for additional discussion of the actuarial valuation, including the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

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

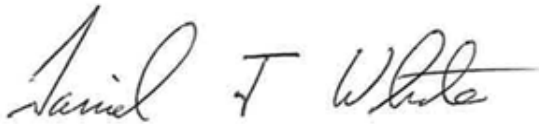


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November 23, 2021
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Sincerely,

Gabriel, Roeder, Smith & Company



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



Jamie Shaw, ASA, EA, MAAA
Consultant

DRAFT



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

(1)	Decrease Discount Rate (2)	Valuation Results (3)	Increase Discount Rate (4)
Payroll Growth Rate	0.00%	0.00%	0.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	4.25%	5.25%	6.25%
Discount Rate - Insurance	5.25%	6.25%	7.25%
Retirement			
Actuarial Accrued Liability	\$ 1,190,256	\$ 1,053,259	\$ 941,901
Actuarial Value of Assets	323,250	323,250	323,250
Unfunded Actuarial Accrued Liability	867,006	730,009	618,651
Funded Ratio	27.2%	30.7%	34.3%
Actuarially Determined Contribution Rate	146.86%	126.40%	109.55%
Insurance			
Actuarial Accrued Liability	\$ 307,759	\$ 272,406	\$ 243,660
Actuarial Value of Assets	223,251	223,251	223,251
Unfunded Actuarial Accrued Liability	84,508	49,155	20,409
Funded Ratio	72.5%	82.0%	91.6%
Actuarially Determined Contribution Rate	22.37%	14.11%	6.74%
Combined			
Actuarial Accrued Liability	\$ 1,498,015	\$ 1,325,665	\$ 1,185,561
Actuarial Value of Assets	546,501	546,501	546,501
Unfunded Actuarial Accrued Liability	951,514	779,164	639,060
Funded Ratio	36.5%	41.2%	46.1%
Actuarially Determined Contribution Rate	169.23%	140.51%	116.29%



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

(1)	Decrease Inflation Rate (2)	Valuation Results (3)	Increase Inflation Rate (4)
Payroll Growth Rate	-0.25%	0.00%	0.25%
Inflation Rate	2.05%	2.30%	2.55%
Discount Rate - Retirement	5.00%	5.25%	5.50%
Discount Rate - Insurance	6.00%	6.25%	6.50%
Retirement			
Actuarial Accrued Liability	\$ 1,083,871	\$ 1,053,259	\$ 1,024,174
Actuarial Value of Assets	323,250	323,250	323,250
Unfunded Actuarial Accrued Liability	760,621	730,009	700,924
Funded Ratio	29.8%	30.7%	31.6%
Actuarially Determined Contribution Rate	133.37%	126.40%	119.79%
Insurance			
Actuarial Accrued Liability	\$ 273,930	\$ 272,406	\$ 270,960
Actuarial Value of Assets	223,251	223,251	223,251
Unfunded Actuarial Accrued Liability	50,679	49,155	47,709
Funded Ratio	81.5%	82.0%	82.4%
Actuarially Determined Contribution Rate	14.66%	14.11%	13.59%
Combined			
Actuarial Accrued Liability	\$ 1,357,801	\$ 1,325,665	\$ 1,295,134
Actuarial Value of Assets	546,501	546,501	546,501
Unfunded Actuarial Accrued Liability	811,300	779,164	748,633
Funded Ratio	40.2%	41.2%	42.2%
Actuarially Determined Contribution Rate	148.03%	140.51%	133.38%



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

(1)	Decrease Payroll Growth (2)	Valuation Results (3)	Increase Payroll Growth (4)
Payroll Growth Rate	-1.00%	0.00%	1.00%
Inflation Rate	2.30%	2.30%	2.30%
Discount Rate - Retirement	5.25%	5.25%	5.25%
Discount Rate - Insurance	6.25%	6.25%	6.25%
Retirement			
Actuarial Accrued Liability	\$ 1,053,259	\$ 1,053,259	\$ 1,053,259
Actuarial Value of Assets	323,250	323,250	323,250
Unfunded Actuarial Accrued Liability	730,009	730,009	730,009
Funded Ratio	30.7%	30.7%	30.7%
Actuarially Determined Contribution Rate	138.72%	126.40%	114.92%
Insurance			
Actuarial Accrued Liability	\$ 272,406	\$ 272,406	\$ 272,406
Actuarial Value of Assets	223,251	223,251	223,251
Unfunded Actuarial Accrued Liability	49,155	49,155	49,155
Funded Ratio	82.0%	82.0%	82.0%
Actuarially Determined Contribution Rate	14.99%	14.11%	13.28%
Combined			
Actuarial Accrued Liability	\$ 1,325,665	\$ 1,325,665	\$ 1,325,665
Actuarial Value of Assets	546,501	546,501	546,501
Unfunded Actuarial Accrued Liability	779,164	779,164	779,164
Funded Ratio	41.2%	41.2%	41.2%
Actuarially Determined Contribution Rate	153.71%	140.51%	128.20%



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

Kentucky Retirement System
KERS Non-Hazardous Retirement Fund
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll (Normal Cost)	Employer Contribution (Amortization Cost)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2021	\$ 16,321	\$ 2,736	\$ 13,585	17%	\$ 1,027	\$ 67	\$ 1,349	7.90%	\$ 920
2022	16,319	3,053	13,266	19%	1,012	67	1,349	7.82%	906
2023	16,293	3,337	12,956	21%	1,012	67	1,349	7.82%	906
2024	16,246	3,612	12,634	22%	991	67	1,349	7.29%	893
2025	16,178	3,878	12,300	24%	991	67	1,349	7.29%	893
2026	16,088	4,058	12,030	25%	971	67	1,349	6.82%	879
2027	15,978	4,218	11,760	26%	971	67	1,349	6.82%	879
2028	15,848	4,372	11,476	28%	965	67	1,349	6.38%	879
2029	15,698	4,520	11,178	29%	965	67	1,349	6.38%	879
2030	15,529	4,666	10,863	30%	959	67	1,349	5.97%	879
2031	15,344	4,812	10,532	31%	959	67	1,349	5.97%	879
2032	15,151	4,968	10,183	33%	954	67	1,349	5.62%	879
2033	14,944	5,128	9,816	34%	954	67	1,349	5.62%	879
2034	14,726	5,295	9,431	36%	950	67	1,349	5.31%	879
2035	14,497	5,472	9,025	38%	950	67	1,349	5.31%	879
2036	14,259	5,663	8,596	40%	947	67	1,349	5.05%	879
2037	14,017	5,871	8,146	42%	947	67	1,349	5.05%	879
2038	13,774	6,101	7,673	44%	944	67	1,349	4.86%	879
2039	13,533	6,358	7,175	47%	944	67	1,349	4.86%	879
2040	13,294	6,645	6,649	50%	945	67	1,349	4.72%	881
2041	13,061	6,966	6,095	53%	975	67	1,349	4.72%	911
2042	12,833	7,353	5,480	57%	980	67	1,349	4.62%	917
2043	12,610	7,784	4,826	62%	987	67	1,349	4.62%	924
2044	12,395	8,263	4,132	67%	992	67	1,349	4.52%	931
2045	12,187	8,793	3,394	72%	999	67	1,349	4.52%	938
2046	11,987	9,377	2,610	78%	998	67	1,349	4.45%	938
2047	11,795	10,011	1,784	85%	998	67	1,349	4.45%	938
2048	11,611	10,697	914	92%	997	67	1,349	4.38%	938
2049	11,438	11,438	-	100%	59	67	1,349	4.36%	-
2050	11,276	11,276	-	100%	59	67	1,349	4.34%	-

Notes and assumptions:

The projection is based on the results of the June 30, 2021 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 5.25%.

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

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

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

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

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

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



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

**Kentucky Retirement System
KERS Hazardous Retirement Fund
(\$ in Millions)**

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2021	\$ 1,295	\$ 782	\$ 513	60%	\$ 54	\$ 13	\$ 163	33.43%	33.43%
2022	1,325	848	477	64%	52	13	163	31.82%	31.82%
2023	1,353	907	446	67%	52	13	163	31.82%	29.92%
2024	1,378	966	412	70%	46	13	163	28.18%	28.18%
2025	1,403	1,026	377	73%	46	13	163	28.18%	26.67%
2026	1,426	1,060	366	74%	40	13	163	24.68%	24.68%
2027	1,448	1,088	360	75%	40	13	163	24.68%	24.43%
2028	1,468	1,115	353	76%	39	13	163	24.16%	24.16%
2029	1,486	1,140	346	77%	39	13	163	24.16%	23.95%
2030	1,505	1,166	339	78%	39	13	163	23.79%	23.79%
2031	1,524	1,192	332	78%	39	13	163	23.79%	23.68%
2032	1,544	1,221	323	79%	38	13	163	23.58%	23.58%
2033	1,566	1,250	316	80%	38	13	163	23.58%	23.52%
2034	1,589	1,282	307	81%	38	13	163	23.45%	23.45%
2035	1,612	1,315	297	82%	38	13	163	23.45%	23.39%
2036	1,637	1,349	288	82%	38	13	163	23.31%	23.31%
2037	1,661	1,384	277	83%	38	13	163	23.31%	23.22%
2038	1,686	1,420	266	84%	38	13	163	23.11%	23.11%
2039	1,710	1,456	254	85%	38	13	163	23.11%	23.01%
2040	1,734	1,492	242	86%	36	13	163	21.86%	21.86%
2041	1,758	1,528	230	87%	36	13	163	21.86%	24.55%
2042	1,782	1,564	218	88%	43	13	163	26.28%	26.28%
2043	1,807	1,609	198	89%	43	13	163	26.28%	27.70%
2044	1,832	1,656	176	90%	47	13	163	29.07%	29.07%
2045	1,857	1,709	148	92%	47	13	163	29.07%	30.81%
2046	1,881	1,763	118	94%	50	13	163	30.97%	30.97%
2047	1,905	1,821	84	96%	50	13	163	30.97%	31.00%
2048	1,928	1,881	47	98%	50	13	163	31.01%	31.01%
2049	1,950	1,950	-	100%	10	13	163	6.29%	6.29%
2050	1,971	1,971	-	100%	10	13	163	6.29%	6.29%

Notes and assumptions:

The projection is based on the results of the June 30, 2021 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.25%.

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

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

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

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



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

Kentucky Retirement System
SPRS Retirement Fund
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll	Employer Actuarially Determined Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2021	\$ 1,053	\$ 323	\$ 730	31%	\$ 58	\$ 4	\$ 45	127.99%	127.99%
2022	1,055	348	707	33%	57	4	45	126.40%	126.40%
2023	1,055	371	684	35%	57	4	45	126.40%	123.44%
2024	1,054	392	662	37%	55	4	45	120.71%	120.71%
2025	1,051	413	638	39%	55	4	45	120.71%	118.30%
2026	1,046	424	622	41%	52	4	45	115.39%	115.39%
2027	1,040	432	608	42%	52	4	45	115.39%	114.66%
2028	1,034	441	593	43%	52	4	45	113.93%	113.93%
2029	1,026	448	578	44%	52	4	45	113.93%	113.26%
2030	1,018	457	561	45%	51	4	45	112.61%	112.61%
2031	1,009	465	544	46%	51	4	45	112.61%	112.16%
2032	1,000	474	526	47%	51	4	45	111.75%	111.75%
2033	990	483	507	49%	51	4	45	111.75%	111.46%
2034	981	494	487	50%	50	4	45	111.19%	111.19%
2035	972	506	466	52%	50	4	45	111.19%	110.91%
2036	962	518	444	54%	50	4	45	110.54%	110.54%
2037	952	531	421	56%	50	4	45	110.54%	110.14%
2038	942	545	397	58%	50	4	45	109.66%	109.66%
2039	931	560	371	60%	50	4	45	109.66%	109.17%
2040	920	576	344	63%	49	4	45	107.78%	107.78%
2041	908	592	316	65%	49	4	45	107.78%	110.49%
2042	896	609	287	68%	51	4	45	112.45%	112.45%
2043	883	630	253	71%	51	4	45	112.45%	114.18%
2044	871	652	219	75%	52	4	45	115.75%	115.75%
2045	857	678	179	79%	52	4	45	115.75%	117.70%
2046	844	704	140	83%	53	4	45	117.76%	117.76%
2047	830	734	96	88%	53	4	45	117.76%	117.73%
2048	816	766	50	94%	53	4	45	117.70%	117.70%
2049	801	801	-	100%	4	4	45	7.77%	7.77%
2050	787	787	-	100%	4	4	45	7.77%	7.77%

Notes and assumptions:

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

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

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



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

Kentucky Retirement System
KERS Non-Hazardous Insurance Fund
(\$ in Millions)

Fiscal Year Beginning July 1,	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio (3) / (2)	Employer Contribution	Member Contribution	Covered Payroll	Employer Contribution as % of Covered Payroll (Normal Cost)	Employer Contribution (Amortization Cost)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2021	\$ 2,574	\$ 1,291	\$ 1,283	50%	\$ 132	\$ 6	\$ 1,339	2.20%	\$ 102
2022	2,641	1,422	1,219	54%	117	7	1,339	2.15%	88
2023	2,706	1,535	1,171	57%	117	7	1,339	2.15%	88
2024	2,764	1,646	1,118	60%	107	8	1,339	1.92%	81
2025	2,816	1,754	1,062	62%	107	8	1,339	1.92%	81
2026	2,860	1,816	1,044	64%	96	9	1,339	1.67%	74
2027	2,896	1,863	1,033	64%	96	9	1,339	1.67%	74
2028	2,923	1,902	1,021	65%	93	10	1,339	1.41%	74
2029	2,941	1,932	1,009	66%	93	10	1,339	1.41%	74
2030	2,950	1,954	996	66%	89	11	1,339	1.16%	74
2031	2,951	1,969	982	67%	89	11	1,339	1.16%	74
2032	2,945	1,978	967	67%	87	11	1,339	0.95%	74
2033	2,934	1,983	951	68%	87	12	1,339	0.95%	74
2034	2,918	1,983	935	68%	85	12	1,339	0.80%	74
2035	2,898	1,980	918	68%	85	12	1,339	0.80%	74
2036	2,876	1,977	899	69%	83	13	1,339	0.68%	74
2037	2,854	1,975	879	69%	83	13	1,339	0.68%	74
2038	2,832	1,974	858	70%	82	13	1,339	0.60%	74
2039	2,810	1,976	834	70%	82	13	1,339	0.60%	74
2040	2,790	1,979	811	71%	103	13	1,339	0.54%	96
2041	2,772	2,009	763	73%	118	13	1,339	0.54%	111
2042	2,755	2,060	695	75%	121	13	1,339	0.50%	115
2043	2,741	2,120	621	77%	125	13	1,339	0.50%	118
2044	2,729	2,191	538	80%	128	13	1,339	0.47%	121
2045	2,718	2,272	446	84%	132	13	1,339	0.47%	126
2046	2,709	2,364	345	87%	132	13	1,339	0.44%	126
2047	2,699	2,462	237	91%	132	13	1,339	0.44%	126
2048	2,688	2,566	122	96%	131	13	1,339	0.43%	126
2049	2,677	2,677	-	100%	6	13	1,339	0.42%	-
2050	2,663	2,663	-	100%	5	13	1,339	0.41%	-

Notes and assumptions:

The projection is based on the results of the June 30, 2021 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.25%.

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

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

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

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

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

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



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

**Kentucky Retirement System
KERS Hazardous Insurance Fund
(\$ in Millions)**

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2021	\$ 424	\$ 575	\$ (151)	136%	\$ -	\$ 1	\$ 162	0.00%	0.00%
2022	437	608	(171)	139%	-	1	162	0.00%	0.00%
2023	447	639	(192)	143%	-	1	162	0.00%	0.00%
2024	456	669	(213)	147%	-	1	162	0.00%	0.00%
2025	464	705	(241)	152%	-	1	162	0.00%	0.00%
2026	470	722	(252)	154%	-	1	162	0.00%	0.00%
2027	475	739	(264)	156%	-	1	162	0.00%	0.00%
2028	479	755	(276)	158%	-	1	162	0.00%	0.00%
2029	482	772	(290)	160%	-	1	162	0.00%	0.00%
2030	485	788	(303)	163%	-	2	162	0.00%	0.00%
2031	487	806	(319)	166%	-	2	162	0.00%	0.00%
2032	488	824	(336)	169%	-	2	162	0.00%	0.00%
2033	491	844	(353)	172%	-	2	162	0.00%	0.00%
2034	493	864	(371)	175%	-	2	162	0.00%	0.00%
2035	495	887	(392)	179%	-	2	162	0.00%	0.00%
2036	498	911	(413)	183%	-	2	162	0.00%	0.00%
2037	501	937	(436)	187%	-	2	162	0.00%	0.00%
2038	505	965	(460)	191%	-	2	162	0.00%	0.00%
2039	510	995	(485)	195%	-	2	162	0.00%	0.00%
2040	515	1,027	(512)	199%	-	2	162	0.00%	0.00%
2041	520	1,061	(541)	204%	-	2	162	0.00%	0.00%
2042	526	1,098	(572)	209%	-	2	162	0.00%	0.00%
2043	533	1,137	(604)	213%	-	2	162	0.00%	0.00%
2044	540	1,178	(638)	218%	-	2	162	0.00%	0.00%
2045	547	1,222	(675)	223%	-	2	162	0.00%	0.00%
2046	554	1,268	(714)	229%	-	2	162	0.00%	0.00%
2047	561	1,317	(756)	235%	-	2	162	0.00%	0.00%
2048	567	1,367	(800)	241%	-	2	162	0.00%	0.00%
2049	573	1,420	(847)	248%	-	2	162	0.00%	0.00%
2050	578	1,476	(898)	255%	-	2	162	0.00%	0.00%

Notes and assumptions:

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

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

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

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



KRS Board Meeting - Approval of Annual Actuarial Valuations and Contribution Rates

Kentucky Retirement System
SPRS Insurance Fund
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2021	\$ 272	\$ 223	\$ 49	82%	\$ 8	\$ -	\$ 45	18.07%	18.07%
2022	278	238	40	86%	6	-	45	14.11%	14.11%
2023	282	250	32	89%	6	-	45	14.11%	11.65%
2024	285	261	24	92%	4	-	45	9.42%	9.42%
2025	286	271	15	95%	4	-	45	9.42%	7.54%
2026	287	273	14	95%	2	-	45	5.17%	5.17%
2027	287	272	15	95%	2	-	45	5.17%	4.75%
2028	286	271	15	95%	2	-	45	4.39%	4.39%
2029	284	268	16	94%	2	-	45	4.39%	4.12%
2030	282	265	17	94%	2	-	45	3.88%	3.88%
2031	279	262	17	94%	2	-	45	3.88%	3.73%
2032	275	258	17	94%	2	-	45	3.59%	3.59%
2033	272	253	19	93%	2	-	45	3.59%	3.51%
2034	268	249	19	93%	2	-	45	3.46%	3.46%
2035	264	244	20	92%	2	-	45	3.46%	3.41%
2036	261	239	22	92%	2	-	45	3.37%	3.37%
2037	258	235	23	91%	2	-	45	3.37%	3.35%
2038	255	231	24	91%	2	-	45	3.33%	3.33%
2039	252	227	25	90%	2	-	45	3.33%	3.31%
2040	250	224	26	90%	2	-	45	4.56%	4.56%
2041	248	221	27	89%	2	-	45	4.56%	8.39%
2042	247	219	28	89%	5	-	45	10.40%	10.40%
2043	246	220	26	89%	5	-	45	10.40%	11.96%
2044	246	221	25	90%	6	-	45	13.40%	13.40%
2045	246	224	22	91%	6	-	45	13.40%	15.27%
2046	246	228	18	93%	7	-	45	15.45%	15.45%
2047	246	233	13	95%	7	-	45	15.45%	15.50%
2048	246	238	8	97%	7	-	45	15.50%	15.50%
2049	246	246	-	100%	2	-	45	3.39%	3.39%
2050	246	246	-	100%	2	-	45	3.37%	3.37%

Notes and assumptions:

The projection is based on the results of the June 30, 2021 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.25%.

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

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

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

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



Wilshire

Kentucky Public Pensions Authority
Kentucky Employees Retirement System (KERS)
State Police Retirement System (SPRS)
Quarterly Board Summary

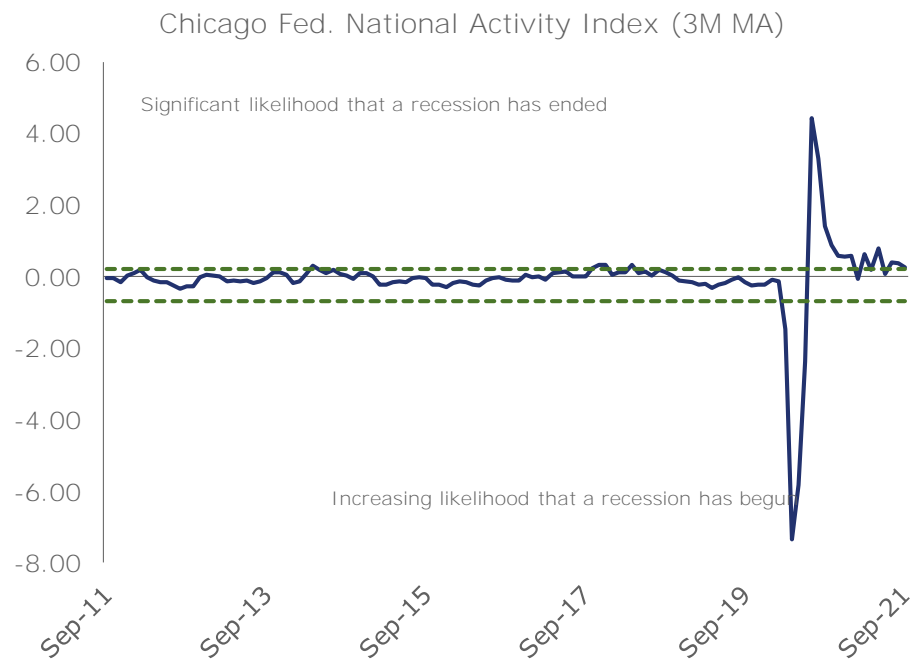
September 30, 2021

Asset Class Performance

Asset Class Returns - Best to Worst						Annualized 5-Year as of 9/21
2016	2017	2018	2019	2020	2021 YTD	
High Yield 17.1%	Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	Commodities 29.1%	U.S. Equity 17.0%
U.S. Equity 13.4%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	REITs 24.8%	Emrg Mrkts 9.6%
Commodities 11.8%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 15.6%	Developed 9.3%
Emrg Mrkts 11.6%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 8.8%	REITs 7.0%
REITs 7.2%	REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	High Yield 4.5%	High Yield 6.5%
U.S. TIPS 4.7%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	U.S. TIPS 3.5%	Commodities 4.5%
Core Bond 2.6%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	U.S. TIPS 4.3%
Developed 1.5%	Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Emrg Mrkts -1.0%	Core Bond 2.9%
T-Bills 0.3%	T-Bills 0.8%	Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Core Bond -1.6%	T-Bills 1.2%

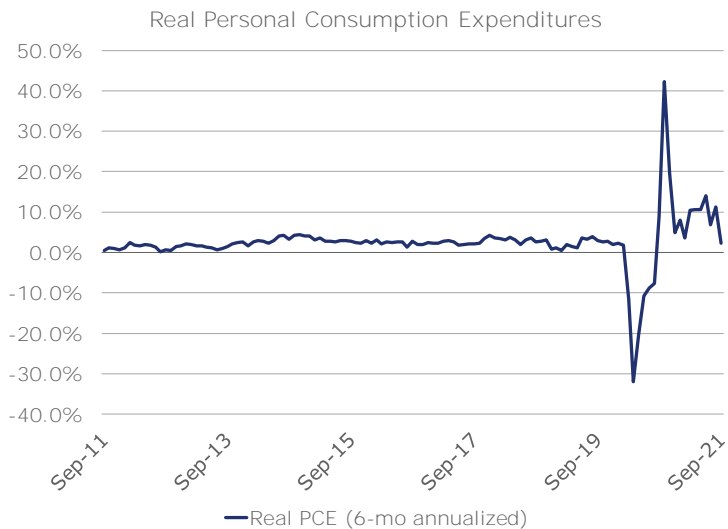
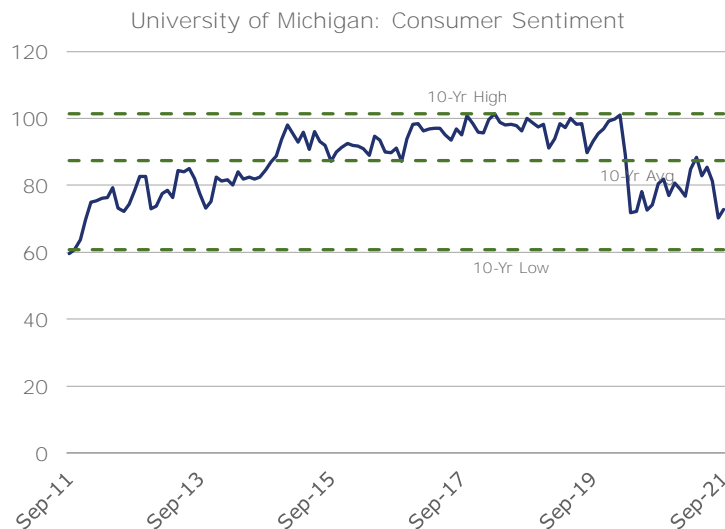
Data Sources: Bloomberg Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

Economic Growth



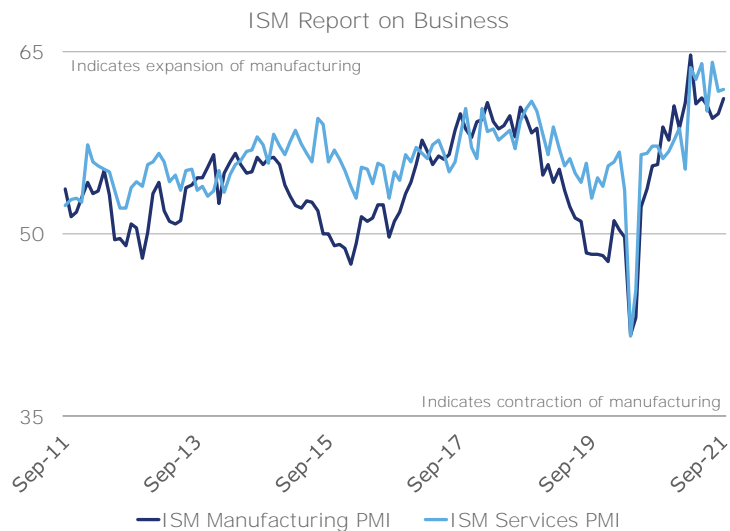
Data Sources: Bloomberg

Consumer Activity



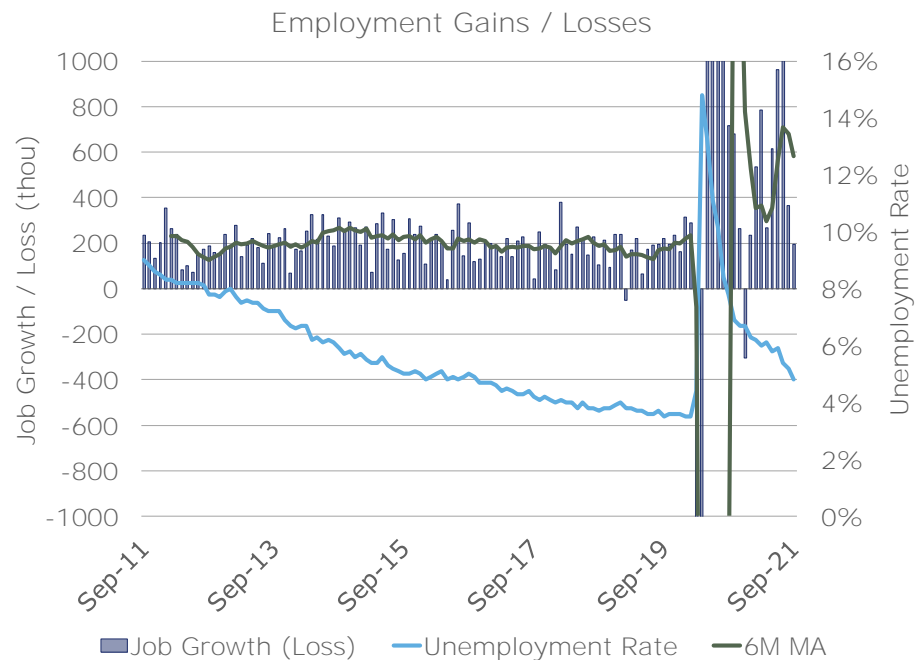
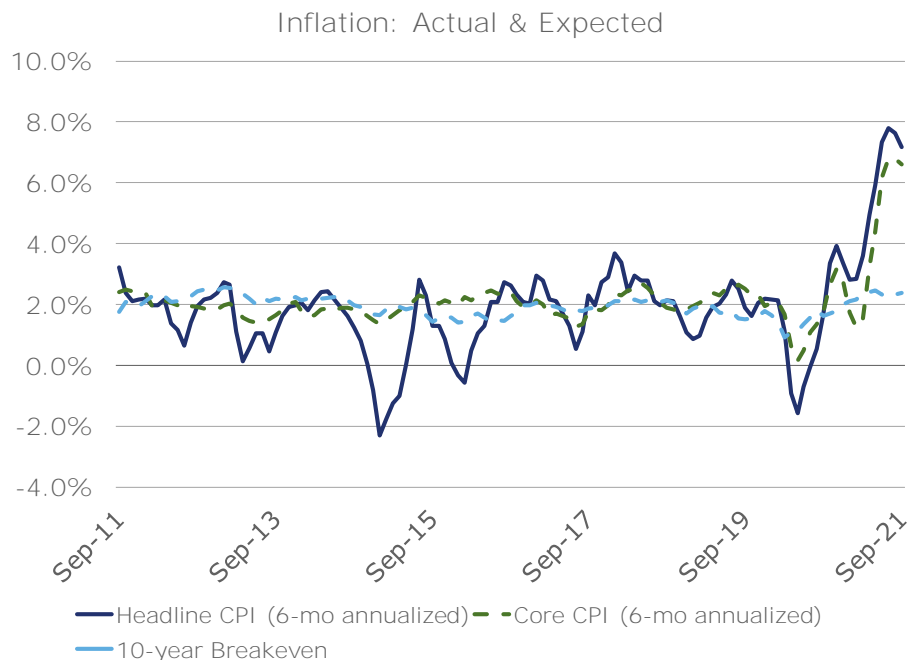
Data Sources: Bloomberg

Business Activity



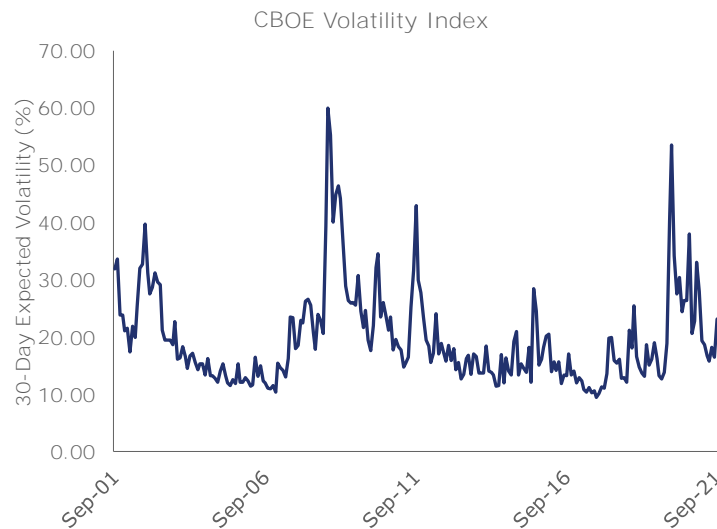
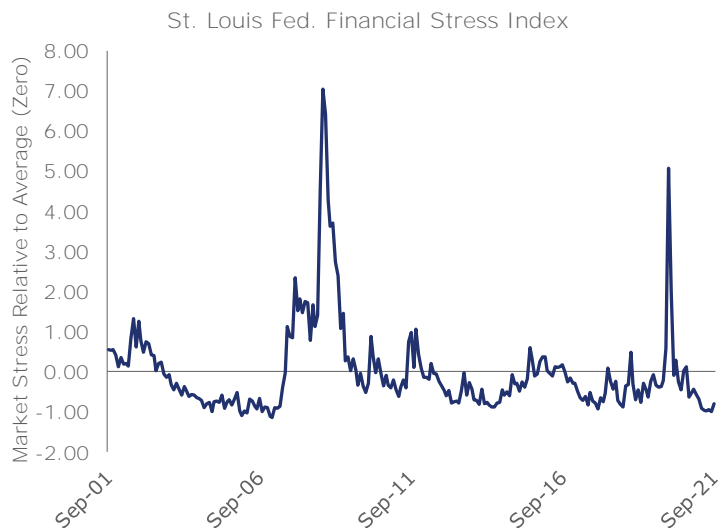
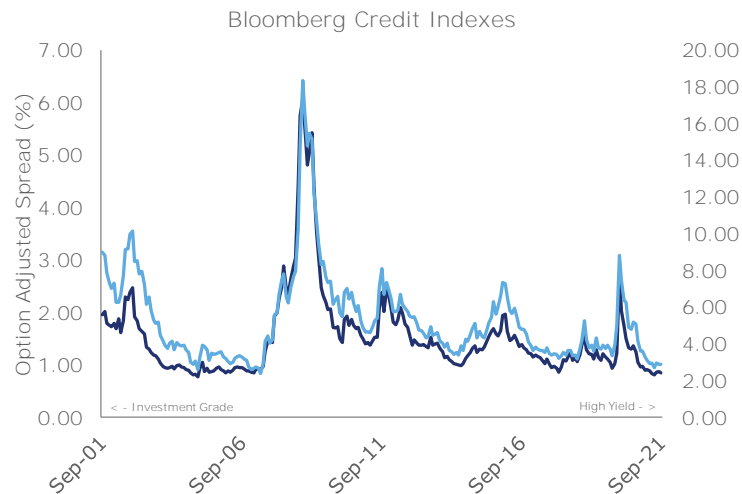
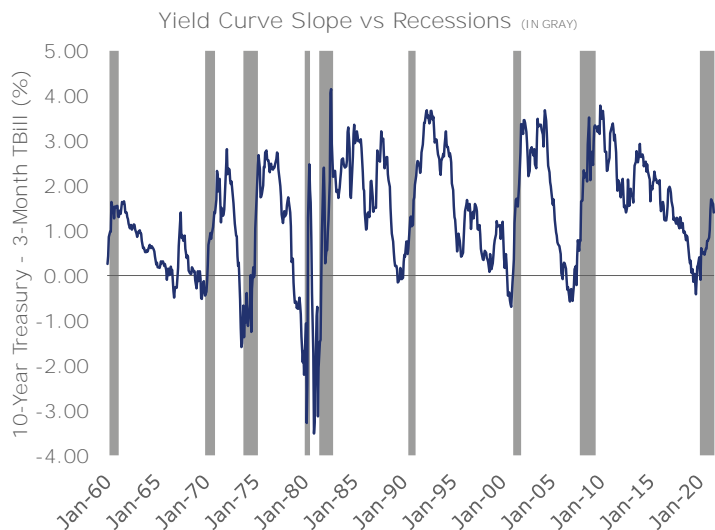
Data Sources: Bloomberg

Inflation and Employment



Data Sources: Bloomberg

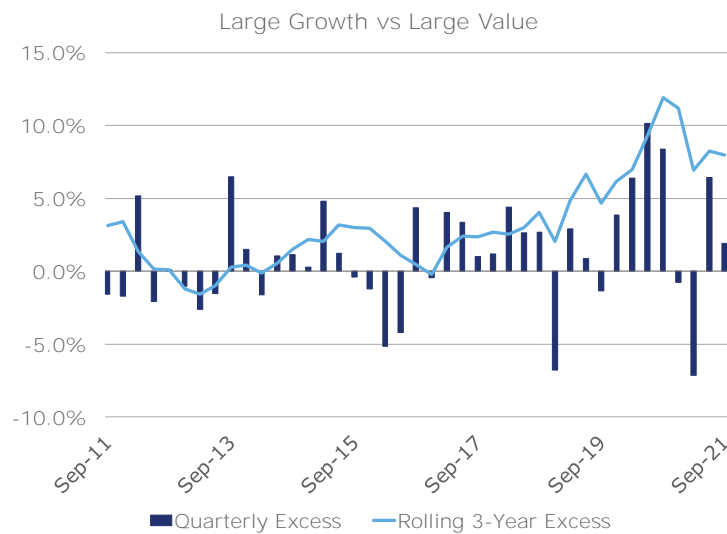
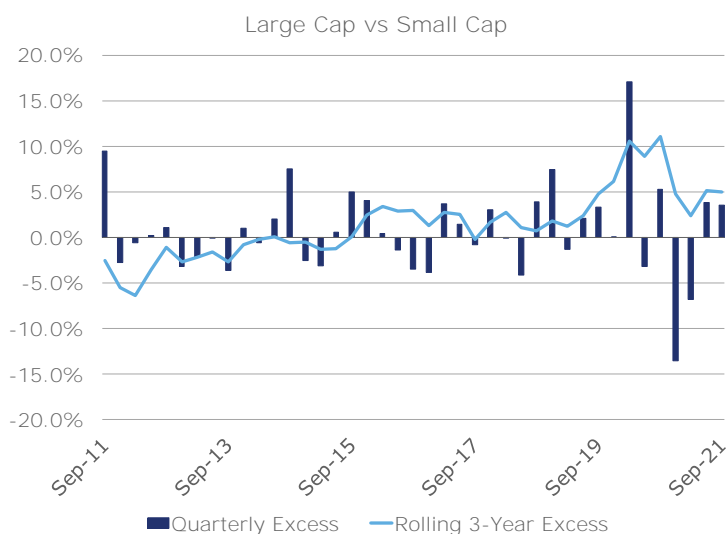
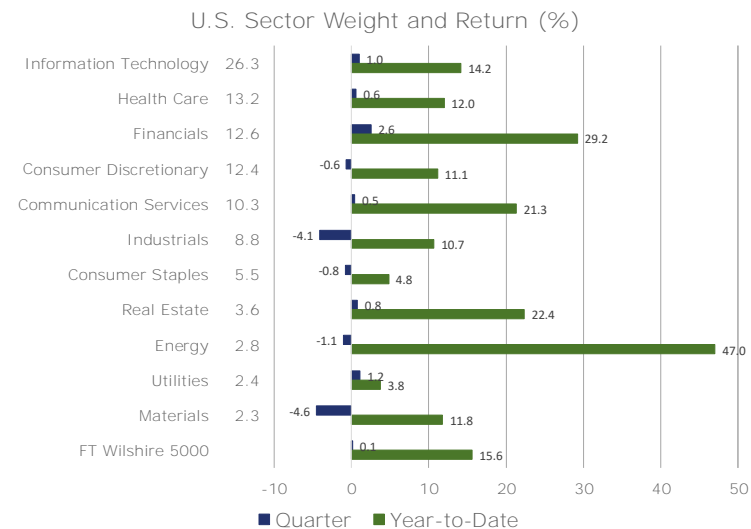
Risk Monitor



Data Sources: Bloomberg

U.S. Equity Market

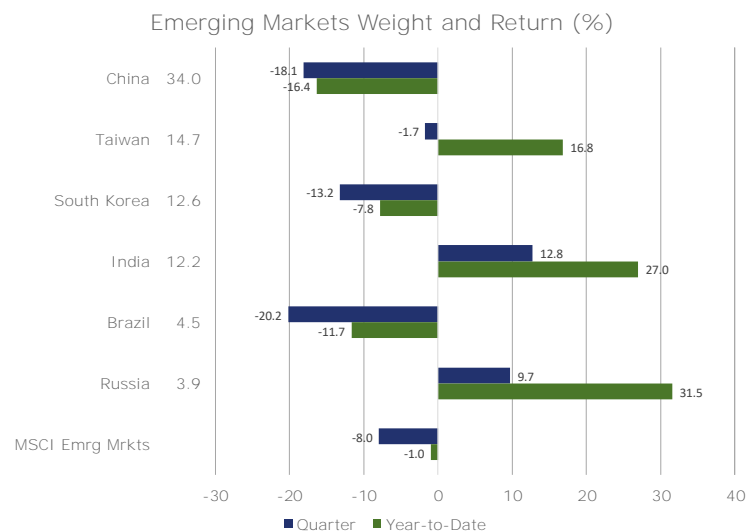
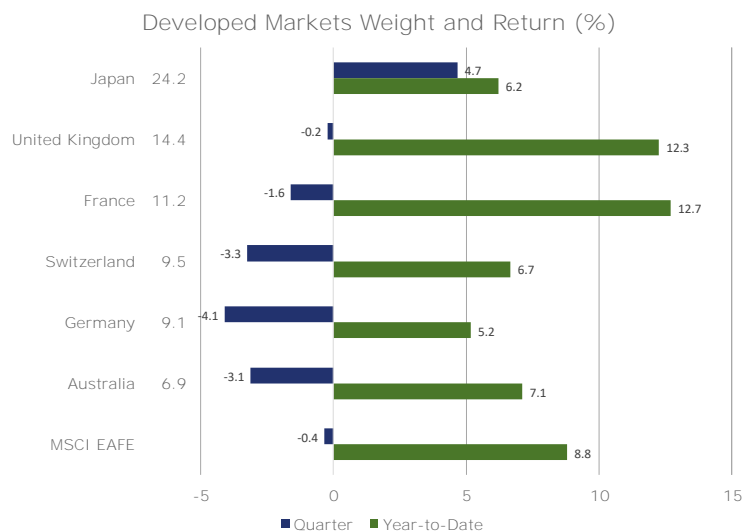
As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	0.1	15.6	32.4	16.2	17.0	16.7
Wilshire U.S. Large Cap	0.4	15.6	30.9	16.7	17.4	16.8
Wilshire U.S. Small Cap	-3.0	15.4	51.1	11.2	13.4	15.1
Wilshire U.S. Large Growth	1.3	15.5	30.3	20.9	22.1	19.4
Wilshire U.S. Large Value	-0.6	14.7	30.3	12.0	12.4	14.1
Wilshire U.S. Small Growth	-3.8	8.2	40.4	13.0	16.1	15.7
Wilshire U.S. Small Value	-1.8	23.3	63.0	9.4	10.7	14.4
Wilshire REIT Index	1.6	24.8	38.0	10.4	7.0	11.3
MSCI USA Min. Vol. Index	0.3	9.6	17.2	11.1	12.4	14.2
FTSE RAFI U.S. 1000 Index	-0.8	20.8	41.9	12.9	13.8	15.2



Data Sources: Bloomberg, Wilshire Atlas

Non-U.S. Equity Market

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	-2.9	6.3	24.4	8.5	9.4	8.0
MSCI EAFE (\$G)	-0.4	8.8	26.3	8.1	9.3	8.6
MSCI Emerging Markets (\$G)	-8.0	-1.0	18.6	9.0	9.6	6.5
MSCI Frontier Markets (\$G)	1.7	2.6	20.5	3.3	3.6	4.0
MSCI ACWI ex-US Growth (\$G)	-3.6	2.9	17.3	12.3	11.6	9.7
MSCI ACWI ex-US Value (\$G)	-1.9	10.3	33.0	4.9	7.3	6.5
MSCI ACWI ex-US Small (\$G)	0.1	12.6	33.5	10.8	10.7	9.8
MSCI ACWI Minimum Volatility	0.2	7.7	14.7	8.2	9.1	10.6
MSCI EAFE Minimum Volatility	0.3	4.9	13.4	4.7	6.1	7.9
FTSE RAFI Developed ex-US	-1.1	12.5	36.5	6.1	8.6	7.5
MSCI EAFE LC (G)	1.4	14.7	27.8	7.7	9.5	10.6
MSCI Emerging Markets LC (G)	-6.6	1.0	17.2	9.8	10.8	9.0

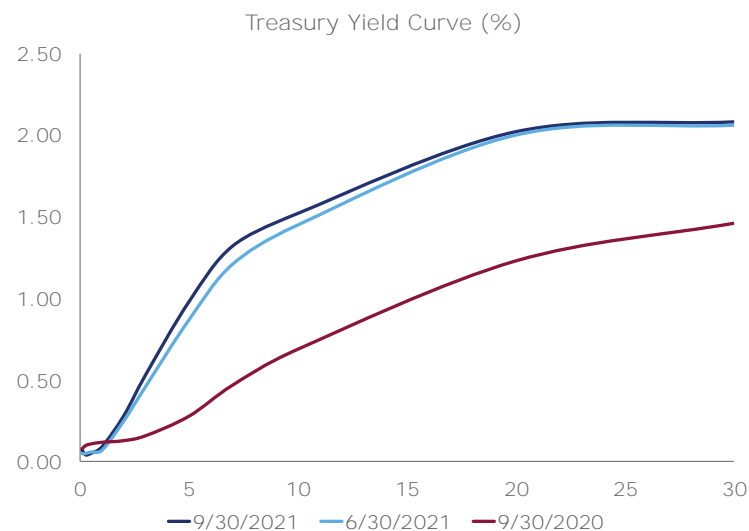
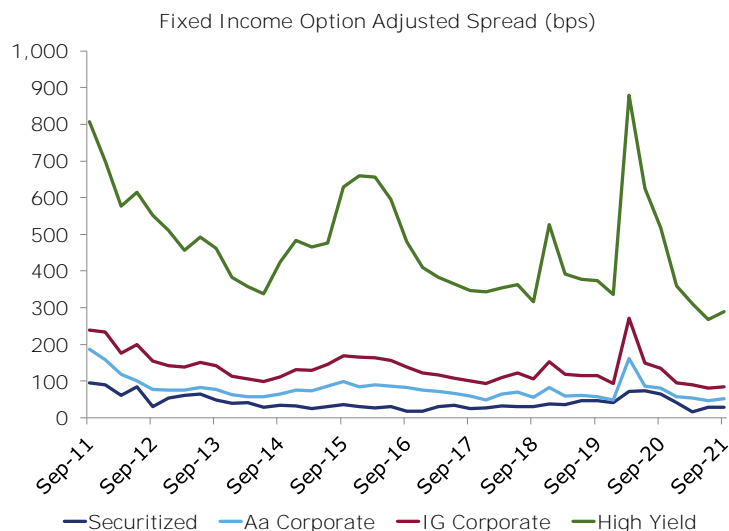


Data Sources: Bloomberg

U.S. Fixed Income

As of 9/30/2021	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	1.6	6.7	0.1	-1.6	-0.9	5.4	2.9	3.0
Bloomberg Treasury	1.0	7.1	0.1	-2.5	-3.3	4.9	2.2	2.2
Bloomberg Gov't-Rel.	1.4	6.1	-0.1	-1.3	-0.4	4.9	2.9	2.9
Bloomberg Securitized	1.8	4.6	0.1	-0.7	-0.3	4.0	2.2	2.5
Bloomberg Corporate	2.1	8.7	0.0	-1.3	1.7	7.4	4.6	4.9
Bloomberg LT Gov't/Credit	2.7	16.6	0.1	-4.6	-3.0	10.1	5.2	5.8
Bloomberg LT Treasury	2.0	18.7	0.5	-7.5	-10.3	9.2	3.3	4.4
Bloomberg LT Gov't-Rel.	3.0	13.7	-0.5	-3.4	-0.7	7.9	4.7	5.5
Bloomberg LT Corporate	3.1	15.3	-0.1	-2.6	2.5	10.5	6.3	6.7
Bloomberg U.S. TIPS *	1.4	8.2	1.8	3.5	5.2	7.4	4.3	3.1
Bloomberg High Yield	4.0	4.0	0.9	4.5	11.3	6.9	6.5	7.4
Treasury Bills	0.0	0.3	0.0	0.0	0.1	1.2	1.2	0.7

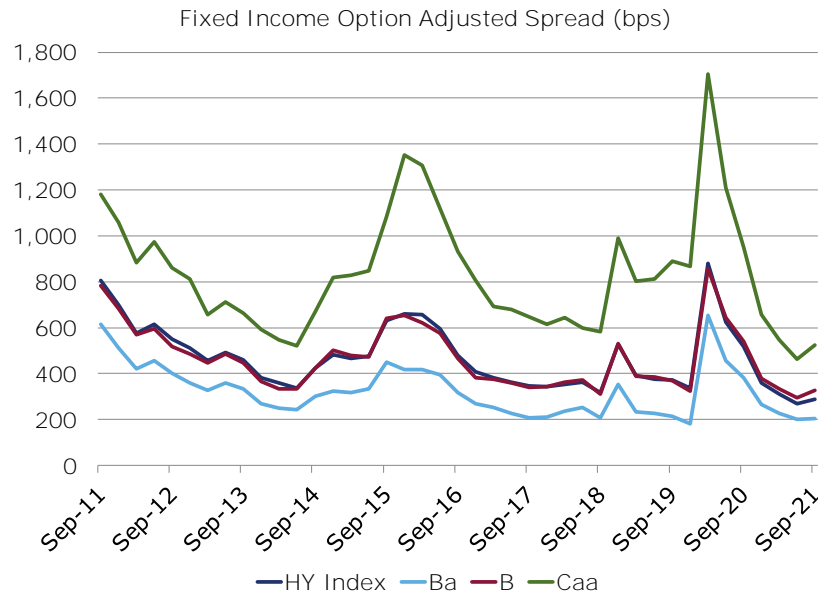
* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index



Data Sources: Bloomberg

High Yield Bond Market

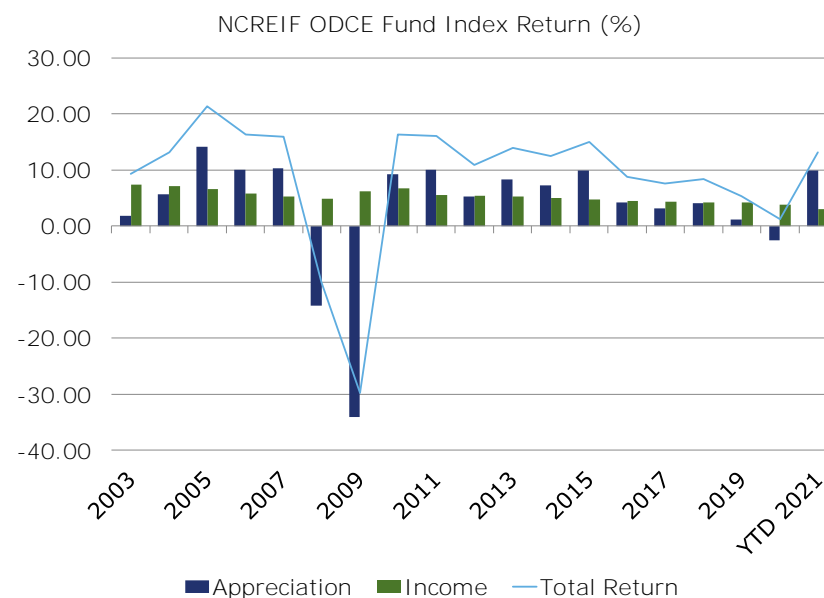
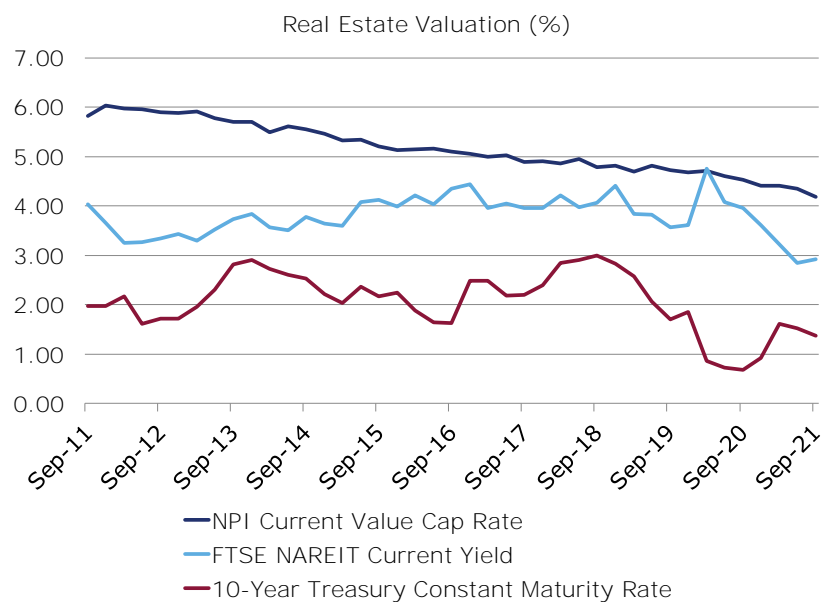
As of 9/30/2021		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		4.0	0.9	4.5	11.3	6.9	6.5	7.4
S&P LSTA Leveraged Loan		3.7	1.0	3.2	6.7	3.9	4.3	4.7
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	53.8%	3.2	1.1	3.8	9.7	8.7	6.8	7.5
B U.S. High Yield	34.1%	4.5	0.6	4.0	10.0	6.1	6.0	6.8
Caa U.S. High Yield	11.7%	6.3	0.8	8.0	18.7	3.1	6.1	7.9
Ca to D U.S. High Yield	0.4%	19.0	0.2	29.2	73.3	0.1	10.7	0.9
Non-Rated U.S. High Yield	0.0%	0.0	0.0	0.0	0.0	-0.8	2.2	3.4



Data Sources: Bloomberg

Real Assets

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	1.8	3.5	5.2	7.4	4.3	3.1
Bloomberg Commodity Index	6.6	29.1	42.3	6.9	4.5	-2.7
Bloomberg Gold Index	-1.0	-7.9	-8.2	12.1	4.7	-0.1
Wilshire Global RESI Index	0.4	18.5	34.4	8.2	6.2	9.9
NCREIF ODCE Fund Index	6.6	13.1	14.6	7.1	7.5	9.9
NCREIF Timberland Index	1.9	4.4	5.0	2.4	2.9	4.9
FTSE Global Core Infrastructure 50/50	-0.1	7.4	16.7	8.5	7.9	10.0
Alerian Midstream Energy	-1.3	38.9	66.9	3.9	2.4	n.a.
Bitcoin	25.6	49.8	305.7	87.8	135.0	147.0



Data Sources: Bloomberg, National Council of Real Estate Investment Fiduciaries

September 2021 Asset Class Assumptions

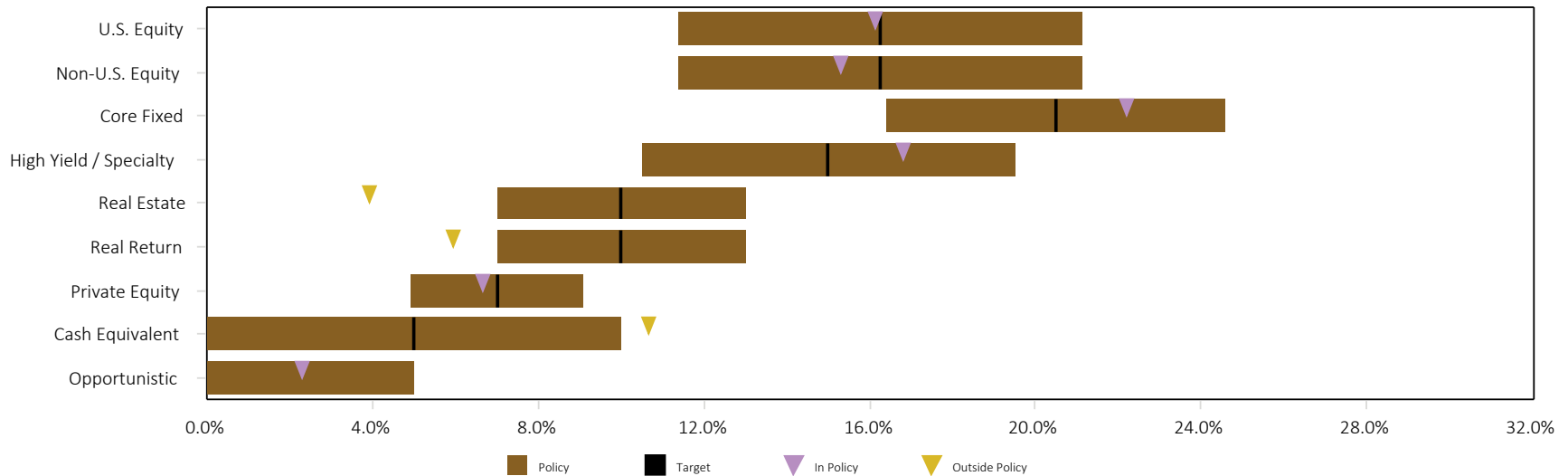
	Equity						Fixed Income						Real Assets					
	U.S. Stock	Dev ex-U.S. Stock	Emg Mrkt Stock	Global ex-U.S. Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	U.S. TIPS	High Yield	Non-U.S. Bond	U.S. Real Estate Secs	Global RE Secs	Private Real Estate	Cmdty	Real Assets	U.S. CPI
Compound Return (%)	5.00	6.00	6.00	6.25	5.65	8.40	1.55	1.85	2.35	1.55	3.60	0.75	4.75	4.90	6.35	4.05	5.85	2.50
Arithmetic Return (%)	6.35	7.50	9.00	7.90	7.00	11.75	1.55	1.95	2.75	1.75	4.10	0.85	6.10	6.05	7.25	5.10	6.35	2.50
Expected Risk (%)	17.00	18.00	26.00	19.15	17.15	28.00	0.75	4.30	8.85	6.00	10.00	4.30	17.00	15.85	14.00	15.00	10.15	1.75
Cash Yield (%)	1.30	2.50	2.00	2.35	1.75	0.00	1.55	3.00	3.40	2.30	7.50	1.80	2.85	2.85	2.30	1.55	1.95	0.00
Growth Expoure	8.00	8.00	8.00	8.00	8.00	13.50	0.00	-0.80	-2.10	-3.00	4.00	-1.00	6.00	6.00	3.50	0.00	1.80	0.00
Inflation Expoure	-3.00	0.00	5.00	1.55	-1.10	-3.80	0.00	-2.45	-6.55	2.50	-1.00	-3.00	1.00	1.95	1.00	12.00	4.90	1.00
Correlations																		
US Stock	1.00																	
Dev ex-US Stock (USD)	0.81	1.00																
Emerging Mkt Stock	0.74	0.74	1.00															
Global ex-US Stock	0.83	0.96	0.87	1.00														
Global Stock	0.95	0.92	0.83	0.94	1.00													
Private Equity	0.74	0.64	0.62	0.67	0.74	1.00												
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
Core Bond	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT Core Bond	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.92	1.00									
TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.59	0.47	1.00								
High Yield Bond	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.17	0.18	0.26	0.10	0.66	0.65	0.39	0.26	1.00						
US RE Securities	0.58	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
Global RE Securities	0.64	0.58	0.56	0.61	0.65	0.58	-0.05	0.17	0.22	0.11	0.61	0.03	0.96	1.00				
Private Real Estate	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.75	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.48	0.51	0.58	0.57	0.54	0.47	-0.02	0.23	0.25	0.39	0.56	0.05	0.70	0.75	0.70	0.65	1.00	
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

Asset Allocation Compliance

KERS Pension Plan

Periods Ended As of September 30, 2021

Executive Summary



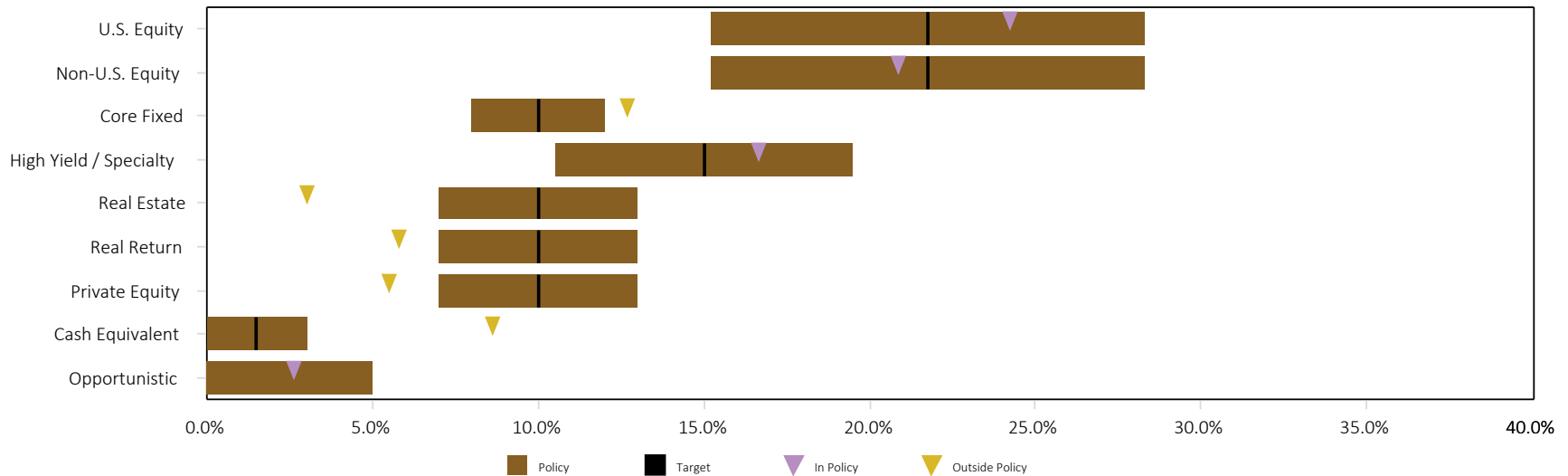
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	504,803,399	16.15	11.38	21.13	16.25	3,079,846
Non-U.S. Equity	478,954,234	15.32	11.38	21.13	16.25	28,929,010
Core Fixed	694,251,526	22.21	16.40	24.60	20.50	-53,537,279
High Yield / Specialty	524,972,632	16.80	10.50	19.50	15.00	-56,157,329
Real Estate	122,295,230	3.91	7.00	13.00	10.00	190,248,305
Real Return	185,730,172	5.94	7.00	13.00	10.00	126,813,364
Private Equity	208,133,280	6.66	4.90	9.10	7.00	10,647,194
Cash Equivalent	333,854,055	10.68	0.00	10.00	5.00	-177,582,287
Opportunistic	72,440,825	2.32	0.00	5.00	0.00	-72,440,825
Total Fund	3,125,435,352	100.00			100.00	

Asset Allocation Compliance

KERS Insurance Plan

Periods Ended As of September 30, 2021

Executive Summary



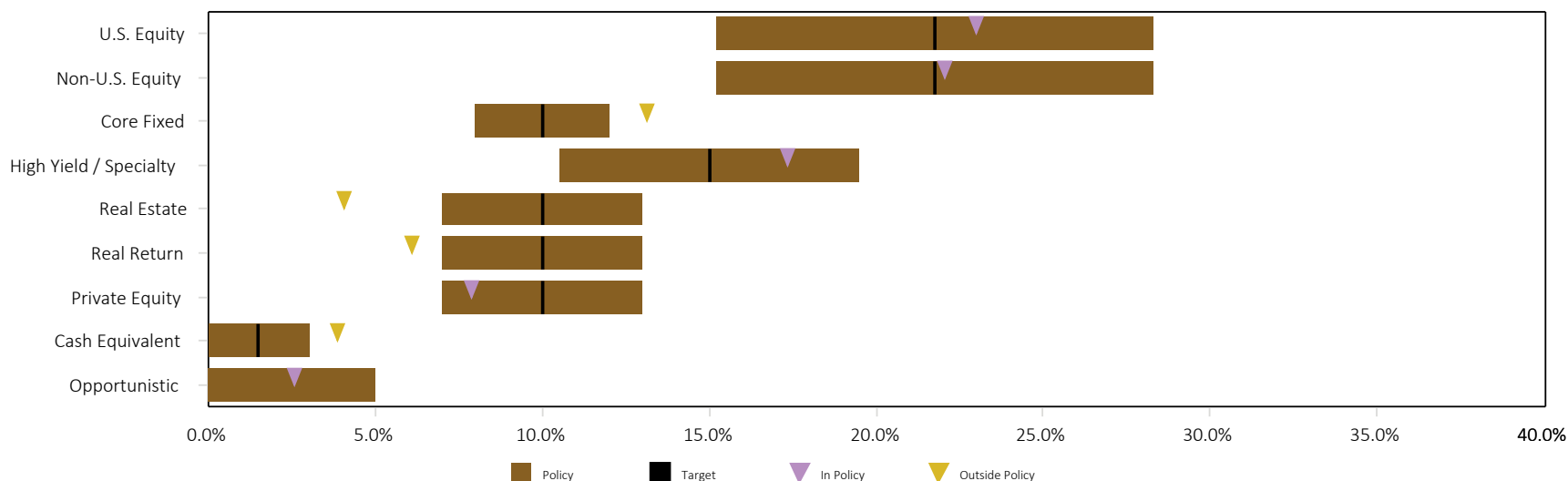
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	330,741,914	24.23	15.23	28.28	21.75	-33,909,890
Non-U.S. Equity	285,030,650	20.89	15.23	28.28	21.75	11,801,373
Core Fixed	173,299,004	12.70	8.00	12.00	10.00	-36,824,510
High Yield / Specialty	227,175,145	16.65	10.50	19.50	15.00	-22,463,405
Real Estate	41,279,746	3.02	7.00	13.00	10.00	95,194,747
Real Return	78,988,024	5.79	7.00	13.00	10.00	57,486,470
Private Equity	75,010,178	5.50	7.00	13.00	10.00	61,464,316
Cash Equivalent	117,457,006	8.61	0.00	3.00	1.50	-96,985,832
Opportunistic	35,763,268	2.62	0.00	5.00	0.00	-35,763,268
Total Fund	1,364,744,935	100.00			100.00	

Asset Allocation Compliance

KERS (H) Pension Plan

Periods Ended As of September 30, 2021

Executive Summary



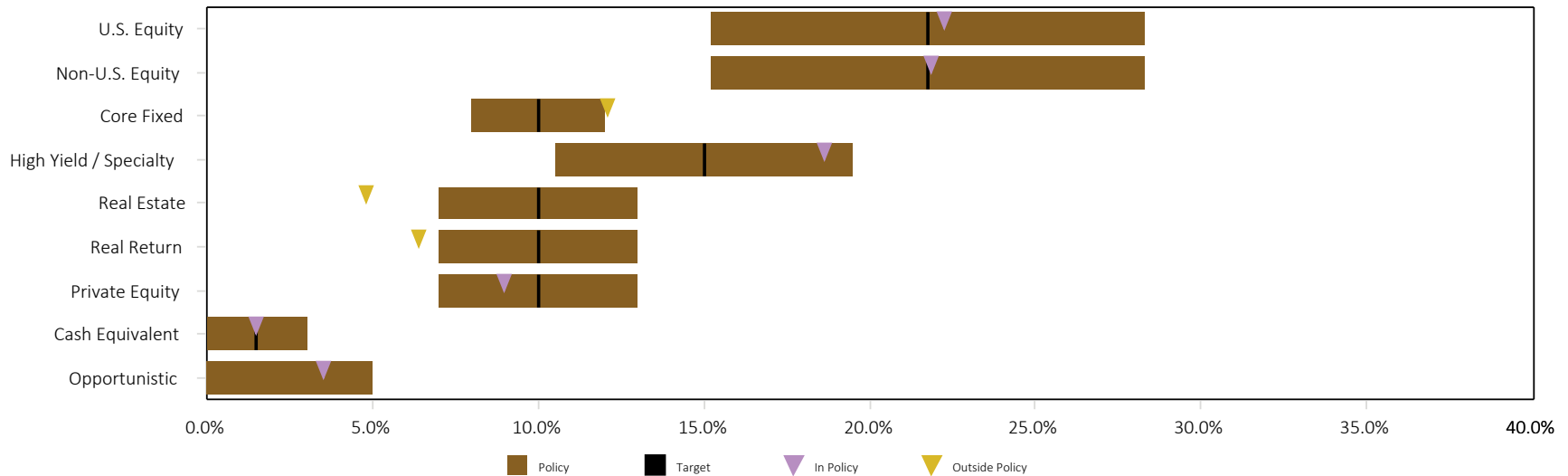
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	202,279,915	23.01	15.23	28.28	21.75	-11,071,886
Non-U.S. Equity	193,887,083	22.05	15.23	28.28	21.75	-2,679,055
Core Fixed	115,420,029	13.13	8.00	12.00	10.00	-27,508,292
High Yield / Specialty	152,476,976	17.34	10.50	19.50	15.00	-20,609,371
Real Estate	35,753,003	4.07	7.00	13.00	10.00	52,158,734
Real Return	53,655,341	6.10	7.00	13.00	10.00	34,256,396
Private Equity	69,389,583	7.89	7.00	13.00	10.00	18,522,154
Cash Equivalent	33,796,682	3.84	0.00	3.00	1.50	-20,609,922
Opportunistic	22,458,759	2.55	0.00	5.00	0.00	-22,458,759
Total Fund	879,117,371	100.00			100.00	

Asset Allocation Compliance

KERS (H) Insurance Plan

Periods Ended As of September 30, 2021

Executive Summary



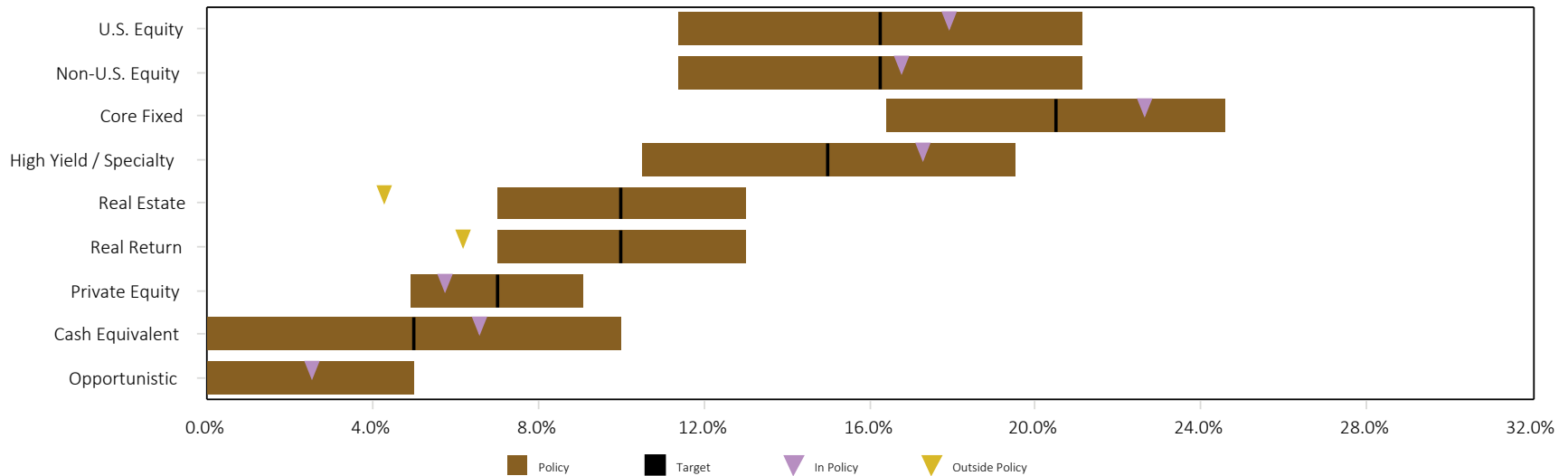
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	139,932,216	22.27	15.23	28.28	21.75	-3,248,423
Non-U.S. Equity	137,269,855	21.84	15.23	28.28	21.75	-586,062
Core Fixed	75,918,368	12.08	8.00	12.00	10.00	-13,075,244
High Yield / Specialty	117,020,814	18.62	10.50	19.50	15.00	-22,756,129
Real Estate	30,303,594	4.82	7.00	13.00	10.00	32,539,530
Real Return	40,033,232	6.37	7.00	13.00	10.00	22,809,892
Private Equity	56,330,567	8.96	7.00	13.00	10.00	6,512,557
Cash Equivalent	9,390,351	1.49	0.00	3.00	1.50	36,118
Opportunistic	22,232,239	3.54	0.00	5.00	0.00	-22,232,239
Total Fund	628,431,236	100.00			100.00	

Asset Allocation Compliance

SPRS Pension Plan

Periods Ended As of September 30, 2021

Executive Summary



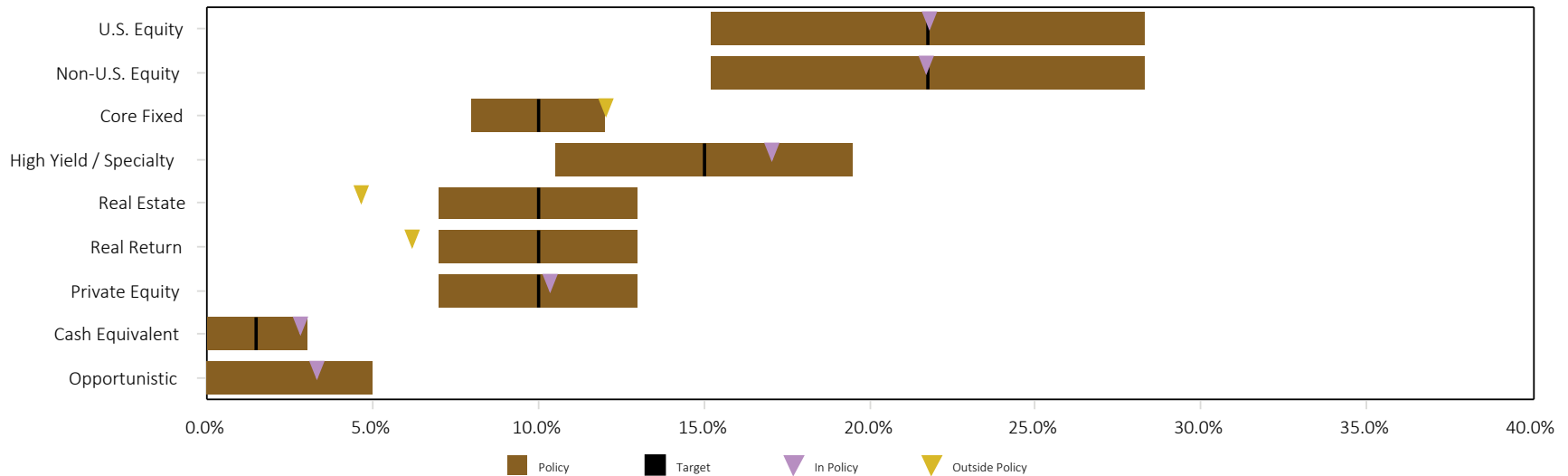
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	63,294,704	17.93	11.38	21.13	16.25	-5,929,935
Non-U.S. Equity	59,270,369	16.79	11.38	21.13	16.25	-1,905,600
Core Fixed	79,954,035	22.65	16.40	24.60	20.50	-7,586,172
High Yield / Specialty	61,062,478	17.30	10.50	19.50	15.00	-8,110,384
Real Estate	15,169,935	4.30	7.00	13.00	10.00	20,131,461
Real Return	21,798,950	6.18	7.00	13.00	10.00	13,502,446
Private Equity	20,292,827	5.75	4.90	9.10	7.00	4,418,151
Cash Equivalent	23,222,812	6.58	0.00	10.00	5.00	-5,572,114
Opportunistic	8,947,853	2.53	0.00	5.00	0.00	-8,947,853
Total Fund	353,013,963	100.00			100.00	

Asset Allocation Compliance

SPRS Insurance Plan

Periods Ended As of September 30, 2021

Executive Summary



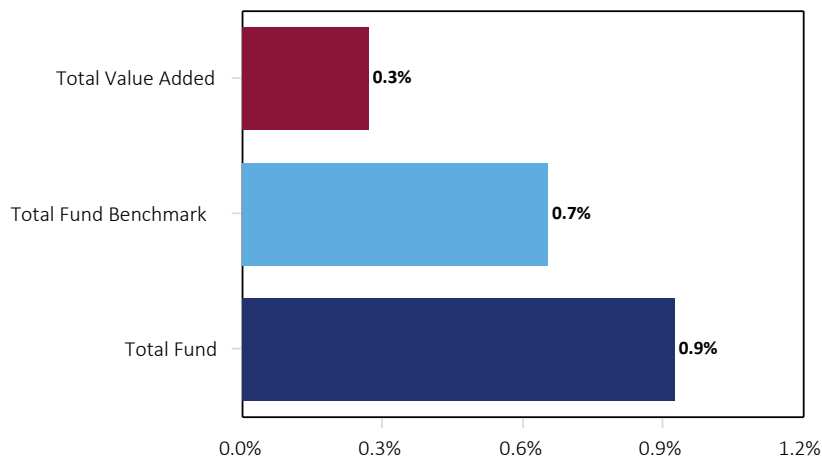
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	54,046,111	21.82	15.23	28.28	21.75	-179,932
Non-U.S. Equity	53,769,851	21.71	15.23	28.28	21.75	96,328
Core Fixed	29,791,825	12.03	8.00	12.00	10.00	-5,025,766
High Yield / Specialty	42,242,341	17.06	10.50	19.50	15.00	-5,093,251
Real Estate	11,582,896	4.68	7.00	13.00	10.00	13,183,164
Real Return	15,395,386	6.22	7.00	13.00	10.00	9,370,674
Private Equity	25,652,706	10.36	7.00	13.00	10.00	-886,647
Cash Equivalent	6,969,828	2.81	0.00	3.00	1.50	-3,254,919
Opportunistic	8,209,651	3.31	0.00	5.00	0.00	-8,209,651
Total Fund	247,660,594	100.00			100.00	

Total Fund Attribution

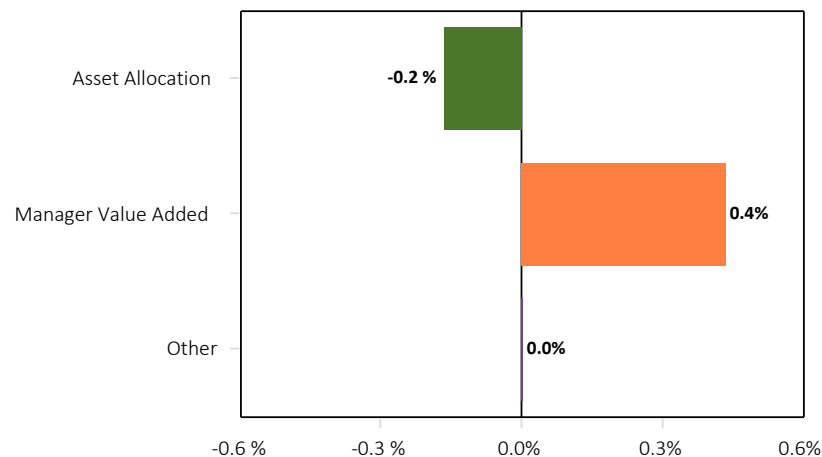
KERS Pension Plan

Periods Ended 1 Quarter Ending September 30, 2021

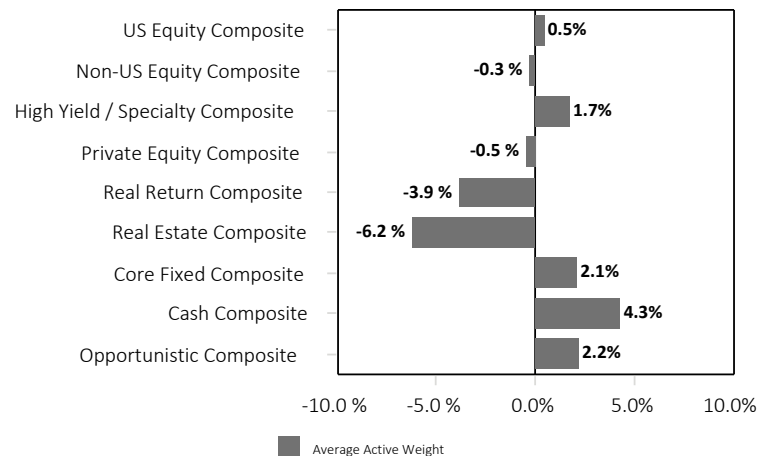
Total Fund Performance



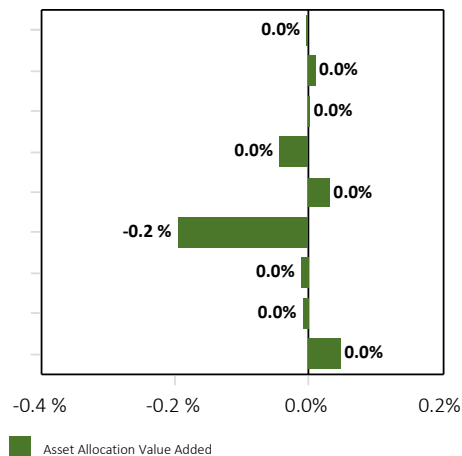
Total Value Added:0.3%



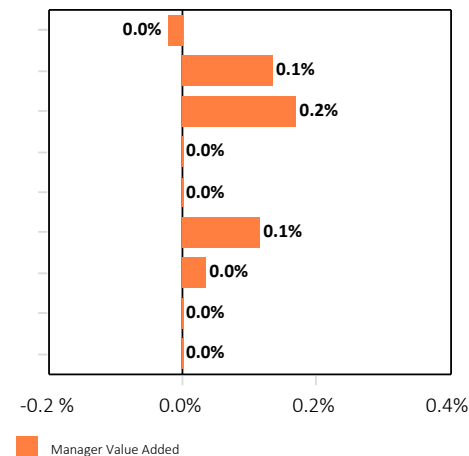
Total Asset Allocation:-0.2%



Asset Allocation Value Added:-0.2%



Total Manager Value Added:0.4%

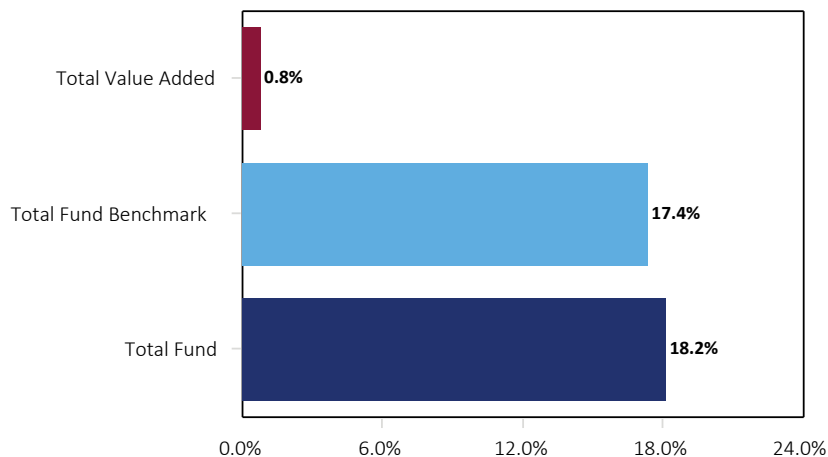


Total Fund Attribution

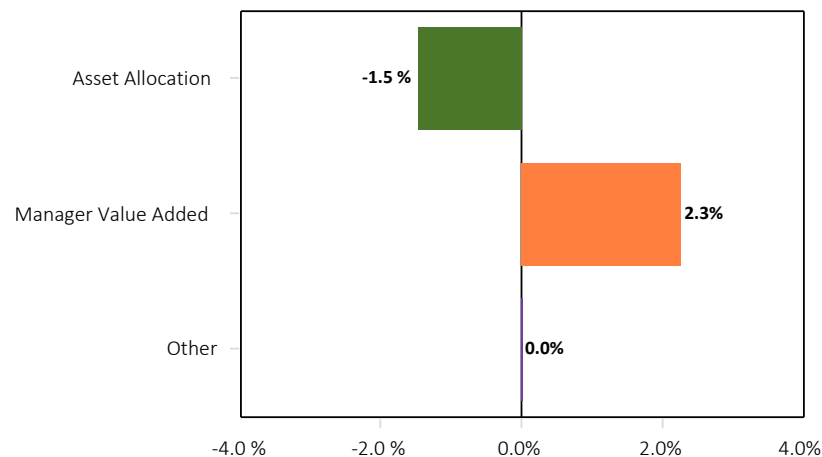
KERS Pension Plan

Periods Ended 1 Year Ending September 30, 2021

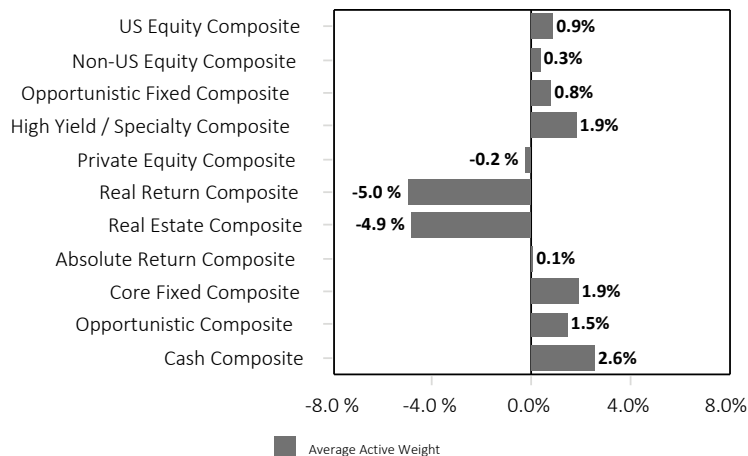
Total Fund Performance



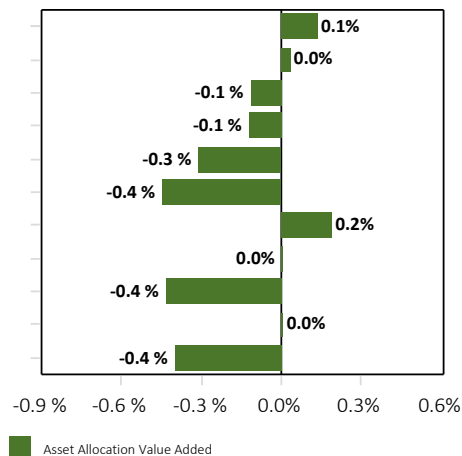
Total Value Added: 0.8%



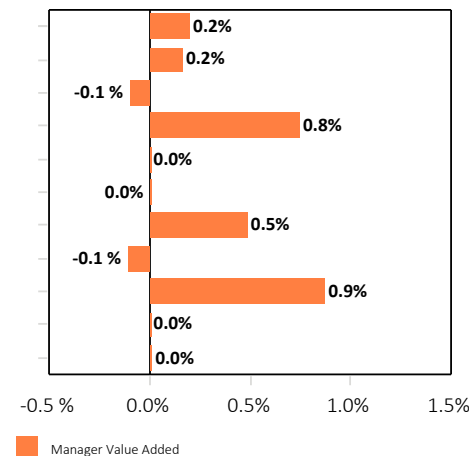
Total Asset Allocation: -1.5%



Asset Allocation Value Added: -1.5%



Total Manager Value Added: 2.3%

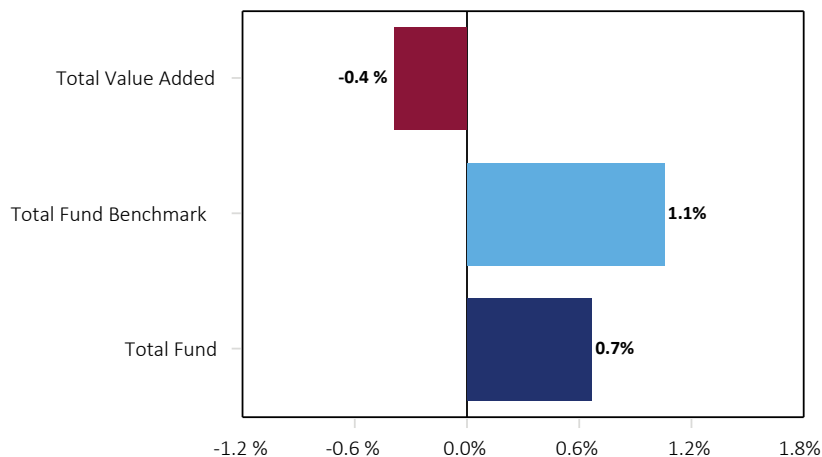


Total Fund Attribution

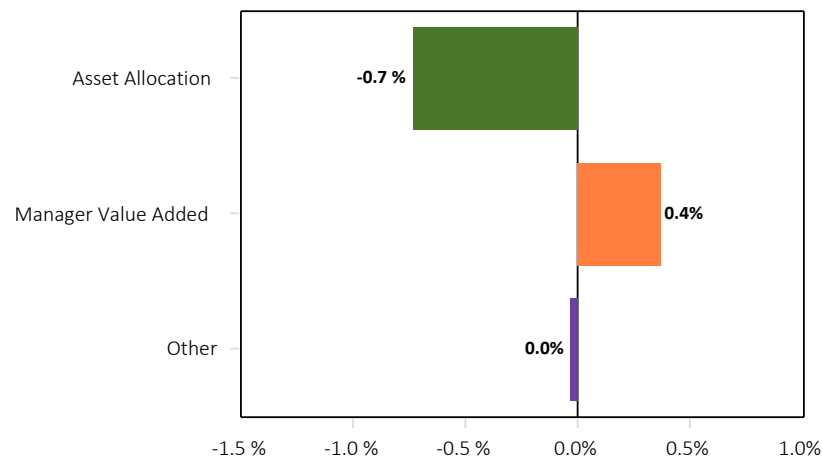
KERS Insurance Plan

Periods Ended 1 Quarter Ending September 30, 2021

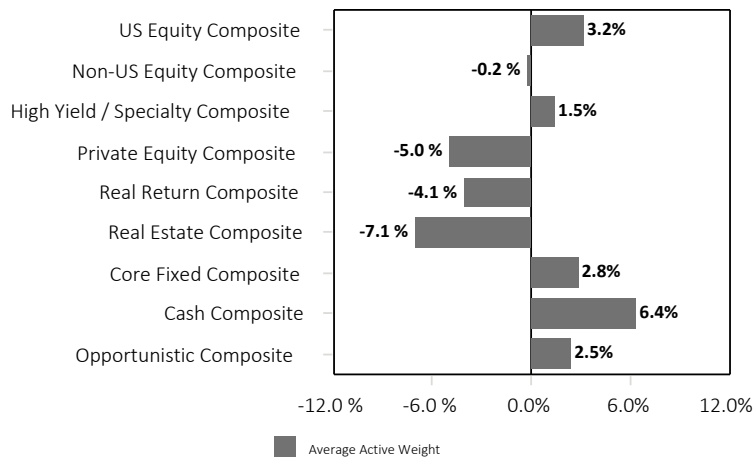
Total Fund Performance



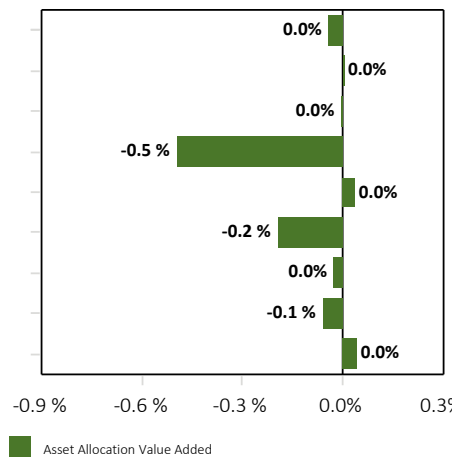
Total Value Added:-0.4 %



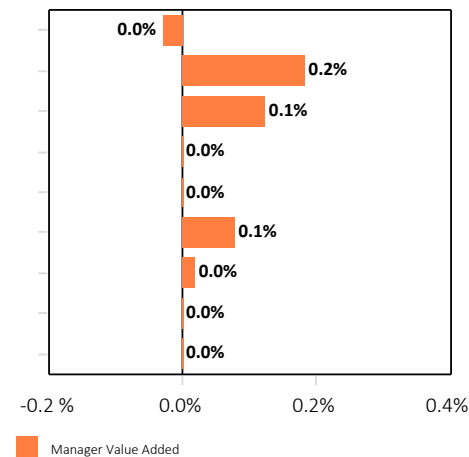
Total Asset Allocation:-0.7 %



Asset Allocation Value Added:-0.7 %



Total Manager Value Added:0.4%

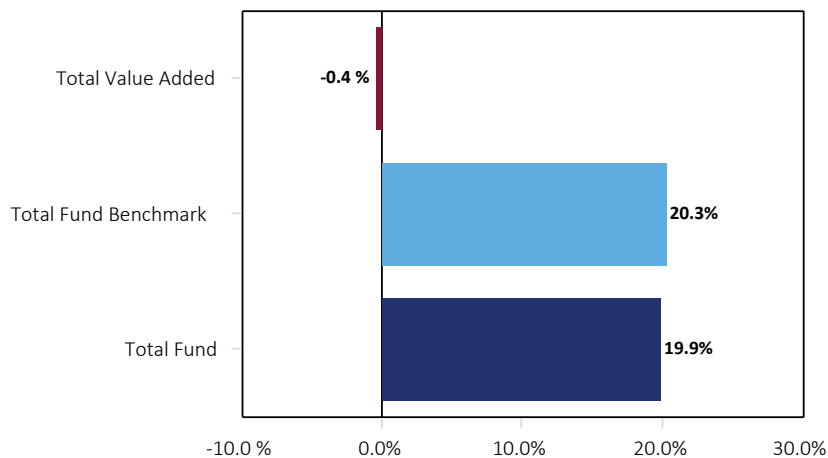


Total Fund Attribution

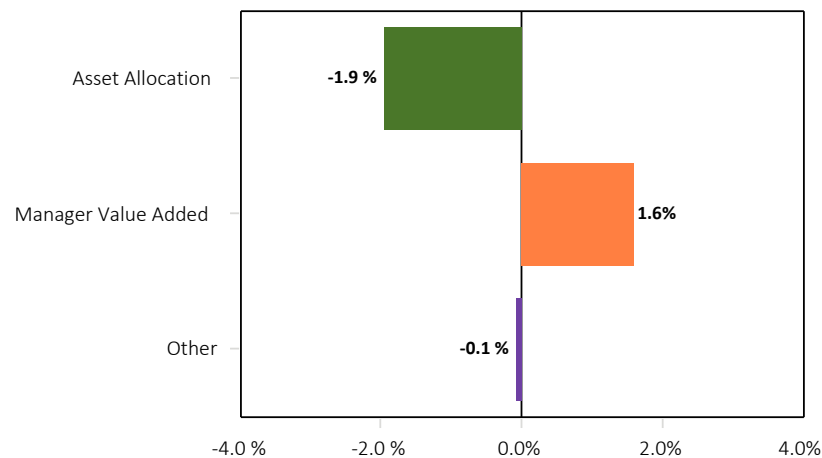
KERS Insurance Plan

Periods Ended 1 Year Ending September 30, 2021

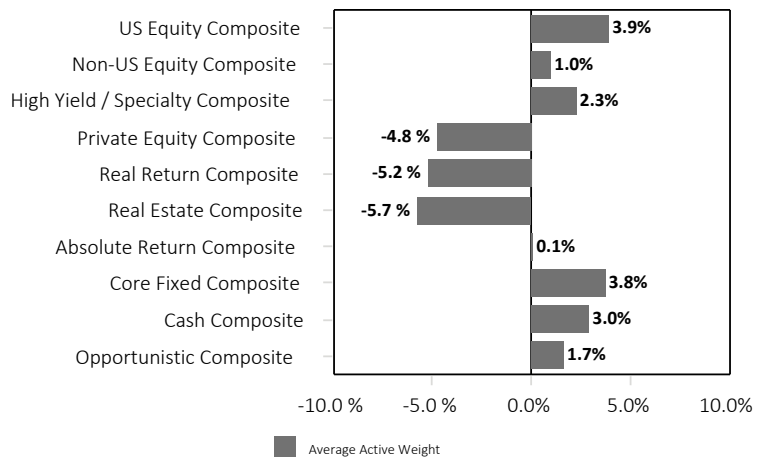
Total Fund Performance



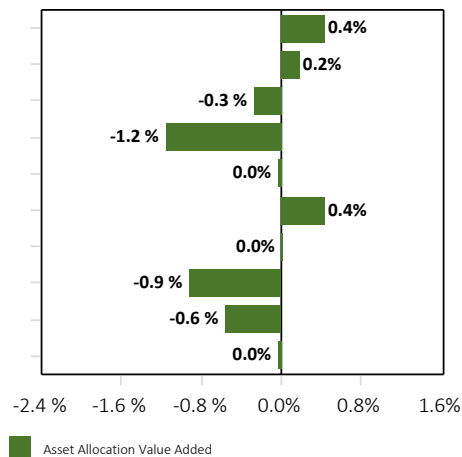
Total Value Added:-0.4 %



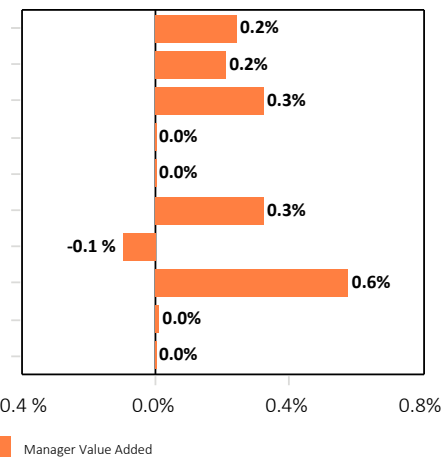
Total Asset Allocation:-1.9 %



Asset Allocation Value Added:-1.9 %



Total Manager Value Added:1.6%

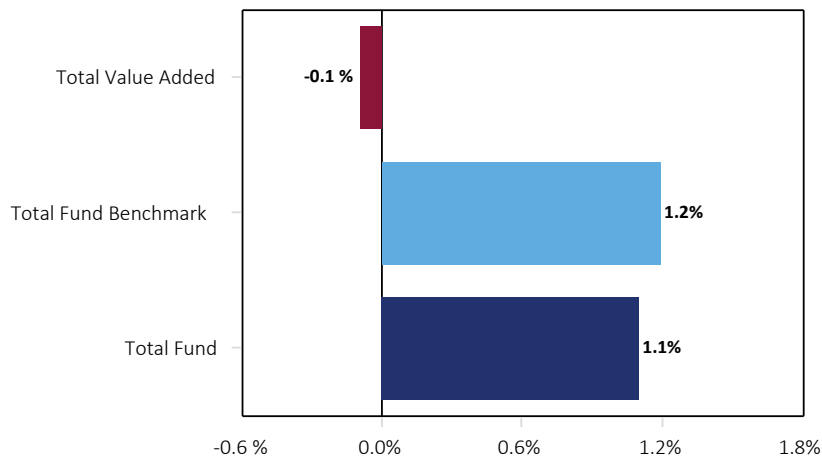


Total Fund Attribution

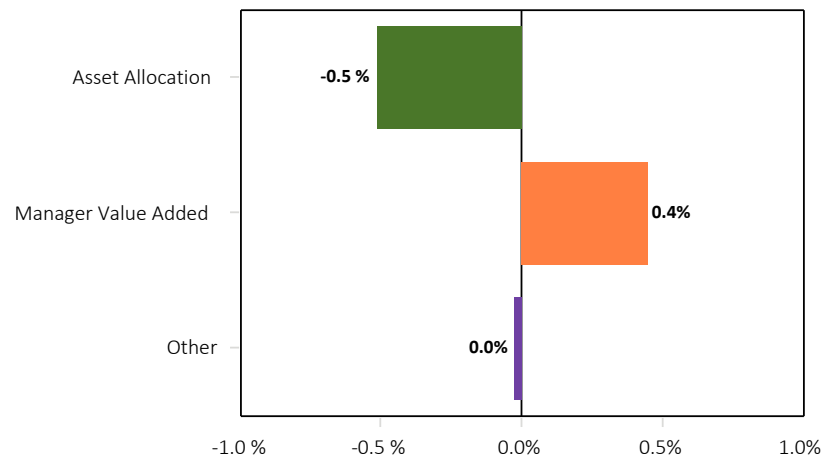
KERS (H) Pension Plan

Periods Ended 1 Quarter Ending September 30, 2021

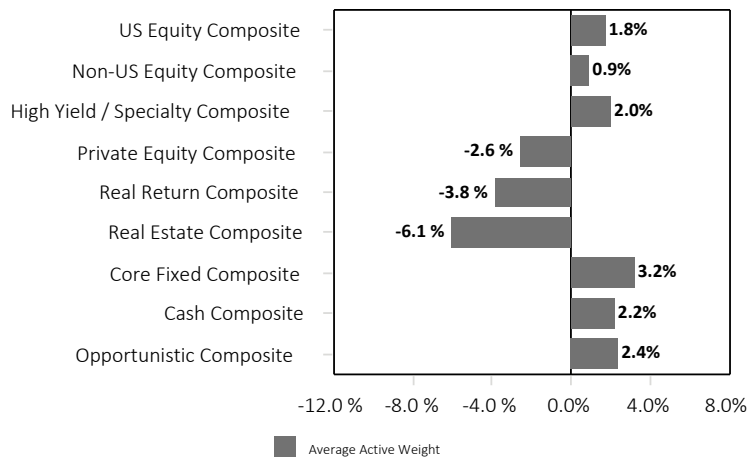
Total Fund Performance



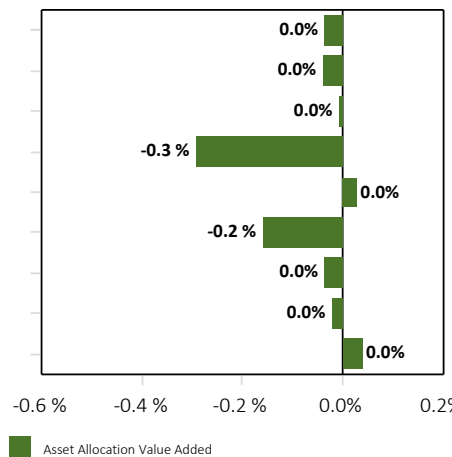
Total Value Added:-0.1 %



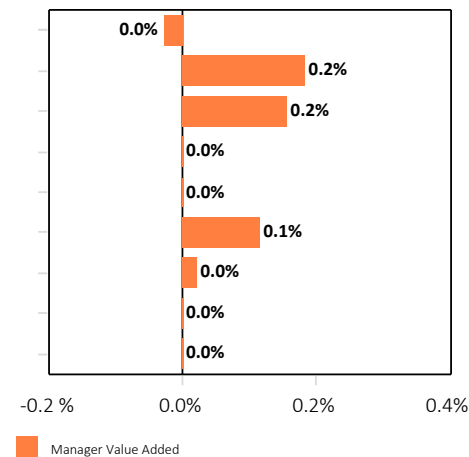
Total Asset Allocation:-0.5 %



Asset Allocation Value Added:-0.5 %



Total Manager Value Added:0.4%

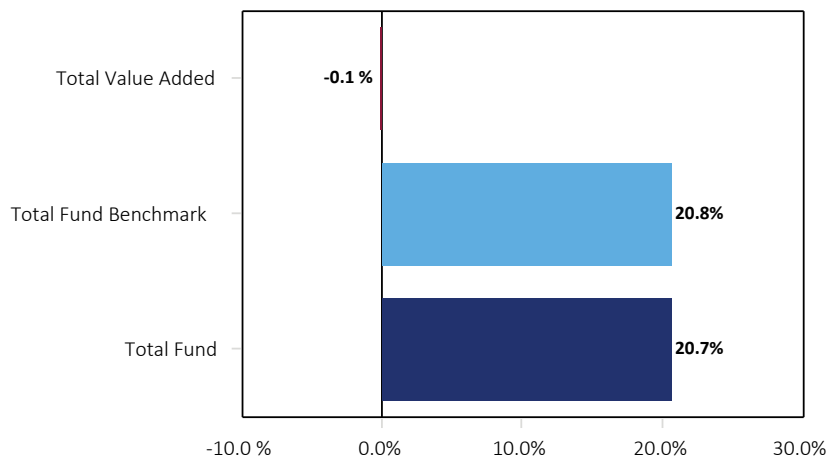


Total Fund Attribution

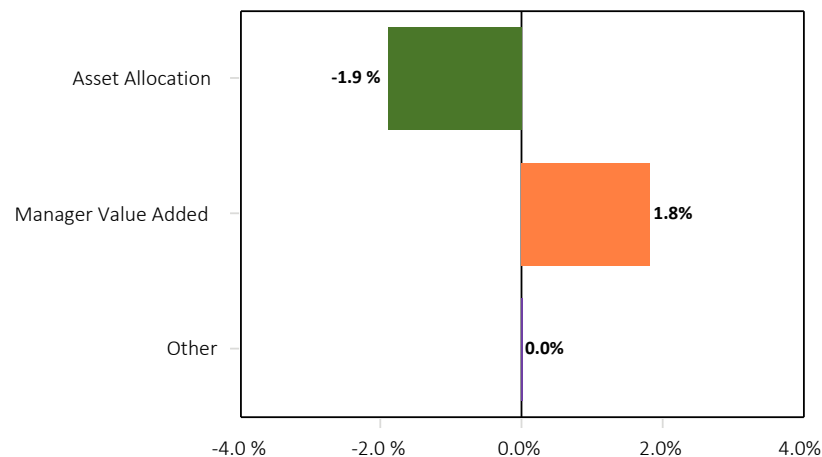
KERS (H) Pension Plan

Periods Ended 1 Year Ending September 30, 2021

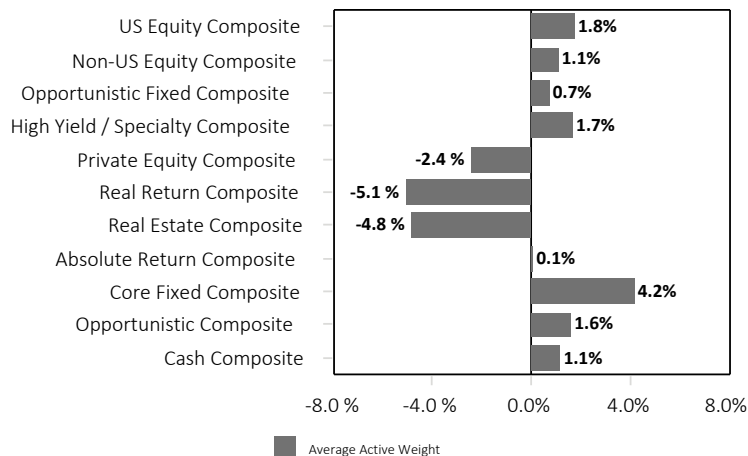
Total Fund Performance



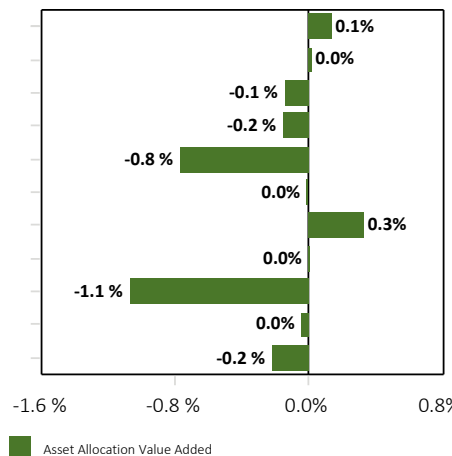
Total Value Added:-0.1 %



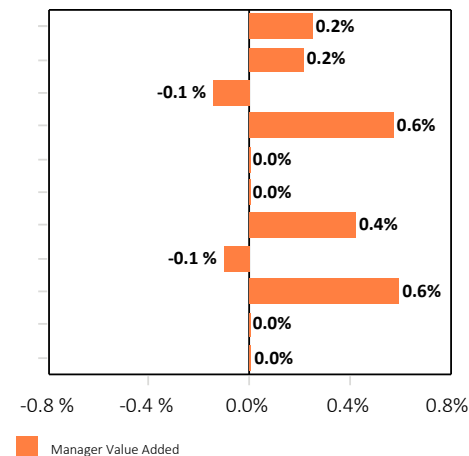
Total Asset Allocation:-1.9 %



Asset Allocation Value Added:-1.9 %



Total Manager Value Added:1.8%

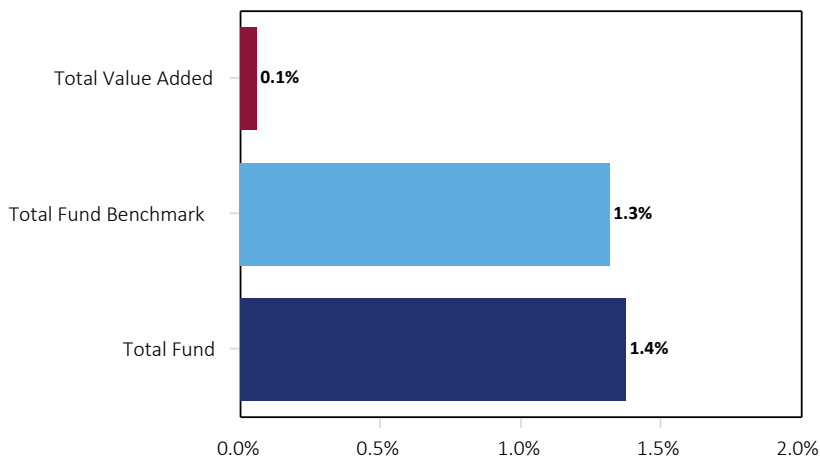


Total Fund Attribution

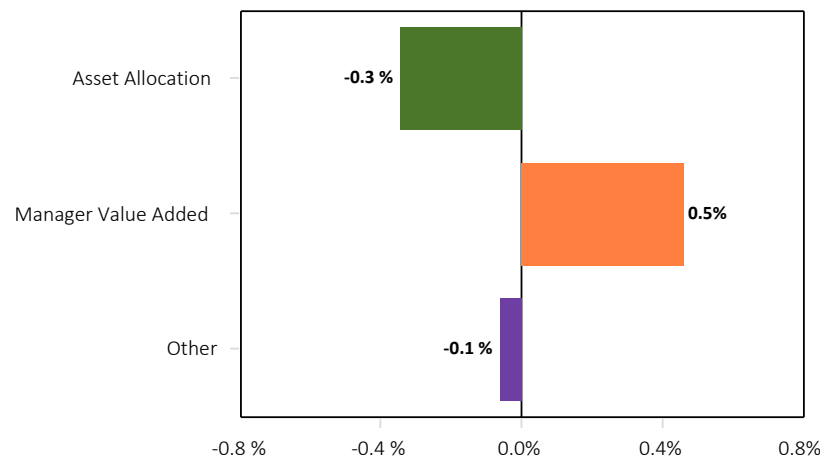
KERS (H) Insurance Plan

Periods Ended 1 Quarter Ending September 30, 2021

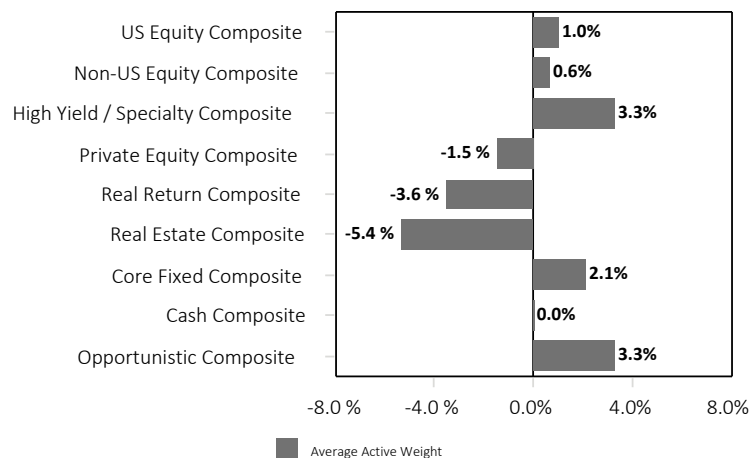
Total Fund Performance



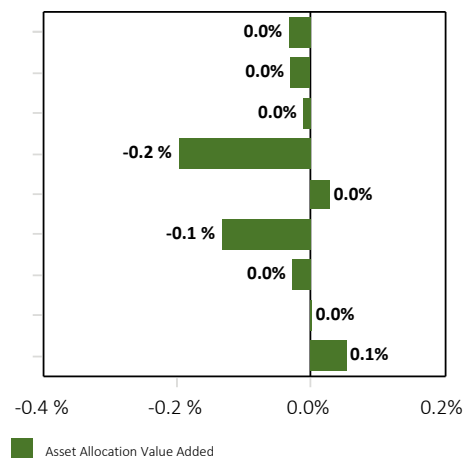
Total Value Added:0.1%



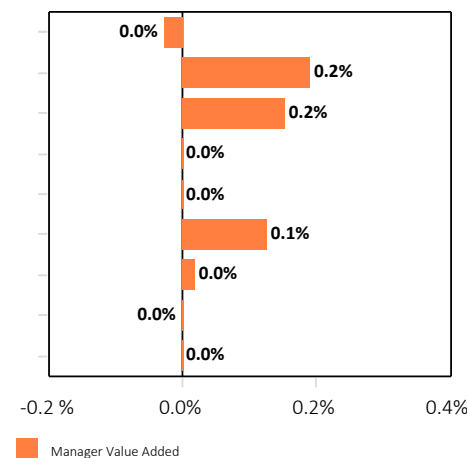
Total Asset Allocation:-0.3%



Asset Allocation Value Added:-0.3%



Total Manager Value Added:0.5%

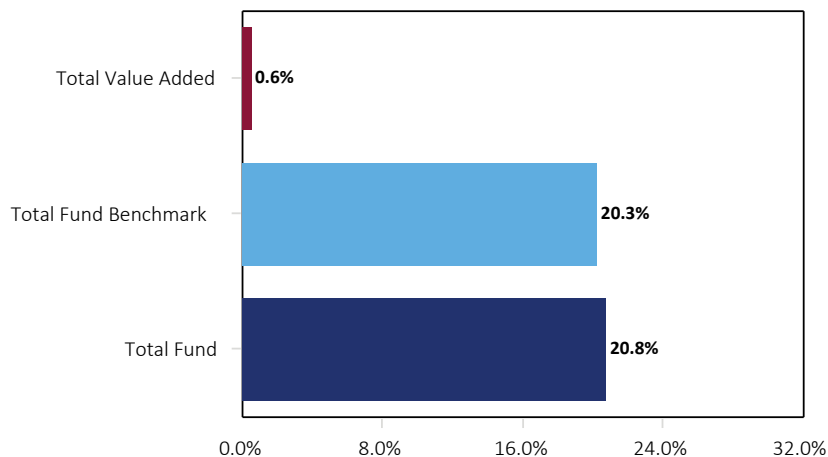


Total Fund Attribution

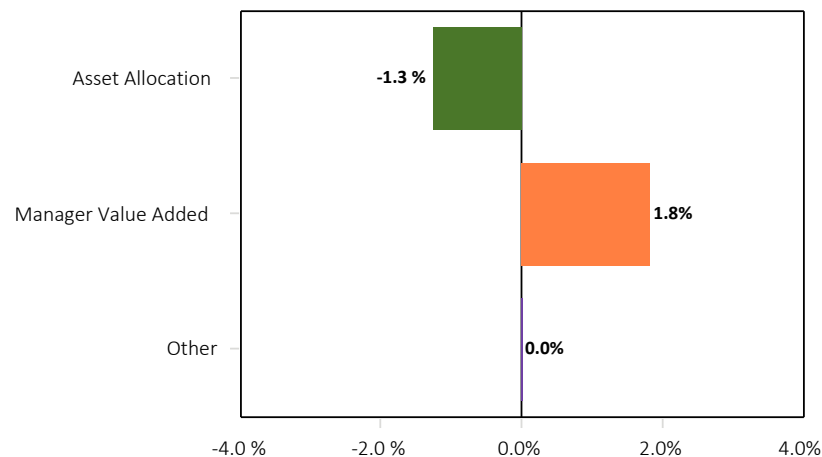
KERS (H) Insurance Plan

Periods Ended 1 Year Ending September 30, 2021

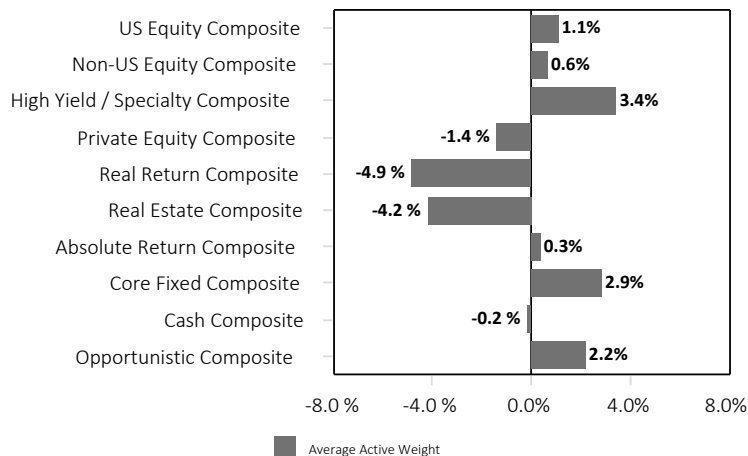
Total Fund Performance



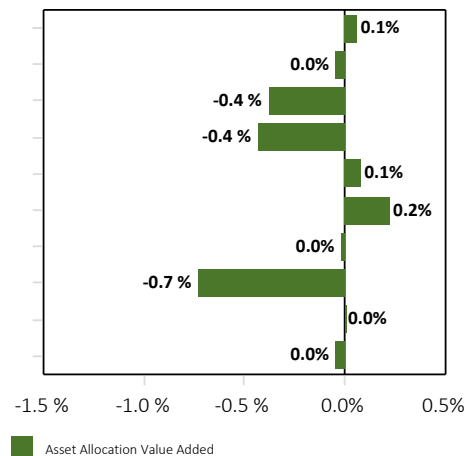
Total Value Added:0.6%



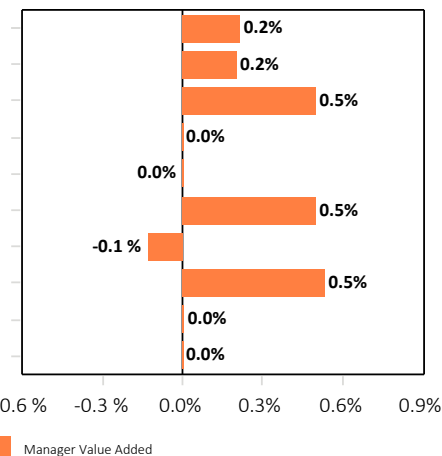
Total Asset Allocation:-1.3%



Asset Allocation Value Added:-1.3%



Total Manager Value Added:1.8%

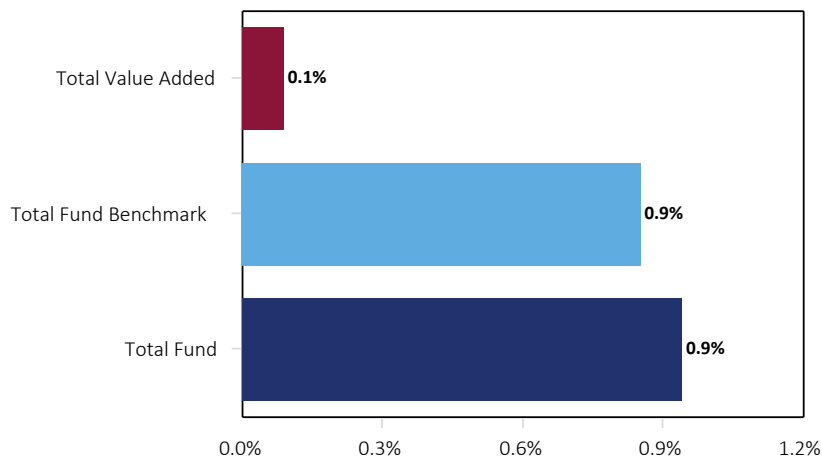


Total Fund Attribution

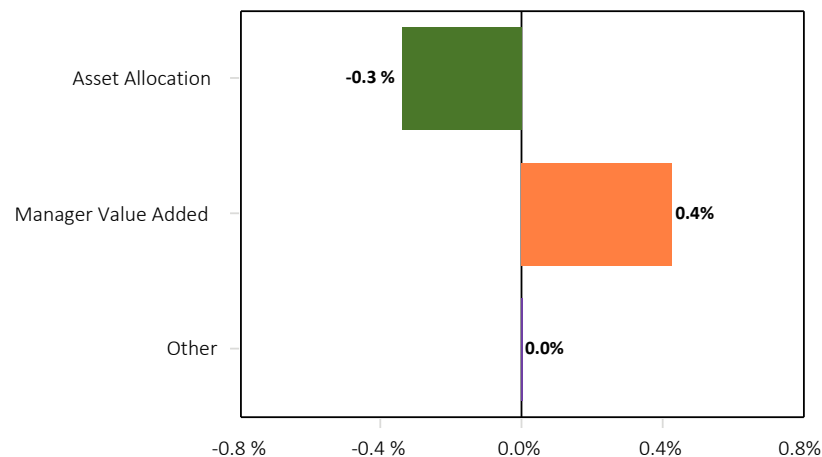
SPRS Pension Plan

Periods Ended 1 Quarter Ending September 30, 2021

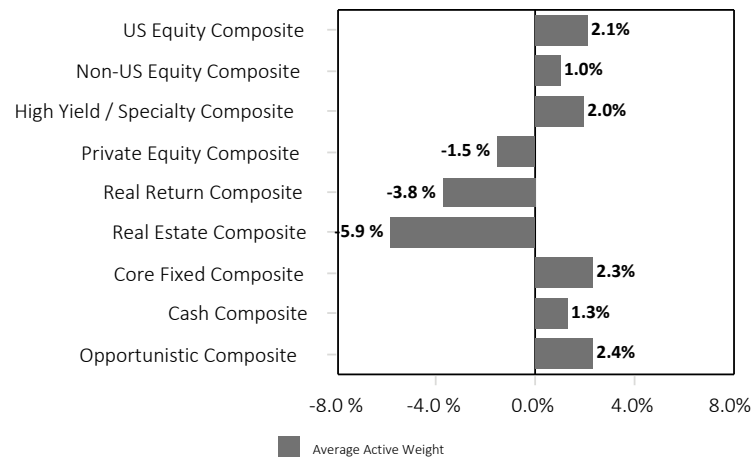
Total Fund Performance



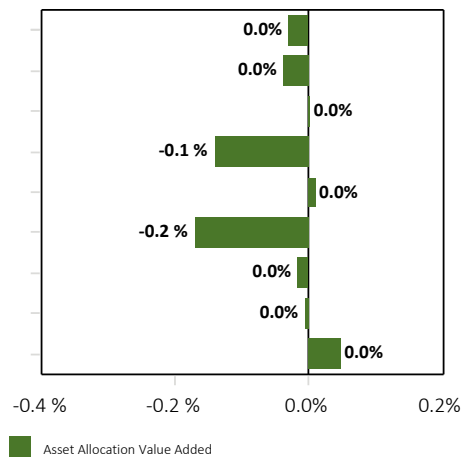
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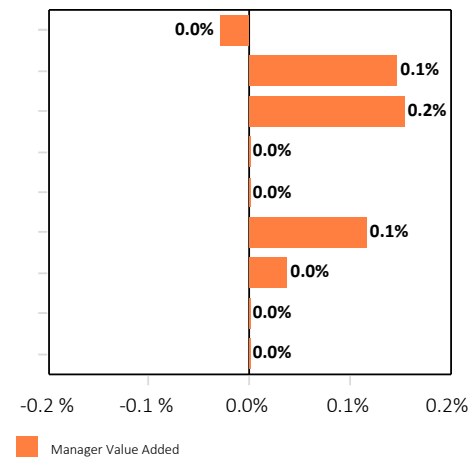
Total Asset Allocation:-0.3%



Asset Allocation Value Added:-0.3%



Total Manager Value Added:0.4%

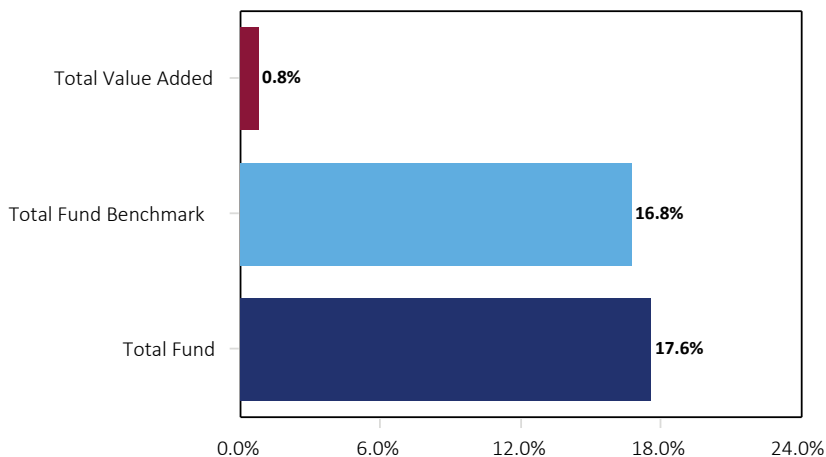


Total Fund Attribution

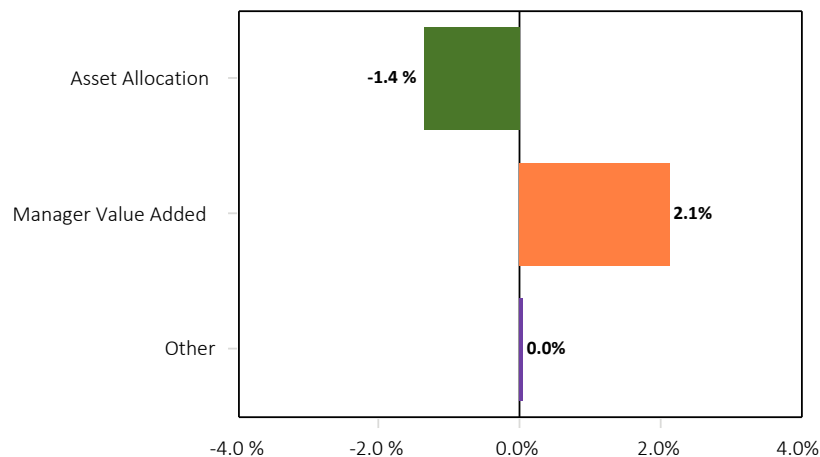
SPRS Pension Plan

Periods Ended 1 Year Ending September 30, 2021

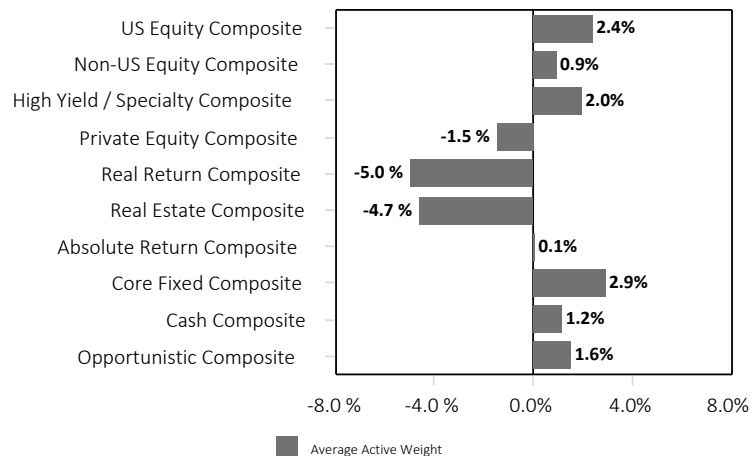
Total Fund Performance



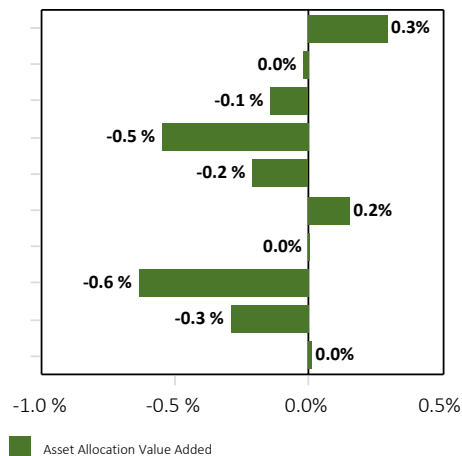
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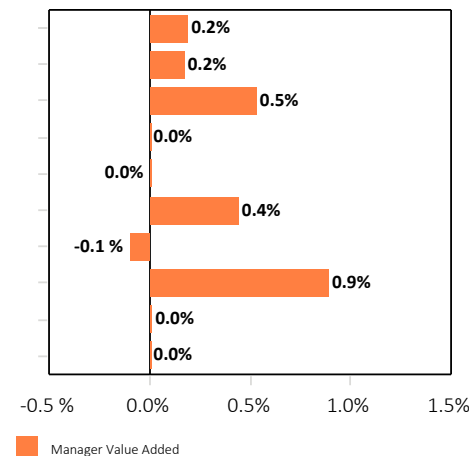
Total Asset Allocation:-1.4%



Asset Allocation Value Added:-1.4%



Total Manager Value Added:2.1%

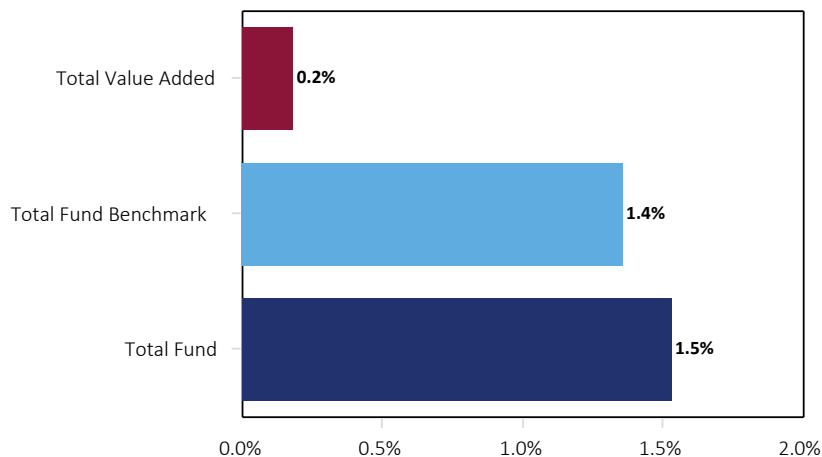


Total Fund Attribution

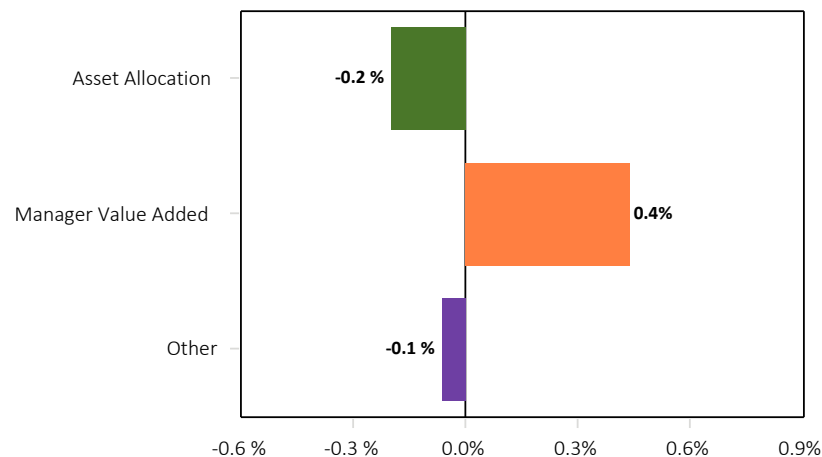
SPRS Insurance Plan

Periods Ended 1 Quarter Ending September 30, 2021

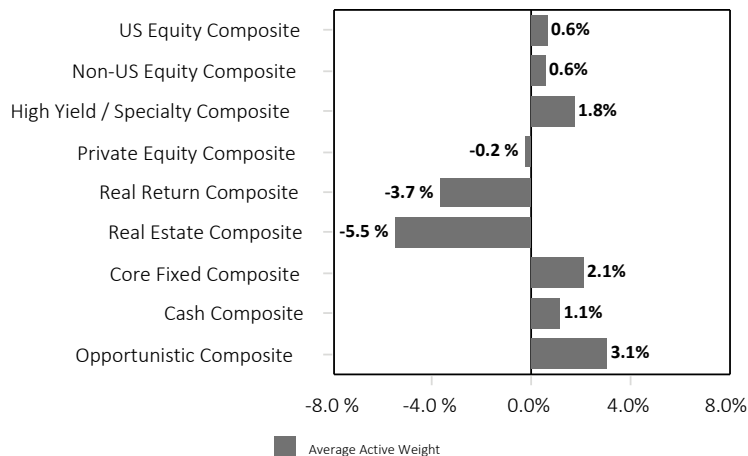
Total Fund Performance



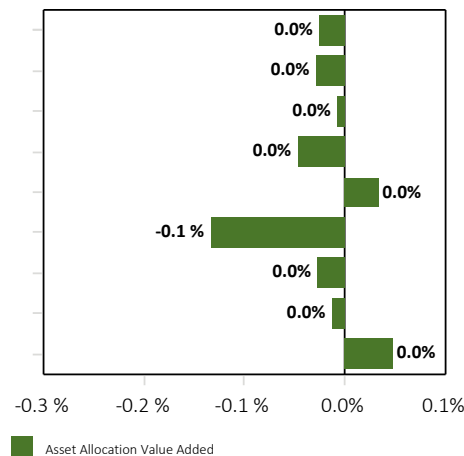
Total Value Added:0.2%



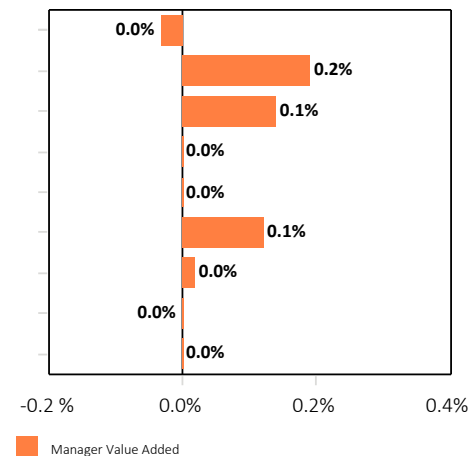
Total Asset Allocation:-0.2%



Asset Allocation Value Added:-0.2%



Total Manager Value Added:0.4%

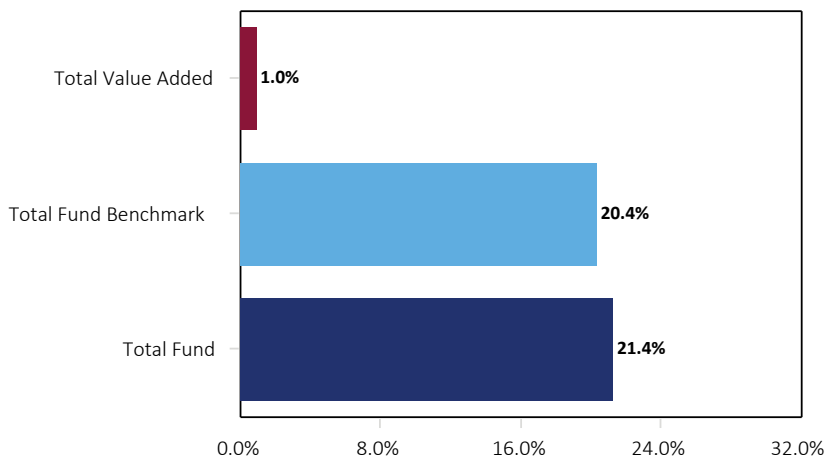


Total Fund Attribution

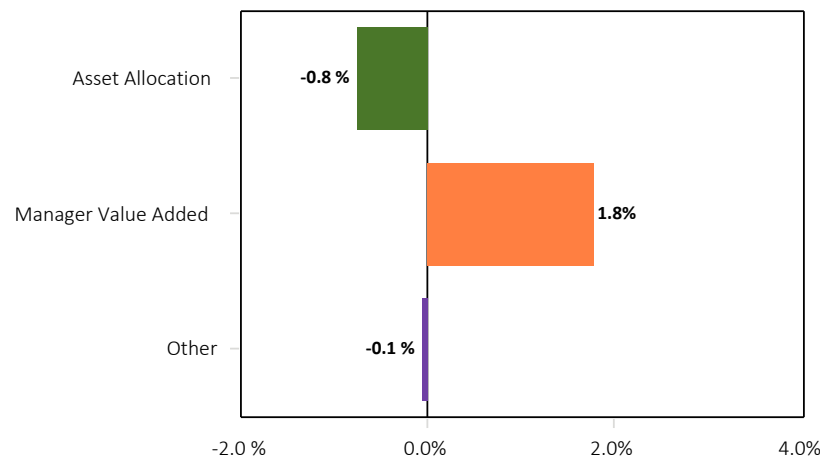
SPRS Insurance Plan

Periods Ended 1 Year Ending September 30, 2021

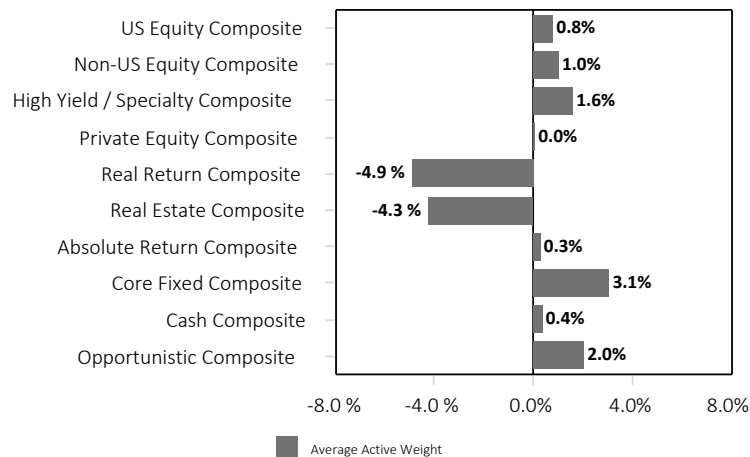
Total Fund Performance



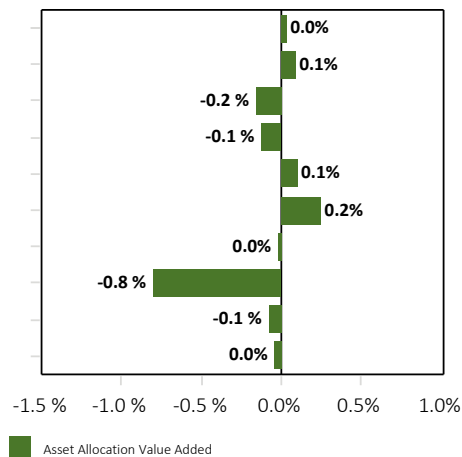
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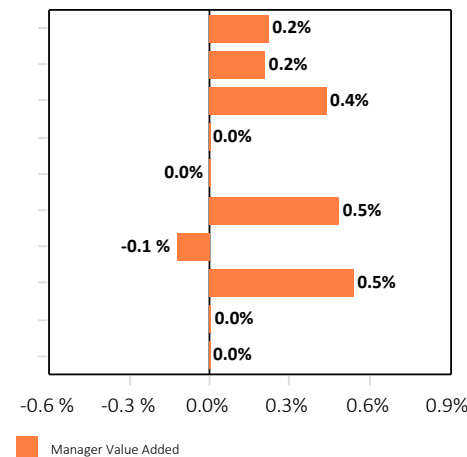
Total Asset Allocation:-0.8%



Asset Allocation Value Added:-0.8%



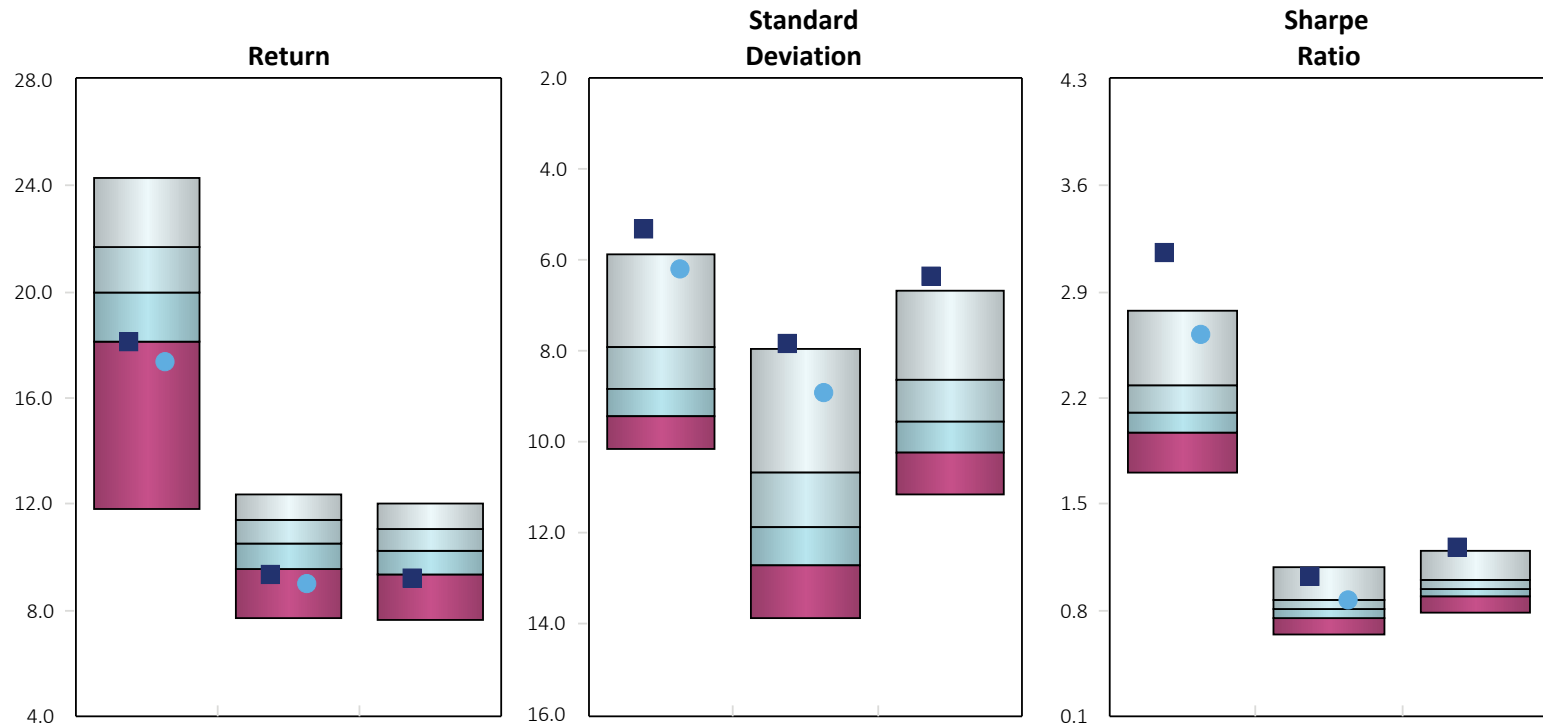
Total Manager Value Added:1.8%



Plan Sponsor Peer Group Analysis - Multi Statistics

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



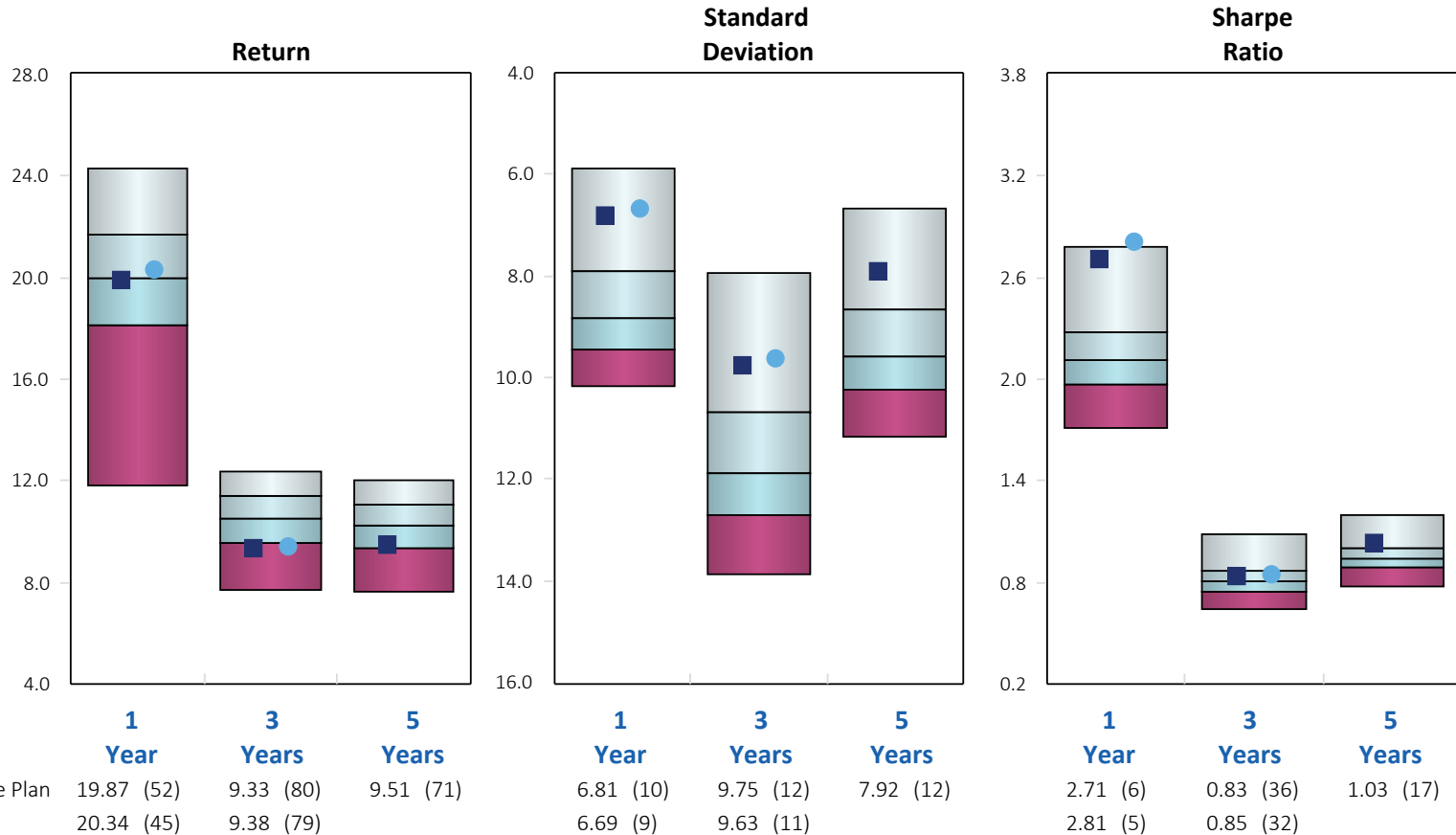
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS Pension Plan	18.12 (75)	9.38 (79)	9.25 (77)	5.32 (3)	7.83 (4)	6.38 (3)	3.16 (3)	1.02 (7)	1.22 (5)
● KERS IPS Index	17.37 (83)	9.01 (86)		6.19 (6)	8.91 (8)		2.62 (8)	0.87 (24)	
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

KERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



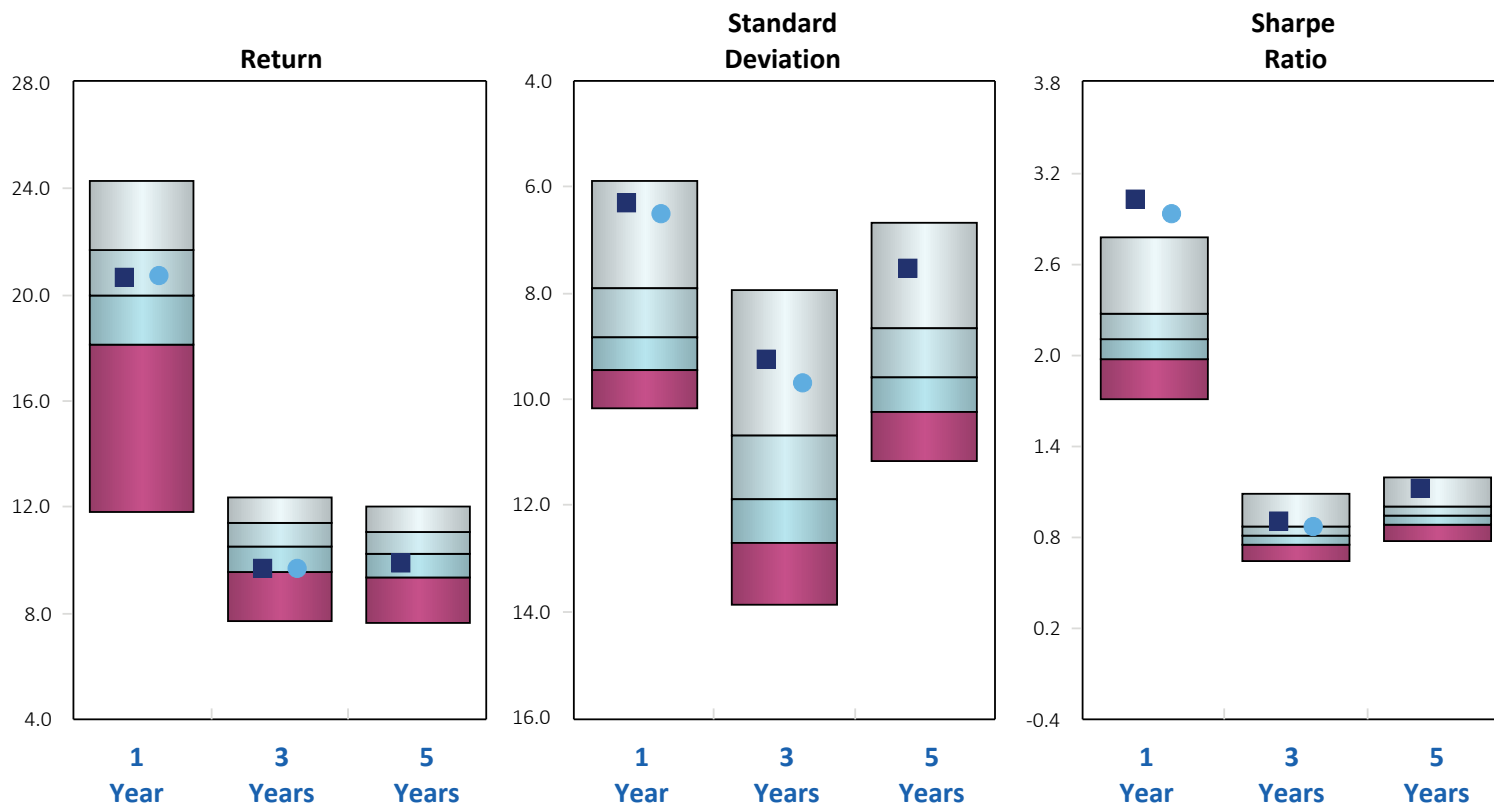
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

KERS (H) Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



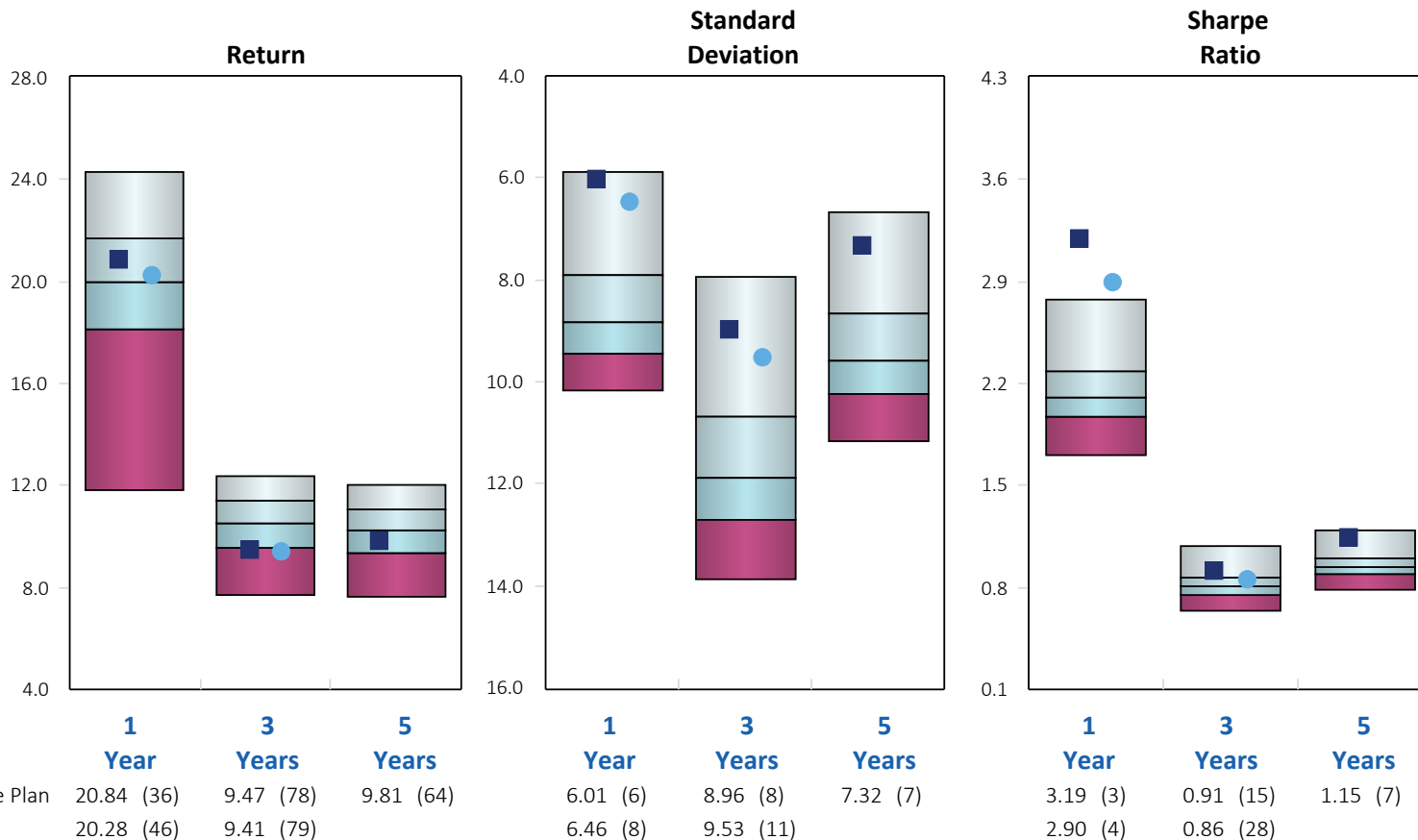
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS (H) Pension Plan	20.66 (39)	9.70 (71)	9.89 (62)	6.29 (7)	9.25 (9)	7.53 (9)	3.03 (3)	0.91 (15)	1.13 (8)
● KERS (H) IPS Index	20.75 (38)	9.72 (70)		6.52 (8)	9.70 (12)		2.94 (4)	0.87 (22)	
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

KERS (H) Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



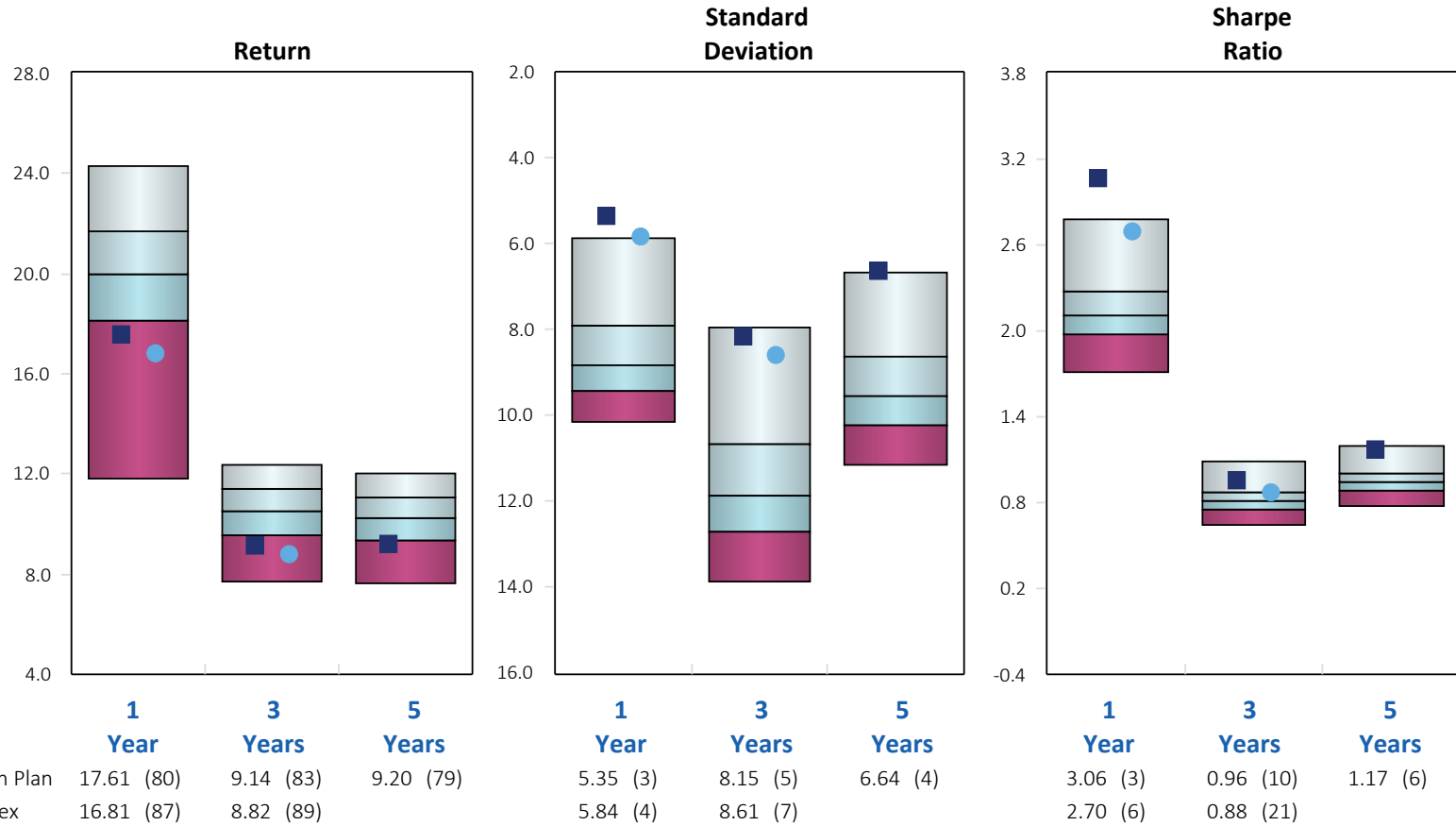
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

SPRS Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



	1 Year	3 Years	5 Years
■ SPRS Pension Plan	17.61 (80)	9.14 (83)	9.20 (79)
● SPRS IPS Index	16.81 (87)	8.82 (89)	

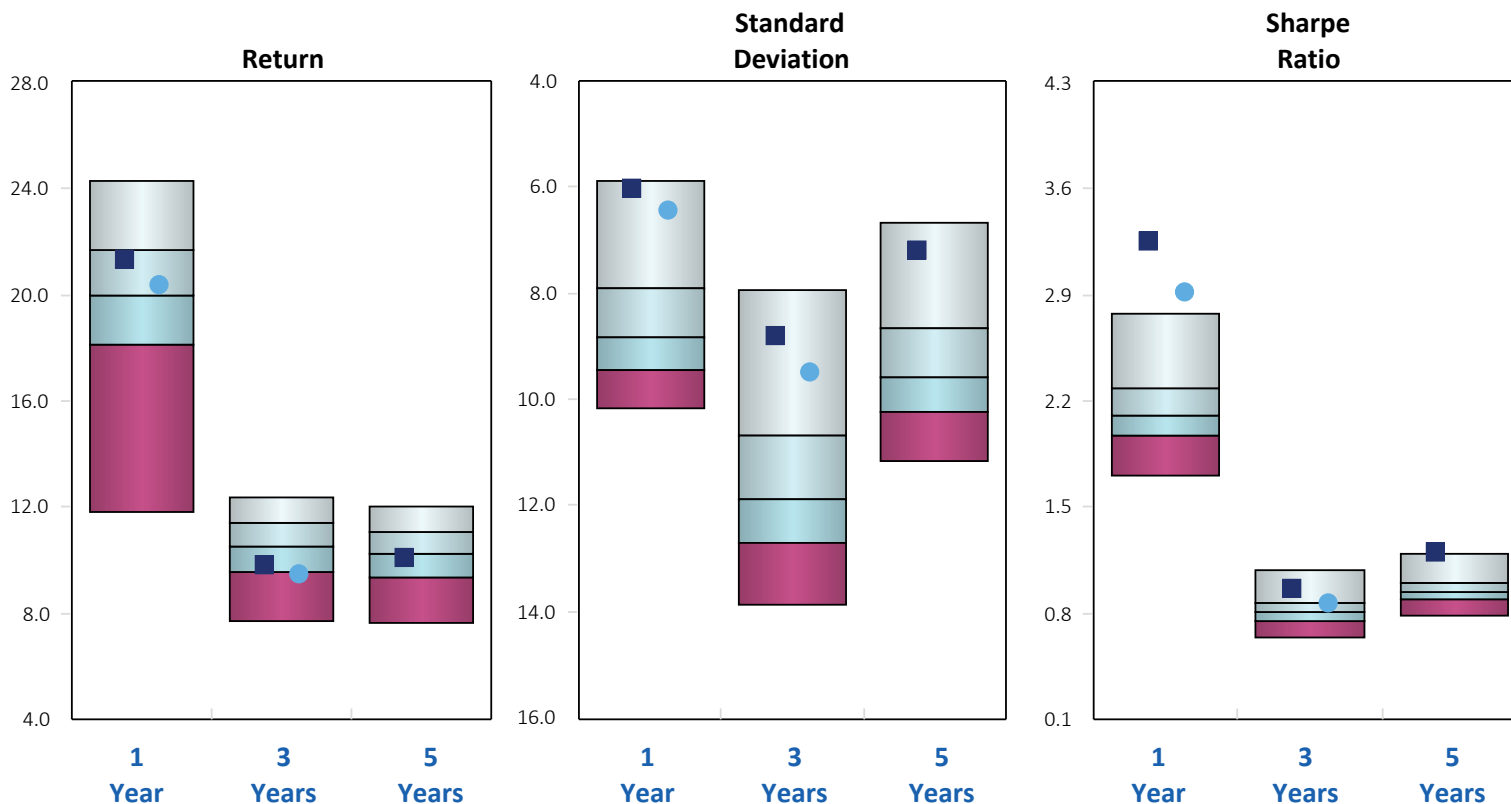
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

SPRS Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



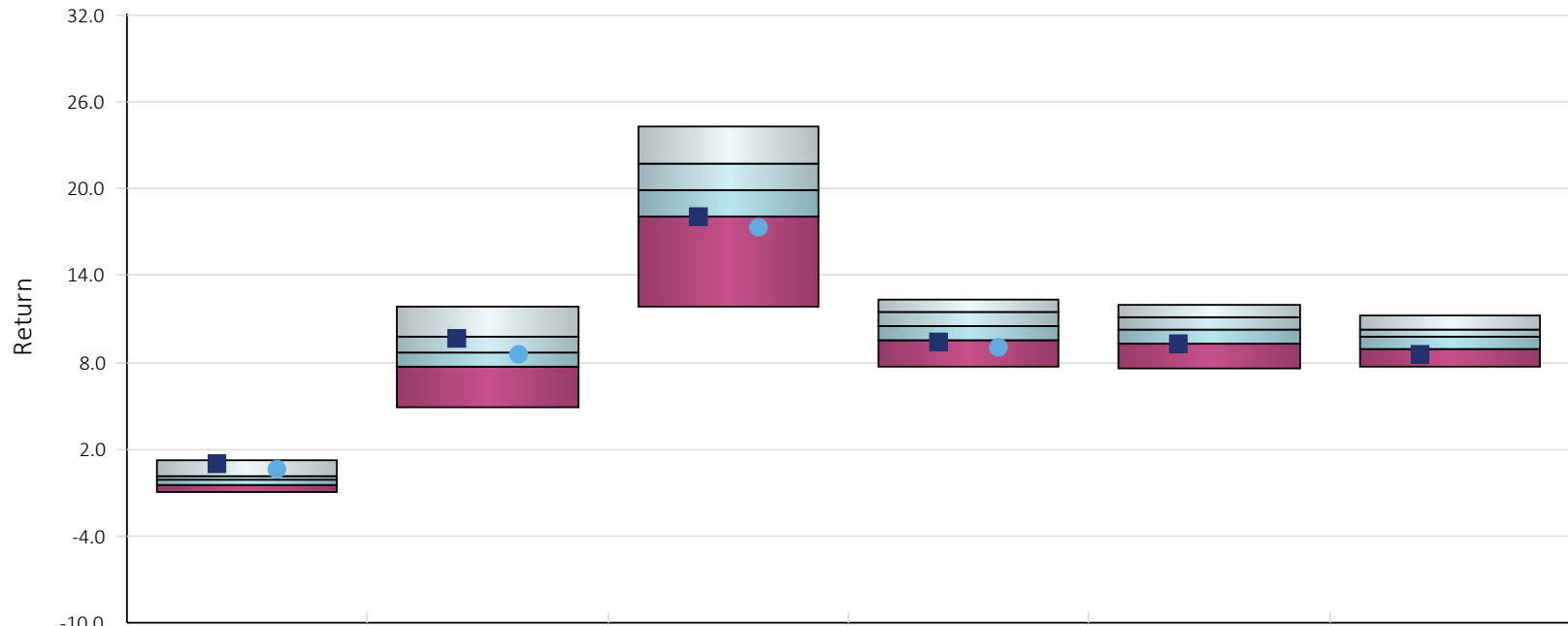
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ SPRS Insurance Plan	21.37 (28)	9.81 (68)	10.12 (55)	6.02 (6)	8.80 (7)	7.19 (7)	3.26 (2)	0.96 (9)	1.20 (5)
● SPRS IPS Index	20.40 (44)	9.50 (77)		6.45 (8)	9.50 (10)		2.92 (4)	0.87 (24)	
5th Percentile	24.29	12.36	12.02	5.89	7.95	6.68	2.78	1.08	1.20
1st Quartile	21.71	11.43	11.08	7.92	10.68	8.65	2.28	0.87	1.00
Median	19.96	10.50	10.22	8.84	11.88	9.58	2.11	0.81	0.94
3rd Quartile	18.12	9.57	9.32	9.44	12.71	10.24	1.97	0.75	0.89
95th Percentile	11.84	7.72	7.64	10.16	13.87	11.17	1.71	0.64	0.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



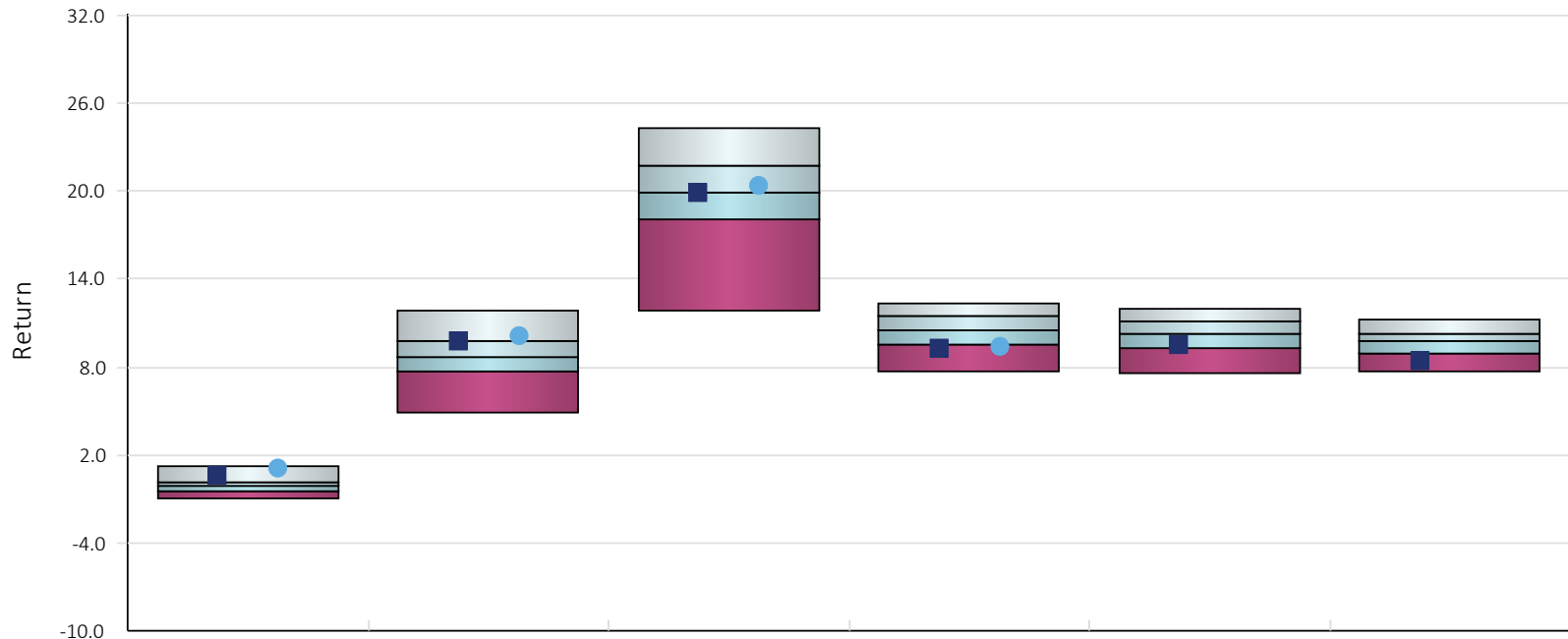
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KERS Pension Plan	0.93 (8)	9.68 (26)	18.12 (75)	9.38 (79)	9.25 (77)	8.58 (86)
● KERS IPS Index	0.66 (10)	8.58 (54)	17.37 (83)	9.01 (86)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



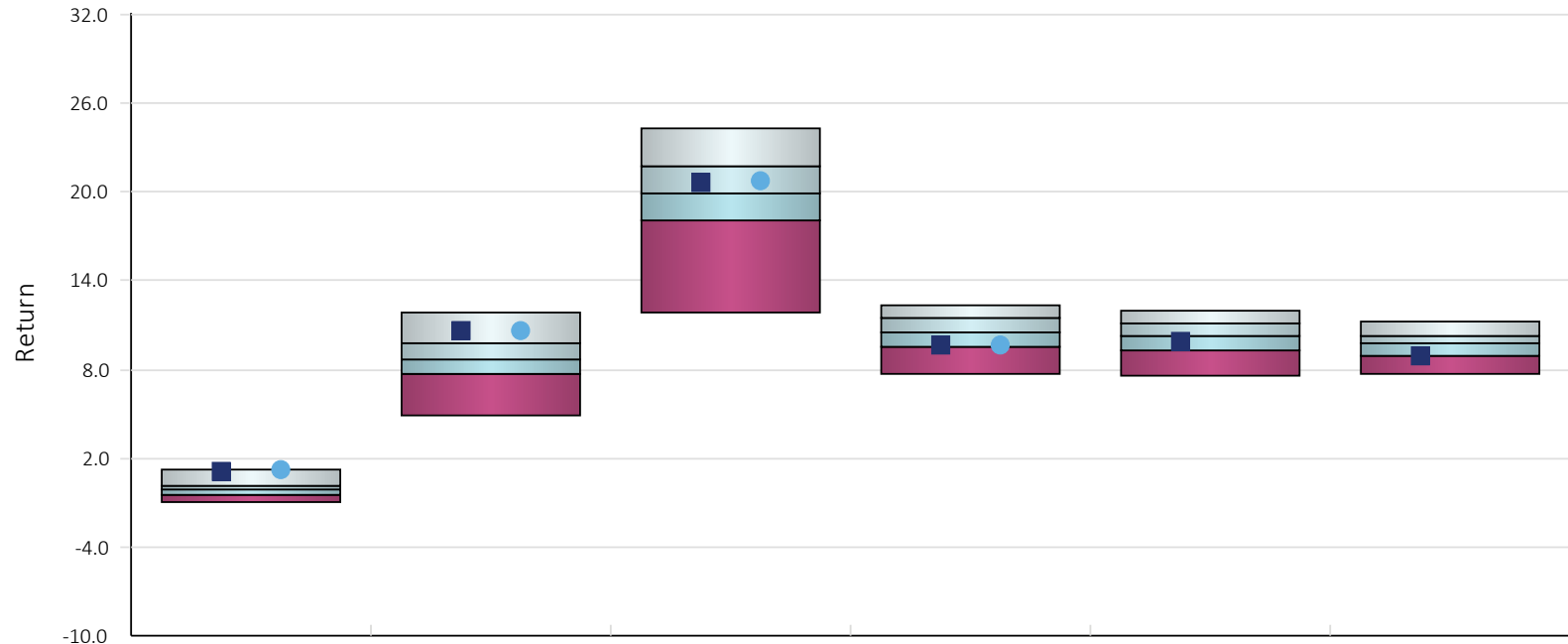
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KERS Insurance Plan	0.67 (10)	9.79 (25)	19.87 (52)	9.33 (80)	9.51 (71)	8.43 (89)
● KERS IPS Index	1.06 (7)	10.19 (20)	20.34 (45)	9.38 (79)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS (H) Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



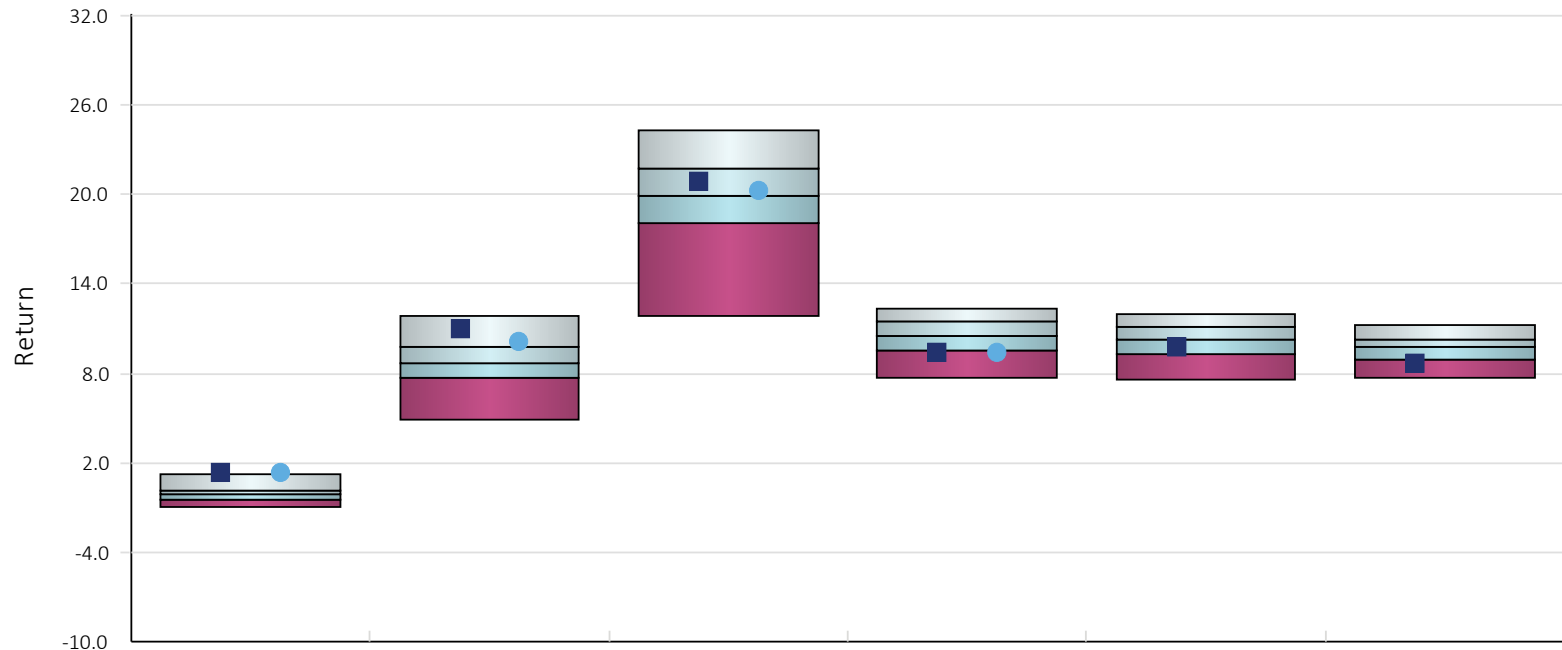
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KERS (H) Pension Plan	1.10 (7)	10.68 (13)	20.66 (39)	9.70 (71)	9.89 (62)	8.93 (77)
● KERS (H) IPS Index	1.20 (6)	10.59 (14)	20.75 (38)	9.72 (70)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS (H) Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



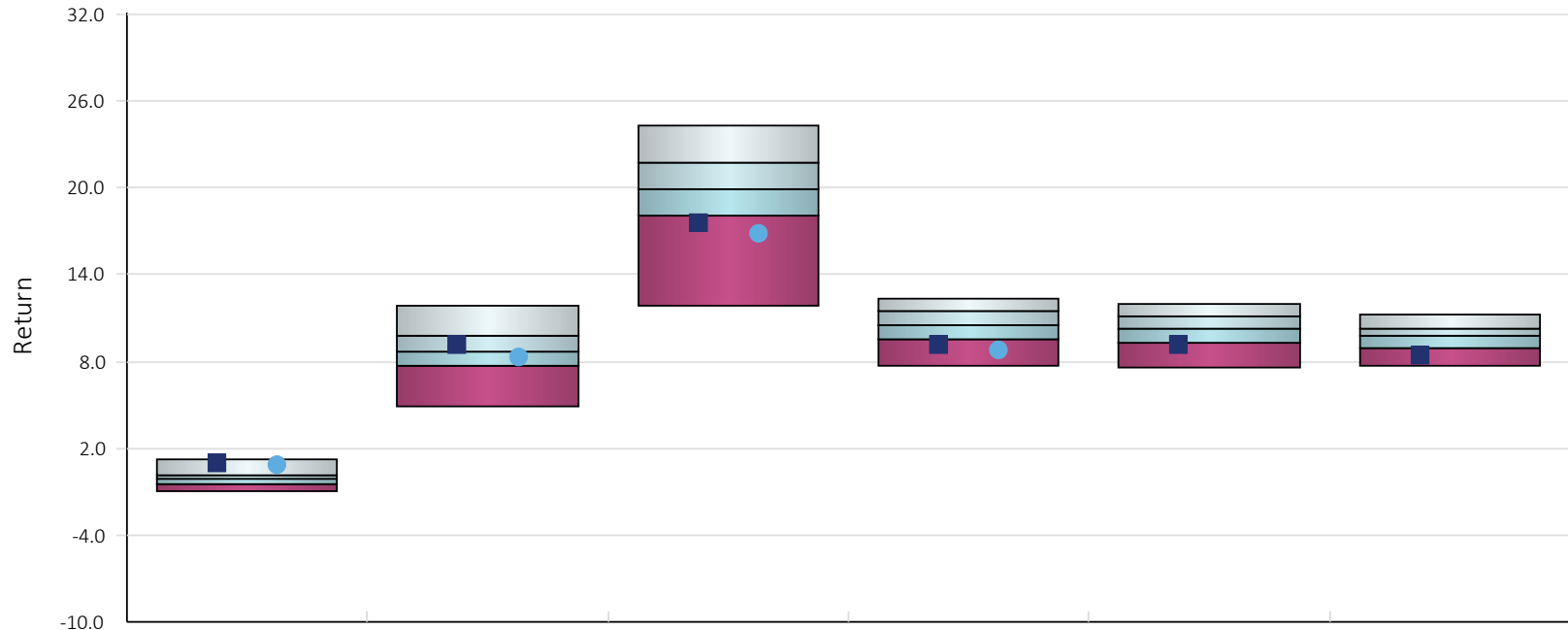
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ KERS (H) Insurance Plan	1.38 (5)	10.97 (11)	20.84 (36)	9.47 (78)	9.81 (64)	8.71 (84)
● KERS (H) IPS Index	1.32 (5)	10.17 (20)	20.28 (46)	9.41 (79)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

SPRS Pension Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



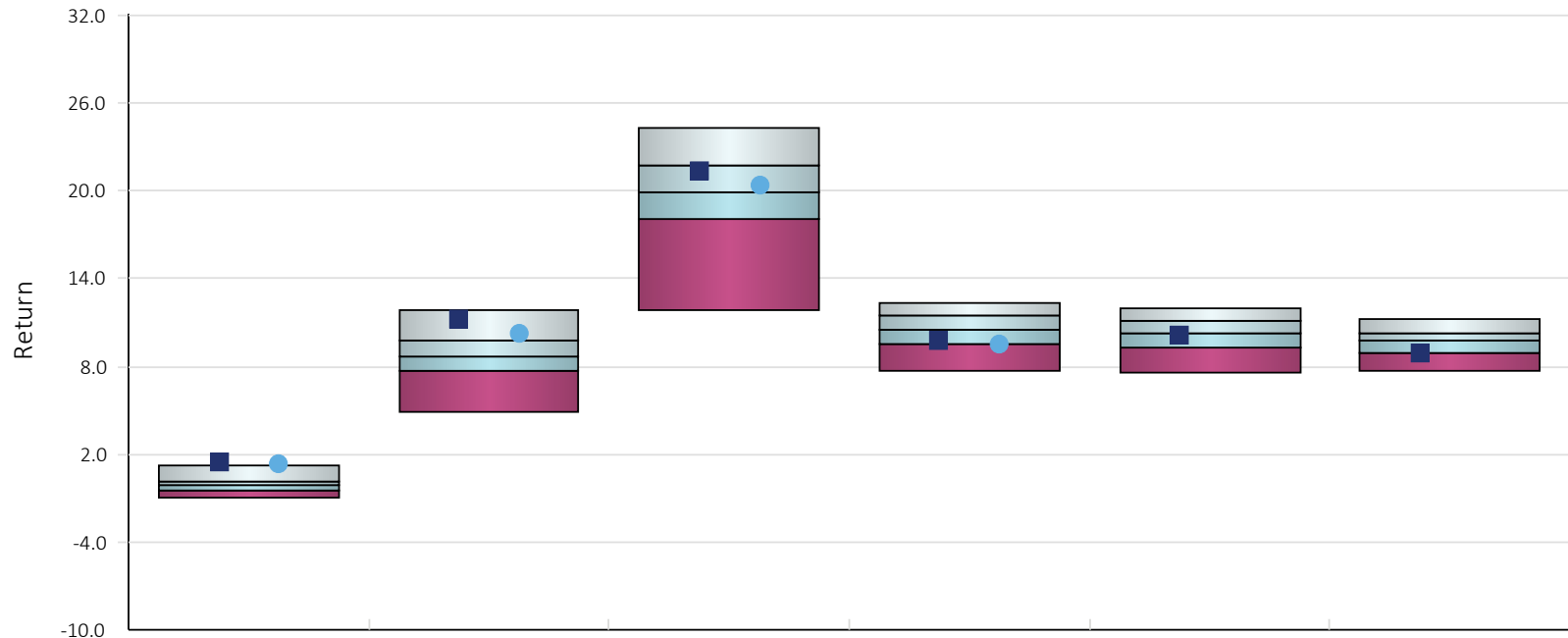
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ SPRS Pension Plan	0.94 (8)	9.21 (37)	17.61 (80)	9.14 (83)	9.20 (79)	8.42 (89)
● SPRS IPS Index	0.85 (9)	8.27 (61)	16.81 (87)	8.82 (89)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

SPRS Insurance Plan vs All Public Plans-Total Fund

Periods Ended September 30, 2021



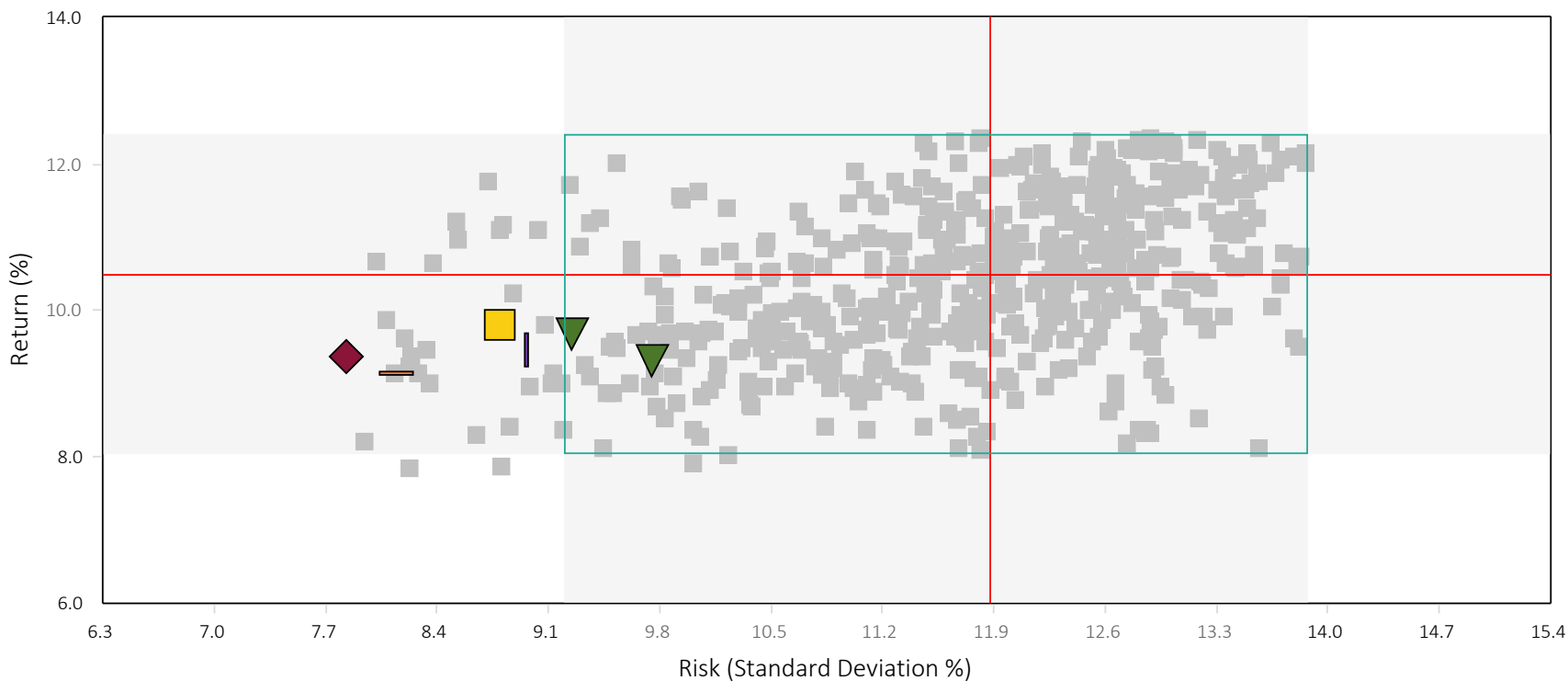
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ SPRS Insurance Plan	1.54 (4)	11.23 (9)	21.37 (28)	9.81 (68)	10.12 (55)	8.88 (79)
● SPRS IPS Index	1.36 (5)	10.21 (19)	20.40 (44)	9.50 (77)		
5th Percentile	1.22	11.83	24.29	12.36	12.02	11.20
1st Quartile	0.17	9.72	21.71	11.43	11.08	10.31
Median	-0.15	8.71	19.96	10.50	10.22	9.79
3rd Quartile	-0.46	7.72	18.12	9.57	9.32	8.97
95th Percentile	-0.92	4.91	11.84	7.72	7.64	7.67
Population	694	691	690	671	643	525

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 3 Years Ending September 30, 2021



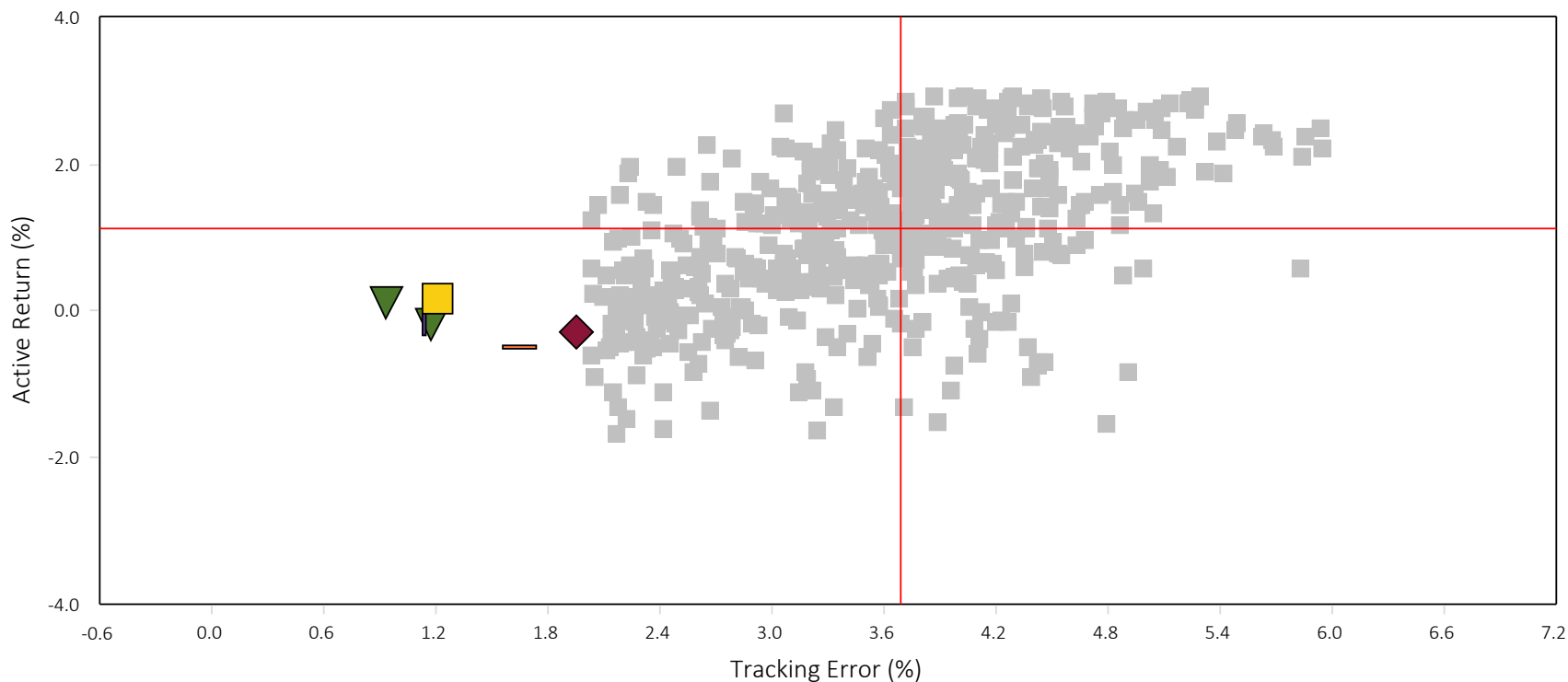
	Return	Standard Deviation
◆ KERS Pension Plan	9.38	7.83
▼ KERS Insurance Plan	9.33	9.75
▼ KERS (H) Pension Plan	9.70	9.25
KERS (H) Insurance Plan	9.47	8.96
— SPRS Pension Plan	9.14	8.15
■ SPRS Insurance Plan	9.81	8.80
— Median	10.50	11.88

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 3 Years Ending September 30, 2021



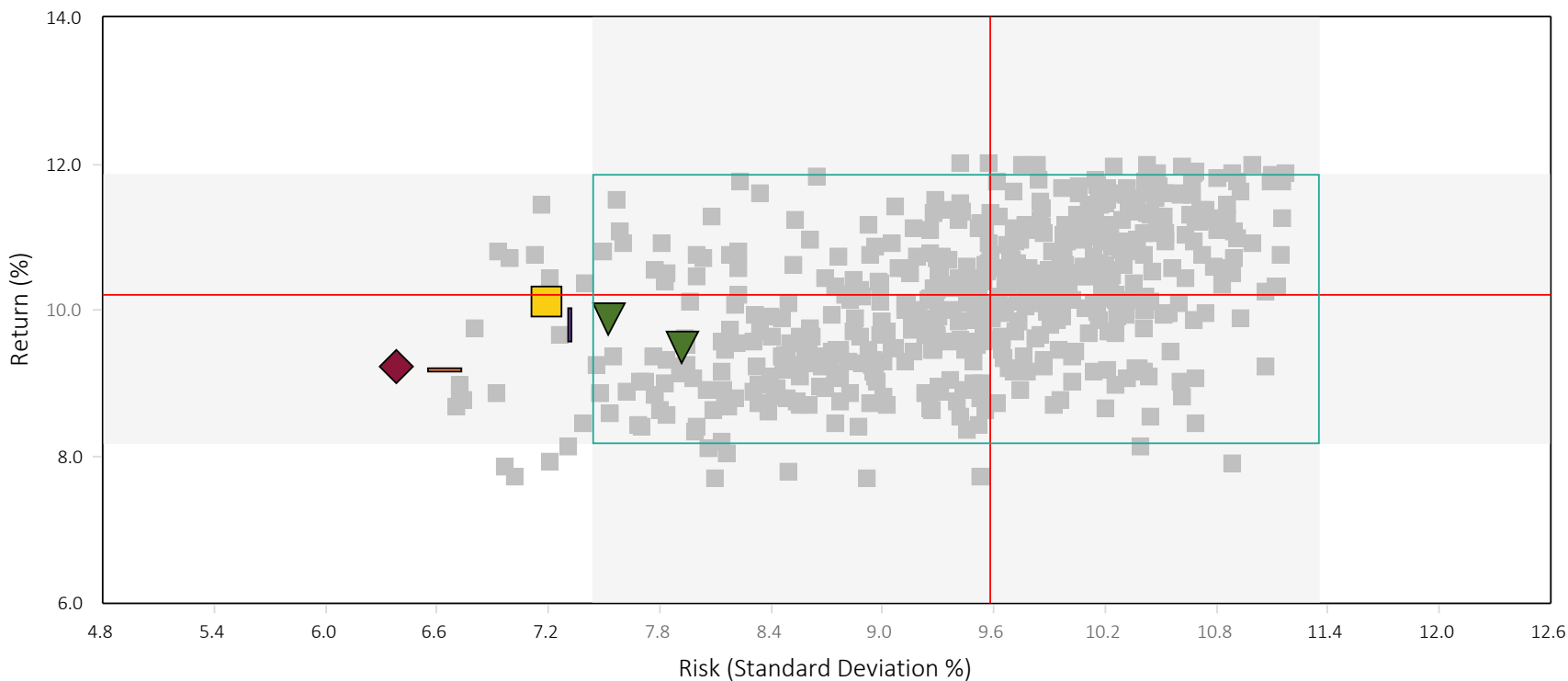
	Active Return	Tracking Error
◆ KERS Pension Plan	-0.29	1.95
▼ KERS Insurance Plan	-0.17	1.17
▼ KERS (H) Pension Plan	0.12	0.93
KERS (H) Insurance Plan	-0.11	1.14
— SPRS Pension Plan	-0.49	1.65
■ SPRS Insurance Plan	0.18	1.21
— Median	1.14	3.69

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending September 30, 2021



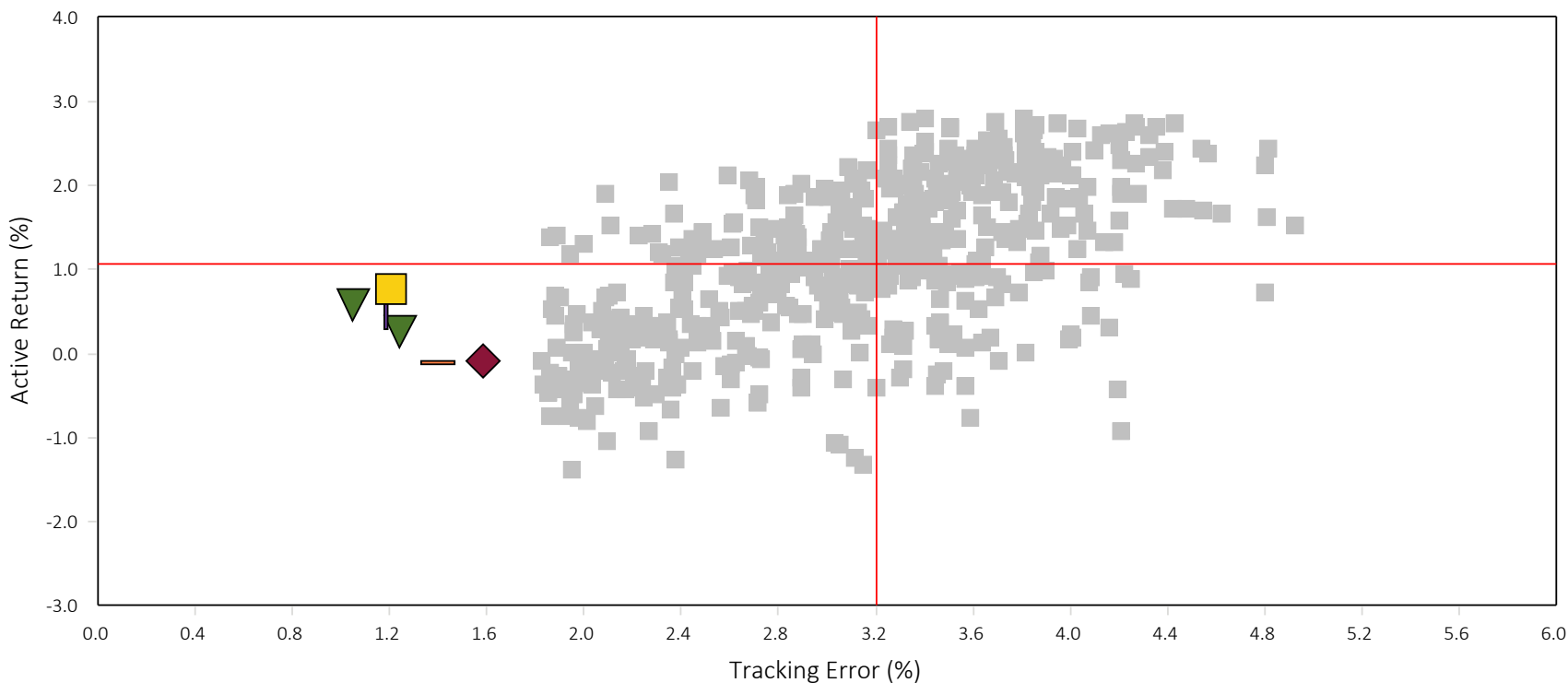
	Return	Standard Deviation
◆ KERS Pension Plan	9.25	6.38
▼ KERS Insurance Plan	9.51	7.92
▼ KERS (H) Pension Plan	9.89	7.53
KERS (H) Insurance Plan	9.81	7.32
— SPRS Pension Plan	9.20	6.64
■ SPRS Insurance Plan	10.12	7.19
— Median	10.22	9.58

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending September 30, 2021



	Active Return	Tracking Error
◆ KERS Pension Plan	-0.09	1.59
▼ KERS Insurance Plan	0.27	1.24
▼ KERS (H) Pension Plan	0.59	1.05
KERS (H) Insurance Plan	0.50	1.18
— SPRS Pension Plan	-0.12	1.40
■ SPRS Insurance Plan	0.77	1.21
— Median	1.07	3.20

Calculation based on monthly periodicity.

Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2021

	Market Value \$	Performance (%) net of fees								
		1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
KERS Pension Plan	3,125,435,352	-0.80	0.93	9.68	0.93	18.12	9.38	9.25	9.10	4/1/1984
KERS IPS Index		-0.68	0.66	8.58	0.66	17.37	9.01			
Value Added		-0.12	0.27	1.10	0.27	0.75	0.37			
Assumed Rate 5.25%		0.43	1.29	3.91	1.29	5.25	5.25			
Value Added		-1.23	-0.36	5.77	-0.36	12.87	4.13			
KERS Insurance Plan	1,364,744,935	-1.31	0.67	9.79	0.67	19.87	9.33	9.51	7.57	4/1/1987
KERS IPS Index		-0.40	1.06	10.19	1.06	20.34	9.38			
Value Added		-0.91	-0.39	-0.40	-0.39	-0.47	-0.05			
Assumed Rate 6.25%		0.51	1.53	4.65	1.53	6.25	6.25			
Value Added		-1.82	-0.86	5.14	-0.86	13.62	3.08			
KERS (H) Pension Plan	879,117,371	-0.97	1.10	10.68	1.10	20.66	9.70	9.89	9.20	4/1/1984
KERS (H) IPS Index		-0.34	1.20	10.59	1.20	20.75	9.72			
Value Added		-0.63	-0.10	0.09	-0.10	-0.09	-0.02			
Assumed Rate 6.25%		0.51	1.53	4.65	1.53	6.25	6.25			
Value Added		-1.48	-0.43	6.03	-0.43	14.41	3.45			
KERS (H) Insurance Plan	628,431,236	-0.72	1.38	10.97	1.38	20.84	9.47	9.81	7.65	4/1/1987
KERS (H) IPS Index		-0.21	1.32	10.17	1.32	20.28	9.41			
Value Added		-0.51	0.06	0.80	0.06	0.56	0.06			
Assumed Rate 6.25%		0.51	1.53	4.65	1.53	6.25	6.25			
Value Added		-1.23	-0.15	6.32	-0.15	14.59	3.22			

Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2021

	Market Value \$	Performance (%) net of fees								
		1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
SPRS Pension Plan	353,013,963	-0.84	0.94	9.21	0.94	17.61	9.14	9.20	9.06	4/1/1984
SPRS IPS Index		-0.49	0.85	8.27	0.85	16.81	8.82			
Value Added		-0.35	0.09	0.94	0.09	0.80	0.32			
Assumed Rate 5.25%		0.43	1.29	3.91	1.29	5.25	5.25			
Value Added		-1.27	-0.35	5.30	-0.35	12.36	3.89			
SPRS Insurance Plan	247,660,594	-0.56	1.54	11.23	1.54	21.37	9.81	10.12	7.70	4/1/1987
SPRS IPS Index		-0.21	1.36	10.21	1.36	20.40	9.50			
Value Added		-0.35	0.18	1.02	0.18	0.97	0.31			
Assumed Rate 6.25%		0.51	1.53	4.65	1.53	6.25	6.25			
Value Added		-1.07	0.01	6.58	0.01	15.12	3.56			

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
GROWTH									
US Equity Composite	-4.42	-0.22	15.58	-0.22	33.16	15.45	16.19	11.78	4/1/1984
Russell 3000 Index	-4.49	-0.10	14.99	-0.10	31.88	16.00	16.85	11.69	
Value Added	0.07	-0.12	0.59	-0.12	1.28	-0.55	-0.66	0.09	
S&P 500 Index	-4.66	0.50	15.75	0.50	29.69	16.38	17.15	8.93	7/1/2001
S&P 500 Index	-4.65	0.58	15.92	0.58	30.00	15.99	16.90	8.53	
Value Added	-0.01	-0.08	-0.17	-0.08	-0.31	0.39	0.25	0.40	
Scientific Beta	-4.47	-0.42	14.32	-0.42	29.80	12.15	13.30	13.16	7/1/2016
S&P 500 Index	-4.65	0.58	15.92	0.58	30.00	15.99	16.90	16.87	
Value Added	0.18	-1.00	-1.60	-1.00	-0.20	-3.84	-3.60	-3.71	
River Road FAV	-5.54	-3.86	8.59	-3.86	28.48	9.42	12.18	13.32	7/1/2016
Russell 3000 Value Index	-3.38	-0.93	16.58	-0.93	36.64	9.94	10.94	11.19	
Value Added	-2.16	-2.93	-7.99	-2.93	-8.16	-0.52	1.24	2.13	
Westfield Capital	-5.35	-0.41	13.54	-0.41	26.94	22.20	22.19	16.16	7/1/2011
Russell 3000 Growth Index	-5.49	0.69	13.49	0.69	27.57	21.27	22.30	17.16	
Value Added	0.14	-1.10	0.05	-1.10	-0.63	0.93	-0.11	-1.00	
Internal US Mid Cap	-4.00	-1.73	15.47	-1.73	43.59	11.68	13.60	11.70	8/1/2014
S&P MidCap 400 Index	-3.97	-1.76	15.52	-1.76	43.68	11.08	12.97	11.33	
Value Added	-0.03	0.03	-0.05	0.03	-0.09	0.60	0.63	0.37	
NTGI Structured	-2.38	-2.38	16.89	-2.38	51.49	11.52	14.27	10.77	10/1/1999
Russell 2000 Index	-2.95	-4.36	12.41	-4.36	47.68	10.54	13.45	9.18	
Value Added	0.57	1.98	4.48	1.98	3.81	0.98	0.82	1.59	
Next Century Growth	-1.43	2.89	31.32	2.89	77.55			71.63	11/1/2019
Russell Microcap Growth Index	-4.91	-9.09	9.61	-9.09	42.11			34.50	
Value Added	3.48	11.98	21.71	11.98	35.44			37.13	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Non-US Equity Composite	-3.86	-1.78	7.60	-1.78	26.16	10.02	10.79	4.32	7/1/2000
Policy Index	-3.18	-2.56	6.77	-2.56	25.16	8.34	9.22	4.18	
Value Added	-0.68	0.78	0.83	0.78	1.00	1.68	1.57	0.14	
BlackRock World Ex US	-2.79	-0.58	9.56	-0.58	27.10	8.17	9.15	7.48	7/1/2009
Policy Index	-2.87	-0.66	9.19	-0.66	26.50	7.85	8.84	7.23	
Value Added	0.08	0.08	0.37	0.08	0.60	0.32	0.31	0.25	
American Century	-6.12	-1.51	6.25	-1.51	21.29	16.92	16.09	9.93	7/1/2014
Policy Index	-3.18	-2.56	6.77	-2.56	25.16	8.34	9.24	5.04	
Value Added	-2.94	1.05	-0.52	1.05	-3.87	8.58	6.85	4.89	
Franklin Templeton	-5.75	-3.01	2.42	-3.01	18.42	12.31	14.29	9.51	7/1/2014
Policy Index	-3.18	-2.56	6.77	-2.56	25.16	8.34	9.24	5.04	
Value Added	-2.57	-0.45	-4.35	-0.45	-6.74	3.97	5.05	4.47	
Lazard Asset Mgmt	-3.96	-1.78	6.69	-1.78	26.02	8.76	9.43	5.93	7/1/2014
Policy Index	-3.18	-2.56	6.77	-2.56	25.16	8.34	9.24	5.04	
Value Added	-0.78	0.78	-0.08	0.78	0.86	0.42	0.19	0.89	
LSV Asset Mgmt	-1.80	-1.23	12.94	-1.23	31.27	5.59	8.11	4.16	7/1/2014
Policy Index	-3.18	-2.56	6.77	-2.56	25.16	8.34	9.24	5.04	
Value Added	1.38	1.33	6.17	1.33	6.11	-2.75	-1.13	-0.88	
NTGI Int'l Small Cap	-3.44	-0.48	11.55	-0.48	32.08	10.40	10.40	12.02	12/1/2008
MSCI AC World ex USA Small Cap (Net)	-3.04	0.00	12.23	0.00	33.06	10.33	10.28	12.24	
Value Added	-0.40	-0.48	-0.68	-0.48	-0.98	0.07	0.12	-0.22	
JP Morgan Emerging Markets	-5.38	-6.62	0.61	-6.62	23.80			20.55	11/1/2019
MSCI Emerging Markets IMI	-3.70	-7.27	0.98	-7.27	21.20			14.01	
Value Added	-1.68	0.65	-0.37	0.65	2.60			6.54	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Pzena Emerging Markets	-2.59	-2.95	8.11	-2.95	40.69			12.23	11/1/2019
MSCI Emerging Markets (Net)	-3.97	-8.09	-1.25	-8.09	18.20			12.52	
Value Added	1.38	5.14	9.36	5.14	22.49			-0.29	
High Yield / Specialty Credit Composite	0.76	2.02	8.00	2.02	12.77	6.87		6.87	10/1/2018
Policy Index	0.32	1.00	4.48	1.00	9.84	5.53		5.53	
Value Added	0.44	1.02	3.52	1.02	2.93	1.34		1.34	
Adams St SPC II A	4.56	4.56	15.85	4.56	20.19			14.79	6/1/2020
Adams St SPC II B	5.18	5.18	18.16	5.18	23.26			16.98	6/1/2020
Blue Torch	2.72	2.72	5.02	2.72	6.35			5.42	8/1/2020
BSP Coinvestment	1.09	1.09	5.66	1.09	6.76			6.34	10/1/2019
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40			4.67	
Value Added	0.45	-0.02	1.24	-0.02	-1.64			1.67	
BSP Private Credit	3.31	3.31	12.84	3.31	18.08	6.86		5.59	2/1/2018
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40	4.14		4.23	
Value Added	2.67	2.20	8.42	2.20	9.68	2.72		1.36	
Capital Springs	1.91	1.91	6.18	1.91	14.26			10.60	2/1/2020
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40			4.19	
Value Added	1.27	0.80	1.76	0.80	5.86			6.41	
Cerberus Capital Mgmt	1.08	6.81	14.83	6.81	18.29	11.50	10.23	9.58	9/1/2014
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40	4.14	4.58	4.04	
Value Added	0.44	5.70	10.41	5.70	9.89	7.36	5.65	5.54	
Columbia	-0.07	0.83	3.96	0.83	9.81	7.25	6.27	6.95	11/1/2011
Blmbg. U.S. Corp: High Yield	-0.01	0.89	4.53	0.89	11.28	6.91	6.52	6.86	
Value Added	-0.06	-0.06	-0.57	-0.06	-1.47	0.34	-0.25	0.09	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Manulife Asset Mgmt	-0.24	0.04	2.19	0.04	7.31	7.49	4.80	4.84	12/1/2011
Policy Index	-0.85	0.07	-1.07	0.07	0.20	5.57	3.30	2.37	
Value Added	0.61	-0.03	3.26	-0.03	7.11	1.92	1.50	2.47	
Marathon Bluegrass	0.00	2.90	13.16	2.90	17.65	6.79	6.55	7.35	1/1/2016
Blmbg. U.S. Corp: High Yield	-0.01	0.89	4.53	0.89	11.28	6.91	6.52	8.26	
Value Added	0.01	2.01	8.63	2.01	6.37	-0.12	0.03	-0.91	
Shenkman Capital	0.64	0.77	3.48	0.77	7.27	4.09	4.28	4.61	10/1/2010
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40	4.14	4.58	4.63	
Value Added	0.00	-0.34	-0.94	-0.34	-1.13	-0.05	-0.30	-0.02	
Waterfall	1.00	2.88	12.33	2.88	17.98	5.12	8.04	10.12	2/1/2010
Policy Index	0.01	0.66	3.29	0.66	7.69	5.03	5.07	5.20	
Value Added	0.99	2.22	9.04	2.22	10.29	0.09	2.97	4.92	
White Oak Yield Spectrum	1.35	1.35	5.16	1.35	6.81	5.74		5.25	3/1/2018
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40	4.14		4.27	
Value Added	0.71	0.24	0.74	0.24	-1.59	1.60		0.98	
H/2 Credit Partner	0.14	0.12	12.12	0.12	21.81	1.02	3.61	4.59	7/1/2011
Mesa West Core Lend	1.61	1.61	5.83	1.61	7.42	6.64	7.49	6.84	5/1/2013
Mesa West IV	2.43	2.43	6.32	2.43	7.77	7.48		6.34	3/1/2017
Private Equity Composite	9.72	11.34	37.75	11.34	47.35	18.83	17.52	12.49	7/1/2002
KRS Short-Term PE Index	9.72	11.34	37.75	11.34	47.35	18.83	17.52	12.49	
Value Added	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Russell 3000 +3% 1 Quarter Lag	2.72	9.04	34.97	9.04	48.49	22.29	21.42	12.85	
Value Added	7.00	2.30	2.78	2.30	-1.14	-3.46	-3.90	-0.36	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
DIVERSIFYING STRATEGIES									
Real Return Composite	-0.28	0.36	11.37	0.36	21.65	5.64	4.74	4.24	7/1/2011
Real Return (P)	-0.28	0.36	11.37	0.36	21.65	5.64	3.94	3.42	
Value Added	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.82	
Putnam	-2.87	-0.24	9.77	-0.24	20.49			20.25	7/1/2020
Policy Index	-2.83	0.00	7.89	0.00	18.11			19.32	
Value Added	-0.04	-0.24	1.88	-0.24	2.38			0.93	
Tortoise Capital	4.73	-2.44	38.87	-2.44	76.23	-3.44	-1.60	7.58	8/1/2009
Alerian MLP Index	3.02	-5.71	39.40	-5.71	84.63	-4.32	-2.42	4.82	
Value Added	1.71	3.27	-0.53	3.27	-8.40	0.88	0.82	2.76	
Amerra AGRI Fund II	4.12	4.12	5.20	4.12	5.53	8.16	3.77	5.22	12/1/2012
Amerra AGRI Holdings	0.78	0.78	-6.15	0.78	-5.77	-1.46	-2.08	-1.56	8/1/2015
BTG Pactual	16.27	16.27	16.59	16.27	18.60	3.15	0.70	-4.84	12/1/2014
IFM Infrastructure	4.69	4.69	8.02	4.69	9.79			4.86	7/1/2019
Magnetar MTP EOF II	11.36	11.36	47.52	11.36	50.57	19.59	14.33	10.49	8/1/2015
Oberland Capital	1.21	1.21	7.76	1.21	9.58	20.27		13.37	8/1/2018
Taurus Mine Finance	1.84	1.84	-4.74	1.84	-6.93	-0.80	5.50	7.14	4/1/2015
TPF II	-0.18	-0.18	-11.49	-0.18	-11.57	0.13	0.94	-2.72	10/1/2008
Blackstone Strat Opp	0.39	0.85	-3.88	0.85	-2.16	-7.11		-3.79	8/1/2017
Luxor Capital	-0.04	-0.13	3.79	-0.13	7.57	-6.57	4.50	-1.78	4/1/2014
Myriad Opportunities	-11.65	-21.81	-11.54	-21.81	-2.70	-4.05	-0.08	0.60	5/1/2016
Pine River	0.64	-2.02	1.80	-2.02	1.01	12.79	6.27	4.16	5/1/2014

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
PRISMA Capital	0.92	0.87	0.91	0.87	0.04	0.54	2.18	2.87	9/1/2011
SRS Partners US	2.13	-0.57	22.33	-0.57	18.65	12.51		10.96	8/1/2017
Tricadia Select	0.00	0.00	0.00	0.00	0.00	-0.35		-6.07	9/1/2017
Real Estate Composite	3.28	6.85	13.93	6.85	18.00	10.51	10.30	6.44	7/1/1984
NCREIF ODCE NOF 1 Quarter Lag	3.68	3.68	6.80	3.68	7.09	4.60	5.62		
Value Added	-0.40	3.17	7.13	3.17	10.91	5.91	4.68		
Baring	1.60	0.80	6.64	0.80	17.96			24.03	1/1/2019
Barings Euro RE II	-1.18	-1.64	-43.80	-1.64				-42.51	12/1/2020
Divcowest IV	7.95	7.95	12.66	7.95	24.61	9.32	15.32	17.98	3/1/2014
Fundamental Partners III	7.23	7.23	18.97	7.23	21.61	16.51		12.63	5/1/2017
Greenfield Acq VI	-44.69	-44.69	-59.05	-44.69	-57.43	-50.44	-35.78	-18.25	12/1/2012
Greenfield Acq VII	13.51	13.51	31.04	13.51	32.79	17.25	15.92	14.38	7/1/2014
Harrison Street	0.00	1.89	3.37	1.89	5.64	5.49	7.23	7.91	5/1/2012
Lubert Adler VII	0.39	0.39	-3.09	0.39	-6.11	-3.47	1.19	-2.31	7/1/2014
Lubert Adler VII B	18.12	18.12	25.61	18.12	31.29	16.53		11.12	7/1/2017
Patron Capital	9.79	9.29	8.04	9.29	15.07	7.58	4.30	4.09	8/1/2016
Prologis Targeted US	0.00	12.01	24.18	12.01	30.87	16.76	17.76	16.22	10/1/2014
Rubenstein PF II	0.78	0.78	-2.27	0.78	-5.29	-0.31	4.92	8.60	7/1/2013
Stockbridge Sm/Mkts	7.39	7.39	17.89	7.39	19.28	10.08	9.36	9.50	5/1/2014
Walton St RE VI	1.71	1.71	5.73	1.71	6.00	-1.87	0.24	-14.03	5/1/2009

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended September 30, 2021

	Performance (%) no returns								
	1 Month	QTD	YTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Walton St RE VII	6.22	6.22	10.29	6.22	8.43	-4.38	1.08	6.09	7/1/2013
LIQUIDITY									
Core Fixed Composite	-0.14	0.24	0.85	0.24	2.32	5.14		5.14	10/1/2018
Blmbg. U.S. Aggregate	-0.87	0.05	-1.56	0.05	-0.90	5.35		5.35	
Value Added	0.73	0.19	2.41	0.19	3.22	-0.21		-0.21	
Loomis Sayles Intmd	-0.59	-0.01	-0.69	-0.01	0.11			4.69	2/1/2019
Blmbg. U.S. Intermediate Aggregate	-0.51	0.05	-0.79	0.05	-0.38			3.93	
Value Added	-0.08	-0.06	0.10	-0.06	0.49			0.76	
Lord Abbett	0.05	0.33	1.54	0.33	3.26	3.61		3.61	10/1/2018
ICE BofAML 1-3 Year U.S. Corporate	-0.03	0.18	0.54	0.18	1.28	3.63		3.63	
Value Added	0.08	0.15	1.00	0.15	1.98	-0.02		-0.02	
NISA	-0.91	0.01	-1.55	0.01	-0.60	5.80	3.26	4.21	2/1/2009
Blmbg. U.S. Aggregate	-0.87	0.05	-1.56	0.05	-0.90	5.35	2.94	3.95	
Value Added	-0.04	-0.04	0.01	-0.04	0.30	0.45	0.32	0.26	
Cash Composite	0.01	0.02	0.07	0.02	0.10	1.30	1.43	3.38	1/1/1988
FTSE 3 Month T-Bill	0.00	0.01	0.03	0.01	0.06	1.14	1.13	2.95	
Value Added	0.01	0.01	0.04	0.01	0.04	0.16	0.30	0.43	
OPPORTUNISTIC									
Arrowmark	1.11	2.95	9.96	2.95	16.22	9.19		9.07	6/1/2018
S&P/LSTA Leverage Loan Index	0.64	1.11	4.42	1.11	8.40	4.14		4.33	
Value Added	0.47	1.84	5.54	1.84	7.82	5.05		4.74	

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INDEPENDENT AUDITOR'S REPORT

To the Members of

Kentucky Public Pensions Authority

Frankfort, Kentucky

We have audited the accompanying financial statements of Kentucky Public Pensions Authority (KPPA), a component unit of the Commonwealth of Kentucky, as of and for the year ended June 30, 2021, and the related notes to the financial statements, which collectively comprise KPPA's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to KPPA's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of KPPA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of Kentucky Public Pensions Authority as of June 30, 2021, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

The financial statements of KPPA for the year ended June 30, 2020, were audited by other auditors whose report dated December 3, 2020, expressed unmodified opinion on those statements.

Report on Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 4 through 8, and the defined benefit pension plan and other postemployment benefit plan supplemental schedules on pages 56 through 65, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the 2021 financial statements that collectively comprise KPPA's basic financial statements. The additional supporting schedules (pages 78 through 79) are presented for purposes of additional analysis and are not a required part of the basic financial statements. The Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are fairly stated, in all material respects, in relation to the basic financial statements as a whole. The 2020 information on the additional supporting schedules (pages 83 to 85) was subject to the auditing procedures applied in the 2020 audit of the basic financial statements by other auditors, whose report on such information stated that it was fairly stated in all material respects in relation to the 2020 basic financial statements.

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

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 8, 2021, on our consideration of the KPPA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the KPPA's internal control over financial reporting and compliance.

Blue & Co., LLC

Lexington, Kentucky

December 8, 2021

Management's Discussion & Analysis (Unaudited)

Pension Funds

The following highlights are explained in more detail later in this report.

The Management Discussion and Analysis is the KPPA leadership summary of the management of the CERS, KERS, and SPRS Fiduciary Pension Plans (collectively the Pension Funds) and Insurance Plan. KPPA is a component unit of the Commonwealth of Kentucky, (the Commonwealth) for financial and reporting purposes.

Total Pension Funds Fiduciary Net Position was \$12.9 billion at the beginning of the fiscal year and increased by 23.80% to \$15.9 billion as of June 30, 2021. The \$3.0 billion increase is primarily attributable to realized and unrealized gains, creating an increase in the market value of investments. The Pension Funds received \$0.4 million in General Fund appropriations in fiscal year 2021 compared to \$1.1 million in fiscal year 2020.

CONTRIBUTIONS

Total contributions reported for fiscal year 2021 were \$2,243.5 million compared to \$2,064.4 million in fiscal year 2020. The major contributor to the increase resulted from an increase in the Employer Contribution rate for KERS Non-Hazardous, as well as an increase in covered payroll for CERS Hazardous, KERS Hazardous and SPRS.

INVESTMENTS

The investment portfolio for the Pension Funds reported a net return of 25.00% for fiscal year 2021 compared to 1.15% return for fiscal year 2020.

The net appreciation in the fair value of investments for fiscal year 2021 was \$2,898.3 million compared to net depreciation of \$(98.1) million for the previous fiscal year.

Interest, dividends, and net securities lending income for fiscal year 2021 was \$392.0 million compared to \$290.7 million in fiscal year 2020. All investment returns are reported net of fees, including carried interest. Investment expenses totaled \$53.1 million for fiscal year 2020 compared to \$140.0million in the current fiscal year. The increase in fees is a direct result of the favorable market conditions in fiscal year 2021 and an increase in assets.

DEDUCTIONS

Pension benefits paid to retirees and beneficiaries for fiscal year 2021 totaled \$2,263.4 million compared to \$2,205.9 million in fiscal year 2020, a 2.61% increase. The increase was due to a 3.90% increase in the number of retirees to 136,707. Refunded contributions paid to former members upon termination of employment for fiscal year 2021 totaled \$32.1 million compared to \$33.5 million in fiscal year 2020, a (4.12)% decrease, as fewer members elected a refund at employment termination.

KPPA's fiscal year 2021 Pension administrative expense totaled \$36.8 million compared to \$37.7 million in the prior year. The decrease was mainly due to lower overtime and Information Technology expenses.

Management's Discussion & Analysis (Unaudited)

Insurance Fund

The following highlights are explained in more detail later in this report.

The combined fiduciary net position of the Insurance Fund increased by \$1,448.9 million during fiscal year 2021. Total combined net position for the fiscal year was \$6,973.6 million. Total contributions and net investment income of \$1,832.4 million offset deductions of \$383.4 million which resulted in the net position increase.

CONTRIBUTIONS

Employer contributions of \$346.0 million were received in fiscal year 2021 compared to \$369.6 million in fiscal year 2020. Total contributions decreased (6.37)% primarily due to the decrease in the contribution rate for KERS Non-Hazardous, KERS Hazardous, and SPRS. As well as a decrease in covered payroll for CERS Non-Hazardous and KERS Non-Hazardous.

The reimbursement of retired/re-employed health insurance for fiscal year 2021 totaled \$12.5 million compared to \$11.5 million in the prior fiscal year. The increase is due to an increase in retired/re-employed members for whom employers are paying health insurance reimbursements.

INVESTMENTS

Interest, dividends, and net securities lending income for fiscal year 2021 was \$162.4 million compared to \$126.5 million in fiscal year 2020. The primary driver of this increase was due to favorable market conditions which resulted in an increase in income and dividends.

The investment portfolio reported a net return of 24.95% for the fiscal year, which was higher than fiscal year 2020 net return of 0.48%. The investment return was above the 6.25% assumed rate of return.

The net appreciation in the fair value of investments for fiscal year 2021 was \$ 1,286.3 million compared to net depreciation of \$(81.9) million for the previous fiscal year. This \$ 1,368.2 million increase in fiscal year 2021 was due to favorable market returns compared to fiscal year 2020.

Investment expenses totaled \$71.2 million for fiscal year 2021 compared to \$21.3 million in the prior fiscal year. The increase in fees is a combination of favorable market conditions and an increase in assets.

DEDUCTIONS

Total insurance premiums, plus self-funded reimbursements were \$381.1 million for fiscal year 2021. The fiscal year 2021 insurance premiums were comparable to fiscal year 2020 rates, the number of covered lives only increased by approximately 1% year-over-year.

Insurance administrative expenses for retirees under age 65, decreased from \$2.41 million in fiscal year 2020 to \$2.35 million in fiscal year 2021.

Management's Discussion & Analysis (Unaudited)

Using This Financial Report

Because of the long-term nature of a defined benefit pension plan and post-employment healthcare benefit plan, the combining financial statements alone cannot provide sufficient information to properly reflect the Plans' ongoing plan perspective. This financial report consists of two combining financial statements and two required schedules of historical trend information. All plans within KPPA are included in the aforementioned combining financial statements. The Combining Statement of Fiduciary Net Position for the Pension Funds on page ## and the Combining Statement of Fiduciary Net Position for the Insurance Fund on page ## provide a snapshot of the financial position of each of the three systems as of fiscal year 2021. The Combining Statement of Changes in Fiduciary Net Position for the Pension Funds on page ##, and the Combining Statement of Changes in Fiduciary Net Position for the Insurance Fund on page ##, summarize the additions and deductions that occurred for each of the three systems during fiscal year 2021.

The economic assumptions for the Pension Funds and Insurance Fund for fiscal year 2021 are on page ##, the Schedules of Changes in Employers' Total Pension Liability on pages ##-##, the Schedules of the Employer Net Pension Liability on pages ##-##; the Schedule of Changes in Employers' Total Other Post-Employment Benefits (OPEB) Liability are on pages ##-##; and, the Schedule of the Employers' Net OPEB Liabilities are on page ##-##. These schedules include current and historical trend information about the actuarially funded status of each plan from a long-term, ongoing plan perspective and the progress made in accumulating sufficient assets to pay benefits and insurance premiums when due. The Schedules of the Employers' Contributions – Pensions are on pages ##-##, and the Schedules of the Employers' Contributions – OPEB are on pages ###-###. These schedules present current and historical trend information about the annual required contributions and the contributions made in relation to the requirement. These schedules provide information that contributes to understanding the changes over time in the funded status of the plans.

Kentucky Public Pensions Authority Combined

KPPA's combined fiduciary net position increased \$4,510.4 million in fiscal year 2021, compared to the fiduciary net position for the previous fiscal year. The increase in fiduciary net position for the fiscal year 2021 is primarily attributable to positive investment performance. The analysis focuses on the net position table and changes in the fiduciary net position table for KPPA's Pension and Insurance Funds.

Management's Discussion & Analysis (Unaudited)

Plan Activities

The net position of the Pension Plans increased by \$3,061.5 million to \$15,922.7 million in fiscal year 2021 compared to \$12,861.2 million in fiscal year 2020. All of these assets are restricted in use to provide monthly retirement allowances to members who contributed to the Pension Plans as employees and on behalf of their beneficiaries. The net position of the Insurance Plan increased by \$1,448.9 million to \$6,973.6 million in fiscal year 2021 compared to \$5,524.7 million in fiscal year 2020. All of these assets are restricted in use to provide hospital and medical insurance benefits to members of the Pension Funds who receive a monthly retirement allowance.

Financial data presented in this report is abbreviated "in thousands" or "in millions."

Fiduciary Net Position									
As of June 30 (\$ in Thousands)									
	Pension Funds			Insurance Fund			Total		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
Cash & Invest.	\$16,391,137	\$13,150,428	\$13,133,900	\$7,184,408	\$5,687,583	\$5,622,703	\$23,575,545	\$18,838,011	\$18,756,603
Receivables	361,429	295,988	468,221	122,132	87,102	142,538	483,561	383,090	610,759
Equip/Int Assets, net of dep/amort.	677	1,619	2,677	-	-	-	677	1,619	2,677
Total Assets	16,753,243	13,448,035	13,604,798	7,306,540	5,774,685	5,765,241	24,059,783	19,222,720	19,370,039
Total Liabilities	(830,553)	(586,817)	(670,466)	(332,927)	(250,019)	(284,602)	(1,163,480)	(836,836)	(955,068)
Fiduciary Net Position	\$15,922,690	\$12,861,218	\$12,934,332	\$6,973,613	\$5,524,666	\$5,480,639	\$22,896,303	\$18,385,884	\$18,414,971

Pension Plan Activities

Member contributions decreased by \$10.4 million. This is primarily due to a decrease in member service purchases and covered payroll in CERS Non-Hazardous and KERS Non-Hazardous. Retirement contributions are calculated by applying a percentage factor to salary and are remitted by each employer on behalf of the member. Non-Hazardous Tier 1 members pay pension contributions of 5.00% of creditable compensation and Hazardous Tier 1 members contribute 8.00% of creditable compensation. Whereas Non-Hazardous Tier 2 and 3 members pay contributions of 6.00% of creditable compensation and Hazardous Tier 2 and 3 members contribute 9% of creditable compensation.

Employer contributions increased by \$14.8 million as a result of the increase in the contribution rates for KERS Hazardous, KERS Non-Hazardous and SPRS.

Total Pension Plans deductions increased by \$55.3 million. The 2.43% increase was primarily driven by the normal increase in retirements across all plans.

Net investment income increased by \$3,010.8 million. This is illustrated in the Investment Income Pension table on the next page. The Pension Funds experienced an increase in income when compared to fiscal year 2020, due to favorable market conditions. KPPA overall returned 25.00% for the fiscal year. This outperformed the benchmark of 24.07% and outperformed the actuarial assumed rate of return of 6.25% used by CERS and KERS Hazardous, and 5.25% used by KERS Non-Hazardous and SPRS.

Management's Discussion & Analysis (Unaudited)

Changes in Fiduciary Net Position									
For the fiscal year ending June 30, (\$ in Thousands)									
	Pension Plans			Insurance Plan			Total		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
Additions:									
Member Cont.	\$342,980	\$353,360	\$333,664	\$-	\$-	\$-	\$342,980	\$353,360	\$333,664
Employer Cont.	1,724,309	1,709,544	1,594,008	346,026	369,573	387,259	2,070,335	2,079,117	1,981,267
Health Ins. Cont.	(4)	11	21,332	24,409	23,142	-	24,405	23,153	21,332
Humana Gain Share	-	-	-	42,897	-	7,516	42,897	-	7,516
Pension Spiking Cont.	222	369	677	-	-	-	222	369	677
Northern Trust Settlement	-	-	102	-	-	21	-	-	123
General Fund Appro.	384	1,086	76,944	-	-	-	384	1,086	76,944
Employer Cessation Cont.	175,600	20	10,643	28,400	25	1,391	204,000	45	12,034
Premiums Rec'd	-	-	-	563	730	715	563	730	715
Retired Re-emp Ins.	-	-	-	12,535	11,482	10,498	12,535	11,482	10,498
Medicare Subsidy	-	-	-	3	7	9	3	7	9
Invest. Inc. (net)	3,150,288	139,534	694,013	1,377,531	23,263	288,294	4,527,819	162,797	982,307
Total Additions	5,393,779	2,203,924	2,731,383	1,832,364	428,222	695,703	7,226,143	2,632,146	3,427,086
Deductions:									
Benefit payments	2,263,388	2,205,859	2,144,053	-	-	-	2,263,388	2,205,859	2,144,053
Refunds	32,130	33,511	32,429	-	-	-	32,130	33,511	32,429
Admin. Exp.	36,789	37,668	36,425	2,354	2,406	2,372	39,143	40,074	38,797
Healthcare Costs	-	-	-	381,063	381,789	377,871	381,063	381,789	377,871
Total Deductions	2,332,307	2,277,038	2,212,907	383,417	384,195	380,243	2,715,724	2,661,233	2,593,150
Increase (Decrease) in Fiduciary Net Position	3,061,472	(73,114)	518,476	1,448,947	44,027	315,460	4,510,419	(29,087)	833,936
Beginning of Period	12,861,218	12,934,332	12,415,856	5,524,666	5,480,639	5,165,179	18,385,884	18,414,971	17,581,035
End of Period	\$15,922,690	\$12,861,218	\$12,934,332	\$6,973,613	\$5,524,666	\$5,480,639	\$22,896,303	\$18,385,884	\$18,414,971

Management's Discussion & Analysis (Unaudited)

CERS			
As of June 30 (\$ in Thousands)			
Investment Income - Pension	2021	2020	2019
Increase (decrease) in fair value of investments	\$1,779,618	\$(562,768)	\$206,282
Investment income net of investment expense	\$181,561	\$180,227	\$160,480
Gain on sale of investments	\$423,782	\$455,215	\$160,765
Net Investment Income	\$2,384,961	\$72,674	\$527,527
KERS			
As of June 30 (\$ in Thousands)			
Investment Income - Pension	2021	2020	2019
Increase (decrease) in fair value of investments	\$510,655	\$(113,765)	\$61,873
Investment income net of investment expense	\$64,574	\$52,073	\$43,935
Gain on sale of investments	\$128,132	\$122,193	\$45,814
Net Investment Income	\$703,361	\$60,501	\$151,622
SPRS			
As of June 30 (\$ in Thousands)			
Investment Income - Pension	2021	2020	2019
Increase (decrease) in fair value of investments	\$45,055	\$(11,168)	\$6,110
Investment income net of investment expense	\$5,885	\$5,314	\$4,881
Gain on sale of investments	\$11,026	\$12,213	\$3,873
Net Investment Income	\$61,966	\$6,359	\$14,864

Insurance Plan Activities

Employer contributions paid into the Insurance Plan decreased by \$23.5 million in fiscal year 2021 over the prior fiscal year. The decrease in employer contributions is directly related to a decrease in covered payroll for KERS Non-Hazardous and CERS Non-Hazardous as well as a decrease in the insurance transfer rate for KERS Non-Hazardous, KERS Hazardous, and SPRS employer contributions.

Net investment income increased \$1,354.3 million in fiscal year 2021 compared to fiscal year 2020. KPPA overall returned 24.95% for the fiscal year. This outperformed the benchmark of 23.84% and outperformed the actuarial assumed rate of return of 6.25% used by all of the Insurance Plan Funds.

Insurance			
As of June 30 (\$ in Thousands)			
Investment Income - Insurance	2021	2020	2019
Increase (decrease) in fair value of investments	\$1,044,425	\$(308,571)	\$112,566
Investment income net of investment expense	91,204	105,181	92,338
Gain on sale of investments	241,902	226,653	83,390
Net Investment Income	\$1,377,531	\$23,263	\$288,294

Management's Discussion & Analysis (Unaudited)

Historical Trends

Accounting standards require that the Combining Statement of Fiduciary Net Position state asset value at fair value and include only benefits and refunds due plan members and beneficiaries; accrued investment income (loss); and administrative expenses as of the reporting date. Information regarding the actuarial funding status of the Pension and Insurance Funds is provided in the Schedules of Net Pension Liability (NPL) on page ## and Net OPEB Liability on pages ##-##. The asset values stated in the Schedules of Changes in Employers' TPL on pages ##-## and Total OPEB Liability on pages ##-## are the actuarial value of assets. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected fair value of assets based on the investment return assumption. The amount recognized each year is 20% of the difference between fair value and expected fair value. The actuarial accrued liability is calculated using the entry age normal cost funding method. This actuarial accrued liability is the measure of the cost of benefits that have been earned to date by KPPA's members, but not yet paid. The difference in value between the actuarial accrued liability and the actuarial value of assets is defined as the unfunded actuarial accrued liability.

The unfunded actuarial accrued liability from the June 30, 2021, actuarial valuation in the Pension Plans decreased by \$722.4 million for a total unfunded amount of \$25,008.1 million in fiscal year 2021, compared to an unfunded amount of \$25,730.6 million in fiscal year 2020. The overall funding decrease is the result of maintaining a sound funding policy and paying the actuarially determined contribution rate for the KERS and SPRS plans. However, both CERS plans experienced a slight increase as a result of the phase in provisions from House Bill 362 passed during the 2018 legislative session.

The Insurance Plan's unfunded actuarial accrued liability from the June 30, 2021, actuarial valuation for fiscal year 2021, was \$1,960.0 million compared to \$2,536.4 million for fiscal year 2020. This is a decrease in the unfunded actuarial accrued liability of \$576.4 million. The decrease is due to the accrued liability being lower than expected due to the 2021 healthcare premium experience.

Annual required actuarially determined contributions of the employers and actual contributions made by employers and other contributing entities in relation to the required contributions, are provided in the Schedules of Employer Contributions - Pension on pages ##-##, and in the Schedules of Contributions - OPEB on pages ###-###. The difference in the annual required contributions and actual contributions made by employers and other contributing entities in the KERS and SPRS funds is attributable to the fact that the employer contribution rate set by the Kentucky General Assembly was less than the rate recommended by the KPPA actuary in prior years and adopted by the Board.

Combining Statement of Fiduciary Net Position						
As of June 30, 2021 with Comparative Totals as of June 30, 2020 (\$ in Thousands)						
ASSETS	CERS	KERS	SPRS	Insurance	KPPA Total 2021	KPPA Total 2020
CASH AND SHORT-TERM INVESTMENTS						
Cash Deposits	\$344	\$313	\$55	\$416	\$1,128	\$814
Short-term Investments	486,085	416,480	33,180	429,500	1,365,245	1,255,711
Total Cash and Short-term Investments	486,429	416,793	33,235	429,916	1,366,373	1,256,525
RECEIVABLES						
Accounts Receivable	88,323	50,693	8,283	36,356	183,655	187,123
Accounts Receivable - Investments	153,262	55,983	4,885	85,776	299,906	195,967
Total Receivables	241,585	106,676	13,168	122,132	483,561	383,090
INVESTMENTS, AT FAIR VALUE						
Core Fixed Income	1,427,767	782,124	77,234	856,629	3,143,754	3,371,195
Public Equities	5,374,082	1,381,218	122,674	3,085,630	9,963,604	6,903,781
Private Equities	948,500	267,509	19,384	584,978	1,820,371	1,549,119
Specialty Credit	1,906,671	652,248	58,694	1,163,959	3,781,572	2,871,308
Derivatives	(156)	80	(9)	52	(33)	9,618
Absolute Return	-	-	-	-	-	247,305
Real Return	740,646	235,954	21,541	422,670	1,420,811	985,538
Opportunistic	307,267	88,461	8,341	205,755	609,824	474,760
Real Estate	455,127	141,477	13,611	258,216	868,431	813,850
Total Investments, at Fair Value	11,159,904	3,549,071	321,470	6,577,889	21,608,334	17,226,474
CAPITAL/INTANGIBLE ASSETS						
Capital Assets	1,854	1,020	11	-	2,885	2,885
Intangible Assets	10,788	6,413	100	-	17,301	17,302
Accumulated Depreciation	(1,854)	(1,020)	(11)	-	(2,885)	(2,826)
Accumulated Amortization	(10,431)	(6,093)	(100)	-	(16,624)	(15,742)
Total Capital Assets	357	320	-	-	677	1,619
Total Assets	11,888,275	4,072,860	367,873	7,129,937	23,458,945	18,867,708
LIABILITIES						
Accounts Payable	9,796	4,105	82	462	14,445	12,980
Investment Accounts Payable	273,391	108,813	10,131	155,862	548,197	468,844
Total Liabilities	283,187	112,918	10,213	156,324	562,642	481,824
Total Fiduciary Net Position Restricted for Pension Benefits	\$11,605,088	\$3,959,942	\$357,660	\$6,973,613	\$22,896,303	\$18,385,884

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

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

Statement of Fiduciary Net Position - CERS and KERS Pension						
As of June 30, 2021 (\$ in Thousands)						
ASSETS	CERS	CERS	CERS	KERS	KERS	KERS
	Non-Hazardous	Hazardous	Total	Non-Hazardous	Hazardous	Total
CASH AND SHORT-TERM INVESTMENTS						
Cash Deposits	\$274	\$70	\$344	\$263	\$50	\$313
Short-term Investments	354,401	131,684	486,085	362,327	54,153	416,480
Total Cash and Short-term Investments	354,675	131,754	486,429	362,590	54,203	416,793
RECEIVABLES						
Accounts Receivable	70,560	17,763	88,323	46,945	3,748	50,693
Accounts Receivable - Investments	114,786	38,476	153,262	44,473	11,510	55,983
Total Receivables	185,346	56,239	241,585	91,418	15,258	106,676
INVESTMENTS, AT FAIR VALUE						
Core Fixed Income	1,062,124	365,643	1,427,767	670,631	111,493	782,124
Public Equities	4,019,813	1,354,269	5,374,082	984,670	396,548	1,381,218
Private Equities	710,086	238,414	948,500	202,161	65,348	267,509
Specialty Credit	1,421,018	485,653	1,906,671	505,214	147,034	652,248
Derivatives	(123)	(33)	(156)	84	(4)	80
Absolute Return	-	-	-	-	-	-
Real Return	553,862	186,784	740,646	182,999	52,955	235,954
Opportunistic	230,926	76,341	307,267	67,526	20,935	88,461
Real Estate	344,816	110,311	455,127	109,064	32,413	141,477
Total Investments, at Fair Value	8,342,522	2,817,382	11,159,904	2,722,349	826,722	3,549,071
CAPITAL/INTANGIBLE ASSETS						
Capital Assets	1,701	153	1,854	929	91	1,020
Intangible Assets	9,961	827	10,788	5,920	493	6,413
Accumulated Depreciation	(1,701)	(153)	(1,854)	(929)	(91)	(1,020)
Accumulated Amortization	(9,612)	(819)	(10,431)	(5,611)	(482)	(6,093)
Total Capital Assets	349	8	357	309	11	320
Total Assets	8,882,892	3,005,383	11,888,275	3,176,666	896,194	4,072,860
LIABILITIES						
Accounts Payable	8,676	1,120	9,796	3,720	385	4,105
Investment Accounts Payable	203,549	69,842	273,391	87,932	20,881	108,813
Total Liabilities	212,225	70,962	283,187	91,652	21,266	112,918
Total Fiduciary Net Position Restricted for Pension Benefits	\$8,670,667	\$2,934,421	\$11,605,088	\$3,085,014	\$874,928	\$3,959,942

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

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

Statement of Fiduciary Net Position - Insurance

As of June 30, 2021, (\$ In Thousands)

ASSETS	CERS	CERS	KERS	KERS	SPRS	Insurance Total
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2021
CASH AND SHORT-TERM INVESTMENTS						
Cash Deposits	\$117	\$51	\$141	\$59	\$48	\$416
Short-term Investments	190,745	76,432	127,774	23,095	11,454	429,500
Total Cash and Short-term Investments	190,862	76,483	127,915	23,154	11,502	429,916
RECEIVABLES						
Accounts Receivable	15,690	4,690	14,807	371	798	36,356
Investment Accounts Receivable	38,392	19,528	17,102	7,772	2,982	85,776
Total Receivables	54,082	24,218	31,909	8,143	3,780	122,132
INVESTMENTS, AT FAIR VALUE						
Core Fixed Income	379,725	199,916	172,044	75,368	29,576	856,629
Public Equities	1,375,704	707,548	616,647	277,710	108,021	3,085,630
Specialty Credit	529,508	262,287	218,770	112,704	40,690	1,163,959
Private Equities	279,970	157,517	68,950	54,085	24,456	584,978
Derivatives	21	3	27	-	1	52
Absolute Return	-	-	-	-	-	-
Real Return	189,953	99,768	77,866	39,778	15,305	422,670
Opportunistic	93,243	50,798	33,337	20,724	7,653	205,755
Real Estate	118,422	64,920	37,138	27,302	10,434	258,216
Total Investments, at Fair Value	2,966,546	1,542,757	1,224,779	607,671	236,136	6,577,889
Total Assets	3,211,490	1,643,458	1,384,603	638,968	251,418	7,129,937
LIABILITIES						
Accounts Payable	292	80	80	8	2	462
Investment Accounts Payable	69,412	35,567	31,400	14,071	5,412	155,862
Total Liabilities	69,704	35,647	31,480	14,079	5,414	156,324
Total Fiduciary Net Position Restricted for OPEB	\$3,141,786	\$1,607,811	\$1,353,123	\$624,889	\$246,004	\$6,973,613
<i>See accompanying notes, which are an integral part of these combining financial statements.</i>						

Combining Statement of Changes In Fiduciary Net Position

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

	CERS	KERS	SPRS	Insurance	KPPA Total 2021	KPPA Total 2020
ADDITIONS						
Member Contributions	\$228,065	\$110,163	\$4,752	\$-	\$342,980	\$353,360
Employer Contributions	644,285	1,020,762	59,262	346,026	2,070,335	2,079,117
Medicare Drug Reimbursement	-	-	-	3	3	7
Insurance Premiums				563	563	730
Humana Gain Share				42,897	42,897	-
General Fund Appropriations	-	-	384	-	384	1,086
Pension Spiking Contributions	148	70	4	-	222	369
Retired Re-employed Healthcare				12,535	12,535	11,482
Health Insurance Contributions (HB1)	1	(5)	-	24,409	24,405	23,153
Employer Cessation Contributions	-	175,600	-	28,400	204,000	45
Total Contributions	872,499	1,306,590	64,402	454,833	2,698,324	2,469,349
INVESTMENT INCOME						
From Investing Activities						
Net Appreciation (Depreciation) in FV of Investments						
	2,203,400	638,787	56,081	1,286,327	4,184,595	(179,997)
Interest/Dividends	291,467	90,939	8,212	161,768	552,386	414,088
Total Investing Activities Income	2,494,867	729,726	64,293	1,448,095	4,736,981	234,091
Less: Investment Expense	48,352	12,912	1,245	30,076	92,585	70,531
Less: Performance Fees	62,584	13,784	1,113	41,086	118,567	3,850
Net Income from Investing Activities	2,383,931	703,030	61,935	1,376,933	4,525,829	159,710
From Securities Lending Activities						
Securities Lending Income	688	227	21	403	1,339	7,933
Less: Securities Lending Borrower Rebates (Income)/Expense	(523)	(162)	(15)	(300)	(1,000)	4,379
Less: Securities Lending Agent Fees	181	58	5	105	349	467
Net Income from Securities Lending	1,030	331	31	598	1,990	3,087
Net Investment Income	2,384,961	703,361	61,966	1,377,531	4,527,819	162,797
Total Additions	3,257,460	2,009,951	126,368	1,832,364	7,226,143	2,632,146
DEDUCTIONS						
Benefit Payments	1,116,749	1,083,390	63,249	-	2,263,388	2,205,859
Refunds	18,524	13,333	273	-	32,130	33,511
Healthcare Premiums Subsidies	-	-	-	375,598	375,598	375,794
Self Funded Healthcare Costs	-	-	-	5,465	5,465	5,986
Administrative Expenses	23,677	12,882	230	2,354	39,143	40,083
Total Deductions	1,158,950	1,109,605	63,752	383,417	2,715,724	2,661,233
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	2,098,510	900,346	62,616	1,448,947	4,510,419	(29,087)
Total Fiduciary Net Position Restricted for Pension Benefits						
Beginning of Period	9,506,578	3,059,596	295,044	5,524,666	18,385,884	18,414,971
End of Period	\$11,605,088	\$3,959,942	\$357,660	\$6,973,613	\$22,896,303	\$18,385,884
<i>See accompanying notes, which are an integral part of these combining financial statements.</i>						

Statement of Changes In Fiduciary Net Position - CERS and KERS Pension

For the fiscal year ending June 30, 2021 (\$ in Thousands)

	CERS			KERS		
	Non-Hazardous	Hazardous	Total	Non-Hazardous	Hazardous	Total
ADDITIONS						
Member Contributions	\$165,698	\$62,367	\$228,065	\$90,202	\$19,961	\$110,163
Employer Contributions	472,196	172,089	644,285	958,580	62,182	1,020,762
General Fund Appropriations	-	-	-	-	-	-
Pension Spiking Contributions	32	116	148	52	18	70
Northern Trust Settlement	-	-	-	-	-	-
Health Insurance Contributions (HB1)	(1)	2	1	(8)	3	(5)
Employer Cessation Contributions	-	-	-	175,600	-	175,600
Total Contributions	637,925	234,574	872,499	1,224,426	82,164	1,306,590
INVESTMENT INCOME						
From Investing Activities						
Net Appreciation (Depreciation) in FV of Investments	1,648,520	554,880	2,203,400	477,809	160,978	638,787
Interest/Dividends	218,068	73,399	291,467	69,458	21,481	90,939
Total Investing Activities Income	1,866,588	628,279	2,494,867	547,267	182,459	729,726
Less: Investment Expense	36,271	12,081	48,352	9,462	3,450	12,912
Less: Performance Fees	46,853	15,731	62,584	9,618	4,166	13,784
Net Income from Investing Activities	1,783,464	600,467	2,383,931	528,187	174,843	703,030
From Securities Lending Activities						
Securities Lending Income	512	176	688	174	53	227
Less: Securities Lending Borrower Rebates (Income)/Expense	(390)	(133)	(523)	(122)	(40)	(162)
Less: Securities Lending Agent Fees	135	46	181	44	14	58
Net Income from Securities Lending	767	263	1,030	252	79	331
Net Investment Income	1,784,231	600,730	2,384,961	528,439	174,922	703,361
Total Additions	2,422,156	835,304	3,257,460	1,752,865	257,086	2,009,951
DEDUCTIONS						
Benefit Payments	826,749	290,000	1,116,749	1,009,501	73,889	1,083,390
Refunds	13,862	4,662	18,524	8,953	4,380	13,333
Administrative Expenses	21,767	1,910	23,677	11,627	1,255	12,882
Total Deductions	862,378	296,572	1,158,950	1,030,081	79,524	1,109,605
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits						
	1,559,778	538,732	2,098,510	722,784	177,562	900,346
Total Fiduciary Net Position Restricted for Pension Benefits						
Beginning of Period	7,110,889	2,395,689	9,506,578	2,362,230	697,366	3,059,596
End of Period	\$8,670,667	\$2,934,421	\$11,605,088	\$3,085,014	\$874,928	\$3,959,942

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

Statement of Changes In Fiduciary Net Position - Insurance Fund						
For the fiscal year ending June 30, 2021, (\$ In Thousands)						
	CERS	CERS	KERS	KERS	SPRS	Insurance Total
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2021
ADDITIONS						
Employer Contributions	\$124,697	\$58,451	\$153,571	\$23	\$9,284	\$346,026
Medicare Drug Reimbursement	3	-	-	-	-	3
Insurance Premiums	555	(149)	182	(11)	(14)	563
Humana Gain Share Payment	20,676	2,990	17,167	1,253	811	42,897
Retired Re-employed Healthcare	5,206	1,348	4,705	1,276	-	12,535
Health Insurance Contributions (HB1)	13,614	3,096	6,326	1,164	209	24,409
Employer Cessation Contributions	-	-	28,400	-	-	28,400
Total Contributions	164,751	65,736	210,351	3,705	10,290	454,833
INVESTMENT INCOME						
From Investing Activities						
Net Appreciation (Depreciation) in FV of Investments	578,584	302,532	240,117	118,103	46,991	1,286,327
Interest/Dividends	73,374	38,177	29,240	15,152	5,825	161,768
Total Investing Activities Income	651,958	340,709	269,357	133,255	52,816	1,448,095
Less: Investment Expense	13,895	7,395	4,836	2,815	1,135	30,076
Less: Performance Fees	18,739	10,634	6,044	4,018	1,651	41,086
Net Income from Investing Activities	619,324	322,680	258,477	126,422	50,030	1,376,933
From Securities Lending Activities						
Securities Lending Income	182	92	79	36	14	403
Less: Securities Lending Borrower Rebates (Income)/Expense	(134)	(69)	(60)	(26)	(11)	(300)
Less: Securities Lending Agent Fees	47	24	21	9	4	105
Net Income from Securities Lending	269	137	118	53	21	598
Net Investment Income	619,593	322,817	258,595	126,475	50,051	1,377,531
Total Additions	784,344	388,553	468,946	130,180	60,341	1,832,364
DEDUCTIONS						
Healthcare Premiums Subsidies	136,263	85,151	119,897	19,800	14,487	375,598
Administrative Expenses	884	466	815	118	71	2,354
Self-Funded Healthcare Costs	3,462	257	1,609	112	25	5,465
Excise Tax Insurance	-	-	-	-	-	-
Total Deductions	140,609	85,874	122,321	20,030	14,583	383,417
Net Increase (Decrease) in Fiduciary Net Position Restricted for OPEB	643,735	302,679	346,625	110,150	45,758	1,448,947
Total Fiduciary Net Position Restricted for OPEB						
Beginning of Period	2,498,051	1,305,132	1,006,498	514,739	200,246	5,524,666
End of Period	\$3,141,786	\$1,607,811	\$1,353,123	\$624,889	\$246,004	\$6,973,613
<i>See accompanying notes which are an integral part of these combining financial statements.</i>						

NOTE A. Summary of Significant Accounting Policies

On April 1, 2021, KRS' name was changed to Kentucky Public Pensions Authority (KPPA) in accordance with HB484 of the 2020 legislative session, and HB9 of the 2021 legislative session.

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

Basis of Accounting

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

Method Used to Value Investments

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

Investment Unitization

KPPA uses a unitization process administered by our custodian BNY Mellon. Each plan is an owner within each investment pool (a pool can be a single manager or a group of managers). The allocation of the pool is determined when the initial investment is made and any changes to the unitization are a result of cash flows made by each plan within the pool. Unitized investments are held in the name of Kentucky Retirement Systems (KRS) with each plan retaining an ownership in the unitized investment.

Estimates

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

Equipment

Equipment is valued at historical cost and depreciation is computed utilizing the straight-line method over the estimated useful lives of the assets ranging from three to ten years. Improvements, which increase the useful life of the equipment, are capitalized. Maintenance and repairs are charged as an expense when incurred. The capitalization threshold used in fiscal year 2021 was \$3,000 (see Equipment Note J for further information).

Intangible Assets

Intangible assets, currently computer software, are valued at historical cost and amortization is computed utilizing the straight-line method over the estimated useful lives of the assets which is ten years. The capitalization threshold used in fiscal year 2021 was \$3,000 (see Intangible Assets Note K for further information).

Contributions Receivable

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

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

Payment of Benefits

Benefits are recorded when paid.

Expense Allocation

KPPA administrative expenses are allocated in proportion to the number of total members participating in each plan and direct investment manager expenses are allocated in proportion to the percentage of investment assets held by each plan.

Component Unit

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

CERS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 78.520. KERS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 61.515. SPRS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 16.510. The KRS Insurance Trust Fund was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 61.701. KPPA's administrative budget is subject to approval by the Kentucky General Assembly. Employer contribution rates for KERS and SPRS are also subject to legislative approval. Employer contribution rates for CERS are determined by the Board of CERS without further legislative review. The methods used to determine the employer rates for CERS and KRS (KERS and SPRS) are specified in Kentucky Revised Statutes 78.635 and 61.565. Employee contribution rates are set by statute and may be changed only by the Kentucky General Assembly.

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

Recent Accounting Pronouncements

In June 2017, the Governmental Accounting Standards Board (GASB) issued *Statement Number 87 Leases*. The objective of this Statement is to address government lessee's recognition of lease liabilities, intangible assets, and report amortization expense for using the leased asset, interest expense on the lease liability, and note disclosures about the lease. Another objective of this Statement is to address government lessor's recognition of a lease receivable, deferred inflow, and report lease revenue, interest income, and note disclosures about the lease. Due to COVID-19, *Statement Number 87 Leases* was updated to extend the requirement of this standard to take effect for financial statements starting with the fiscal year that ends June 30, 2022. KPPA is evaluating the impact of this Statement to the financial report.

GASB *Statement Number 96 Subscription-Based Information Technology Arrangements (SBITAs)* established standards of accounting and financial reporting for SBITAs by a government end user (a government). The requirements of this Statement apply to financial statements of all state and local governments. To the extent relevant, the standards for SBITAs are based on the standards established in *Statement Number 87, Leases*, as amended. The requirements of this Statement are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. KPPA is evaluating the impact of the Statement to the financial report.

Note B. Descriptions & Contribution Information

CERS Membership Combined			
As of June 30			
	2021		
Members	Non-Haz	Hazardous	Total
Retirees and Beneficiaries Receiving Benefits	63,566	8,814	72,380
Inactive Memberships	95,682	3,243	98,925
Active Members	80,378	9,138	89,516
Total	239,626	21,195	260,821
Number of Participating Employers			1,122

KERS Membership Combined			
As of June 30			
	2021		
Members	Non-Haz	Hazardous	Total
Retirees and Beneficiaries Receiving Benefits	44,469	3,339	47,808
Inactive Memberships	49,679	6,513	56,192
Active Members	29,709	3,809	33,518
Total	123,857	13,661	137,518
Number of Participating Employers			329

SPRS Membership			
As of June 30			
	2021		
Members	Non-Haz	Hazardous	Total
Retirees and Beneficiaries Receiving Benefits	-	1,540	1,540
Inactive Memberships	-	389	389
Active Members	-	775	775
Total	-	2704	2,704
Number of Participating Employers			1

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

Retiree Medical Insurance Coverage As of June 30, 2021

	Single	Couple/ Family	Parent	Medicare Without Prescription	Medicare With Prescription
CERS Non-Hazardous	8,685	508	218	2,081	28,472
CERS Hazardous	1,768	2,894	473	120	4,103
CERS Total	10,453	3,402	691	2,201	32,575
KERS Non-Hazardous	7,415	633	428	1,026	22,648
KERS Hazardous	667	491	104	82	1,693
KERS Total	8,082	1,124	532	1,108	24,341
SPRS	221	448	89	13	1,003
Total	18,756	4,974	1,312	3,322	57,919

Plan Descriptions

Pension Funds

KPPA provides retirement, disability, and death benefits to system members. Retirement benefits may be extended to beneficiaries of members under certain circumstances. The Kentucky Employees Retirement System (KERS), County Employees Retirement System (CERS), State Police Retirement System (SPRS), and Kentucky Retirement System Insurance trust fund (Insurance Fund) operate under common management and are collectively referred to as the Kentucky Public Pensions Authority (KPPA or Systems). In addition to executive management, the CERS, KERS, SPRS, and Insurance Fund share investment management, accounting, and information system services, the costs of which are allocated to the plans on an equitable basis.

CERS - County Employees Retirement System

CERS is a cost-sharing multiple-employer defined benefit pension plan and was established by KRS 78.520 for the purpose of providing retirement benefits to all regular full-time members employed in positions of each participating county, city, school board, and any additional eligible local agencies electing to participate in CERS. The membership of CERS includes employees whose position is considered hazardous with principal job duties including, but are not limited to, active law enforcement, probation and parole officer, detective, pilots, paramedics, and emergency medical technicians, with duties that require frequent exposure to a high degree of danger or period and also require a high degree of physical condition. The responsibility for the general administration and operation of CERS is vested in its Board of Trustees. The CERS Board of Trustees consist of 9 members. Six trustees are appointed by the governor and three are elected by CERS members and retired members. Of the six appointed trustees, three must have investment experience and three must have retirement experience as defined by statute. All appointments by the governor are subject to Senate confirmation.

KERS - Kentucky Employees Retirement System

KERS is a cost-sharing multiple-employer defined benefit pension plan and was established by Kentucky Revised Statute (KRS) 61.515 for the purpose of providing retirement benefits to all regular full-time members employed in positions of any state department, board, or agency directed by Executive Order to participate in KERS. The membership of KERS includes employees whose position is considered hazardous with principal job duties including, but are not limited to, active law enforcement, probation and parole officer, detective, pilots, paramedics, and emergency medical technicians, with duties that require frequent exposure to a high degree of danger or period and also require a high degree of physical condition. The responsibility for the general administration and operation of KERS is vested with the Kentucky Retirement Systems (KRS) Board of Trustees. The KRS Board of Trustees consist of 9 members. Six trustees are appointed by the governor and three are elected by KERS and SPRS members and retired members. Of the six appointed trustees, three must have investment experience and three must have retirement experience as defined by statute. All appointments by the governor are subject to Senate confirmation. Two elected members represent KERS and must be members of or retired from KERS. One elected member represents SPRS and must be a member of or retired from SPRS. [SPRS - State Police Retirement System](#)

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

Kentucky Retirement System Insurance Trust Fund

The Insurance Fund is a cost-sharing multiple-employer defined benefit other postemployment benefits (OPEB) plan and was established by KRS 61.701 for the purpose of providing hospital and medical insurance benefits for eligible members receiving benefits from CERS, KERS, and SPRS (collectly the Insurance Fund). The responsibility for the general administration and operation of the Insurance is vested with the KRS and CERS Boards of Trustees.

Cost of Living Adjustment (COLA)

Prior to July 1, 2009, COLAs were provided annually equal to the percentage increase in the annual average of the consumer price index (CPI) for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. After July 1, 2009, the COLAs were limited to 1.50%. No COLA has been granted since July 1, 2011.

Contributions

The Commonwealth is required to contribute at an actuarially determined rate for KERS and SPRS pensions. Participating employers are required to contribute at an actuarially determined rate for CERS pensions. Per Kentucky Revised Statute Sections CERS 78.545(33), KERS 61.565(3), and SPRS 16.645(18), normal contribution and past service contribution rates shall be determined by the Boards on the basis of the last annual valuation preceding July 1 of a new biennium. The Boards may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Boards. However, formal commitment to provide the contributions by the employer is made through the biennial budget for KERS and SPRS.

For the fiscal year ended June 30, 2021, participating employers contributed a percentage of each employee's creditable compensation. The actuarially determined rates set by the Boards for the fiscal year is a percentage of each employee's creditable compensation. Administrative costs of KPPA are financed through employer contributions and investment earnings. See the chart on the following page for the fiscal year employer contribution rates, including the actuarially recommended rates.

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

TIER 1:

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

TIER 2:

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

TIER 3:

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

Contribution Rate Breakdown by Fund As of June 30, 2021

Fund	Pension		Insurance		Combined Total	
	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates	Employer Contribution Rates	Actuarially Recommended Rates
CERS Non-Hazardous**	19.30%	21.17%	4.76%	5.78%	24.06%	26.95%
CERS Hazardous**	30.06%	33.86%	9.52%	10.47%	39.58%	44.33%
KERS Non-Hazardous *	41.06%	80.98%	8.41%	12.03%	49.47%	93.01%
KERS Non-Hazardous	73.28%	80.98%	11.15%	12.03%	84.43%	93.01%
KERS Hazardous	36.00%	38.71%	0.00%	0.00%	36.00%	38.71%
SPRS	123.79%	136.12%	19.69%	20.85%	143.48%	156.97%

* House Bill 265 passed during the 2018 legislative session reduced the employer contribution rate for fiscal year 2019 (same as fiscal year 2018 rate) for Regional Mental Health/Mental Retardation Boards, Local and District Health Departments, State Universities, Community Colleges and any agency eligible to voluntarily cease participating in the KERS. The July 2019 Special Session HB 1 continued the reduced KERS Non-Hazardous employer contribution rate for fiscal year 2020 (same as fiscal year 2019) for the agencies listed. The legislated reduced rates have been continued for fiscal year 2021 by the passage of House Bill 352 in the 2020 regular session.

**House Bill 362 passed during the 2018 legislative session caps CERS employer contribution rate increases up to 12% per year over the prior fiscal year for the period of July 1, 2018 to June 30, 2028.

Tier 3

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

Upside Sharing Interest

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

The chart below shows the interest calculated on the members' balances as of June 30, 2020, and credited to each member's account on June 30, 2021.

(A-B) = C x 75% = D then B + D = Interest (\$ in Thousands)						
	A	B	C	D		
Fund	5-Year Geometric Average Return	Less Guarantee Rate of 4%	Upside Sharing Interest	Upside Sharing Interest X 75% = Upside Gain	Interest Rate Earned (4% + Upside)	Total Interest Credited to Member Accounts
CERS Non-Hazardous	10.35%	4.00%	6.35%	4.76%	8.76%	\$21,116
CERS Hazardous	10.53%	4.00%	6.53%	4.90%	8.90%	\$6,833
KERS Non-Hazardous	9.28%	4.00%	5.28%	3.96%	7.96%	\$8,939
KERS Hazardous	10.32%	4.00%	6.32%	4.74%	8.74%	\$2,789
SPRS	9.67%	4.00%	5.67%	4.25%	8.25%	\$412

Insurance Fund Description

KRS Insurance Fund was established to provide hospital and medical insurance for eligible members receiving benefits from CERS, KERS, and SPRS. The eligible non-Medicare retirees are covered by the Department of Employee Insurance (DEI) plans. The Board contracts with Humana to provide health care benefits to the eligible Medicare retirees through a Medicare Advantage Plan. KPPA submits the premium payments to DEI and Humana. The Insurance Plan pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal year ended June 30, 2021, insurance premiums withheld from benefit payments for KPPA's members were \$24.3 million and \$3.3 million for CERS Non-Hazardous and Hazardous, respectively; \$20.4 million and \$1.3 million for KERS Non-Hazardous and Hazardous, respectively; and, \$358,508 for SPRS.

The amount of benefit paid by the Insurance Fund is based on years of service. For members who began participating prior to July 1, 2003, a percentage of the contribution rate is paid based on years of service with 100% of the contribution rate being paid with 20 years of service. Since the passage of House Bill 290 (2004 Kentucky General Assembly), medical insurance benefits have been calculated differently for members who began participating on or after July 1, 2003. Once members reach a minimum vesting period of 10 years, Non-Hazardous employees whose participation began on or after July 1, 2003, earn \$10 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Hazardous employees whose participation began on or after July 1, 2003 earn \$15 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Upon death of a Hazardous employee, the employee's spouse receives \$10 per month for insurance benefits for each year of the deceased employee's earned Hazardous service. This dollar amount is subject to adjustment annually, which is currently 1.5%, based upon Kentucky Revised Statutes. House Bill 1 (2008 Kentucky General Assembly) changed the minimum vesting requirement for participation in the health insurance plan to 15 years for members whose participation began on or after September 1, 2008. This benefit is not protected under the inviolable contract provisions of Kentucky Revised Statutes 16.652, 61.692 and 78.852. The Kentucky General Assembly reserves the right to suspend or reduce this benefit if, in its judgment, the welfare of the Commonwealth so demands. The Insurance Fund pays 100% of the contribution rate for hospital and medical insurance premiums for the spouse and dependents of members who die as a direct result of an act in the line of duty or from a duty-related injury.

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

Portion Paid by Insurance Fund As of June 30, 2021	
Years of Service	Paid by Insurance Fund (%)
20+ years	100.00%
15-19 years	75.00%
10-14 years	50.00%
4-9 years	25.00%
Less than 4 years	0.00%

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

Dollar Contribution for Fiscal Year 2021 For Member participation date on or after July 1, 2003	
Fund	(in Whole \$)
CERS Non-Hazardous	\$13.78
CERS Hazardous	\$20.68
KERS Non-Hazardous	\$13.78
KERS Hazardous	\$20.68
SPRS	\$20.68

Note C. Cash, Short-Term Investments & Securities Lending Collateral

The provisions of GASB *Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions* require that cash received as collateral on securities lending transactions and investments made with that cash be reported as assets on the financial statements. In accordance with GASB *No. 28*, KPPA classifies certain other investments, not related to the securities lending program as short-term. Cash and short-term investments consist of the following:

Cash, Short-Term Investments, & Securities Lending Collateral		
As of June 30 (\$ in Thousands)		
CERS		
	Pension	Insurance
	2021	2021
Cash	\$344	\$168
Short-Term Investments	486,085	267,176
Securities Lending Collateral Invested	310,117	120,431
Total	\$796,546	\$387,775
KERS		
	Pension	Insurance
	2021	2021
Cash	\$313	\$200
Short-Term Investments	416,480	150,869
Securities Lending Collateral Invested	104,773	49,928
Total	\$521,565	\$200,997
SPRS - Pension		
	Pension	Insurance
	2021	2021
Cash	\$55	\$48
Short-Term Investments	33,180	11,454
Securities Lending Collateral Invested	9,345	6,244
Total	\$42,580	\$17,746

Note D. Investments

Kentucky Revised Statute 61.650 grants the responsibility for the investment of plan assets to the Boards. In addition, 61.645 requires six (6) members of the boards shall have at least ten (10) years of investment experience. The Boards established Investment Committees are specifically charged with the oversight and investment of plan assets. The Investment Committees recognize their duty to invest the funds in accordance with the “Prudent Person Rule” set forth in Kentucky Revised Statute 61.650 and manage those funds consistent with the long-term nature of the trusts. The Investment Committees of each Board must adopt an Investment Policy Statements (IPS) that contain guidelines and restrictions for deposits and investments. A copy of each Board’s IPS can be found on the KPPA website. By statute, all investments are to be registered and held in the name of the trusts. The IPS contains the specific guidelines for the investment of CERS, KERS, SPRS and Insurance Fund assets. Additionally, the Investment Committees establish specific investment guidelines that are summarized below and are included in the Investment Management Agreement (IMA) for each investment management firm.

Growth

Equity Investments

Investments may be made in common stock; securities convertible into common stock; preferred stock of publicly traded companies on stock markets; asset class relevant Exchange Traded Funds (ETFs); or any other type of security contained in a manager’s benchmark. Each individual equity account has a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions, and standards of performance.

Specialty Credit Investments

The Specialty Credit accounts may include, but are not limited to, the following types of securities and investments: non-investment grade U.S. corporate credit including both bonds and bank loans; non-investment grade non-U.S. corporate credit including bonds and bank loans; private debt; municipal bonds; non-U.S. sovereign debt; mortgages, including residential mortgage-backed securities; commercial mortgage backed securities and whole loans; asset-backed securities and emerging market debt (EMD), including both sovereign EMD and corporate EMD; and asset class relevant ETFs.

Private Equity

Subject to the specific approval of the Investment Committees, Private Equity investments may be made to diversify the Private Equity portfolio. The Boards may invest in, but not limited to and without limitation: venture capital and Private Equity investments. The Investment Committees believe Private Equity investments have the potential to generate substantial income, but may have a higher degree of risk. It is important to note that KERS and SPRS have not made any new investments in Private Equity since 2010 and 2016, respectively, due to the lack of resources available to invest in long-term investments as a result of the underfunding of the plans. Investments may be made in real estate mortgages on a direct basis or in the form of mortgage pool instruments.

Liquidity

Core Fixed Income

The Core Fixed Income accounts may include, but are not limited to, the following securities: U.S. government and agency bonds; investment grade U.S. corporate credit; investment grade non-U.S. corporate credit; mortgages, including residential mortgage-backed securities; commercial mortgage-backed securities and whole loans; asset-backed securities; and, asset class relevant ETFs.

Cash Equivalent Securities

The following Short-Term investment vehicles are considered acceptable: publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; 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 is used.

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.

Fixed income managers, who utilize cash equivalent securities as an integral part of their investment strategy, are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for Fixed Income managers shall be included in the investment manager's investment guidelines.

Diversifying

Real Estate/Real Return/Absolute Return/Opportunistic Investments

Subject to the specific approval of the corresponding Investment Committee, investments may be made to create a diversified portfolio of alternative investments. The Boards may invest in real estate or alternative investments including, but not limited to and without limitation: real return and absolute return investments. Alternative investments have the potential to generate substantial income, but may have a higher degree of risk. Investments may be made in real estate mortgages on a direct basis or in the form of mortgage pool instruments.

Investment Expenses

In accordance with GASB *Statement No. 67 and No. 74, Financial Reporting for Pension Plans and Other Postemployment Benefit Plans other than Pension Plans*, KPPA has exercised professional judgment to report investment expenses. It is not cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses. In fiscal year 2015, KRS changed Private Equity investment fees from a gross basis to a net basis. The Boards made the decision to enhance transparency reporting. Prior to 2015, the majority of the trusts' Private Equity investment fees were netted against investment activity which is the standard used within the Private Equity sector. trusts' net investment income has always included these fees regardless of the reporting method used. During the 2017 Regular Session of the Kentucky General Assembly, legislators passed SB 2 which requires the reporting of all investment fees and expenses. KPPA staff continues to work with managers to enhance fee and expense reporting.

Derivatives

Derivative instruments are financial contracts that have various effective dates and maturity dates and whose values depend on the values of one or more underlying assets, reference rates, or financial indices. Investments may be made in derivative securities or strategies which make use of derivative instruments, only if such investments do not cause the portfolio to be in any way leveraged beyond a 100% invested position. Examples of such derivatives include, but are not limited to the following securities: foreign currency forward contracts; collateralized mortgage obligations; treasury inflation protected securities (TIPS); futures; options; and swaps. Investments in derivative securities are subject to large or unanticipated changes in duration or cash flows and can be interest only, principal only, inverse floater or structured note securities. These are permitted only to the extent that they are authorized in a contract or an alternative investment offering memorandum of agreement.

Investments in securities such as collateralized mortgage obligations and planned amortization class issues are allowed if, in the judgment of the investment manager, they are not expected to be subject to large or unanticipated changes in duration or cash flows. Investment managers may make use of derivative securities for defensive or hedging purposes. Any derivative security shall be sufficiently liquid so that it can be expected to be sold at, or near, its most recently quoted market price.

For accounting and financial reporting purposes, all derivative instruments are considered investment derivative instruments. The derivatives have been segregated on the Combining Statement of Fiduciary Net Position for both the Pension and Insurance Funds.

In accordance with GASB *Statement No. 53, Accounting and Financial Reporting for Derivative Instruments*, KPPA provides additional disclosure regarding its derivatives. The charts included represent the derivatives by types as of June 30, 2021. The chart shows the change in fair value of derivative types as well as the current fair value and notional value. The notional value is the reference amount of the underlying asset times its current spot price. The

trusts hold investments in options, commitments, futures, and forward foreign exchange contracts. Investments are exposed to counterparty risk with the foreign exchange contracts that are held.

CERS Derivative Instruments

As of June 30, 2021 (\$ in Thousands)

Pension

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value for the Fiscal year Ended June 30, 2021	Classification	Fair Value	Notional Value
FX Spots and Forwards	\$(440)	Investment	\$(400)	\$-
Futures	(1,787)	Investment	(1,787)	321,438
Commits and Options	114	Investment	31	-
Swaps	4	Investment	2,001	-

KERS Derivative Instruments

As of June 30, 2021 (\$ in Thousands)

Pension

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value for the Fiscal year Ended June 30, 2021	Classification	Fair Value	Notional Value
FX Spots and Forwards	\$(183)	Investment	\$(166)	\$-
Futures	(509)	Investment	(509)	91,486
Commits and Options	54	Investment	15	-
Swaps	2	Investment	740	-

SPRS Derivative Instruments

As of June 30, 2021 (\$ in Thousands)

Pension

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value for the Fiscal year Ended June 30, 2021	Classification	Fair Value	Notional Value
FX Spots and Forwards	\$(13)	Investment	\$(12)	\$-
Futures	(57)	Investment	(57)	10,309
Commits and Options	4	Investment	1	-
Swaps	0	Investment	59	-

Insurance Derivative Instruments

As of June 30, 2021 (\$ in Thousands)

Insurance

Derivatives (by Type)	Net Appreciation (Depreciation) in Fair Value for the Fiscal year Ended June 30, 2021	Classification	Fair Value	Notional Value
FX Spots and Forwards	\$(278)	Investment	\$(278)	\$-
Futures	(1,008)	Investment	(1,008)	168,633
Commits and Options	140	Investment	99	-
Swaps	21	Investment	1,239	-

**Derivative Instruments Subject to Counterparty Credit Risk
As of June 30, 2021**

Pension				
Counterparty	S & P Ratings	CERS Percentage of Net Exposure	KERS Percentage of Net Exposure	SPRS Percentage of Net Exposure
Derivative Instruments - Pension Fund				
Australia & New Zealand Banking Group Ltd	AA-	0.06%	0.30%	0.01%
BNP Paribas SA	A+	0.07%	0.30%	0.01%
Bank of America Corp	A-	0.90%	2.44%	0.07%
The Bank of New York Mellon Corp	A	0.16%	0.87%	0.02%
Barclays PLC	BBB	0.65%	2.25%	0.06%
Brown Brothers Harriman & Co		0.03%	0.11%	0.00%
Canadian Imperial Bank of Commerce	A+	0.23%	1.16%	0.03%
Citigroup Inc	BBB+	1.00%	3.60%	0.10%
Credit Suisse Group AG	BBB+	0.37%	1.16%	0.03%
The Goldman Sachs Group Inc	BBB+	7.58%	21.29%	0.63%
HSBS Holding PLC	A-	0.97%	3.10%	0.09%
JPMorgan Chase & Co	A-	2.31%	7.50%	0.21%
Morgan Stanley	BBB+	3.02%	9.69%	0.28%
Royal Bank of Canada	AA-	0.47%	2.36%	0.07%
Standard Chartered PLC	BBB+	0.12%	0.61%	0.02%
State Street Corp	A	0.50%	2.48%	0.07%
The Toronto-Dominion Bank	AA-	1.24%	3.34%	0.10%
UBS Group AG	A-	2.34%	6.66%	0.19%
United Kingdom of Great Britain and Northern Ireland	AA	1.47%	3.96%	0.12%
Westpac Banking Corp	AA-	0.32%	0.87%	0.03%
TOTAL		23.81%	74.05%	2.14%

**Derivative Instruments Subject to Counterparty Credit Risk
As of June 30, 2021**

Insurance		
Counterparty	S & P Ratings	Percentage of Net Exposure
Derivative Instruments - Insurance Fund		
Australia & New Zealand Banking Group Ltd	AA-	0.37%
BNP Paribas SA	A+	0.38%
Bank of America Corp	A-	3.41%
The Bank of New York Mellon Corp	A	1.06%
Barclays PLC	BBB	2.97%
Brown Brothers Harriman & Co		0.14%
Canadian Imperial Bank of Commerce	A+	1.42%
Citigroup Inc	BBB+	4.70%
Credit Suisse Group AG	BBB+	1.56%
The Goldman Sachs Group Inc	BBB+	29.50%
HSBS Holding PLC	A-	4.16%
JPMorgan Chase & Co	A-	10.02%
Morgan Stanley	BBB+	12.99%
Royal Bank of Canada	AA-	2.90%
Standard Chartered PLC	BBB+	0.74%
State Street Corp	A	3.05%
The Toronto-Dominion Bank	AA-	4.68%
UBS Group AG	A-	9.19%
United Kingdom of Great Britain and Northern Ireland	AA	5.55%
Westpac Banking Corp	AA-	1.21%
TOTAL		100.00%

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that may occur as a result of a financial institution's failure, whereby KPPA' deposits may not be returned. All non-investment related bank balances are held by JP Morgan Chase and each individual account is insured by the Federal Deposit Insurance Corporation (FDIC). None of these balances were exposed to custodial credit risk as they were either insured or collateralized at required levels.

Custodial Credit Risk for Deposits As of June 30 (\$ in Thousands)	
	2021
CERS Pension Funds at JPM Chase	\$1,075
KERS Pension Funds at JPM Chase	1,008
SPRS Pension Funds at JPM Chase	85
Insurance Fund at JPM Chase	419
Clearing Account at JPM Chase	1,498
Excess Benefit Account at JPM Chase	-

Custodial Credit Risk for Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of an investment or collateral securities that are in the possession of an outside party. As of June 30, 2021, the currencies in the chart below were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent but not in Trust's name.

Custodial Credit Risk for Investments As of June 30, 2021 (\$ in Thousands)	
	2021
CERS Pension Funds Foreign Currency	\$3,360,396
KERS Insurance Fund Foreign Currency	859,970
SPRS Insurance Fund Foreign Currency	75,841

Pension Plan Securities

CERS Pension Plans Investment Summary

As of June 30, 2021 (\$ in Thousands)

Type	Fair Value
Core Fixed Income	\$1,427,767
Public Equities	5,374,082
Private Equities	948,500
Specialty Credit	1,906,671
Derivatives	(156)
Absolute Return	-
Real Return	740,646
Opportunistic	307,267
Real Estate	455,127
Short-Term Investments	486,085
Accounts Receivable (Payable), Net	(120,129)
Total	\$11,525,860

KERS Pension Plans Investment Summary

As of June 30, 2021 (\$ in Thousands)

Type	Fair Value
Core Fixed Income	\$782,124
Public Equities	1,381,218
Private Equities	267,509
Specialty Credit	652,248
Derivatives	80
Absolute Return	-
Real Return	235,954
Opportunistic	88,461
Real Estate	141,477
Short-Term Investments	416,480
Accounts Receivable (Payable), Net	(52,830)
Total	\$3,912,721

SPRS Pension Plans Investment Summary

As of June 30, 2021 (\$ in Thousands)

Type	Fair Value
Core Fixed Income	\$77,234
Public Equities	122,675
Private Equities	19,384
Specialty Credit	58,694
Derivatives	(9)
Absolute Return	-
Real Return	21,541
Opportunistic	8,341
Real Estate	13,611
Short-Term Investments	33,180
Accounts Receivable (Payable), Net	(5,246)
Total	\$349,405

Insurance Fund Securities

Insurance Plan Investment Summary

As of June 30, 2021 (\$ in Thousands)

Type	Fair Value
Core Fixed Income	\$856,629
Public Equities	3,085,629
Private Equities	584,978
Specialty Credit	1,163,959
Derivatives	52
Absolute Return	-
Real Return	422,670
Opportunistic	205,755
Real Estate	258,216
Short-Term Investments	429,500
Accounts Receivable (Payable), Net	(70,086)
Total	\$6,937,302

Note: Differences due to rounding.

Credit Risk Debt Securities

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The debt security portfolios are managed by the Office of Investments staff and by external investment management firms. All portfolio managers are required by the IPS to maintain diversified portfolios. Each portfolio is also required to be in compliance with risk management guidelines that are assigned to them based upon the portfolio's specific mandate. In total, the Pension and Insurance Funds' debt securities portfolios are managed using the following guidelines adopted by the Board:

- Bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies or instrumentalities are permissible investments and may be held without restrictions.
- Fixed Income investments, which include both Core Fixed Income and Specialty Credit, will be similar in type to those securities found in the KRS Fixed Income and Specialty Credit benchmarks and the characteristics of the KRS Fixed Income and Specialty Credit portfolios will be similar to the KRS Fixed Income and Specialty Credit benchmarks. The duration of the total Fixed Income and Specialty Credit portfolio shall not deviate from the KRS Fixed Income and Specialty Credit by more than 25%.
- The amount invested in the debt of a single corporation shall not exceed 5% of the total market value of KRS' assets.
- No public Fixed Income manager shall invest more than 5% of the market value of assets held in any single issue Short-Term instrument with the exception of U.S. Government issued, guaranteed or agency obligations.

As of June 30, 2021, the KPPA Pension portfolio had \$1,257.1 million in debt securities rated below BBB- and does not include unrated (NR) securities. The government agencies in which KPPA invested have primarily credit ratings of AA+ or above.

Pension Plans Debt Securities			
As of June 30, 2021 (\$ in Thousands)			
Rating	CERS	KERS	SPRS
AAA	\$387,895	\$207,975	\$20,592
AA+	10,697	5,596	542
AA	26,136	12,568	1,237
AA-	21,687	10,851	1,083
A+	18,422	9,115	902
A	29,597	14,430	1,453
A-	46,814	24,132	2,359
BBB+	143,085	74,809	7,383
BBB	127,619	61,540	6,136
BBB-	255,872	121,671	12,243
BB+	142,316	61,834	5,929
BB	141,040	59,060	5,589
BB-	164,337	69,007	6,617
B+	117,702	49,601	4,755
B	135,185	51,122	5,062
B-	89,782	34,480	3,437
CCC+	42,313	20,537	1,738
CCC	22,340	10,456	940
CCC-	3,387	973	111
CC	3,496	1,240	144
C	1,972	540	71
D	-	-	-
NR	1,158,861	402,831	33,911
Total Credit Risk Debt Securities	3,090,555	1,304,368	122,233
Government Agencies	19,021	9,081	927
Government Mortgage-Backed Securities	15,345	5,843	652
Government Issued Commercial Mortgage Backed	21,203	7,696	665
Government Collateralized Mortgage Obligations	172,002	85,117	8,050
Government Bonds	153,501	73,016	7,459
Total	\$3,471,627	\$1,485,121	\$139,987

Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Fitch and Moody's Ratings are used as proxies.

Note: Differences due to rounding.

Note: Government Agencies, Government Mortgage-Backed Securities, Government Issued Commercial Mortgage Backed and Government Bonds are highly rated securities since they are backed by the US Government.

Note: The NR reported above consist of pooled investment funds, cash, and derivatives, which do not carry a rating.

As of June 30, 2021, the KPPA Insurance portfolio had \$540.3 million in debt securities rated below BBB- and does not include NR securities. The government agencies in which KPPA invested have credit ratings primarily of AA+ or above.

Insurance Fund Debt Securities	
As of June 30, (\$ in Thousands)	
Rating	Fair Value
AAA	\$223,726
AA+	10,527
AA	17,332
AA-	14,667
A+	12,427
A	20,516
A-	33,942
BBB+	86,240
BBB	80,012
BBB-	147,446
BB+	82,636
BB	88,174
BB-	104,574
B+	74,246
B	85,907
B-	57,485
CCC+	28,034
CCC	13,868
CCC-	1,377
CC	2,454
C	1,507
D	-
NR	694,917
Total Credit Risk Debt	1,882,014
Government Agencies	1,539
Government Mortgage-Backed Securities	106,141
Government Issued Commercial Mortgage Backed	13,085
Government Collateralized Mortgage Obligations	10,645
Government Bonds	88,879
Total	\$2,102,303
<i>Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Fitch and Moody's Ratings are used as proxies.</i>	
<i>Note: Differences due to rounding.</i>	
<i>Note: Government Agencies, Government Mortgage-Backed Securities, Government Issued Commercial Mortgage Backed and Government Bonds are highly rated securities since they are backed by the US Government.</i>	
<i>Note: The NR reported above consist of pooled investment funds, cash, and derivatives, which do not carry a rating.</i>	

Concentration of Credit Risk Debt Securities

Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer. The total debt securities portfolio is managed using the following general guidelines adopted by the CERS and KRS Boards: bonds, notes, or other obligations issued or guaranteed by the U.S. Government, its agencies, or instrumentalities are permissible investments and may be held without restrictions. Debt obligations of any single U.S. corporation is limited to a maximum of 5% of the total portfolio at market value.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration measures the sensitivity of the market prices of fixed income securities to changes in the yield curve and can be measured using two methodologies: effective or modified duration. Effective duration uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price, and makes adjustments for any bond features that would retire the bonds prior to maturity. The modified duration, similar to effective duration, measures the sensitivity of the market prices to changes in the yield curve, but does not assume the securities will be called prior to maturity.

Below are the market values and modified durations for the combined debt securities.

GASB 40 - Interest Rate Risk - Modified Duration		
As of June 30, 2021 (\$ in Thousands)		
KERS		
TYPE	Fair Value	Weighted Avg Modified Duration
Asset Backed Securities	\$173,488	1.58
Financial Institutions	170,100	3.04
Collateralized Mortgage Obligations	28,398	2.49
Commercial Mortgage Backed Securities	116,043	3.50
Corporate Bonds - Industrial	445,509	4.03
Corporate Bonds - Utilities	37,992	3.57
Agencies	9,081	3.40
Government Bonds - Sovereign Debt	4,176	5.91
Mortgage Back Securities Pass-through - Not CMO's	86,636	4.49
Local Authorities - Municipal Bonds	1,974	4.70
Supranational - Multi-National Bonds	545	0.96
Treasuries	73,016	5.20
Unclassified	335,363	0.04
Other	2,800	5.40
Total	\$1,485,121	2.74

GASB 40 - Interest Rate Risk - Modified Duration		
As of June 30, 2021 (\$ in Thousands)		
CERS		
TYPE	Fair Value	Weighted Avg Modified Duration
Asset Backed Securities	\$337,027	1.73
Financial Institutions	396,761	2.99
Collateralized Mortgage Obligations	63,337	2.40
Commercial Mortgage Backed Securities	254,663	3.74
Corporate Bonds - Industrial	981,323	4.12
Corporate Bonds - Utilities	72,982	3.62
Agencies	19,021	4.01
Government Bonds - Sovereign Debt	11,491	6.50
Mortgage Back Securities Pass-through - Not CMO's	176,616	4.49
Local Authorities - Municipal Bonds	5,956	4.86
Supranational - Multi-National Bonds	2,715	0.96
Treasuries	153,501	5.14
Unclassified	985,456	0.06
Other	10,778	5.69
Total	\$3,471,627	2.61

GASB 40 - Interest Rate Risk - Modified Duration
As of June 30, 2021 (\$ in Thousands)
SPRS

TYPE	Fair Value	Weighted Avg Modified Duration
Asset Backed Securities	\$17,464	1.74
Financial Institutions	17,651	2.99
Collateralized Mortgage Obligations	2,705	2.40
Commercial Mortgage Backed Securities	12,120	3.74
Corporate Bonds - Industrial	42,328	4.11
Corporate Bonds - Utilities	3,645	3.61
Agencies	927	4.02
Government Bonds - Sovereign Debt	460	6.51
Mortgage Back Securities Pass-through - Not CMO's	8,233	4.49
Local Authorities - Municipal Bonds	224	4.86
Supranational - Multi-National Bonds	75	0.96
Treasuries	7,459	5.14
Unclassified	26,352	0.06
Other	344	5.69
Total	\$139,987	2.92

GASB 40 - Interest Rate Risk - Modified Duration for the Insurance Fund
As of June 30, 2021 (\$ in Thousands)

TYPE	Fair Value	Weighted Avg Modified Duration
Asset Backed Securities	\$194,278	1.57
Financial Institutions	247,780	2.91
Collateralized Mortgage Obligations	37,274	2.32
Commercial Mortgage Backed Securities	158,289	3.64
Corporate Bonds - Industrial	585,032	4.17
Corporate Bonds - Utilities	45,254	3.84
Agencies	10,978	4.47
Government Bonds - Sovereign Debt	6,791	6.93
Mortgage Back Securities Pass-through - Not CMO's	108,920	4.19
Local Authorities - Municipal Bonds	3,651	5.24
Supranational - Multi-National Bonds	1,517	0.93
Treasuries	105,035	5.28
Unclassified	590,817	0.05
Other	6,687	5.42
Total	\$2,102,303	2.61

Foreign Currency Risk

Foreign currency risk is the risk that occurs if exchange rates adversely affect the value of a non-U.S. dollar based investment or deposit within the KPPA portfolio. KPPA's currency risk exposure, or exchange rate risk, primarily resides with KPPA's Non-U.S. equity holdings, but also affects other asset classes. KPPA does not have a formal policy to limit foreign currency risk; however, some individual managers are given the latitude to hedge some currency exposures. All foreign currency transactions are classified as Short-Term Investments. All gains and losses associated with these transactions are recorded in the Net Appreciation (Depreciation) in Fair Value of Investments on the combining financial statements.

Foreign Currency Risk for the Pension Plans (GASB 40)			
As of June 30, 2021 (\$ in Thousands)			
	CERS	KERS	SPRS
Australian Dollar	\$35,449	\$9,879	\$843
Brazilian Real	31,564	8,039	687
Canadian Dollar	53,569	13,129	1,158
Chinese R Yuan HK	(2,260)	(836)	(67)
Chinese Yuan Renminbi	187	38	5
Columbian Peso	2,816	565	78
Czech Koruna	3,113	794	68
Danish Krone	54,479	14,011	1,193
Egyptian Pound	710	181	15
Euro	628,793	160,311	14,640
Hong Kong Dollar	164,920	41,907	3,577
Hungarian Forint	7,048	1,797	153
Indian Rupee	37,733	9,606	822
Indonesian Rupiah	26,204	6,226	619
Israeli Shekel	5,629	1,480	125
Japanese Yen	158,860	40,617	3,480
Kenyan Shilling	-	-	-
Malaysian Ringgit	5,092	1,080	134
Mexican Peso	6,848	1,518	173
New Taiwan Dollar	49,262	12,581	1,073
New Zealand Dollar	(7,281)	(2,803)	(217)
Norwegian Krone	13,414	4,061	363
Philippine Peso	815	163	22
Polish Zloty	1,965	501	43
Pound Sterling	177,835	47,135	4,023
Romanian Leu	-	-	-
Russian Ruble	7	2	-
Singapore Dollar	5,223	1,527	106
South African Rand	6,398	1,632	139
South Korean Won	64,697	16,424	1,402
Swedish Krona	49,758	13,496	1,137
Swiss Franc	79,660	20,413	1,739
Thai Bhat	10,879	2,774	237
Turkish Lira	5,298	1,351	115
UAE Dirham	3,026	772	67
Total Foreign Investment Securities	1,681,710	430,371	37,952
U.S. Dollar	9,844,150	3,482,351	311,452
Total Investment Securities	\$11,525,860	\$3,912,722	\$349,404

Foreign Currency Risk for the Insurance Fund (GASB 40)
As of June 30, 2021 (\$ in Thousands)

	Fair Value
Australian Dollar	\$20,446
Brazilian Real	18,146
Canadian Dollar	30,541
Chinese R Yuan HK	(1,386)
Chinese Yuan Renminbi	165
Columbian Peso	1,444
Czech Koruna	1,871
Danish Krone	31,222
Egyptian Pound	314
Euro	355,609
Hong Kong Dollar	95,578
Hungarian Forint	4,055
Indian Rupee	21,984
Indonesian Rupiah	14,503
Israeli Shekel	3,237
Japanese Yen	90,707
Kenyan Shilling	-
Malaysian Ringgit	2,960
Mexican Peso	3,678
New Taiwan Dollar	29,221
New Zealand Dollar	(4,518)
Norwegian Krone	7,844
Philippine Peso	462
Polish Zloty	1,117
Pound Sterling	102,698
Romanian Leu	-
Russian Ruble	4
Singapore Dollar	3,206
South African Rand	3,619
South Korean Won	36,706
Swedish Krona	29,553
Swiss Franc	45,683
Thai Bhat	6,106
Turkish Lira	2,828
Total Foreign Investment Securities	959,603
U.S. Dollar	5,977,699
Total Investment Securities	\$6,937,302
<i>Note: Differences due to rounding.</i>	

Fair Value Measurement and Applications (GASB 72)

In accordance with GASB *Statement No. 72, Fair Value Measurement and Application*, KPPA provides this additional disclosure regarding the fair value of its Pension and Insurance investments. KPPA

categorizes its fair value measurements within the fair value hierarchy established by GAAP.

KRS defined the Fair Value Hierarchy and Levels as follows:

Level 1

Quoted prices (unadjusted) in an active market for identical assets or liabilities that KPPA has the ability to access at the measurement date (e.g., prices derived from NYSE, NASDAQ, Chicago Board of Trade, and Pink Sheets). Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using quoted prices (unadjusted) in an active market for identical assets or liabilities that KPPA has the ability to access at the measurement date.

Level 2

Inputs (other than quoted prices included within Level 1) that are observable for an asset or liability, either directly or indirectly. These inputs can include matrix pricing, market corroborated pricing and inputs such as yield curves and indices.

Level 3

Unobservable inputs for an asset or liability, which generally results in using the best information available for the valuation of the assets or liabilities being reported.

Net Asset Value (NAV)

The remaining investments not categorized under the fair value hierarchy are shown at net asset value (NAV). These are investments in non-governmental entities for which a readily determinable fair value is not available, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed.

Fair Value Measurements and Application (GASB 72) Pension Plans As of June 30, 2021 (\$ in Thousands)

Asset Type	CERS			Total	KERS			Total	SPRS			Total
	Level				Level				Level			
	1	2	3	Fair Value	1	2	3	Fair Value	1	2	3	Fair Value
Public Equity												
Emerging Markets	\$300,898	\$-	\$-	\$300,898	\$76,726	\$-	\$-	\$76,726	\$6,544	\$-	\$-	\$6,544
US Equity	2,728,326	-	-	2,728,326	703,700	-	-	703,700	62,995	-	-	62,995
Non-US Equity	1,454,252	-	-	1,454,252	370,823	-	-	370,823	31,626	-	-	31,626
Total Public Equity	4,483,476	-	-	4,483,476	1,151,248	-	-	1,151,248	101,165	-	-	101,165
Fixed Income												
Agencies	-	3,588	-	3,588	-	1,966	-	1,966	-	194	-	194
Asset-Backed	-	342,115	-	342,115	-	175,878	-	175,878	-	17,713	-	17,713
Bank & Finance	3,552	205,574	292,702	501,828	712	104,514	93,495	198,722	98	10,385	10,951	21,435
Cash & Cash Equivalent	41,803	215,787	-	257,590	22,900	304,891	-	327,790	2,261	22,620	-	24,882
Corporate	14,749	824,250	4,886	843,885	3,193	393,148	2,445	398,786	426	36,796	247	37,469
Healthcare	-	37,381	-	37,381	-	16,642	-	16,642	-	1,652	-	1,652
Insurance	-	9,307	-	9,307	-	4,411	-	4,411	-	442	-	442
Mortgage-backed securities	1,469	400,355	-	401,824	324	196,531	-	196,855	44	20,101	-	20,145
Municipals	-	54,852	-	54,852	-	27,279	-	27,279	-	2,641	-	2,641
Sovereign Debt	-	52,629	-	52,629	-	12,929	-	12,929	-	1,634	-	1,634
US Government	121,619	-	-	121,619	66,622	-	-	66,622	6,579	-	-	6,579
Total Fixed Income	183,192	2,145,838	297,588	2,626,618	93,751	1,238,189	95,941	1,427,881	9,408	114,178	11,199	134,785
Derivatives												
Futures	(1,787)	-	-	(1,787)	(509)	-	-	(509)	(57)	-	-	(57)
Options	-	31	-	31	-	15	-	15	-	1	-	1
Swaps	-	2,001	-	2,001	-	740	-	740	-	59	-	59
Total Derivatives	(1,787)	2,032	-	245	(509)	755	-	246	(57)	60	-	3
Real Return												
Real Return	380,653	66,833	-	447,487	140,813	24,723	-	165,536	11,263	1,977	-	13,240
Real Return - Fixed Income	697	135,534	958	137,189	258	50,138	355	50,750	21	4,010	28	4,059
Total Real Return	381,350	202,368	958	584,676	141,071	74,861	355	216,286	11,283	5,988	28	17,300
Total Investments at Fair Value	5,046,231	2,350,238	298,546	7,695,015	1,385,562	1,313,805	96,295	2,795,662	121,799	120,226	11,227	253,252
Investments Measured at NAV												
Specialty Credit	-	-	-	998,425	-	-	-	342,183	-	-	-	27,010
Opportunistic	-	-	-	307,267	-	-	-	88,461	-	-	-	8,341
Private Equity	-	-	-	916,430	-	-	-	265,517	-	-	-	19,384
Real Estate	-	-	-	451,613	-	-	-	138,056	-	-	-	13,245
Real Return	-	-	-	270,150	-	-	-	54,156	-	-	-	6,933
Fixed Income	-	-	-	62,918	-	-	-	34,466	-	-	-	3,403
Non US Equity	-	-	-	909,621	-	-	-	234,822	-	-	-	21,924
US Equity	-	-	-	20,823	-	-	-	5,414	-	-	-	507
Total Investments Measured at NAV	-	-	-	3,937,247	-	-	-	1,163,075	-	-	-	100,748
Cash and Accruals	-	-	-	(106,402)	-	-	-	(46,015)	-	-	-	(4,597)
Total Investments	\$5,046,231	\$2,350,238	\$298,546	\$11,525,860	\$1,385,562	\$1,313,805	\$96,295	\$3,912,722	\$121,799	\$120,226	\$11,227	\$349,404

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: Cash Equivalents include publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages; municipal bonds; Short Term Investment Funds (STIF); money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper); and repurchase agreements.

The investments measured at net asset value (NAV) are presented in the chart below:

Fair Value Measurements and Application (GASB 72) Pension Plans												
As of June 30, 2021 (\$ in Thousands)												
Asset Type	CERS				KERS				SPRS			
	Fair Value	Unfunded			Fair Value	Unfunded			Fair Value	Unfunded		
Specialty Credit ⁽¹⁾	\$998,425	\$338,159	Daily - Quarterly	90 Days	\$342,183	\$101,595	Daily - Quarterly	90 Days	\$27,010	\$9,042	Daily - Quarterly	90 Days
Opportunistic ⁽²⁾	307,267	-	Annually		88,461	-	Annually		8,341	-	Annually	
Real Estate ⁽³⁾	451,613	219,976			138,056	65,017			13,245	6,286		
Real Return ⁽⁴⁾	270,150	49,686	Daily	30 - 60 Days	54,156	7,896	Daily	30 - 60 Days	6,933	1,243	Daily	30 - 60 Days
Private Equity ⁽⁵⁾	916,430	212,534			265,517	23,012			19,384	1,738		
Fixed Income ⁽⁶⁾	62,918	-	Daily		34,466	-	Daily		3,403	-	Daily	
Non US Equity ⁽⁶⁾	909,621	-	Daily		234,822	-	Daily		21,924	-	Daily	
US Equity ⁽⁶⁾	20,823	-	Daily		5,414	-	Daily		507	-	Daily	
Total Investments Measured at NAV	\$3,937,247	\$820,355			\$1,163,075	\$197,520			\$100,747	\$18,309		

⁽¹⁾ This type includes 14 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.

⁽²⁾ This type includes investments that are intended to provide favorable risk-adjusted returns while maintaining low correlation with equity and fixed income markets. Currently, we have 1 manager in this category that is pursuing a regulatory capital relief strategy.

⁽³⁾ This type includes 15 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.

⁽⁴⁾ This type includes 18 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.

⁽⁵⁾ This type includes 36 managers with multiple strategies. These investments cannot be redeemed. Instead, the investments are redeemed throughout the life of the investment. Distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that the all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.

⁽⁶⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.

**Fair Value Measurements and Application (GASB 72) Insurance Fund
As of June 30, 2021 (\$ in Thousands)**

Asset Type	Level			Fair Value
	1	2	3	
Public Equity				
Emerging Markets	\$172,826	\$-	\$-	\$172,826
US Equity	1,570,388	-	-	\$1,570,388
Non-US Equity	831,420	-	-	\$831,420
Total Public Equity	2,574,634	-	-	2,574,634
Core Fixed Income				
Agencies	-	2,158	-	2,158
Asset-Backed	-	199,553	-	199,553
Bank & Finance	11,321	121,832	186,162	319,315
Cash & Cash Equivalent	12,135	297,214	-	309,350
Corporate	8,239	486,573	3,418	498,230
Healthcare	-	22,018	-	22,018
Insurance	-	5,286	-	5,286
Mortgage-backed securities	682	249,784	-	250,466
Municipals	-	35,294	-	35,294
Sovereign Debt	-	27,858	-	27,858
US Government	88,879	-	-	88,879
Total Fixed Income	121,257	1,447,571	189,580	1,758,407
Derivatives				
Futures	(1,008)	-	-	(1,008)
Options	-	99	-	99
Swaps	-	1,240	-	1,240
Total Derivatives	(1,008)	1,338	-	330
Real Return				
Real Return	206,823	42,259	-	249,083
Real Return - Fixed income	-	80,989	726	81,715
Total Real Return	206,823	123,248	726	330,797
Total investments by fair value level	2,901,706	1,572,157	190,306	4,664,169
Investments Measured at NAV				
Specialty Credit	-	-	-	604,420
Opportunistic	-	-	-	205,754
Private Equity	-	-	-	584,979
Real Estate	-	-	-	258,215

Real Return				125,873
Fixed Income				24,156
Non-US Equity				520,970
US Equity	-	-	-	11,723
Total Investments Measured at NAV	-	-	-	2,336,089
Accruals	-	-	-	(62,956)
Total Investments	\$2,901,706	\$1,572,157	\$190,306	\$6,937,302

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note: The Level 3 reported in for Cash and Cash Equivalents are defined as the following - "The assets of the Fund shall be invested primarily in instruments issued by the U.S. Government, Federal agencies, sponsored agencies or sponsored corporations; short-term corporate obligations maturing in 397 days or less; commercial paper rated in the highest rating category (First Tier) for short-term debt by two Nationally Recognized Security Rating Organizations (NRSRO's) (within which there may be sub-categories or gradations indicating relative strength); corporate instruments other than short-term rated A2 and A or better by at least two NRSRO's; obligations of approved domestic and foreign issuers including banker's acceptances, certificates of deposit, demand deposits, repurchase agreements, time deposits, notes and other debt instruments; instruments representing securitized assets, such as asset-backed securities, rated AAA long-term or rated in the highest rating category (First Tier) for short-term debt by two NRSRO's (within which there may be sub-categories or gradations indicating relative strength); securitized assets which are money market eligible; repurchase agreements subject to a minimum 102% collateralization with daily updated valuation. All credit ratings are applicable at time of purchase. The Fund's maximum average maturity will be 60 days and the Fund's maximum weighted average life will be 120 days. No credit instrument will have a maturity in excess of 397 days. Government agencies may have a maturity up to 762 days with a maximum reset of 90 days. Rate reset dates and put dates will be used as a proxy for maturity in calculating the portfolio average maturity. Final maturity dates will be used for maturity in calculating the portfolio weighted average life. The Fund may invest in other collective investment funds maintained by the Trustee or its affiliates, provided such collective investment fund's investment policy is consistent with the Fund's investment policy. To the extent a portion of the Fund is invested in units of another collective investment fund, the terms of that fund are incorporated by reference".

Note: The Level 3 reported in for Bank and Finance and Real Return - Fixed Income are comprised of various term loans.

The investments measured at net asset value (NAV) are presented in the chart below:

Fair Value Measurements and Application (GASB 72) Insurance Fund					
As of June 30, 2021 (\$ in Thousands)					
Asset Type	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	
Specialty Credit ⁽¹⁾	\$604,420	\$200,482	Daily - Quarterly	90 Days	
Opportunistic ⁽²⁾	205,754	-	Annually		
Real Estate ⁽³⁾	258,215	121,427			
Real Return ⁽⁴⁾	125,873	24,839	Daily	30 - 60 Days	
Private Equity ⁽⁵⁾	584,979	153,491			
Fixed Income ⁽⁶⁾	24,156	-	Daily		
Non-US Equity ⁽⁶⁾	520,970	-	Daily		
US Equity ⁽⁶⁾	11,723	-	Daily		
Total Investments Measured at NAV	\$2,336,090	\$500,239			

⁽¹⁾ This type includes 14 high yield specialty credit managers with multiple strategies. These managers may invest in U.S. or non-U.S. investment grade corporate credit, U.S. or non U.S. non-investment grade corporate credit, including both bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities and whole loans, asset-backed securities and emerging market debt.

⁽²⁾ This type includes investments that are intended to provide favorable risk-adjusted returns while maintaining low correlation with equity and fixed income markets. Currently, we have 1 manager in this category that is pursuing a regulatory capital relief strategy.

⁽³⁾ This type includes 15 real estate funds that invest primarily in U.S. commercial real estate; however, there is one manager who invests solely in non-U.S. commercial real estate. The fair value of the investments have been determined using the NAV per share of the Plan's ownership interest and in the partners' capital. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the funds will be liquidated over the next 7 to 10 years. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share of the Plan's ownership interest in the partners' capital. Due to restrictions in the contract, redemptions are not likely until the assets of the fund are liquidated.

⁽⁴⁾ This type includes 18 real return managers that invest in multiple strategies such as infrastructure, agriculture, royalties, commodities, and natural resources. These investments are intended to provide both favorable risk-adjusted returns and correlation with inflation to help with the hedging of inflation for the broader plan. This group of managers also includes any hedge fund managers remaining in the portfolio which have all been terminated and are only awaiting payouts.

⁽⁵⁾ This type includes 40 managers with multiple strategies. These investments cannot be redeemed with the funds. Instead, the nature of the investments in this type is that distributions are received through the liquidation of the underlying assets of the fund. It is expected that each fund will remain invested for a period of 5 to 10 years. It is probable that the all of the investments in this type will be sold at an amount different from the NAV per share of the Plan's ownership interest in partners' capital. Therefore, the fair values of the investment in this asset class have been determined using recent observable transaction information.

⁽⁶⁾ This type includes short-term commingled investment instruments issued by the US Government, Federal agencies, sponsored agencies or sponsored corporations.

Money-Weighted Rates of Return

In accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, and GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other than Pension Plans*, KPPA provides this additional disclosure regarding its money-weighted rate of return for the period of June 30, 2021. The money-weighted rate of return is a method of calculating period-by-period returns on the Pension and Insurance Funds' investments that adjusts for the changing amounts actually invested. For the purposes of this Statement, money-weighted rate of return is calculated as the internal rate of return on investments, net of investment expenses, then adjusted for the changing amounts actually invested.

Money-Weighted Rates of Return As of June 30					
	CERS	CERS	KERS	KERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Pension Funds					
2021	25.72%	25.58%	22.53%	25.21%	21.70%
Insurance Funds					
2021	24.81%	24.99%	25.16%	24.99%	25.36%

Note E. Securities Lending Transactions

Kentucky Revised Statutes Sections 61.650 and 386.020(2) permit the Pension and Insurance Funds to lend their securities to broker-dealers and other entities. The borrowers of the securities agree to transfer to the Funds' custodial banks either cash collateral or other securities with an initial fair value of 102% or 105% of the value of the borrowed securities. The borrowers of the securities simultaneously agree to return the borrowed securities in exchange for the collateral. The types of securities lent include U.S. Treasuries, U.S. Agencies, U.S. Corporate Bonds, U.S. Equities, Global Fixed Income Securities, and Global Equities Securities.

The IPS does not address any restrictions on the amount of loans that can be made. As of June 30, 2021, KPPA had no credit risk exposure to borrowers because the collateral amounts received exceeded the amounts out on loan. The contracts with the custodial bank requires them to indemnify KPPA if the borrowers fail to return the securities the custodial bank has failed to live up to their contractual responsibilities relating to the lending of securities.

All securities loans can be terminated on demand by either party to the transaction. BNY Mellon invests cash collateral as permitted by state statute and Board policy. The agent, BNY Mellon, of the Funds cannot pledge or sell collateral securities received unless the borrower defaults. KPPA maintains a conservative approach to investing the cash collateral with BNY Mellon, emphasizing capital preservation, liquidity, and credit quality.

As of June 30, 2021, the cash collateral received for the securities on loan for the Pension and Insurance Funds was \$424.2 million and \$176.6 million, respectively. The total collateral received included both cash and non-cash totaling \$239.3 million and \$98.8 million, respectively. The fair value of the underlying securities on loan was \$638.0 million and \$264.3 million, respectively.

Note F. Risk of Loss

KPPA is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes, the Kentucky Claims Commission is vested with full power and authority to investigate, hear proof, and compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to \$250,000 for a single claim and \$400,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Kentucky Claims Commission are paid from the fund of the agency having a claim or claims before the Kentucky Claims Commission.

Claims against the KPPA Board, or any of its staff as a result of an actual or alleged breach of fiduciary duty, are self-insured effective May 26, 2019.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. All medical expenses related to a work injury or illness are paid based upon appropriate statutory and regulatory reductions, and up to 66.67% of wages for temporary disability. Each agency pays premiums based on fund reserves and payroll. Settlements did not exceed insurance coverage in any of the past three fiscal years. Thus, no secondary insurance had to be utilized. There were no claims which were appealed to the Kentucky Workers' Compensation Board.

Note G. Contingencies

In the normal course of business, KPPA is involved in litigation concerning the right of participants, or their beneficiaries, to receive benefits. KPPA does not anticipate any material losses as a result of the contingent liabilities.

Note H. Defined Benefit Pension Plan

KPPA is an agency within the Executive branch of the Commonwealth of Kentucky. All regular full-time employees in non-hazardous positions of any Kentucky State Department, Board, or Agency are directed by Executive Order (EO) to participate in KERS. These employees participate in KERS Non-Hazardous, a cost-sharing, multiple-employer defined pension fund that provides retirement, disability, and death benefits to fund members. Fund benefits are extended to beneficiaries of fund members under certain circumstances. Tier 1 Fund members contributed 5% of creditable compensation for the fiscal year ended June 30, 2021. Tier 2 and Tier 3 Fund members contributed 6% of creditable compensation for the fiscal year ended June 30, 2021.

The chart below includes the covered payroll and contribution amounts for the employees of KPPA:

Payroll and Contributions as of June 30 (\$ in Thousands)	
	2021
Covered Payroll	\$13,892
Required Employer Contributions	11,729
Employer Percentage Contributed	100%

Note I. Income Tax Status

The Internal Revenue Service (IRS) has ruled that plans administered by KPPA qualifies under Section 401(a) of the Internal Revenue Code so is, generally, not subject to tax. The plans are subject to income tax on any unrelated business income (UBI).

Note J. Equipment

Equipment as of June 30, 2021 (\$ in Thousands)	
	2021
Equipment, cost	\$2,885
Less Accumulated Depreciation	(2,885)
Equipment, net	\$0

Note K. Intangible Assets

The provisions of GASB *Statement No. 51, Accounting and Financial Reporting for Intangible Assets*, requires that intangible assets be recognized in the Combining Statement of Fiduciary Net Position only if they are considered identifiable. In accordance with the Statement, KPPA has capitalized software costs as indicated below for the Strategic Technology Advancements for the Retirement of Tomorrow (START) project.

Software Expenses as of June 30 (\$ in Thousands)	
	2021
Software, Cost	\$17,302
Less Accumulated Amortization	(16,625)
Intangible Assets, Net	\$677

Accumulated amortization rose to \$16.6 million in fiscal year 2021, an increase of \$883 thousand.

Note L. Actuarial Valuation

KPPA's actuary, Gabriel, Roeder, Smith & Co. (GRS), completed the actuarial valuation for the calculation of the employer contribution rates for the CERS, KERS, SPRS and Insurance Fund for the period ended June 30, 2021. The last experience study for the five-year period ended June 30, 2018, was completed prior to the June 2019 valuation. At that time, the actuary made changes to the actuarial assumptions used in the annual valuation. For example, one of the more significant changes was to the mortality assumption rate, which presumes improvement in life expectancy. The 2021 valuation utilized the same assumptions. The following two charts show the economic assumptions and target asset allocations for the Pension Funds and Insurance Fund.

Economic Assumptions - Pension as of June 30										
	CERS		CERS		KERS		KERS		SPRS	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Assumed Investment Return	6.25%	6.25%	6.25%	6.25%	5.25%	5.25%	6.25%	6.25%	5.25%	5.25%
Inflation Factor	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Payroll Growth	2.00%	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Economic Assumptions - Insurance as of June 30										
	CERS		CERS		KERS		KERS		SPRS	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Assumed Investment Return	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Inflation Factor	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Payroll Growth	2.00%	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Target Asset Allocation

The long-term expected rates of return were determined by using a building block method in which best estimated ranges of expected future real rates of return were developed for each asset class. The ranges were combined by weighting the expected future real rate of return by the target asset allocation percentage. The target allocation and best estimates of arithmetic real rate of return for each major asset class are summarized in the tables below.

Target Asset Allocation - Pension		
As of June 30, 2021		
Allocations Apply Only to KERS and SPRS in Pension Funds		
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Growth	54.50%	
US Equity	16.25%	2.30%
Non-US Equity	16.25%	3.55%
Private Equity	7.00%	5.35%
Specialty Credit/High Yield	15.00%	1.55%
Liquidity	25.50%	
Core Bonds	20.50%	-0.60%
Cash	5.00%	-1.05%
Diversifying Strategies	20.00%	
Real Estate	10.00%	3.75%
Opportunistic/Absolute Return	0.00%	1.61%
Real Return	10.00%	2.93%
Total	100.00%	2.05%

Target Asset Allocation - Pension and Insurance		
As of June 30, 2021		
Allocations Apply to CERS, CERS-Haz, and KERS-Haz in Pension Funds and All Plans are included in the Insurance Fund		
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Growth	68.50%	
US Equity	21.75%	2.30%
Non-US Equity	21.75%	3.55%
Private Equity	10.00%	5.35%
Specialty Credit/High Yield	15.00%	1.55%
Liquidity	11.50%	
Core Bonds	10.00%	-0.60%
Cash	1.50%	-1.05%
Diversifying Strategies	20.00%	
Real Estate	10.00%	3.75%
Opportunistic	0.00%	1.61%
Real Return	10.00%	2.93%
Total	100.00%	2.63%

Long Term Inflation Expectation is 2.30%

NOTE: Minor deviations are expected between the actuarial assumed rate of return and the expected rate of return reported in the above charts. The actuarial assumed rates of return are based on a review of economic assumptions completed periodically as warranted but not longer than every 5 years; whereas, the expected rate of return is calculated annually for GASB purposes by taking the current asset allocation and applying the most recent long term market expectations for each asset class as of June 30.

Note M. Financial Report for Pension Plans(GASB 67) and Postemployment Benefit Plans(GASB 74)

The following details actuarial information and assumptions utilized in determining the unfunded (overfunded) actuarial accrued liabilities for CERS, KERS, SPRS and Insurance Fund. Please note that calculations for TPL, net fiduciary position, NPL, total OPEB liability, net OPEB fiduciary position, and net OPEB liability are reported in the Plans' Required Supplementary Information (RSI) on pages ##-### are based on June 30, 2020, actuarial valuations, rolled forward to June 30, 2021. The prior year valuations are used as the basis for the roll forward method and are applied to complete the current year pension and OPEB valuations as of the measurement date, June 30, 2021, in accordance with GASB *Statement No.67*, paragraph 37, and GASB *Statement No. 74*, paragraph 41.

Financial Report for Pension Plan (GASB 67)

Basis of Calculations

GRS completed reports by plan in compliance with GASB *Statement No. 67 Financial Reporting for Pension Plans*. The TPL, NPL, and sensitivity information are based on an actuarial valuation date of June 30, 2020. The TPL was rolled forward from the valuation date to the Plans' fiscal year ended June 30, 2021, using generally accepted actuarial principles. Information disclosed for years prior to June 30, 2017, were prepared by KPPA's prior actuary. Separate reports will be provided at a later date with additional accounting information determined in accordance with GASB *Statement No. 68, Accounting and Financial Reporting for Pensions*.

Assumptions

There have been no changes in actuarial assumptions since June 30, 2020. Senate Bill 169 passed during the 2021 legislative session and increased the disability benefits for members who become "total and permanently disabled" in the line of duty or as a result of a duty-related disability. The total pension liability as of June 30, 2021, is determined using these updated benefit provisions. Based on the June 30, 2020, actuarial valuation report, the actuarial methods and assumptions used to calculate these contributions rates are:

- Investment Return - 6.25% for CERS Non-Hazardous, and CERS Hazardous, KERS Hazardous, 5.25% for KERS Non-Hazardous and SPRS.
- Inflation - 2.30% for all plans.
- Salary Increases - 3.30% to 10.30% for CERS Non-Hazardous, 3.55% to 19.05% for CERS Hazardous, 3.30% to 15.30% for KERS Non-Hazardous, 3.55% to 20.05% for KERS Hazardous, and 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 2% for CERS Non-Hazardous and Hazardous, 0% for KERS Non-Hazardous and Hazardous, and SPRS.
- Mortality - System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.

Plan Provisions

Senate Bill 169 Passed during the 2021 legislative session and increased the disability benefits for members who become "total and permanently disabled" in the line of duty or as a result of a duty-related disability. The total pension liability as of June 30, 2021, is determined using these updated benefit provisions.

Additionally, House Bill 8 passed during the 2021 legislative session and changed how employer contributions are allocated and collected from the participating employers in the KERS Non-Hazardous Fund. This change does not impact the calculation of the total pension liability and only impacts the allocation of required contributions amongst the participating employers.

Further, House Bill 1 passed during the 2019 special legislative session and allowed certain agencies in the KERS Non-Hazardous Fund to elect to cease participating in KERS as of June 30, 2020, under different provisions than were previously established. Senate Bill 249 passed during the 2020 legislative session and delayed the effective date of cessation for these provisions to June 30, 2021. Only one employer elected to cease participation under these provisions and freeze accruals for their current employees. As such, there is no material impact on the total pension liability due to this legislation.

There were no other material plan provision changes and it is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

Discount Rate

The single discount rates for CERS, KERS and SPRS of 6.25%, 5.33%, and 5.25% respectively, were used to measure the TPL as of June 30, 2020. In accordance with paragraph 40 of GASB Statement No. 67, a single discount rate was used for the reporting and disclosure of the CERS and KERS pension plans. Note, this is the equivalent discount rate that produces the same total pension liability as the discount rates used by each individual fund to measure the total pension liability for the fiscal year ending June 30, 2021 (6.25% for CERS Non-Hazardous, and CERS Hazardous, 5.25% for KERS Non-Hazardous and 6.25% for KERS Hazardous funds).

These single discount rates were based on the expected rate of return on pension investments for each plan. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the Pension Plans' fiduciary net position and future contributions were projected to be sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rates of return on Pension Plans' investments were applied to all periods of projected benefit payments to determine the TPL for each plan.

The projections of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that each participating employer in CERS, KERS and SPRS contributes the actuarially determined employer contribution each future year calculated in accordance with the current funding policy, as most recently revised by House Bill 8, passed during the 2021 Legislative Session. The assumed future employer contributions for CERS reflect the provisions of House Bill 362 (passed during the 2018 legislative session) which limit the increases to the employer contribution rates to 12% over the prior fiscal year through June 30, 2028.

Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with GASB *Statement No. 74*, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an Other Post Employment Benefit (OPEB) asset. As a result, the reported pension fiduciary net positions as of June 30, 2017, and later are net of the 401(h) asset balance.

Additional Disclosures

The reports are based upon information furnished to GRS by KPPA, which includes benefit provisions, membership information, and financial data. GRS did not audit this data and information, but did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2020", for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for KPPA's fiscal year ending June 30, 2021.

Financial Reporting for Postemployment Benefit Plans (GASB 74)

GRS completed reports by plan in compliance with GASB *Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans* for the fiscal year ended June 30, 2021. Separate reports will be provided at a later date with additional accounting information determined in accordance with GASB *Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Basis of Calculations

The total OPEB liability, net OPEB liability (NOL), and sensitivity information are based on an actuarial valuation date of June 30, 2020. The total OPEB liability was rolled forward from the valuation date to the plan's fiscal year ended June 30, 2021, using generally accepted actuarial principles.

Assumptions

The Insurance Plan single discount rate of 5.18% was used to measure the total OPEB liability as of June 30, 2020. The discount rates used to calculate the total OPEB liability decreased (0.14%-0.27%) for all Funds. The assumed increase in future healthcare costs, or trend assumption, was reviewed during the June 30, 2020, valuation process and was updated to better reflect the plan's anticipated long-term healthcare cost increases. In general, the updated assumption is assuming higher future increases in healthcare costs. There were no other material assumption

changes and it is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB *Statement No. 74*.

The actuarially determined contribution rates effective for fiscal year ended 2021 that are documented in the schedules were calculated as of June 30, 2019. Based on the June 30, 2019, actuarial valuation reports (as amended by SB249, passed during the 2020 legislative session), the actuarial methods and assumptions used to calculate the required contributions are:

- Investment Return - 6.25%.
- Inflation - 2.30%.
- Salary Increases - 3.30% to 10.30% for CERS Non-Hazardous, 3.55% to 19.05% for CERS Hazardous, 3.30% to 15.30% for KERS Non-Hazardous, 3.55% to 20.05% for KERS Hazardous, 3.55% to 16.05% for SPRS, varies by service.
- Payroll Growth - 2.00% for CERS Non-Hazardous and CERS Hazardous, 0.00% for KERS Non-Hazardous, KERS Hazardous, and SPRS.
- Mortality - System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.
- Health Care Trend Rates:
 - Pre-65 - Initial trend starting at 6.25% on January 1, 2021, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2020 premiums were known at the time of the valuation and were incorporated into the liability measurement.
 - Post-65 - Initial trend starting at 5.50% on January 1, 2021, and gradually decreasing to an ultimate trend rate of 4.05% over a period of 14 years. The 2020 premiums were known at the time of the valuation and were incorporated into the liability measurement.
- Phase-In provision - Board certified rate for CERS is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.

Plan Provisions

Senate Bill 169 passed during the 2021 legislative session and increased the disability benefits for members who become "total and permanently disabled" in the line of duty or as a result of a duty-related disability. The total OPEB liability as of June 30, 2021, is determined using these updated benefit provisions. There were no other material plan provision changes and it is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements of GASB *Statement No 74*.

Additionally, House Bill 8 passed during the 2021 legislative session and changed how employer contributions are allocated and collected from the participating employers in the KERS Non-Hazardous Fund. This change does not impact the calculation of the total OPEB liability and only impacts the allocation of required contributions amongst the participating employers.

Further, House Bill 1 passed during the 2019 special legislative session and allowed certain agencies in the KERS Non-Hazardous Fund to elect to cease participating in KERS as of June 30, 2020, under different provisions than were previously established. Senate Bill 249 passed during the 2020 legislative session and delayed the effective date of cessation for these provisions to June 30, 2021. Only one employer elected to cease participation under these provisions and freeze benefit accruals for their current employees. As such, there is no material impact on the total OPEB liability due to this legislation. There were no other material plan provision changes and it is GRS' opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 74

Implicit Employer Subsidy for non-Medicare retirees

The fully-insured premiums KPPA pays for the Kentucky Employees' Health Plan are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit employer subsidy for the non-Medicare eligible retirees. GASB *Statement No. 74* required that the liability associated with this implicit subsidy be included in the calculation of the Total OPEB Liability.

Discount Rates

The Insurance Plan single discount rate of 5.18% was used to measure the total OPEB liability as of June 30, 2020. This rate is derived from the discount rate of each fund as listed below:

CERS Non-Hazardous	5.20%
CERS Hazardous	5.05%
KERS Non-Hazardous	5.26%
KERS Hazardous	5.01%
SPRS	5.20%

The single discount rates are based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 1.92%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 28, 2021. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the plan's fiduciary net position and future contributions were projected to be sufficient to finance the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on insurance plan investments was applied to all periods of the projected benefit payments paid from the retirement plan. However, the cost associated with the implicit subsidy is not currently being included in the calculation of the actuarial determined contributions, and it is understood that any cost associated with the implicit subsidy will not be paid out of the Plan's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that each participating employer contributes the actuarially determined employer contribution each future year calculated in accordance with the current funding policy, as most recently reviewed by House Bill 8, passed during the 2021 legislative session. The assumed future employer contributions for CERS reflect the provisions of House Bill 362 (passed during the 2018 legislative session) which limit the increases to the employer contribution rates to 12% over the prior fiscal year through June 30, 2028.

Additional health care contributions (IRC 401(h) Subaccount)

Based on guidance issued by GASB in connection with the GASB *Statement No. 74*, the 1% member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net position includes these 401(h) assets. Additionally, these member contributions and associated investment income and administrative expenses are included in the reconciliation of the fiduciary net position.

Additional Disclosures¹

The reports are based upon information furnished to GRS by the KPPA, which includes benefit provisions, membership information, and financial data. GRS did not audit this data and information, but GRS did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by the KPPA. Please see the "Actuarial Valuation Report as of June 30, 2020", for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for KPPA's fiscal year ending June 30, 2021.

¹ Note: Data and information regarding GASB 67 and GASB 74 reporting was provided by GRS Retirement Consulting.

Sensitivity of the NPL to Changes in the Discount Rate Fiscal Year 2021
As of June 30, 2021 (\$ in Thousands)

	CERS	KERS	SPRS
	Current 6.25%	Current 5.33%	Current 5.25%
1% Decrease	\$11,570,537	\$15,950,744	\$836,592
Current Discount Rate	9,037,944	13,762,624	699,478
1% Increase	\$6,951,407	\$11,965,291	\$587,977

Sensitivity of the NPL to Changes in the Discount Rate Fiscal Year 2021
As of June 30, 2021 (\$ in Thousands)

	CERS	CERS	CERS	KERS	KERS	KERS	SPRS
	Non-Hazardous			Non-Hazardous			
	Current 6.25%	Current 6.25%	Current 6.25%	Current 5.25%	Current 6.25%	Current 5.33%	
1% Decrease	\$8,177,246	\$3,393,291	\$11,570,537	\$15,340,588	\$610,156	\$15,950,744	\$836,592
Current Discount Rate	6,375,785	2,662,159	9,037,944	13,316,997	445,627	13,762,624	699,478
1% Increase	\$4,885,117	\$2,066,290	\$6,951,407	\$11,653,150	\$312,141	\$11,965,291	\$587,977

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate
As of June 30, 2021 (\$ in Thousands)

	CERS	CERS	KERS	KERS	SPRS	Insurance
	Non-Hazardous		Non-Hazardous			
	Single 5.20%	Single 5.05%	Single 5.26%	Single 5.01%		
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate						
1% Decrease	\$2,628,525	\$1,172,258	\$2,783,547	\$82,367	\$170,127	\$6,836,824
Single Discount Rate	1,914,450	808,559	2,279,327	(11,525)	117,581	\$5,108,392
1% Increase	\$1,328,433	\$516,349	\$1,865,935	\$(86,891)	\$75,212	\$3,699,038
Sensitivity of the Net OPEB Liability to Changes in the Current Healthcare Cost Trend Rate						
1% Decrease	\$1,378,176	\$529,812	\$1,882,957	\$(79,113)	\$75,680	\$3,787,512
Current Healthcare Cost Trend Rate	1,914,450	808,559	2,279,327	(11,525)	117,581	\$5,108,392
1% Increase	\$2,561,740	\$1,149,958	\$2,756,702	\$71,015	\$168,646	\$6,708,061

Schedule of Employers' NPL			
As of June 30, 2021 (\$ in Thousands)	CERS	KERS	SPRS
Total Pension Liability (TPL)	\$20,518,004	\$17,647,424	\$1,055,824
Plan Fiduciary Net Position ⁽¹⁾	\$11,480,060	\$3,884,800	\$356,346
Net Pension Liability	\$9,037,944	\$13,762,624	\$699,478
Ratio of Plan Fiduciary Net Position to TPL	55.95%	22.01%	33.75%
Covered Payroll	\$3,019,096	\$1,614,062	\$47,873
Net Pension Liability as a Percentage of Covered Employee Payroll	299.36%	852.67%	1461.11%
⁽¹⁾ Plan Fiduciary Net Position does not include 401(h) assets.			

Schedule of Employers' NPL - CERS Non-Hazardous**As of June 30, 2021 (\$ in Thousands)**

Total Pension Liability (TPL)	\$14,941,437
Plan Fiduciary Net Position	8,565,652
Net Pension Liability	\$6,375,785
Ratio of Plan Fiduciary Net Position to TPL	57.33%
Covered Payroll ⁽¹⁾	\$2,446,612
Net Pension Liability as a Percentage of Covered Employee Payroll	260.60%

Schedule of Employers' NPL - CERS Hazardous**As of June 30, 2021 (\$ in Thousands)**

Total Pension Liability (TPL)	\$5,576,567
Plan Fiduciary Net Position	2,914,408
Net Pension Liability	\$2,662,159
Ratio of Plan Fiduciary Net Position to TPL	52.26%
Covered Employee Payroll ⁽¹⁾	\$572,484
Net Pension Liability as a Percentage of Covered Employee Payroll	465.02%

Schedule of Employers' NPL - KERS Non-Hazardous**As of June 30, 2021 (\$ in Thousands)**

Total Pension Liability (TPL)	\$16,335,657
Plan Fiduciary Net Position	3,018,660
Net Pension Liability	\$13,316,997
Ratio of Plan Fiduciary Net Position to TPL	18.48%
Covered Payroll ⁽¹⁾	\$1,441,337
Net Pension Liability as a Percentage of Covered Employee Payroll	923.93%

Schedule of Employers' NPL - KERS Hazardous**As of June 30, 2021 (\$ in Thousands)**

Total Pension Liability (TPL)	\$1,311,767
Plan Fiduciary Net Position	866,140
Net Pension Liability	\$445,627
Ratio of Plan Fiduciary Net Position to TPL	66.03%
Covered Payroll ⁽¹⁾	\$172,725
Net Pension Liability as a Percentage of Covered Employee Payroll	258.00%

Schedule of Employer's NPL - SPRS**As of June 30, 2021 (\$ in Thousands)**

Total Pension Liability (TPL)	\$1,055,824
Plan Fiduciary Net Position	356,346
Net Pension Liability	\$699,478
Ratio of Plan Fiduciary Net Position to TPL	33.75%
Covered Payroll ⁽¹⁾	\$47,873
Net Pension Liability as a Percentage of Covered Employee Payroll	1,461.11%

1 Based on derived compensation using the provided employer contribution information.

Development of Single Discount Rate for OPEB As of June 30, 2021						
	CERS	CERS	KERS	KERS	SPRS	Insurance
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		
2021						
Single Discount Rate	5.20%	5.05%	5.26%	5.01%	5.20%	5.18%
Long-Term Expected Rate of Return	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Long-Term Municipal Bond Rate	1.92%	1.92%	1.92%	1.92%	1.92%	1.92%
<p>Note: 1. In accordance with paragraph 48 of GASB Statement No. 74, a single discount rate was used for the reporting and disclosure of the insurance plan. Note, this is the equivalent discount rate that produces the same total OPEB liability as the discount rates used by each individual fund to measure the total OPEB liability for the fiscal year ending June 30, 2021. The single discount rates for each fund are blended rates based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 1.92%</p> <p>2. Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2021.</p>						

Schedule of the Employers' Net OPEB Liability - Insurance
As of June 30, 2021 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$12,283,489	\$7,175,097	\$5,108,392	58.41%	\$4,905,905	104.13%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, derived compensation for KERS Hazardous fund based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021.

Schedule of the Employers' Net OPEB Liability - CERS Non-Hazardous
As of June 30, 2021 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$5,161,251	\$3,246,801	\$1,914,450	62.91%	\$2,619,965	73.08%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

Schedule of the Employers' Net OPEB Liability - CERS Hazardous
As of June 30, 2021 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$2,436,383	\$1,627,824	\$808,559	66.81%	\$613,985	131.69%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

Schedule of the Employers' Net OPEB Liability - KERS Non-Hazardous**As of June 30, 2021 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll (1)	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$3,698,804	\$1,419,477	\$2,279,327	38.38%	\$1,452,345	156.94%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.**Schedule of the Employers' Net OPEB Liability - KERS Hazardous****As of June 30, 2021 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll (1)	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$622,152	\$633,677	\$(11,525)	101.85%	\$172,725	(6.67)%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021.**Schedule of the Employer's Net OPEB Liability-SPRS Plan****As of June 30, 2021 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll (1)	Net OPEB Liability as a Percentage of Covered Employee Payroll
2021	\$364,899	\$247,318	\$117,581	67.78%	\$47,155	249.35%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

Note N. Pension Legislation

2021 Regular Session

The 2021 Regular Session of the Kentucky General Assembly adjourned on Tuesday, March 30, 2021. The following is a list of the most significant bills and resolutions passed this Session that will have an impact on the systems operated by KPPA.

1. Passage of House Bill 8 to Help Ensure Agencies Pay Their Fair Share of Unfunded Liability

House Bill 8 (Rep. J. DuPlessis) changes the current method for calculating employer contributions from a percent of payroll model to a fixed allocation funding method. **This is only a change for KERS nonhazardous employers.** Beginning July 1, 2021, employers will pay the normal cost for all employees plus their actuarially-calculated portion of the unfunded liability.

2. CERS Separation Clean-Up Bill

House Bill 9 (Rep. R. Webber) is the CERS separation (House Bill 484 - 2020 Regular Session) cleanup bill. Key elements of this bill include the creation of separate statutes for the CERS as provided by intent language included in HB 484 during the 2020 Regular Session. The bill also amends current statutes to allow KRS and CERS to use the existing registration of assets in order to avoid additional expenses. There were no changes to benefits as a result of this bill.

3. KPPA Housekeeping Bill

House Bill 87 (Rep. J. Decker), the KPPA Housekeeping bill, makes notable changes to current benefits procedures to improve efficiencies and provides eligible members with the flexibility to choose options best suited to their personal situation. For example:

A. Beneficiary Changes after Retirement: House Bill 87 makes changes that will allow retired members to change their beneficiary after retirement under certain conditions:

- Non-Survivorship Payment Options: Retired members who selected a non-survivorship payment option (Basic, Annuity, Social Security Adjustment without Survivor Rights, or a life with period certain option (10, 15 or 20 years)) may change their beneficiary designation at any time.
- Marriage or Remarriage: Within 120 days of the date of marriage or remarriage, a retired member may name his/her new spouse as beneficiary and elect a new survivorship payment option. The survivorship payment option will be recalculated and must be actuarially equivalent to the retirement allowance at the original retirement date. This bill also establishes a window for retired members who married or remarried prior to June 29, 2021, to do the same if the beneficiary change and new survivorship payment option election is filed with KPPA on or before January 1, 2022. Members must provide a marriage certificate and date of birth verification to name their spouse as beneficiary and elect a survivorship payment option.

B. Pension Spiking: When a member retires, KPPA evaluates creditable compensation growth to determine if pension spiking (a 10% increase during the last five years of employment) has occurred. House Bill 87 amends the current statute to provide that the 10% cap on creditable compensation growth will not apply when it results in a benefit change of less than \$25 per month. If there is a benefit change of \$25 or more per month due to pension spiking, the member's creditable compensation will be reduced by the appropriate amount to meet the new \$25 monthly threshold. This change, effective for retirement dates of July 1, 2021, and after, will save money for KPPA through reduced administrative and legal costs associated with pursuing these cases.

C. Nonhazardous Opt-Out: A member employed in a regular full-time hazardous position, who is simultaneously employed in a part-time nonhazardous position with a different employer, now has the option to decline participation under the part-time nonhazardous position within 30 days of initial employment in the nonhazardous position. Once a member declines participation, they are never permitted to participate as long as they are employed with that employer, even if they change from part-time to full-time at a later date.

This change is prospective and only applies to initial employment in a nonhazardous part-time position on or after June 29, 2021. Members who are dually employed currently cannot terminate and be rehired in order to decline participation under their nonhazardous position. In addition, if a member was previously employed in a participating position and reemploys with that same employer after June 29, 2021, the member will not be eligible to reject participation under the part-time nonhazardous position.

4. State Executive Branch Budget Bill, House Bill 192

Due to the COVID-19 crisis, the legislature only passed a one-year budget during the 2020 Regular Session rather than the customary two-year budget. Therefore, the General Assembly passed **House Bill 192** (Rep. Petrie) during the 2021 Session that will cover fiscal year 2021-2022.

A few important retirement-related items included in the budget bill were Employer Contribution rates, subsidies for Quasi-governmental agencies to cover anticipated increases in retirement costs for fiscal year 2021-22, and money from the state to assist with covering employer contribution rates for County Attorneys and most universities. The bill contained no raises for State employees, and no Cost of Living Adjustments (COLAs) for retirees. The bill does contain language establishing a process and procedures for State employee layoffs, furloughs, and reduced hours in the event that the Commonwealth or any agency determines it necessary.

5. Changes to Total and Permanent Disability Benefits

Senate Bill 169 (Sen. C. McDaniel) increases the disability benefits for members who become “totally and permanently disabled” as a result of an act in the line of duty (hazardous) or a duty-related injury (nonhazardous) to be equal to 75% of the member’s monthly average pay plus 10% of the member’s monthly average pay for each dependent child. The combined benefit payable to both the member and dependent children while the member is alive is not to exceed 100% of the member’s monthly average pay. Health insurance coverage will be available at 100% of the contribution rate for the member, the member’s spouse, and the member’s dependent children. The bill also provides for prospective adjustments in benefits for those eligible retirees who were already determined to be totally and permanently disabled in the line of duty or due to a duty-related injury.

Members experiencing a total and permanent disability due to a duty related injury in a nonhazardous participating position must meet additional requirements to be considered for these benefits.

6. Additional Requirements for the Actuarial Analysis Performed on Retirement-Related Legislation

House Bill 69 (Rep. J. Miller) establishes additional standards and requirements for information a bill’s actuarial analysis must contain, including lengthening the time period to 30 years from 20 years for certain projections/analysis.

An **actuarial analysis** is intended to show the anticipated economic impact of a bill on the retirement system funding status. Kentucky Revised Statute 6.350 requires an actuarial analysis to be performed on any bill that may increase or decrease benefits, the participation in benefits, or change the actuarial liability of any state-administered retirement system.

7. House Bill 261 Provides Legal Protections Against False Pension Benefit Claims

House Bill 261 (Rep. J. Miller) provides a new level of legal protection for KPPA against anyone who knowingly submits false or fraudulent claims to KPPA in order to obtain benefits.

8. State Senate Confirms Gubernatorial Appointments to CERS and KRS Boards

State law requires that gubernatorial appointments to the CERS and KRS Boards receive Senate approval. On March 30, four Senate Resolutions confirming Governor Andy Beshear’s recent appointments to the boards were unanimously adopted by a vote of 38-0:

1. **Senate Resolution 205** (Sponsor D. Givens) confirmed the appointment of **George Carlisle Cheatham II** to the CERS Board of Trustees for a term ending March 31, 2025;
2. **Senate Resolution 206** (Sponsor J. Adams) confirmed the appointment of **William Thomas O’Mara** to the CERS Board of Trustees for a term ending March 31, 2025;
3. **Senate Resolution 207** (Sponsor J. Adams) confirmed the appointment of **James Michael Foster** to the KRS Board of Trustees for a term ending July 1, 2021;
4. **Senate Resolution 209** (Sponsor J. Adams) confirmed the appointment of **Dr. Merl Hackbart** to the CERS Board of Trustees for a term ending March 31, 2025.

The Resolutions only required Senate confirmation and did not need to be adopted in the House.

Note O. Litigation

City of Fort Wright

In June 2014, the City of Fort Wright and several other participating employers in CERS filed a lawsuit against KRS (although KRS' name changed to KPPA, the cases will remain in KRS' name and not change), alleging that the Board invested CERS funds in investments that were prohibited by both statutory and common law. In addition, the plaintiffs alleged that the Board paid substantial asset management fees, which the suit alleges were improper. On September 20, 2018, Franklin Circuit Court issued an Opinion and Order denying the City of Fort Wright's Motion for Declaratory Judgment and granting KRS' Cross-Motion for Declaratory Judgment. The Court stated in relevant part, "There is nothing in the record or in the City's pleadings to this Court that persuades this Court that the Board did not follow the law or did not appropriately apply the facts to the law." The City of Fort Wright filed an appeal with the Kentucky Court of Appeals. In a January 10, 2020, Opinion, the Court of Appeals affirmed the decision of Franklin Circuit Court. The City of Fort Wright filed a Motion for Discretionary Review with the Supreme Court of Kentucky. On September 16, 2020, the Supreme Court of Kentucky granted this Motion. On September 28, 2020, KRS filed a Cross Motion for Discretionary Review. The Supreme Court also granted this Motion. Argument in front of the KY Supreme Court was held on August 19, 2021. The KY Supreme Court affirmed the Court of Appeals in an Opinion dated October 28, 2021.

On September 2, 2015, a CERS member filed a complaint that is substantially similar in terms of allegations and ambiguous requests for relief to that of the City of Fort Wright. The exact nature and scope of the relief sought is unclear; therefore, no provision has been made in the combining financial statements. The member's complaint is currently being held in abeyance pending the outcome of the City of Fort Wright's appeal. No new action has been taken in this matter to date.

Seven Counties

Seven Counties Services, Inc. (Seven Counties) filed for Chapter 11 bankruptcy in the United States Bankruptcy Court for the Western District of Kentucky (the Bankruptcy Court) in April 2013. Seven Counties provides mental health services for the Cabinet for Health and Family Services for the greater Louisville, Kentucky area and surrounding counties. Seven Counties participated in KERS for approximately twenty-five years. Seven Counties identified KERS as a creditor with a primary objective of discharging its continuing obligation to remit retirement contributions for approximately 1,300 employees and to terminate its participation in KERS. If Seven Counties is successful in discharging its obligations to KERS, the estimated member pension and insurance actuarial accrued liability is in the range of \$145 to \$150 million.

KERS opposed Seven Counties' attempt to discharge its obligations and terminate its participation. KERS asserted that Seven Counties is a Governmental Unit properly participating in KERS by Executive Order issued in 1978 and thus ineligible for Chapter 11 relief. Consequently, Seven Counties would remain statutorily obligated to continue participation and remit contributions. On May 30, 2014, the Bankruptcy Court held that Seven Counties was not a Governmental Unit and could move forward with its Chapter 11 bankruptcy case. The Bankruptcy Court further held that Seven Counties' statutory obligation to participate in and remit contributions to KERS was a "contract" eligible for rejection. KRS appealed this decision.

On August 24, 2018, the U.S. Court of Appeals for the Sixth Circuit (the Sixth Circuit) issued a two to one Opinion affirming the decision that Seven Counties is eligible to file for bankruptcy under Chapter 11. However, the Sixth Circuit went on to state, "lacking state court precedent estion to the Kentucky Supreme Court." KERS filed a petition to have the Opinion Reheard En Banc by the entire Sixth Circuit. On October 5, 2018, the Sixth Circuit issued an order holding the petition in abeyance pending a response from the Kentucky Supreme Court on the certified question of law. On November 1, 2018, the Supreme Court of Kentucky issued an Order granting certification of the question. The certified question of law was briefed by the parties and oral arguments were held before the Supreme Court of Kentucky on March 6, 2019. On August 29, 2019, the Supreme Court of Kentucky ruled that Seven Counties' participation in and its contributions to KERS are based on a statutory obligation. The Supreme Court of Kentucky's ruling was forwarded to the Sixth Circuit for further consideration.

On July 20, 2020, the Sixth Circuit Court of Appeals issued an Opinion stating that they affirmed their previous determination that Seven Counties was eligible to file a Chapter 11 bankruptcy case. The Sixth Circuit also reversed the conclusion that Seven Counties can reject its obligation to participate as an executory contract and that Seven Counties need not maintain its statutory contribution obligation during the pendency of the bankruptcy. The Sixth Circuit dismissed Seven Counties' cross appeal and remanded the case for further proceedings consistent with the opinion. KERS again filed a petition to have the Opinion regarding Seven Counties' ability to file a Chapter 11

bankruptcy Reheard En Banc by the entire Sixth Circuit. This petition was denied in an Order dated September 11, 2020. The case was remanded back to the Bankruptcy Court. The case is currently being litigated.

Mayberry

In December 2017, members and beneficiaries of KERS filed a derivative action suit in Franklin Circuit Court naming KRS as a nominal defendant. The suit alleges that investment managers actively pursued KRS while it was under the control of Trustees who were acting adversely to its interests, and that the investment managers recommended risky investments in alternative investment strategies which resulted in billions of dollars in losses to KRS. The Amended Complaint alleges numerous claims against KRS Trustees and Officers, hedge fund sellers, actuarial, fiduciary, and investment advisors, and an annual report certifier. Plaintiffs alleged that the defendants breached statutory, fiduciary, and other duties and engaged in civil conspiracy. The Complaint further alleged claims against Officers and hedge fund sellers, actuarial, fiduciary, and investment advisors, and an annual report certifier for aiding and abetting breaches of statutory, fiduciary, and other duties. Plaintiffs sought compensatory and punitive damages, as well as equitable relief. More specifically, plaintiffs sought compensatory damages against defendants for the violations of statutory, fiduciary, and other duties; while also seeking punitive damages against hedge fund sellers, investment, actuarial, and fiduciary advisors and each of their principals/officers named as defendants. Further, plaintiffs requested several forms of equitable relief, which included directing a complete accounting of fees associated with fund of hedge funds and other absolute return strategies.

On April 19, 2018, KRS and plaintiffs filed a Joint Notice to the Court and Parties notifying the parties that (1) KRS will not pursue the claims asserted by plaintiffs; and (2) KRS would not have been in a position to pursue those claims had they been brought prior to the filing of the Complaint. Since then, the Franklin Circuit Court has ruled on various defendants' motions to dismiss, denying nearly all of them. On January 10, 2019, Kohlberg, Kravis, Roberts (KKR), Henry Kravis and George Roberts (collectively, "KKR Parties") amended their Answer to assert cross-claims against KRS. Certain Officer and Trustee defendants appealed the denial of their Motion to Dismiss on immunity grounds to the Court of Appeals and that appeal was transferred to the Supreme Court of Kentucky. The hedge fund defendants filed a Petition for Writ of Prohibition in the Court of Appeals arguing that the Circuit Judge acted outside his jurisdiction. The Writ was issued on April 23, 2019, and the judgment granting standing was vacated. Plaintiffs promptly appealed the Court of Appeals' decision to the Supreme Court of Kentucky. On July 9, 2020, the Supreme Court of Kentucky issued an Opinion stating that the plaintiffs, as beneficiaries of a defined-benefit plan who have received all of their vested benefits so far and are legally entitled to receive their benefits for the rest of their lives, do not have a concrete stake in this case and therefore lack standing to bring this claim. The case was remanded to the circuit court with directions to dismiss the complaint. Thereafter, plaintiffs filed a motion seeking to amend their complaint to add parties and claims that would purportedly correct the standing defect identified by the Supreme Court of Kentucky. Furthermore, the Attorney General of the Commonwealth sought leave to intervene in this action through a motion filed July 20, 2020, and an Intervening Complaint on July 22, 2020. On February 1, 2021 a new group of Tier 3 KRS members sought to intervene on a derivative basis, and filed a 3rd Amended Complaint in the Mayberry matter. The Attorney General filed an Amended Complaint on May 24, 2021. On June 14, 2021, the Franklin Circuit Court denied the Tier 3 Motion to Intervene as well as denied their 3rd Amended Complaint. The Tier 3 plaintiffs also filed an independent lawsuit with similar allegations to those they seek to pursue in *Mayberry*. That independent action is still in the initial stages and is pending with Franklin Circuit Court.

On August 2, 2021, Blackstone Alternative Asset Management, L.P. (BAAM) filed an action against the Kentucky Public Pensions Authority, the Board of Trustees of the Kentucky Retirement Systems, the Board of Trustees of the County Employees Retirement System, the Kentucky Retirement Systems Insurance Fund, and the Kentucky Retirement Systems Pension Fund (collectively "Defendants") for breach of contract. The Defendants' answers were due on September 8, 2021. In lieu of filing Answers, both KRS and CERS filed motions to dismiss. The motions were heard on November 4, 2021. The Court has not ruled on the motions at this time.

A number of related cases have also developed based on issues raised in the above referenced Mayberry action. There has been an action filed by certain Mayberry Trustees and Officers seeking reimbursement by KRS of legal fees. KRS has also filed an action against Hallmark Specialty Insurance seeking a declaratory judgment that Hallmark has a duty to defend and indemnify KRS in the Mayberry action. Two of the hedge fund defendants in the Mayberry action have also filed an action in the United States District Court for the Eastern District of Kentucky naming individual members of the current KRS Board as defendants. This action is seeking a judgment declaring that the Trustees violated plaintiffs' right to due process as well as an award of costs and attorneys' fees. Three actions have been filed in Delaware Chancery Court regarding the Mayberry action. One filed by Prisma Capital Partners and one filed by Blackstone Alternative Asset Management allege breaches of warranties, representations and more relating to the Subscription Agreements signed by KRS. The Blackstone action was voluntarily dismissed without prejudice on July 8, 2019. The third was filed by Prisma Capital Partners against the Daniel Boone Fund, LLC. Finally, an action was filed by PAAMCO against KRS in California alleging breach of warranties, representations and more relating to the Subscription Agreements. Litigation of those cases is currently ongoing.

Western Kentucky University

On November 17, 2016, Western Kentucky University (WKU), a participating employer, filed a petition for declaration of rights in the Franklin Circuit Court in Frankfort, KY. The petition involved a dispute as to whether WKU can terminate a group of its employees, which participated in KERS, and reutilize those same employees through a privatization process, in order to excuse WKU from its obligations to pay contributions to the KERS Fund. On March 10, 2020, Franklin Circuit Court issued an Opinion and Order declaring that:

1. As of August 1, 2016, former WKU employees are Sodexo employees, not WKU employees;
2. As of August 1, 2016, WKU is no longer required to provide employer or employee contributions to KERS on behalf of the former employees;
3. WKU and its former employees are not responsible for any penalties or interest since August 1, 2016, insofar as they are related to contributions to KERS on behalf of the former employees at issue; and,
4. The former WKU employees had a break in service from WKU as of July 31, 2016, and may have full access to their retirement benefits being held by KERS and administered by KRS for all benefits earned prior to August 1, 2016.

KRS filed an appeal of this Opinion and Order with the Court of Appeals on June 17, 2020. On August 20, 2021, the Court of Appeals issued its Order Affirming the Opinion and Order of the Franklin Circuit Court. Due to the far reaching impacts of this decision, KRS is filing a Petition for Discretionary Review with the Kentucky Supreme Court.

Bayhills

Kentucky Retirement Systems sued Bayhills for breach of contract seeking to terminate Bayhills as investment managers. Kentucky Retirement Systems filed the suit in Franklin Circuit Court, but Bayhills removed it to federal district court. Kentucky Retirement Systems successfully had the case remanded back to state court. The case is now pending before Franklin Circuit Court. The Court entered an injunction preventing Bayhills from paying themselves management and other fees during the litigation. Bayhills has appealed this ruling to the Court of Appeals.

River City Fraternal Order of Police Lodge 614

River City FOP and four retired/reemployed police officers sued KRS in Franklin Circuit Court claiming that KRS wrongfully terminated their health insurance. Though the case originated in state court, it was removed to federal district court. The plaintiffs were awarded summary judgment on the merits of their inviolable contract claims. The court also awarded the plaintiffs money damages. KRS appealed to the Sixth Circuit Court of Appeals who affirmed in part and reversed in part the district court's decision. The matter has been remanded to the district court for a determination of damages. The parties are currently negotiating the damages.

Note P. Reciprocity Agreement

KPPA has a reciprocity agreement with Kentucky Teachers' Retirement System (TRS) for the payment of insurance benefits for those members who have creditable service in both systems.

Note Q. Reimbursement of Retired Re-Employed Health Insurance, Active Member Health Insurance Contributions, and Retired Re-Employed Employer Contributions

Reimbursement of Retired Re-Employed Health Insurance

If a retiree is re-employed in a regular full-time position and has chosen health insurance coverage through KPPA, the employer is required to reimburse KPPA for the health insurance premium paid on the retiree’s behalf, not to exceed the cost of the single premium rate. Exceptions for retired members who re-employ as a police officer, sheriff or school resource officer exist which may exempt employers from paying employer contributions and health insurance reimbursements if certain requirements are met. For the fiscal year ended June 30, 2021, the reimbursement totaled \$12.5 million.

Active Member Health Insurance Contributions

For new plan participants after August 31, 2008, an active member contribution of 1% in addition to the member pension contribution is required. This 1% is applicable to all Non-Hazardous and Hazardous funds, and reported in the Insurance Fund. For the fiscal year ended June 30, 2021, members paid into the Insurance Fund \$24.4 million.

Retired Re-Employed Employer Contributions

Employers are required to report employer contributions on retired members who are employed in a regular full-time position. These members are referred to as retired re-employed members. These are reported within the employer contributions on the financial statements. Please see the chart below for the breakdown.

Retired Re-employed Employer Contributions As of June 30 (\$ in Thousands)	CERS	CERS	CERS	KERS	KERS	SPRS	KRS	KPPA Total
	Non-Hazardous	Hazardous	Total	Non-Hazardous	Hazardous		Total	
FY 2021	\$12,693	\$5,085	\$17,778	\$36,087	\$2,662	\$-	\$38,749	\$56,527

Note S. Reduction of Receivables

Employers reported June 2020 wages earned in the following month of July 2020 (next fiscal year) and the new Annual Required Contribution (ARC) rate was applied. The Commonwealth’s approved budget guidelines paid contributions at the fiscal year 2020 ARC rate in effect when the wages were earned. KPPA will not receive payments at the new ARC rate for that period; therefore, contribution receivables have been reduced as of June 30, 2021 as noted in the chart.

Reduction of Receivables As of June 30 (\$ in Thousands)	
	2021
KERS Non-Hazardous	\$476
KERS Hazardous	(62)
SPRS	(54)
TOTAL	\$360

Note T. Prisma Daniel Boone Fund

The funds invested with Prisma Daniel Boone Fund continue to be held in a contingency reserve to cover potential obligations arising from the Mayberry Action (see Note O for details of Mayberry Case). The total reported in reserve as of June 30, 2021, is \$97.3 million for the Pension Funds and \$40.4 million for the Insurance Fund. This is based on the May 31, 2021, report because Absolute Return managers are reported on a one month lag.

Note U. Subsequent Events

Management has evaluated the period June 30, 2021, to December 15, 2021, (the date the combining financial statements were available to be issued) for items requiring recognition or disclosure in the combining financial statements.

Note U. Coronavirus

Before the onset of the coronavirus, or COVID-19, in Kentucky in March 2020, KPPA staff were assessing the risks and potential action necessary to address these risks. On March 6, 2020, the Governor of Kentucky declared a state of emergency with the first confirmed case of COVID-19. KPPA staff acted quickly with these goals in mind:

- To preserve the health and safety of staff, members and other stakeholders;
- To protect the assets of every plan;
- To maintain vigilance in cyber security; and,
- To ensure all required services were available to our members.

Although the state of emergency expired, with the increase in the Delta variant of COVID-19 in the Spring and Summer of 2021, the state of emergency was reinstated until January 15, 2022, KPPA staff have continued to assess the risk and potential action necessary to address these risks.

With change as significant as has been experienced since the beginning of the state of emergency, to the current increase in the Delta variant, there have been increased risks.

Note V. Employer Cessation

Kentucky Revised Statutes 61.522, 61.523 and 78.535 allow for an employer of KERS or CERS to make an election to cease participating in the systems operated by KPPA. The statutes require that the employer ceasing from the plan must pay the employer's portion of the unfunded liability as calculated by the actuary. HB 1 of the 2019 Regular Session established a one-time, voluntary cessation window for KERS Quasi-Governmental Employers, including universities and community colleges, to cease participation for its nonhazardous employees by June 30, 2020. SB 249 of the 2020 Regular session extended the cessation date to June 30, 2021. HB 1 also added additional parameters apart from the normal cessation process including a soft freeze option (Tier 1 and Tier 2 employees continue to earn service credit after the cessation date), created an installment payment option and established different discount rates for use in calculating the cost. Northern Kentucky University (NKU) and Kentucky Housing Corporation (KHC) elected to cease participation effective June 30, 2021 under HB 1. HB 8 of the 2021 Regular Session further adjusted the discount rate to be used to calculate the cessation cost for universities and community colleges. NKU elected a soft-freeze, lump sum payment option and its actuarially determined estimated portion of the unfunded liability was \$204.0 million. The payment of the cessation cost is not required until the final cost amount is calculated by the actuary which will be in early 2022, however, \$175.6 million for the pension portion and \$28.4 million for the insurance portion of the unfunded liability was paid by NKU in the 2021 fiscal year. KHC did not make a payment in fiscal year 2021. The deadline has passed for Quasi-Governmental Employers to cease participation under special provisions, therefore, any future cessations will be calculated under normal parameters unless new legislation is enacted.

REQUIRED SUPPLEMENTARY INFORMATION INCLUDING GASB 67 AND 74

Schedule of Employer NPL

CERS

CERS Non-Hazardous

CERS Hazardous

KERS

KERS Non-Hazardous

KERS Hazardous

SPRS

Schedule of Changes in Employers' TPL

CERS

CERS Non-Hazardous

CERS Hazardous

KERS

KERS Non-Hazardous

KERS Hazardous

SPRS

Notes to Schedule of Employers' Contributions

Schedule of Employers' Contributions Pension

CERS

CERS Non-Hazardous

CERS Hazardous

KERS

KERS Non-Hazardous

KERS Hazardous

SPRS

Schedule of Employers' NOL

Insurance Plan

CERS Non-Hazardous

CERS Hazardous

KERS Non-Hazardous

KERS Hazardous

SPRS

Schedule of Changes in Employers' Net OPEB Liability

Insurance Plan

CERS Non-Hazardous

CERS Hazardous

KERS Non-Hazardous

KERS Hazardous

SPRS

Notes to Schedule of Employers' OPEB Contribution

REQUIRED SUPPLEMENTARY INFORMATION INCLUDING GASB 67 AND 74

Schedule of Employers' OPEB Contributions

Insurance Plan

CERS Non-Hazardous

CERS Hazardous

KERS Non-Hazardous

KERS Hazardous

SPRS

Money Weighted Rates of Return

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$20,518,004	\$11,480,060	\$9,037,944	55.95%	\$3,019,096	299.36%
2020	20,091,976	9,407,031	10,684,945	46.82%	3,022,303	353.54%
2019	19,368,969	9,573,629	9,795,340	49.43%	2,978,337	328.89%
2018	17,876,062	9,367,300	8,508,762	52.40%	3,017,780	281.95%
2017	16,995,820	8,905,233	8,090,587	52.40%	2,902,849	278.71%
2016	14,791,128	8,151,569	6,639,559	55.11%	2,943,521	225.57%
2015	14,353,633	8,519,002	5,834,631	59.35%	2,780,357	209.85%
2014	\$13,061,348	\$8,615,148	\$4,446,200	65.96%	\$2,751,434	161.60%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - CERS Non-Hazardous Pension Funds
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$14,941,437	\$8,565,652	\$6,375,785	57.33%	\$2,446,612	260.60%
2020	14,697,244	7,027,327	7,669,917	47.81%	2,462,752	311.44%
2019	14,192,966	7,159,921	7,033,045	50.45%	2,424,796	290.05%
2018	13,109,268	7,018,963	6,090,305	53.54%	2,454,927	248.08%
2017	12,540,545	6,687,237	5,853,308	53.32%	2,376,290	246.32%
2016	11,065,013	6,141,395	4,923,618	55.50%	2,417,187	203.69%
2015	10,740,325	6,440,800	4,299,525	59.97%	2,296,716	187.20%
2014	\$9,772,522	\$6,528,146	\$3,244,376	66.80%	\$2,272,270	142.78%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - CERS Hazardous Pension Funds
As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$5,576,567	\$2,914,408	\$2,662,159	52.26%	\$572,484	465.02%
2020	5,394,732	2,379,704	3,015,028	44.11%	559,551	538.83%
2019	5,176,003	2,413,708	2,762,295	46.63%	553,541	499.02%
2018	4,766,794	2,348,337	2,418,457	49.26%	562,853	429.68%
2017	4,455,275	2,217,996	2,237,279	49.78%	526,559	424.89%
2016	3,726,115	2,010,174	1,715,941	53.95%	526,334	326.02%
2015	3,613,308	2,078,202	1,535,106	57.52%	483,641	317.41%
2014	\$3,288,826	\$2,087,002	\$1,201,824	63.46%	\$479,164	250.82%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - KERS

As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$17,647,424	\$3,884,800	\$13,762,624	22.01%	\$1,614,062	852.67%
2020	17,723,760	2,998,430	14,725,330	16.92%	1,647,996	893.53%
2019	17,583,900	2,914,604	14,669,296	16.58%	1,646,454	890.96%
2018	16,758,831	2,649,931	14,108,900	15.81%	1,662,891	848.46%
2017	16,543,836	2,658,399	13,885,437	16.07%	1,780,907	779.68%
2016	14,299,298	2,508,171	11,791,127	17.54%	1,789,853	658.78%
2015	13,255,106	2,880,251	10,374,855	21.73%	1,672,914	620.17%
2014	\$12,366,960	\$3,139,775	\$9,227,185	25.39%	\$1,706,572	540.69%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - KERS Non-Hazardous Pension Funds

As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$16,335,657	\$3,018,660	\$13,316,997	18.48%	\$1,441,337	923.93%
2020	16,472,733	2,308,080	14,164,653	14.01%	1,476,156	959.56%
2019	16,356,674	2,233,672	14,123,002	13.66%	1,485,854	950.50%
2018	15,608,221	2,004,446	13,603,775	12.84%	1,509,955	900.94%
2017	15,445,206	2,056,870	13,388,336	13.32%	1,602,396	835.52%
2016	13,379,781	1,980,292	11,399,489	14.80%	1,631,025	698.92%
2015	12,359,673	2,327,783	10,031,890	18.83%	1,544,234	649.64%
2014	\$11,550,110	\$2,578,291	\$8,971,819	22.32%	\$1,577,496	568.74%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - KERS Hazardous Pension Funds

As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$1,311,767	\$866,140	\$445,627	66.03%	\$172,725	258.00%
2020	1,251,027	690,350	560,677	55.18%	171,840	326.28%
2019	1,227,226	680,932	546,294	55.49%	160,600	340.16%
2018	1,150,610	645,485	505,125	56.10%	152,936	330.29%
2017	1,098,630	601,529	497,101	54.75%	178,511	278.47%
2016	919,517	527,879	391,638	57.41%	158,828	246.58%
2015	895,433	552,468	342,965	61.70%	128,680	266.53%
2014	\$816,850	\$561,484	\$255,366	68.74%	\$129,076	197.84%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Employers' NPL - SPRS Pension Funds

As of June 30 (\$ in Thousands)

Year	Total Pension Liability (TPL)	Plan Fiduciary Net Position	Net Pension Liability	Ratio of Plan Fiduciary Net Position to TPL	Covered Payroll ⁽¹⁾	Net Pension Liability as a Percentage of Covered Payroll
2021	\$1,055,824	\$356,346	\$699,478	33.75%	\$47,873	1,461.11%
2020	1,049,237	293,949	755,288	28.02%	49,019	1,540.81%
2019	1,035,000	286,165	748,835	27.65%	49,515	1,512.34%
2018	969,622	267,572	702,050	27.60%	50,346	1,394.45%
2017	943,271	255,737	687,534	27.11%	54,065	1,271.68%
2016	795,421	218,012	577,409	27.41%	46,685	1,236.82%
2015	734,156	247,228	486,928	33.68%	45,765	1,063.97%
2014	\$681,118	\$260,974	\$420,144	38.32%	\$44,616	941.69%

⁽¹⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

These tables are intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - CERS**As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$389,515	\$389,979	\$332,069	\$335,272	\$251,425	\$275,350	\$279,334	\$259,243
Interest	1,220,272	1,176,482	1,084,676	1,031,316	1,074,415	1,043,473	980,010	949,191
Benefit Changes	4,439	-	-	17,880	-	-	-	-
Difference between Expected and Actual Experience	(52,926)	247,041	114,741	485,283	(115,427)	-	91,901	-
Changes of Assumptions	-	-	1,003,892	-	1,925,467	-	773,142	-
Benefit Payments	(1,135,272)	(1,090,495)	(1,042,471)	(989,509)	(931,190)	(881,327)	(832,102)	(789,435)
Net Change in TPL	426,028	723,007	1,492,907	880,242	2,204,691	437,494	1,292,285	418,999
TPL – Beginning	20,091,976	19,368,969	17,876,062	16,995,820	14,791,128	14,353,633	13,061,348	12,642,349
TPL – Ending (a)	\$20,518,004	\$20,091,976	\$19,368,969	\$17,876,062	\$16,995,819	\$14,791,127	\$14,353,633	\$13,061,348
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$644,433	\$643,859	\$531,506	\$485,677	\$449,501	\$389,818	\$406,636	\$439,471
Contributions – Member ⁽²⁾	228,065	232,230	217,725	221,459	210,816	194,646	188,003	172,290
Net Investment Income ⁽²⁾	2,359,380	72,092	522,896	765,153	1,096,373	(49,820)	147,672	1,184,020
Retirement Benefit	(1,116,748)	(1,071,762)	(1,025,230)	(970,687)	(914,445)	(864,694)	(815,469)	(772,485)
Administrative Expense ⁽²⁾	(23,577)	(24,285)	(23,385)	(21,096)	(21,030)	(20,751)	(19,500)	(20,336)
Refunds of Contributions	(18,524)	(18,732)	(17,241)	(18,822)	(16,745)	(16,632)	(16,634)	(16,950)
Other	-	-	58	472	(50,806)	-	13,145	-
Net Change in Plan Fiduciary Net Position	2,073,029	(166,598)	206,329	462,156	753,665	(367,433)	(96,147)	986,010
Plan Fiduciary Net Position - Beginning	9,407,031	9,573,629	9,367,300	8,905,233	8,151,569	8,519,002	8,615,148	7,629,138
Prior Year Adjustment	-	-	-	(89)	-	-	-	-
Plan Fiduciary Net Position – Ending (b)	11,480,060	9,407,031	9,573,629	9,367,300	8,905,233	8,151,569	8,519,002	8,615,148
Net Pension Liability – Ending (a) – (b)	\$9,037,944	\$10,684,945	\$9,795,340	\$8,508,762	\$8,090,587	\$6,639,559	\$5,834,631	\$4,446,200
Plan Fiduciary Net Position as a Percentage	55.95%	46.82%	49.43%	52.40%	52.40%	55.11%	59.35%	65.96%
Covered Payroll ⁽³⁾	\$3,019,096	\$3,022,303	\$2,978,337	\$3,017,780	\$2,902,849	\$2,943,521	\$2,780,357	\$2,751,434
Net Pension Liability as a Percentage of Covered Payroll	299.36%	353.54%	328.89%	281.95%	278.71%	225.57%	209.85%	161.60%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.⁽²⁾ Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.⁽⁵⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - CERS Non-Hazardous**As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$280,165	\$280,092	\$254,643	\$254,169	\$193,082	\$209,101	\$207,400	\$192,482
Interest	892,309	861,720	794,935	760,622	803,555	780,587	733,002	710,526
Benefit Changes	4,106	-	-	15,708	-	-	-	-
Difference between Expected and Actual Experience	(91,776)	173,345	87,377	279,401	(208,015)	-	49,966	-
Changes of Assumptions	-	-	727,351	-	1,388,800	-	606,293	-
Benefit Payments	(840,611)	(810,879)	(780,608)	(741,177)	(701,891)	(665,000)	(628,858)	(597,136)
Net Change in TPL	244,193	504,278	1,083,698	568,723	1,475,532	324,687	967,803	305,872
TPL – Beginning	14,697,244	14,192,966	13,109,268	12,540,545	11,065,013	10,740,325	9,772,522	9,466,650
TPL – Ending (a)	\$14,941,437	\$14,697,244	\$14,192,966	\$13,109,268	\$12,540,545	\$11,065,013	\$10,740,325	\$9,772,522
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$472,228	\$475,416	\$393,453	\$358,017	\$333,554	\$284,105	\$298,565	\$324,231
Contributions – Member ⁽²⁾	165,698	168,994	159,064	160,370	150,715	141,674	140,311	128,568
Net Investment Income ⁽²⁾	1,762,739	56,178	390,664	573,829	825,900	(40,800)	110,568	895,530
Retirement Benefit	(826,749)	(795,960)	(766,221)	(726,569)	(687,461)	(651,246)	(615,335)	(582,850)
Administrative Expense ⁽²⁾	(21,729)	(22,304)	(21,659)	(19,592)	(19,609)	(19,385)	(18,212)	(18,615)
Refunds of Contributions	(13,862)	(14,918)	(14,387)	(14,608)	(14,430)	(13,753)	(13,523)	(14,286)
Other	-	-	44 ⁽⁵⁾	361 ⁽⁵⁾	(42,827) ⁽⁴⁾	-	10,280	-
Net Change in Plan Fiduciary Net Position	1,538,325	(132,594)	140,958	331,808	545,843	(299,405)	(87,346)	732,578
Plan Fiduciary Net Position - Beginning	7,027,327	7,159,921	7,018,963	6,687,237	6,141,395	6,440,800	6,528,146	5,795,568
Prior Year Adjustment	-	-	-	(82)	-	-	-	-
Plan Fiduciary Net Position – Ending (b)	8,565,652	7,027,327	7,159,921	7,018,963	6,687,237	6,141,395	6,440,800	6,528,146
Net Pension Liability – Ending (a) – (b)	\$6,375,785	\$7,669,917	\$7,033,045	\$6,090,305	\$5,853,308	\$4,923,618	\$4,299,525	\$3,244,376
Plan Fiduciary Net Position as a Percentage	57.33%	47.81%	50.45%	53.54%	53.32%	55.50%	59.97%	66.80%
Covered Payroll ⁽³⁾	\$2,446,612	\$2,462,752	\$2,424,796	\$2,454,927	\$2,376,290	\$2,417,187	\$2,296,716	\$2,272,270
Net Pension Liability as a Percentage of Covered Payroll	260.60%	311.44%	290.05%	248.08%	246.32%	203.69%	187.20%	142.78%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.

⁽²⁾ Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - CERS Hazardous**As of June 30 (\$ in Thousands)**

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$109,350	\$109,887	\$77,426	\$81,103	\$58,343	\$66,249	\$71,934	\$66,761
Interest	327,963	314,762	289,741	270,694	270,860	262,886	247,008	238,665
Benefit Changes	333	-	-	2,172	-	-	-	-
Difference between Expected and Actual Experience	38,850	73,696	27,364	205,882	92,588	-	41,935	-
Changes of Assumptions	-	-	276,541	-	536,667	-	166,849	-
Benefit Payments	(294,661)	(279,616)	(261,863)	(248,332)	(229,299)	(216,327)	(203,244)	(192,299)
Net Change in TPL	181,835	218,729	409,209	311,519	729,159	112,807	324,482	113,127
TPL – Beginning	5,394,732	5,176,003	4,766,794	4,455,275	3,726,115	3,613,308	3,288,826	3,175,699
TPL – Ending (a)	\$5,576,567	\$5,394,732	\$5,176,003	\$4,766,794	\$4,455,275	\$3,726,115	\$3,613,308	\$3,288,826
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$172,205	\$168,443	\$138,053	\$127,660	\$115,947	\$105,713	\$108,071	\$115,240
Contributions – Member ⁽²⁾	62,367	63,236	58,661	61,089	60,101	52,972	47,692	43,722
Net Investment Income ⁽²⁾	596,641	15,914	132,232	191,324	270,473	(9,020)	37,104	288,490
Retirement Benefit	(289,999)	(275,802)	(259,009)	(244,118)	(226,984)	(213,448)	(200,134)	(189,635)
Administrative Expense ⁽²⁾	(1,848)	(1,981)	(1,726)	(1,504)	(1,421)	(1,366)	(1,288)	(1,721)
Refunds of Contributions	(4,662)	(3,814)	(2,854)	(4,214)	(2,315)	(2,879)	(3,111)	(2,664)
Other	-	-	14 ⁽⁵⁾	111 ⁽⁵⁾	(7,979) ⁽⁴⁾	-	2,865	-
Net Change in Plan Fiduciary Net Position	534,704	(34,004)	65,371	130,348	207,822	(68,028)	(8,801)	253,432
Plan Fiduciary Net Position – Beginning	2,379,704	2,413,708	2,348,337	2,217,996	2,010,174	2,078,202	2,087,002	1,833,570
Prior Year Adjustment	-	-	-	(7)	-	-	-	-
Plan Fiduciary Net Position – Ending (b)	2,914,408	2,379,704	2,413,708	2,348,337	2,217,996	2,010,174	2,078,202	2,087,002
Net Pension Liability – Ending (a) – (b)	\$2,662,159	\$3,015,028	\$2,762,295	\$2,418,457	\$2,237,279	\$1,715,941	\$1,535,106	\$1,201,824
Plan Fiduciary Net Position as a Percentage	52.26%	44.11%	46.63%	49.26%	49.78%	53.95%	57.52%	63.46%
Covered Payroll ⁽³⁾	\$572,484	\$559,551	\$553,541	\$562,853	\$526,559	\$526,334	\$483,641	\$479,164
Net Pension Liability as a Percentage of Covered Payroll	465.02%	538.83%	499.02%	429.68%	424.89%	326.02%	317.41%	250.82%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.⁽²⁾ Does not include 401(h) contributions associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.⁽⁵⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - KERS

As of June 30 (\$ in Thousands)

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$199,922	\$205,270	\$212,105	\$224,322	\$164,939	\$160,382	\$162,576	\$150,241
Interest	913,827	906,535	862,820	851,659	937,314	956,748	920,514	913,247
Benefit Changes	2,117	-	-	10,329	-	-	-	-
Difference between Expected and Actual Experience	(95,479)	114,420	71,924	177,780	(107,477)	-	37,025	-
Changes of Assumptions	-	-	751,122	-	2,273,408	923,999	746,757	-
Benefit Payments	(1,096,723)	(1,086,365)	(1,072,902)	(1,049,095)	(1,023,647)	(996,937)	(978,726)	(960,715)
Net Change in TPL	(76,336)	139,860	825,069	214,995	2,244,537	1,044,192	888,146	102,773
TPL – Beginning	17,723,760	17,583,900	16,758,831	16,543,836	14,299,298	13,255,106	12,366,960	12,264,187
TPL – Ending (a)	\$17,647,424	\$17,723,760	\$17,583,900	\$16,758,831	\$16,543,835	\$14,299,298	\$13,255,106	\$12,366,960
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$1,196,432	\$1,007,707	\$1,090,721	\$732,804	\$810,095	\$536,843	\$550,227	\$308,506
Contributions – Member ⁽²⁾	110,163	116,363	110,877	122,863	118,067	122,234	117,813	110,033
Net Investment Income ⁽²⁾	689,375	59,238	148,751	196,348	291,979	(22,316)	53,271	418,647
Retirement Benefit	(1,083,390)	(1,071,674)	(1,057,876)	(1,032,991)	(1,009,721)	(982,594)	(962,564)	(944,257)
Administrative Expense ⁽²⁾	(12,877)	(13,117)	(12,815)	(11,667)	(11,876)	(11,905)	(11,318)	(12,042)
Refunds of Contributions	(13,333)	(14,691)	(15,026)	(16,104)	(13,925)	(14,341)	(16,162)	(16,457)
Other	-	-	41	334	(34,391)	-	9,209	-
Net Change in Fiduciary Net Position	886,370	83,826	264,673	(8,413)	150,228	(372,079)	(259,524)	(135,570)
Plan Fiduciary Net Position – Beginning	2,998,430	2,914,604	2,649,931	2,658,399	2,508,171	2,880,251	3,139,775	3,275,345
Prior Year Adjustment	-	-	-	(55)	-	-	-	-
Plan Fiduciary Net Position – Ending (b)	3,884,800	2,998,430	2,914,604	2,649,931	2,658,399	2,508,171	2,880,251	3,139,775
Net Pension Liability – Ending (a) – (b)	\$13,762,624	\$14,725,330	\$14,669,296	\$14,108,900	\$13,885,436	\$11,791,127	\$10,374,855	\$9,227,185
Plan Fiduciary Net Position as a Percentage	22.01%	16.92%	16.58%	15.81%	16.07%	17.54%	21.73%	25.39%
Covered Payroll ⁽³⁾	\$1,614,062	\$1,647,996	\$1,646,454	\$1,662,891	\$1,780,907	\$1,789,853	\$1,672,914	\$1,706,572
Net Pension Liability as a Percentage of Covered Payroll	852.67%	893.53%	890.96%	848.46%	779.68%	658.78%	620.17%	540.69%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.

⁽²⁾ Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

⁽⁶⁾ Includes \$175.6 million employer cessation contribution.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - KERS Non-Hazardous

As of June 30 (\$ in Thousands)

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$171,472	\$179,702	\$184,988	\$195,681	\$143,858	\$139,631	\$143,847	\$133,361
Interest	838,084	832,178	793,163	785,123	870,725	891,897	859,509	853,653
Benefit Changes	2,091	-	-	9,624	-	-	-	-
Difference between Expected and Actual Experience	(130,268)	115,515	70,529	153,565	(134,379)	-	30,958	-
Changes of Assumptions	-	-	700,464	-	2,145,530	923,999	694,592	-
Benefit Payments	(1,018,455)	(1,011,336)	(1,000,691)	(980,978)	(960,309)	(935,419)	(919,343)	(903,564)
Net Change in TPL	(137,076)	116,059	748,453	163,015	2,065,425	1,020,108	809,563	83,450
TPL – Beginning	16,472,733	16,356,674	15,608,221	15,445,206	13,379,781	12,359,673	\$11,550,110	\$11,466,660
TPL – Ending (a)	\$16,335,657	\$16,472,733	\$16,356,674	\$15,608,221	\$15,445,206	\$13,379,781	\$12,359,673	\$11,550,110
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$1,134,232	\$948,592	\$1,035,462	\$689,143	\$757,121	\$513,084	\$521,691	\$296,836
Contributions – Member ⁽²⁾	90,202	96,594	93,759	104,972	100,543	106,494	104,606	97,487
Net Investment Income ⁽²⁾	516,223	52,499	112,371	144,881	220,985	(20,663)	44,570	337,922
Retirement Benefit	(1,009,502)	(999,813)	(988,349)	(967,375)	(948,490)	(923,288)	(905,791)	(889,937)
Administrative Expense ⁽²⁾	(11,622)	(11,941)	(11,712)	(10,692)	(10,957)	(10,989)	(10,474)	(11,145)
Refunds of Contributions	(8,953)	(11,523)	(12,342)	(13,603)	(11,819)	(12,130)	(13,552)	(13,627)
Other	-	-	37 ⁽⁵⁾	301 ⁽⁵⁾	(30,805) ⁽⁴⁾	-	8,442	-
Net Change in Fiduciary Net Position	710,580	74,408	229,226	(52,373)	76,578	(347,491)	(250,508)	(182,463)
Plan Fiduciary Net Position – Beginning	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783	2,578,291	2,760,754
Prior Year Adjustment	-	-	-	(51)	-	-	-	-
Plan Fiduciary Net Position – Ending (b)	3,018,660	2,308,080	2,233,672	2,004,446	2,056,870	1,980,292	2,327,783	2,578,291
Net Pension Liability – Ending (a) – (b)	\$13,316,997	\$14,164,653	\$14,123,002	\$13,603,775	\$13,388,336	\$11,399,489	\$10,031,890	\$8,971,819
Plan Fiduciary Net Position as a Percentage	18.48%	14.01%	13.66%	12.84%	13.32%	14.80%	18.83%	22.32%
Covered Payroll ⁽³⁾	\$1,441,337	\$1,476,156	\$1,485,854	\$1,509,955	\$1,602,396	\$1,631,025	\$1,544,234	\$1,577,496
Net Pension Liability as a Percentage of Covered Payroll	923.93%	959.56%	950.50%	900.94%	835.52%	698.92%	649.64%	568.74%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.

⁽²⁾ Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

⁽⁶⁾ Includes \$175.6 million employer cessation contribution.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' TPL - KERS Hazardous								
As of June 30 (\$ in Thousands)								
Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$28,450	\$25,568	\$27,117	\$28,641	\$21,081	\$20,751	\$18,729	\$16,880
Interest	75,743	74,357	69,657	66,536	66,589	64,851	61,005	59,594
Benefit Changes	26	-	-	705	-	-	-	-
Difference between Expected and Actual Experience	34,789	(1,095)	1,395	24,215	26,902	-	6,067	-
Changes of Assumptions	-	-	50,658	-	127,878	-	52,165	-
Benefit Payments	(78,268)	(75,029)	(72,211)	(68,117)	(63,338)	(61,518)	(59,383)	(57,151)
Net Change in TPL	60,740	23,801	76,616	51,980	179,112	24,084	78,583	19,323
TPL – Beginning	1,251,027	1,227,226	1,150,610	1,098,630	919,517	895,433	816,850	797,527
TPL – Ending (a)	\$1,311,767	\$1,251,027	\$1,227,226	\$1,150,610	\$1,098,630	\$919,517	\$895,433	\$816,850
Plan Fiduciary Net Position ⁽¹⁾								
Contributions – Employer	\$62,200	\$59,115	\$55,259	\$43,661	\$52,974	\$23,759	\$28,536	\$11,670
Contributions - Member ⁽²⁾	19,961	19,769	17,118	17,891	17,524	15,739	13,207	12,546
Net Investment Income	173,152	6,739	36,380	51,467	70,994	(1,653)	8,701	80,724
Retirement Benefit	(73,888)	(71,861)	(69,527)	(65,616)	(61,231)	(59,306)	(56,773)	(54,320)
Administrative Expense ⁽²⁾	(1,255)	(1,176)	(1,103)	(975)	(919)	(916)	(844)	(897)
Refunds of Contributions	(4,380)	(3,168)	(2,684)	(2,501)	(2,106)	(2,211)	(2,610)	(2,830)
Other	-	-	4 ⁽⁵⁾	33 ⁽⁵⁾	(3,586) ⁽⁴⁾	-	767	-
Net Change in Plan Fiduciary Net Position	175,790	9,418	35,447	43,960	73,650	(24,588)	(9,016)	46,893
Plan Fiduciary Net Position – Beginning	690,350	680,932	645,485	601,529	527,879	552,468	561,484	514,591
Prior Year Adjustment	-	-	-	(4)	-	-	-	-
Fiduciary Net Position – Ending (b)	866,140	690,350	680,932	645,485	601,529	527,879	552,468	561,484
Net Pension Liability – Ending (a) – (b)	\$445,627	\$560,677	\$546,294	\$505,125	\$497,101	\$391,638	\$342,965	\$255,366
Plan Fiduciary Net Position as a Percentage	66.03%	55.18%	55.49%	56.10%	54.75%	57.41%	61.70%	68.74%
Covered Payroll ⁽³⁾	\$172,725	\$171,840	\$160,600	\$152,936	\$178,511	\$158,828	\$128,680	\$129,076
Net Pension Liability as a Percentage of Covered Payroll	258.00%	326.28%	340.16%	330.29%	278.47%	246.58%	266.53%	197.84%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.

⁽²⁾ Does not include 401(h) contributions associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employer's TPL - SPRS

As of June 30 (\$ in Thousands)

Total Pension Liability (TPL)	2021	2020	2019	2018	2017	2016	2015	2014
Service Cost	\$12,530	\$13,192	\$11,726	\$11,890	\$8,297	\$8,402	\$7,695	\$7,142
Interest	53,417	52,697	49,301	47,978	51,769	52,951	50,661	50,391
Benefit Changes	35	-	-	184	-	-	-	-
Difference between Expected and Actual Experience	4,127	10,859	20,952	25,126	8,143	-	9,331	-
Changes of Assumptions	-	-	44,510	0	136,602	56,191	40,201	-
Benefit Payments	(63,522)	(62,511)	(61,111)	(58,827)	(56,960)	(56,279)	(54,850)	(53,239)
Net Change in TPL	6,587	14,237	65,378	26,351	147,850	61,265	53,038	4,294
TPL - Beginning	1,049,237	1,035,000	969,622	943,271	795,421	734,156	681,118	676,824
TPL - Ending (a)	\$1,055,824	\$1,049,237	\$1,035,000	\$969,622	\$943,271	\$795,421	\$734,156	\$681,118
Plan Fiduciary Net Position ⁽¹⁾								
Contributions - Employer	\$59,650	\$59,453	\$60,048	\$46,877	\$63,239	\$25,822	\$31,990	\$20,279
Contributions - Member ⁽²⁾	4,752	4,767	5,062	5,522	5,348	5,263	5,244	5,075
Net Investment Income ⁽²⁾	61,729	6,341	14,816	18,437	26,795	(3,843)	3,426	40,374
Retirement Benefit	(63,249)	(62,423)	(60,949)	(58,805)	(56,934)	(56,268)	(54,765)	(53,026)
Administrative Expense ⁽²⁾	(212)	(266)	(225)	(194)	(181)	(178)	(201)	(215)
Refunds of Contributions	(273)	(88)	(162)	(22)	(26)	(11)	(85)	(213)
Other	-	-	3 ⁽⁵⁾	21 ⁽⁵⁾	(517) ⁽⁴⁾	-	645	-
Net Change in Plan Fiduciary Net Position	62,397	7,784	18,593	11,836	37,724	(29,215)	(13,746)	12,274
Plan Fiduciary Net Position - Beginning	293,949	286,165	267,572	255,737	218,012	247,228	260,974	248,700
Prior Year Adjustment	-	-	-	(1)	-	-	-	-
Plan Fiduciary Net Position - Ending (b)	356,346	293,949	286,165	267,572	255,737	218,012	247,228	260,974
Net Pension Liability - Ending (a) - (b)	\$699,478	\$755,288	\$748,835	\$702,050	\$687,534	\$577,409	\$486,928	\$420,144
Plan Fiduciary Net Position as a Percentage	33.75%	28.02%	27.65%	27.60%	27.11%	27.41%	33.68%	38.32%
Covered Payroll ⁽³⁾	\$47,873	\$49,019	\$49,515	\$50,346	\$54,065	\$46,685	\$45,765	\$44,616
Net Pension Liability as a Percentage of Covered Payroll	1,461.11%	1,540.81%	1,512.34%	1,394.45%	1,271.68%	1,236.82%	1,063.97%	941.69%

⁽¹⁾ Does not include 401(h) assets for fiscal years 2017 and later.

⁽²⁾ Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later.

⁽³⁾ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

⁽⁴⁾ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later.

⁽⁵⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

The actuarially determined contribution effective for fiscal year ended 2021 that are documented in the schedules on the following pages, were calculated as of June 30, 2019. Separate contribution rates are determined for the non-hazardous fund and the hazardous fund based on the liabilities associated with the current active members, former inactive members, and members receiving benefits from each respective fund, as well as the separately maintained asset balance for each fund.

Based on the June 30, 2019, actuarial valuation report (as amended by SB249, passed during the 2020 legislative session), the actuarial methods and assumptions used to calculate the required contributions are below:

Notes to Schedule of Employers' Contribution			
Item	CERS	KERS	SPRS
Determined by the Actuarial Valuation as of:	June 30, 2019	June 30, 2019	June 30, 2019
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases	30-year closed period at June 30, 2019, Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases
Payroll Growth	2.00%	0.00%	0.00%
Investment Return:	6.25%	5.25% for the KERS Non-Hazardous fund assets 6.25% for the KERS Hazardous fund assets	5.25%
Inflation:	2.30%	2.30%	2.30%
Salary Increase:	3.30% to 10.30%, for non-hazardous members, varies by service 3.55% to 19.05% for hazardous members, varies by service	3.30% to 15.30%, for non-hazardous members, varies by service 3.55% to 20.05% for hazardous members, varies by service	3.55% to 16.05%, varies by service
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019
Phase-In provision	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.	N/A	N/A

Schedule of Employers' Contributions Pension - CERS**As of June 30 (\$ in Thousands)**

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$823,096	\$644,433	\$178,663	\$3,019,096	21.35%
2020	761,534	643,859	117,675	3,022,303	21.30%
2019	727,134	531,506	195,628	2,978,337	17.85%
2018	480,426	485,677	(5,251)	3,017,780	16.09%
2017	445,808	449,501	(3,693)	2,902,849	15.48%
2016	387,719	389,819	(2,100)	2,943,521	13.24%
2015	405,229	406,637	(1,408)	2,780,357	14.63%
2014	439,471	439,471	-	2,751,434	15.97%
2013	415,054	415,054	-	2,697,950	15.38%
2012	\$345,353	\$365,065	\$(19,712)	\$2,700,775	13.52%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years. Separate contribution rates are determined for the non-hazardous pension fund and hazardous pension fund and hazardous pension fund.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ending 2017, and later.

Schedule of Employers' Contributions Pension - CERS Non-Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$582,538	\$472,228	\$110,310	\$2,446,612	19.30%
2020	554,612	475,416	79,196	2,462,752	19.30%
2019	529,575	393,453	136,122	2,424,796	16.23%
2018	355,473	358,017	(2,544)	2,454,927	14.58%
2017	331,492	333,554	(2,062)	2,376,290	14.04%
2016	282,767	284,106	(1,339)	2,417,187	11.75%
2015	297,715	298,566	(851)	2,296,716	13.00%
2014	324,231	324,231	-	2,272,270	14.27%
2013	294,914	294,914	-	2,236,277	13.19%
2012	\$261,764	\$275,736	\$(13,972)	\$2,236,546	12.33%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ending 2017, and later.

Schedule of Employers' Contributions Pension - CERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$240,558	\$172,205	\$68,353	\$572,484	30.08%
2020	206,922	168,443	38,479	559,551	30.10%
2019	197,559	138,053	59,506	553,541	24.94%
2018	124,953	127,660	(2,707)	562,853	22.68%
2017	114,316	115,947	(1,631)	526,559	22.02%
2016	104,952	105,713	(761)	526,334	20.08%
2015	107,514	108,071	(557)	483,641	22.35%
2014	115,240	115,240	-	479,164	24.05%
2013	120,140	120,140	-	461,673	26.02%
2012	\$83,589	\$89,329	\$(5,740)	\$464,229	19.24%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employers' Contributions Pension - KERS

As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$1,118,392	\$1,196,432	\$(78,040)	\$1,614,062	74.13%
2020	1,107,609	1,007,707	99,902	1,647,996	61.15%
2019	1,110,632	1,090,721	19,911	1,646,454	66.25%
2018	665,200	732,804	(67,604)	1,662,891	44.07%
2017	661,443	810,095	(148,652)	1,780,907	45.49%
2016	536,360	536,843	(483)	1,789,853	29.99%
2015	549,322	550,227	(905)	1,672,914	32.89%
2014	534,335	308,506	225,829	1,706,572	18.08%
2013	506,898	308,208	198,690	1,775,424	17.36%
2012	\$461,359	\$235,595	\$225,764	\$1,776,874	13.26%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years. Separate contribution rates are determined for the non-hazardous pension fund and hazardous pension fund.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employers' Contributions Pension - KERS Non-Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$1,056,211	\$1,134,232	\$(78,021)	\$1,441,337	78.69%
2020	1,048,513	948,592	99,921	1,476,156	64.26%
2019	1,055,402	1,035,462	19,940	1,485,854	69.69%
2018	633,879	689,143	(55,264)	1,509,955	45.64%
2017	623,813	757,121	(133,308)	1,602,396	47.25%
2016	512,670	513,084	(414)	1,631,025	31.46%
2015	520,948	521,691	(743)	1,544,234	33.78%
2014	520,765	296,836	223,929	1,577,496	18.82%
2013	485,396	280,874	204,522	1,644,409	17.08%
2012	\$441,094	\$214,786	\$226,308	\$1,644,897	13.06%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employers' Contributions Pension - KERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$62,181	\$62,200	\$(19)	\$172,725	36.01%
2020	59,096	59,115	(19)	171,840	34.40%
2019	55,230	55,259	(29)	160,600	34.41%
2018	31,321	43,661	(12,340)	152,936	28.55%
2017	37,630	52,974	(15,344)	178,511	29.68%
2016	23,690	23,759	(69)	158,828	14.96%
2015	28,374	28,536	(162)	128,680	22.18%
2014	13,570	11,670	1,900	129,076	9.04%
2013	21,502	27,334	(5,832)	131,015	20.86%
2012	\$20,265	\$20,809	\$(544)	\$131,977	15.77%

⁽¹⁾ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of Employer's Contributions Pension - SPRS

As of June 30 (\$ in Thousands)

Fiscal Year Ending	Actuarially Determined Contribution ⁽¹⁾	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$59,263	\$59,650	\$(387)	\$47,873	124.60%
2020	58,358	59,453	(1,095)	49,019	121.29%
2019	58,948	60,048	(1,100)	49,515	121.27%
2018	36,033	46,877	(10,844)	50,346	93.11%
2017	35,937	63,240	(27,303)	54,065	116.97%
2016	25,723	25,822	(99)	46,685	55.31%
2015	31,444	31,990	(546)	45,765	69.90%
2014	25,808	20,279	5,529	44,616	45.45%
2013	23,117	18,501	4,616	45,256	40.88%
2012	\$20,498	\$15,362	\$5,136	\$48,373	31.76%

⁽¹⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽²⁾ Based on derived compensation using the provided employer contribution information for fiscal year ended 2017, and later.

Schedule of the Employers' Net OPEB Liability

As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$12,283,489	\$7,175,097	\$5,108,392	58.41%	\$4,905,905	104.13%
2020	\$11,745,554	\$5,686,474	\$6,059,080	48.41%	\$4,929,457	122.92%
2019	\$10,369,782	\$5,640,573	\$4,729,209	54.39%	\$4,877,191	96.97%
2018	\$10,232,580	\$5,296,232	\$4,936,348	51.76%	\$4,972,961	99.26%
2017	\$10,399,986	\$4,886,583	\$5,513,403	46.99%	\$4,835,897	114.01%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, derived compensation for KERS Hazardous fund based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employers' Net OPEB Liability - CERS Non-Hazardous

As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$5,161,251	\$3,246,801	\$1,914,450	62.91%	\$2,619,695	73.08%
2020	4,996,309	2,581,613	2,414,696	51.67%	2,620,585	92.14%
2019	4,251,466	2,569,511	1,681,955	60.44%	2,577,378	65.26%
2018	4,189,606	2,414,126	1,775,480	57.62%	2,570,156	69.08%
2017	\$4,222,878	\$2,212,536	\$2,010,342	52.39%	\$2,480,130	81.06%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employers' Net OPEB Liability - CERS Hazardous

As of June 30 (\$ in Thousands)

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$2,436,383	\$1,627,824	\$808,559	66.81%	\$613,985	131.69%
2020	2,245,222	1,321,117	924,105	58.84%	596,001	155.05%
2019	2,080,574	1,340,714	739,860	64.44%	583,632	126.77%
2018	1,993,941	1,280,982	712,959	64.24%	588,526	121.14%
2017	\$2,015,673	\$1,189,001	\$826,672	58.99%	\$542,710	152.32%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employers' Net OPEB Liability - KERS Non-Hazardous**As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$3,698,804	\$1,419,477	\$2,279,327	38.38%	\$1,452,345	156.94%
2020	3,599,557	1,060,649	2,538,908	29.47%	1,482,431	171.27%
2019	3,217,985	995,089	2,222,896	30.92%	1,515,953	146.63%
2018	3,262,117	891,205	2,370,912	27.32%	1,573,898	150.64%
2017	\$3,353,332	\$817,370	\$2,535,962	24.37%	\$1,593,097	159.18%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employers' Net OPEB Liability - KERS Hazardous**As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$622,152	\$633,677	\$(11,525)	101.85%	\$172,725	(6.67)%
2020	564,524	521,755	42,769	92.42%	182,209	23.47%
2019	507,204	534,053	(26,849)	105.29%	151,448	(17.73)%
2018	485,904	519,072	(33,168)	106.83%	190,317	(17.43)%
2017	\$494,869	\$488,838	\$6,031	98.78%	\$171,087	3.53%

⁽¹⁾ Based on derived compensation using the provided employer contribution information. For 2021, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of the Employer's Net OPEB Liability - SPRS**As of June 30 (\$ in Thousands)**

Year	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability as a Percentage of Covered Payroll
2021	\$364,899	\$247,318	\$117,581	67.78%	\$47,155	249.35%
2020	339,942	201,340	138,602	59.23%	48,231	287.37%
2019	312,553	201,206	111,347	64.38%	48,780	228.26%
2018	\$301,012	\$190,847	\$110,165	63.40%	\$50,064	220.05%
2017	\$313,234	\$178,838	\$134,396	57.09%	\$48,873	274.99%

⁽¹⁾ Based on derived compensation using the provided employer contribution information.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' Net OPEB Liability
As of June 30 (\$ in Thousands)

	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$258,502	\$255,269	\$230,132	\$241,532	\$165,102
Interest on Total OPEB liability	617,700	577,636	589,654	598,167	592,515
Benefit Changes	6,036	-	-	6,856	-
Difference between Expected and Actual Experience	(633,119)	873,712	(855,049)	(586,623)	(14,634)
Assumption Changes	726,071	136,923	591,634	(19,550)	1,472,895
Benefit Payments ⁽¹⁾	(437,255)	(467,768)	(419,169)	(407,788)	(372,118)
Net Change in Total OPEB Liability	537,935	1,375,772	137,202	(167,406)	1,843,760
Total OPEB Liability - Beginning	11,745,554	10,369,782	10,232,580	10,399,986	8,556,226
Total OPEB Liability - Ending (a)	\$12,283,489	\$11,745,554	\$10,369,782	\$10,232,580	\$10,399,986
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾	\$486,616	\$467,797	\$448,684	\$364,109	\$352,728
Contributions – Member	24,405	23,155	21,332	19,848	16,964
Benefit Payments ⁽¹⁾	(437,255)	(467,768)	(419,169)	(407,788)	(372,118)
OPEB Plan Net Investment Income	1,417,333	25,123	295,845	435,370	584,154
OPEB Plan Administrative Expense	(2,476)	(2,406)	(2,372)	(2,063)	(2,202)
Other ⁽⁴⁾	-	-	21	173	-
Net Change in Plan Fiduciary Net Position	1,488,623	45,901	344,341	409,649	579,526
Plan Fiduciary Net Position – Beginning	5,686,474	5,640,573	5,296,232	4,886,583	4,307,057
Plan Fiduciary Net Position – Ending (b)	7,175,097	5,686,474	5,640,573	5,296,232	4,886,583
Net OPEB Liability – Ending (a) – (b)	\$5,108,392	\$6,059,080	\$4,729,209	\$4,936,348	\$5,513,403
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	58.41%	48.41%	54.39%	51.76%	46.99%
Covered Payroll ⁽³⁾	\$4,905,905	\$4,929,457	\$4,877,191	\$4,972,961	\$4,835,897
Net OPEB Liability as a Percentage of Covered Employee Payroll	104.13%	122.92%	96.97%	99.26%	114.01%

⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

⁽⁵⁾ Includes \$28.4 million employer cessation contribution for KERS Non-Hazardous fund.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' Net OPEB Liability - CERS Non-Hazardous					
As of June 30 (\$ in Thousands)					
	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$132,407	\$131,289	\$119,011	\$122,244	\$85,468
Interest on Total OPEB liability	262,128	236,126	240,352	242,048	240,854
Benefit Changes	3,359	-	-	4,306	-
Difference between Expected and Actual Experience	(340,831)	505,843	(404,301)	(240,568)	(6,641)
Assumption Changes	282,975	60,225	268,842	(4,876)	520,286
Benefit Payments ⁽¹⁾	(175,096)	(188,640)	(162,044)	(156,426)	(140,120)
Net Change in Total OPEB Liability	164,942	744,843	61,860	(33,272)	699,847
Total OPEB Liability - Beginning	4,996,309	4,251,466	4,189,606	4,222,878	3,523,031
Total OPEB Liability - Ending (a)	\$5,161,251	\$4,996,309	\$4,251,466	\$4,189,606	\$4,222,878
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾	\$186,509	\$179,521	\$168,905	\$145,809	\$133,326
Contributions – Member	13,613	12,964	11,801	10,825	9,158
Benefit Payments ⁽¹⁾	(175,096)	(188,640)	(162,044)	(156,426)	(140,120)
OPEB Plan Net Investment Income	641,084	9,160	137,591	202,068	264,782
OPEB Plan Administrative Expense	(922)	(903)	(877)	(761)	(789)
Other ⁽⁴⁾	-	-	9	75	-
Net Change in Plan Fiduciary Net Position	665,188	12,102	155,385	201,590	266,357
Plan Fiduciary Net Position – Beginning	2,581,613	2,569,511	2,414,126	2,212,536	1,946,179
Plan Fiduciary Net Position – Ending (b)	3,246,801	2,581,613	2,569,511	2,414,126	2,212,536
Net OPEB Liability – Ending (a) – (b)	\$1,914,450	\$2,414,696	\$1,681,955	\$1,775,480	\$2,010,342
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	62.91%	51.67%	60.44%	57.62%	52.39%
Covered Payroll ⁽³⁾	\$2,619,695	\$2,620,585	\$2,577,378	\$2,570,156	\$2,480,130
Net OPEB Liability as a Percentage of Covered Employee Payroll	73.08%	92.14%	65.26%	69.08%	81.06%
⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).					
⁽²⁾ Employer contributions include expected benefits due to the implicit subsidy for members under age 65.					
⁽³⁾ Based on derived compensation using the provided employer contribution information.					
⁽⁴⁾ Northern Trust Settlement.					
This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.					

Schedule of Changes in Employers' Net OPEB Liability - CERS Hazardous
As of June 30 (\$ in Thousands)

	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$48,413	\$47,443	\$32,623	\$33,948	\$20,493
Interest on Total OPEB liability	116,710	115,998	116,768	118,009	113,166
Benefit Changes	1,146	-	-	484	-
Difference between Expected and Actual Experience	(47,937)	38,156	(103,317)	(100,348)	(2,470)
Assumption Changes	159,106	46,925	116,618	(2,500)	391,061
Benefit Payments ⁽¹⁾	(86,277)	(83,874)	(76,059)	(71,325)	(63,656)
Net Change in Total OPEB Liability	191,161	164,648	86,633	(21,732)	458,594
Total OPEB Liability - Beginning	2,245,222	2,080,574	1,993,941	2,015,673	1,557,079
Total OPEB Liability - Ending (a)	\$2,436,383	\$2,245,222	\$2,080,574	\$1,993,941	\$2,015,673
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾	\$63,509	\$59,662	\$60,445	\$51,615	\$44,325
Contributions – Member	3,098	2,762	2,458	2,173	1,708
Benefit Payments ⁽¹⁾	(86,277)	(83,874)	(76,059)	(71,325)	(63,656)
OPEB Plan Net Investment Income	326,905	2,315	73,317	109,854	143,892
OPEB Plan Administrative Expense	(528)	(462)	(434)	(376)	(381)
Other ⁽⁴⁾	-	-	5	40	-
Net Change in Plan Fiduciary Net Position	306,707	(19,597)	59,732	91,981	125,888
Plan Fiduciary Net Position – Beginning	1,321,117	1,340,714	1,280,982	1,189,001	1,063,113
Plan Fiduciary Net Position – Ending (b)	1,627,824	1,321,117	1,340,714	1,280,982	1,189,001
Net OPEB Liability – Ending (a) – (b)	\$808,559	\$924,105	\$739,860	\$712,959	\$826,672
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	66.81%	58.84%	64.44%	64.24%	58.99%
Covered Payroll ⁽³⁾	\$613,985	\$596,001	\$583,632	\$588,526	\$542,710
Net OPEB Liability as a Percentage of Covered Employee Payroll	131.69%	155.05%	126.77%	121.14%	152.32%

⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' Net OPEB Liability - KERS Non-Hazardous
As of June 30 (\$ in Thousands)

	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$58,831	\$59,600	\$61,345	\$66,360	\$46,992
Interest	191,624	179,811	186,820	191,178	192,911
Benefit Changes	1,382	-	-	1,865	-
Difference between Expected and Actual Experience	(231,631)	288,235	(302,189)	(191,147)	(3,921)
Changes of Assumptions	220,184	13,767	158,004	(11,235)	414,835
Benefit Payments ⁽¹⁾	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
Net Change in Total OPEB Liability	99,247	381,572	(44,132)	(91,215)	511,216
Total OPEB Liability - Beginning	3,599,557	3,217,985	3,262,117	3,353,332	2,842,116
Total OPEB Liability - Ending (a)	\$3,698,804	\$3,599,557	\$3,217,985	\$3,262,117	\$3,353,332
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾⁽⁵⁾	\$223,661	\$208,300	\$201,155	\$152,985	\$162,636
Contributions – Member	6,318	6,128	5,963	5,786	5,156
Benefit Payments ⁽¹⁾	(141,143)	(159,841)	(148,112)	(148,236)	(139,601)
OPEB Plan Net Investment Income	270,811	11,820	45,749	64,028	94,239
OPEB Plan Administrative Expense	(819)	(847)	(875)	(760)	(861)
Other ⁽⁴⁾	-	-	4	32	-
Net Change in Plan Fiduciary Net Position	358,828	65,560	103,884	73,835	121,569
Plan Fiduciary Net Position – Beginning	1,060,649	995,089	891,205	817,370	695,801
Plan Fiduciary Net Position – Ending (b)	1,419,477	1,060,649	995,089	891,205	817,370
Net OPEB Liability – Ending (a) – (b)	\$2,279,327	\$2,538,908	\$2,222,896	\$2,370,912	\$2,535,962
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	38.38%	29.47%	30.92%	27.32%	24.37%
Covered Payroll ⁽³⁾	\$1,452,345	\$1,482,431	\$1,515,953	\$1,573,898	\$1,593,097
Net OPEB Liability as a Percentage of Covered Employee Payroll	156.94%	171.27%	146.63%	150.64%	159.18%

⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions includes expected benefits due to the implicit subsidy for members under age 65.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

⁽⁵⁾ Includes \$28.4 million employer cessation contribution.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employers' Net OPEB Liability - KERS Hazardous
As of June 30 (\$ in Thousands)

	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$13,633	\$11,548	\$12,337	\$12,893	\$8,002
Interest on Total OPEB liability	29,254	28,101	27,990	28,500	27,591
Benefit Changes	48	-	-	167	-
Difference between Expected and Actual Experience	(6,402)	27,668	(30,947)	(31,240)	(1,029)
Assumption Changes	42,022	11,428	31,687	(581)	89,401
Benefit Payments ⁽¹⁾	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
Net Change in Total OPEB Liability	57,628	57,320	21,300	(8,965)	107,347
Total OPEB Liability - Beginning	564,524	507,204	485,904	494,869	387,522
Total OPEB Liability - Ending (a)	\$622,152	\$564,524	\$507,204	\$485,904	\$494,869
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾	\$3,556	\$7,441	\$5,556	\$5,165	\$4,579
Contributions – Member	1,167	1,105	934	909	811
Benefit Payments ⁽¹⁾	(20,927)	(21,425)	(19,767)	(18,704)	(16,618)
OPEB Plan Net Investment Income	128,244	704	28,373	42,950	59,614
OPEB Plan Administrative Expense	(118)	(123)	(117)	(104)	(105)
Other ⁽⁴⁾	-	-	2	18	-
Net Change in Plan Fiduciary Net Position	111,922	(12,298)	14,981	30,234	48,281
Plan Fiduciary Net Position – Beginning	521,755	534,053	519,072	488,838	440,557
Plan Fiduciary Net Position – Ending (b)	633,677	521,755	534,053	519,072	488,838
Net OPEB Liability – Ending (a) – (b)	\$(11,525)	\$42,769	\$(26,849)	\$(33,168)	\$6,031
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	101.85%	92.42%	105.29%	106.83%	98.78%
Covered Payroll ⁽³⁾	\$172,725	\$182,209	\$151,448	\$190,317	\$171,087
Net OPEB Liability as a Percentage of Covered Employee Payroll	(6.67)%	23.47%	(17.73)%	(17.43)%	3.53%

⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

⁽³⁾ Based on derived compensation using the provided employer contribution information. For 2021, derived compensation based on pension contribution information, as there were no required employer contributions for the insurance fund for FYE 2021.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Schedule of Changes in Employer's Net OPEB Liability - SPRS
As of June 30 (\$ in Thousands)

	2021	2020	2019	2018	2017
Total OPEB Liability					
Service Cost	\$5,218	\$5,389	\$4,816	\$6,087	\$4,147
Interest on Total OPEB liability	17,984	17,600	17,724	18,432	17,993
Benefit Changes	101	-	-	34	-
Difference between Expected and Actual Experience	(6,318)	13,810	(14,295)	(23,320)	(573)
Assumption Changes	21,784	4,578	16,483	(358)	57,312
Benefit Payments ⁽¹⁾	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
Net Change in Total OPEB Liability	24,957	27,389	11,541	(12,222)	66,756
Total OPEB Liability - Beginning	339,942	312,553	301,012	313,234	246,478
Total OPEB Liability - Ending (a)	\$364,899	\$339,942	\$312,553	\$301,012	\$313,234
Plan Fiduciary Net Position					
Contributions – Employer ⁽²⁾	\$9,381	\$12,873	\$12,623	\$8,535	\$7,862
Contributions – Member	209	196	176	155	131
Benefit Payments ⁽¹⁾	(13,812)	(13,988)	(13,187)	(13,097)	(12,123)
OPEB Plan Net Investment Income	50,289	1,124	10,815	16,470	21,627
OPEB Plan Administrative Expense	(89)	(71)	(69)	(62)	(66)
Other ⁽⁴⁾	-	-	1	8	-
Net Change in Plan Fiduciary Net Position	45,978	134	10,359	12,009	17,431
Plan Fiduciary Net Position – Beginning	201,340	201,206	190,847	178,838	161,407
Plan Fiduciary Net Position – Ending (b)	247,318	201,340	201,206	190,847	178,838
Net OPEB Liability – Ending (a) – (b)	\$117,581	\$138,602	\$111,347	\$110,165	\$134,396
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	67.78%	59.23%	64.38%	63.40%	57.09%
Covered Payroll ⁽³⁾	\$47,155	\$48,231	\$48,780	\$50,064	\$48,873
Net OPEB Liability as a Percentage of Covered Employee Payroll	249.35%	287.37%	228.26%	220.05%	274.99%

⁽¹⁾ Benefit payments include expected benefits due to the implicit subsidy for members under age 65. They are also offset by insurance premiums received from retirees, Medicare Drug Reimbursements, and Humana Gain Share Payments (in applicable years).

⁽²⁾ Employer contributions include expected benefits due to the implicit subsidy for members under age 65.

⁽³⁾ Based on derived compensation using the provided employer contribution information.

⁽⁴⁾ Northern Trust Settlement.

This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

The actuarially determined contribution effective for fiscal year ending 2021 that is documented in the schedules below was calculated as of June 30, 2019. Separate contribution rates are determined for each fund based on the liabilities associated with the current active members, former inactive members, and members receiving benefits from each respective fund, as well as the separately maintained asset balances for each fund.

Based on the June 30, 2019, actuarial valuation report (as amended by SB249, passed during the 2020 legislative session), the actuarial methods and assumptions used to calculate the required contributions follow.

Notes to Schedule of Employers' OPEB Contributions

Item	Insurance
Determined by the Actuarial Valuation as of:	June 30, 2019
Actuarial Cost Method:	Entry Age Normal
Asset Valuation Method:	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized.
Amortization Method:	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019 Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases.
Payroll Growth Rate:	2.00% for CERS funds, 0.00% for KERS and SPRS funds
Investment Return:	6.25%
Inflation:	2.30%
	3.30% to 10.30%, for CERS non-hazardous members, varies by service. 3.55% to 19.05% for CERS hazardous members, varies by service. 3.30% to 15.30% for KERS non-hazardous members, varies by service. 3.55% to 20.05% for KERS hazardous members, varies by service.
Salary Increase:	3.55% to 16.05% for SPRS members, varies by service.
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019.
Healthcare Trend Rates:	
Pre-65	Initial trend starting at 6.25% at January 1, 2021 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years. The 2020 premiums were known at the time of the valuation and were incorporated into the liability measurement.
Post-65	Initial trend starting at 5.50% at January 1, 2021 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 14 years. The 2020 premiums were known at the time of the valuation and were incorporated into the liability measurement.
CERS Phase-In provision	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018.

Schedule of Employers' OPEB Contributions
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$374,009	\$386,963	\$(12,954)	\$4,905,905	7.89%
2020	382,915	381,080	1,835	4,929,457	7.73%
2019	436,070	399,149	36,921	4,877,191	8.18%
2018	319,801	331,725	(11,924)	4,972,961	6.67%
2017	322,335	339,447	(17,112)	4,835,897	7.02%
2016	314,878	342,274	(27,396)	4,567,976	7.49%
2015	342,111	352,426	(10,315)	4,499,036	7.83%
2014	450,399	403,047	47,352	4,502,623	8.95%
2013	637,202	453,154	184,048	4,519,630	10.03%
2012	\$679,661	\$457,044	\$222,617	\$4,526,021	10.10%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rates calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years. Separate contribution rates are determined for each fund.

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - CERS Non-Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$142,249	\$129,903	\$12,346	\$2,619,695	4.96%
2020	124,740	129,267	(4,527)	2,620,585	4.93%
2019	160,055	139,655	20,400	2,577,378	5.42%
2018	120,797	124,619	(3,822)	2,570,156	4.85%
2017	122,270	120,712	1,558	2,480,130	4.87%
2016	110,987	111,836	(849)	2,352,762	4.75%
2015	119,511	119,444	67	2,296,716	5.20%
2014	130,652	123,278	7,374	2,272,270	5.43%
2013	195,561	159,993	35,568	2,236,277	7.15%
2012	\$214,421	\$171,925	\$42,496	\$2,236,546	7.69%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years..

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - CERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$60,539	\$59,799	\$740	\$613,985	9.74%
2020	56,739	57,897	(1,158)	596,001	9.71%
2019	71,028	62,272	8,756	583,632	10.67%
2018	55,027	56,002	(975)	588,526	9.52%
2017	53,131	51,537	1,594	542,710	9.50%
2016	64,253	67,619	(3,366)	492,851	13.72%
2015	69,103	71,778	(2,675)	483,641	14.84%
2014	74,360	74,792	(432)	479,164	15.61%
2013	102,011	85,319	16,692	461,673	18.48%
2012	\$110,763	\$92,564	\$18,199	\$464,229	19.94%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - KERS Non-Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$161,936	\$186,676	(24,740)	\$1,452,345	12.85%
2020	183,821	175,007	8,814	1,482,431	11.81%
2019	187,978	178,964	9,014	1,515,953	11.81%
2018	132,365	136,419	(4,054)	1,573,898	8.67%
2017	133,024	152,356	(19,332)	1,593,097	9.56%
2016	121,899	135,816	(13,917)	1,529,249	8.88%
2015	130,455	135,940	(5,485)	1,544,234	8.80%
2014	208,881	166,610	42,271	1,577,496	10.56%
2013	286,143	165,331	120,812	1,644,409	10.05%
2012	\$297,904	\$156,057	\$141,847	\$1,644,897	9.49%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employers' OPEB Contributions - KERS Hazardous
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$-	\$1,300	\$(1,300)	\$172,725	0.75%
2020	4,482	5,776	(1,294)	182,209	3.17%
2019	3,726	4,970	(1,244)	151,448	3.28%
2018	2,550	5,288	(2,738)	190,317	2.78%
2017	4,688	5,620	(932)	171,087	3.28%
2016	9,186	16,766	(7,580)	147,563	11.36%
2015	13,152	14,882	(1,730)	128,680	11.57%
2014	15,627	23,874	(8,247)	129,076	18.50%
2013	26,253	25,682	571	132,015	19.45%
2012	\$28,326	\$24,538	\$3,788	\$131,977	18.59%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information.

Schedule of Employer's OPEB Contributions - SPRS
As of June 30 (\$ in Thousands)

Fiscal Year Ending ⁽¹⁾	Actuarially Determined Contribution ⁽²⁾	Total Employer Contribution ⁽³⁾	Contribution Deficiency (Excess)	Covered Payroll ⁽⁴⁾	Actual Contributions as a Percentage of Covered Payroll
2021	\$9,285	\$9,285	\$-	\$47,155	19.69%
2020	13,133	13,133	-	48,231	27.23%
2019	13,283	13,288	(5)	48,780	27.24%
2018	9,062	9,397	(335)	50,064	18.77%
2017	9,222	9,222	-	48,873	18.87%
2016	8,553	10,237	(1,684)	45,551	22.47%
2015	9,890	10,382	(492)	45,765	22.69%
2014	20,879	14,493	6,386	44,616	32.48%
2013	27,234	16,829	10,405	45,256	37.19%
2012	\$28,247	\$11,960	\$16,287	\$48,373	24.72%

⁽¹⁾ Data for years prior to 2018 is based on contribution data provided in the 2017 CAFR, based on calculations provided by the prior actuary.

⁽²⁾ Actuarially determined contribution for fiscal year ended 2021 is based on the contribution rate calculated with the June 30, 2019, actuarial valuation, amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

⁽³⁾ Employer contributions do not include the expected implicit subsidy.

⁽⁴⁾ Based on derived compensation using the provided employer contribution information

Money-Weighted Rates of Return

In accordance with GASB, KPPA provides this additional disclosure regarding the money-weighted rate of return for the Pension Funds and Insurance Funds. The money-weighted rate of return is a method of calculating period-by-period returns on Pension Funds' and Insurance Funds' investments that adjusts for the changing amounts actually invested. For purposes of this statement, money-weighted rate of return is calculated as the internal rate of return on Pension Funds' and Insurance Funds' investments, net of Pension Funds' and Insurance Funds' investment expense, adjusted for the changing amounts actually invested.

See below for the money-weighted rates of return for multiple periods including fiscal year June 30, 2021, as calculated by the custodian bank, BNY Mellon:

Money - Weighted Rates of Return As of June 30					
	CERS	CERS	KERS	KERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Pension Funds					
2021	25.72%	25.58%	22.53%	25.21%	21.70%
2020	0.84%	0.71%	2.35%	0.96%	2.21%
2019	5.72%	5.76%	5.77%	5.68%	5.67%
2018	8.82%	8.82%	7.63%	8.69%	7.68%
2017	13.80%	13.72%	12.08%	13.45%	12.50%
2016	(0.62)%	(0.46)%	(0.97)%	(0.33)%	(1.76)%
2015	1.65%	1.88%	1.89%	1.69%	1.71%
2014	15.56%	15.50%	15.50%	15.65%	15.66%
Insurance Funds					
	CERS	CERS	KERS	KERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
2021	24.81%	24.99%	25.16%	24.99%	25.36%
2020	0.36%	0.27%	0.98%	0.21%	0.64%
2019	5.73%	5.81%	4.95%	5.61%	5.74%
2018	9.22%	9.35%	7.95%	8.93%	9.39%
2017	13.67%	13.69%	13.77%	13.75%	13.69%

Note: This table is intended to show information for ten years; additional year's information will be displayed as it becomes available.

Additional Supporting Schedules

Schedule of Administrative Expenses

Schedule of Direct Investment Expenses

Schedule of Professional Consultant Fees

Report on Internal Control

Schedule of Administrative Expenses		
As of June 30 (\$ in Thousands)		
	2021	2020
Personnel		
Salaries and Per Diem	\$14,426	\$14,725
Pension, Insurance Related Benefits	14,875	14,616
Unemployment Compensation	-	6
Tuition Assistance	10	12
Total Personnel	29,311	29,359
Contractual		
Actuarial Services	449	512
Audit Services	72	160
Healthcare	-	7
Legal Counsel	754	811
Medical Review Services	316	249
Miscellaneous	88	93
Total Contractual	1,679	1,832
Communication		
Printing	107	104
Telephone	106	113
Postage	552	412
Travel	15	62
Total Communication	780	691
Internal Audit		
Travel/Conferences	1	1
Dues/Subscriptions	2	
Total Internal Audit	3	1
Investments-Pension Funds		
Travel/Conferences	-	35
Dues/Subscriptions	9	1
Legal	10	32
Total Investments	19	\$68
Rentals		
Office Space	1,061	\$999
Equipment	67	74
Total Rentals	1,128	1,073
Information Technology		
Software	2,430	3,224
Total Information Technology	2,430	3,224
Miscellaneous		
Utilities	153	186
Supplies	47	107
Insurance	4	10
Dues & Subscriptions	44	56
Maintenance	1	1
Other	1	
COVID Expenses	153	2
Total Miscellaneous	403	362
Depreciation/Amortization/Accruals	1,113	1,058
Bayhills legal fees paid out of admin	(77)	
Total Pension Fund Administrative Expense	36,789	37,668
Healthcare Fees	2,354	2,406
Total Insurance Fund Administrative Expense	2,354	2,406
Total Administrative Expenses	\$39,143	\$40,074

**Pension Fund Schedule of Direct Investment Expenses
As of June 30 (\$ in Thousands)**

	CERS	KERS	SPRS
	2021	2021	2021
Security Lending Fees			
Borrower (Income) Rebates	\$(523)	\$(162)	\$(15)
Lending Agent Fees	181	58	5
Total Security Lending	(342)	(104)	(10)
Contractual Services			
Investment Management	46,888	12,431	1,200
Security Custody	1,116	369	34
Investment Consultant	348	112	11
Performance Fees	62,584	13,784	1,113
Total Contractual Services	\$110,936	\$26,696	\$2,358

**Insurance Fund Schedule of Direct Investment Expenses
As of June 30 (\$ in Thousands)**

	2021
Security Lending Fees	
Borrower (Income) Rebates	\$(300)
Lending Agent Fees	105
Total Security Lending	(195)
Contractual Services	
Investment Management	28,905
Security Custody	966
Investment Consultant	205
Performance Fees	41,086
Total Contractual Services	\$71,162

**Schedule of Professional Consultant Fees
As of June 30 (\$ in Thousands)**

	2021	2020
Actuarial Services	\$448	\$512
Medical Review Services	316	249
Audit Services	72	160
Legal Counsel	687	842
Healthcare	-	7
Miscellaneous	88	93
Total	\$1,611	\$1,863

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Members of

Kentucky Public Pensions Authority

Frankfort, Kentucky

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Kentucky Public Pensions Authority, which comprise the statement of fiduciary net position as of June 30, 2021, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Kentucky Public Pensions Authority's basic financial statements, and have issued our report thereon dated December 8, 2021.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Kentucky Public Pensions Authority's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Kentucky Public Pensions Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Kentucky Public Pensions Authority's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Kentucky Public Pensions Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Kentucky Public Pensions Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Kentucky Public Pensions Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Blue & Co., LLC

Lexington, Kentucky

December 8, 2021

December 8, 2021

Joint CERS-KRS Audit Committee
Kentucky Public Pensions Authority
Frankfort, Kentucky

We have audited the financial statements of Kentucky Public Pensions Authority (KPPA) for the year ended June 30, 2021, and have issued our report thereon dated December 8, 2021. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

OUR RESPONSIBILITY UNDER AUDITING STANDARDS GENERALLY ACCEPTED IN THE UNITED STATES OF AMERICA AND GOVERNMENT AUDITING STANDARDS

As stated in our engagement letter dated May 14, 2021, our responsibility, as described by professional standards, was to express an opinion about whether the consolidated financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with accounting principles generally accepted in the United States of America. Our responsibility was to plan and perform the audit to obtain reasonable, but not absolute, assurance that the consolidated financial statements are free of material misstatement. Our audit of the consolidated financial statements does not relieve you or management of your responsibilities.

As part of our audit, we considered the internal control of KPPA. Such consideration was solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control. We are responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures specifically to identify such matters.

As part of obtaining reasonable assurance about whether the consolidated financial statements are free of material misstatement, we performed tests of KPPA's compliance with certain provisions of laws, regulations, contracts, and grants. However, the objective of our tests was not to provide an opinion on compliance with such provisions.

Joint CERS-KRS Audit Committee
Kentucky Public Pensions Authority
December 8, 2021
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SIGNIFICANT AUDIT FINDINGS

QUALITATIVE ASPECTS OF ACCOUNTING PRACTICES

Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we will advise management about the appropriateness of accounting policies and their application. The significant accounting policies used by KPPA are described in Note A to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed. We noted no transactions entered into by KPPA during the year for which there is a lack of authoritative guidance or consensus. We noted no significant transactions that have been recognized in the financial statements in a different period than when the transaction occurred.

Accounting estimates are an integral part of the financial statements prepared by management and are based upon management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Management's estimates related to the fair value of its investments based on the net asset value (NAV) of units of the investee. The NAV, as provided by the investment manager, is used as a practical expedient. The NAV is based on the fair value of the underlying investments held by the investee less its liabilities. Due to the nature of the investments held by the investee, changes in market conditions and the economic environment may significantly impact the net asset value of the investee and, consequently, the fair value of KPPA's interests in the investee. In performing our audit, we have considered the internal controls of KPPA in selecting, monitoring, and valuing these investments. We have also confirmed the year end balances of alternative investments and have reviewed selected investments' underlying annual audited financial statements. We evaluated the key factors and assumptions used to develop NAV and believe that they are reasonable in relation to the financial statements taken as a whole.
- Management's disclosure of the net pension liability in Note M to the financial statements. The information presented therein was obtained from KPPA's actuarial valuations and the methods and assumptions used in determining the amounts are disclosed in the footnote. We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.
- Management's disclosure of the net OPEB liability of KPPA in Note M the financial statements. The information presented therein was obtained from the KPPA's actuarial valuations and the methods and assumptions used in determining the amounts are disclosed in the footnote. We evaluated the key factors and assumptions used to develop

Joint CERS-KRS Audit Committee
 Kentucky Public Pensions Authority
 December 8, 2021
 Page 3 of 5

the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.

We believe the disclosures in the financial statements are neutral, consistent, and clear.

DIFFICULTIES ENCOUNTERED IN PERFORMING THE AUDIT

We encountered no significant difficulties in dealing with management in performing and completing our audit.

CORRECTED AND UNCORRECTED MISSTATEMENTS

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements.

In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole.

The below journal entry summarizes the uncorrected misstatement of the financial statements. Management has determined that its effect is immaterial to the financial statements taken as a whole.

Entry to adjust value of investments to June 30, 2021 net asset value:

DR. Investments	\$315,872,000
DR. Net Depreciation in FV of Investments	\$68,635,000
CR.. Fiduciary Net Position Restricted for Benefits	\$384,507,000

DISAGREEMENTS WITH MANAGEMENT

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor’s report. We are pleased to report that no such disagreements arose during the course of the audit.

Joint CERS-KRS Audit Committee
Kentucky Public Pensions Authority
December 8, 2021
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MANAGEMENT REPRESENTATIONS

We have requested certain representations from management that are included in the management representation letter dated as of the date of this letter.

MANAGEMENT CONSULTATIONS WITH OTHER INDEPENDENT ACCOUNTANTS

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves the application of an accounting principle to the KPPA's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all of the relevant facts. To our knowledge, there were no such consultations.

OTHER AUDIT FINDINGS OR ISSUES

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the KPPA's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

OTHER INFORMATION IN DOCUMENTS CONTAINING AUDITED FINANCIAL STATEMENTS

With respect to the additional supporting schedules accompanying the consolidated financial statements, we made certain inquiries of management and evaluated the form, content, methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the consolidated financial statements. We compared and reconciled the additional supporting schedules to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

REQUIRED SUPPLEMENTARY INFORMATION

With respect to the required supplementary information accompanying the financial statements, we have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Joint CERS-KRS Audit Committee
Kentucky Public Pensions Authority
December 8, 2021
Page 5 of 5

This communication is intended solely for the information and use of management, the Joint CERS-KRS Audit Committee, and others within the KPPA, and is not intended to be and should not be used by anyone other than those specified parties.

We appreciate this opportunity to be of service and extend our thanks to everyone at the KPPA for their cooperation and assistance. We would be pleased to discuss any of the above matters with you at your convenience.

Blue & Co., LLC

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 30, 2021

Subject: Final Audit Report Released

Please find attached the final audit report entitled *Review of the Employer Penalty Invoice Waiver Process*. The report is dated November 19, 2021. The Division of Internal Audit Administration noted two findings, which are summarized below. The detailed findings and recommendations as well as management's responses are attached for your review. A separate management letter was not issued.

Audit Results

1. Support for employer penalty invoice waivers is kept in the Outlook email account of the Division Director of Accounting, which is not accessible by all staff involved in the waiver process.
2. Employer Penalty Invoice Waiver Policy and related procedures need to be updated.

In addition to the items above, we also noted that approved minutes for five Audit Committee meetings were not posted on the Kentucky Public Pensions Authority (KPPA) website. We communicated this to KPPA Executive Management.

Attachment

No action is required of the Committee.



KPPA
Kentucky Public Pensions Authority

Review of the Employer Penalty Invoice Waiver Process
as of September 27, 2021

November 19, 2021

Executive Summary

The following findings were noted during our review of the Employer Penalty Invoice Waiver process. The related recommendations can be found in the Audit Results section of the report.

1. Support for employer penalty invoice waivers is kept in the Outlook email account of the Division Director of Accounting, which is not accessible by all staff involved in the waiver process.
2. Employer Penalty Invoice Waiver Policy and related procedures need to be updated.

Commendations

We would like to thank the Division of Accounting (Accounting) staff for their assistance on this audit. All staff were helpful in addressing questions and were knowledgeable about the process reviewed. Although this is a busy time for Accounting staff, they took time to meet with us on multiple occasions and ensured all of our questions were addressed. We noted that the percentage of waived invoices has been decreasing since fiscal year 2016, which shows a commitment to collecting penalties due and properly training employers on how to submit the required information in a timely manner. During testing, we noted several areas that were working effectively and efficiently:

1. Waivers were only granted by authorized personnel.
2. Reasoning for waivers complied with established policies.
3. Requests for waivers were reviewed timely.
4. Employers were not granted multiple waivers without proper justification.

Background

Each month, employers must submit three items to the Kentucky Public Pensions Authority (KPPA) - a summary contribution report, a detailed contribution report, and their contribution payment. These items are due by the 10th of the following month (i.e. July information is due August 10th). If any of the items are received past the due date, a penalty invoice is automatically generated in the START line of business system. The amount of the penalty is the interest on the delinquent contribution (calculated at the actuarial rate) or \$1,000, whichever is greater.

The penalty invoice shows up in the employer's account. Upon seeing the invoice, the employer may call or send an email to the Division Director of Accounting to request that the penalty be waived. Upon receiving the request, the Division Director of Accounting will research the situation as well as review prior filing history and history of penalties waived. Penalties that are a result of a KPPA error are always waived. The employer receives an email explaining whether the penalty will be waived. If the request is denied, the employer can appeal the decision to the KPPA Office of Legal Services.

Objective

The objectives of our Employer Penalty Invoice Waiver audit were to ensure internal controls were in place and operating effectively. We also ensured compliance with applicable state regulations and policies and procedures established by the Board of Trustees (Board) for the County Employees Retirement System (CERS) and Kentucky Retirement Systems (KRS) as well as the KPPA, CERS, and KRS management teams.

Scope and Sampling

From December 1, 2019 – June 30 2021, KPPA created 250 employer penalty invoices; 57 of those were waived. Auditor reviewed 100% of the waived employer penalty invoices.

Methodology

The following steps were performed to ensure the objectives of the Employer Penalty Invoice Waiver audit were met.

1. Reviewed each waived employer penalty invoice and ensured the penalty was waived by authorized personnel.
2. Reviewed each waived employer penalty invoice and ensured the reason for the waiver was documented in the START line of business system.
3. Reviewed each waived employer penalty invoice and ensured the reason for the waiver complied with the established policy.
4. Compared the date each waived employer penalty invoice was created to the date the invoice was cancelled and ensured the request for waiver was resolved within a reasonable time.
5. For each employer who was granted a waiver during our scope, reviewed the employer's prior waiver history to ensure the employer was not granted an unreasonable number of waivers.
6. For the employers who were granted a waiver during our scope, determined the reasons for the waivers. Reviewed these same employers for January 1, 2012 to November 30, 2019 to determine if the employers received waivers during prior years and, if so, to determine if the reasons for the waivers were similar. Please see Exhibit A for results.
7. Generated report to show the status of employer penalty invoices from fiscal years 2011 to 2020. Determined the number of penalty invoices created and the number waived. Analyzed this information by retirement plan. Please see Exhibit B for results.

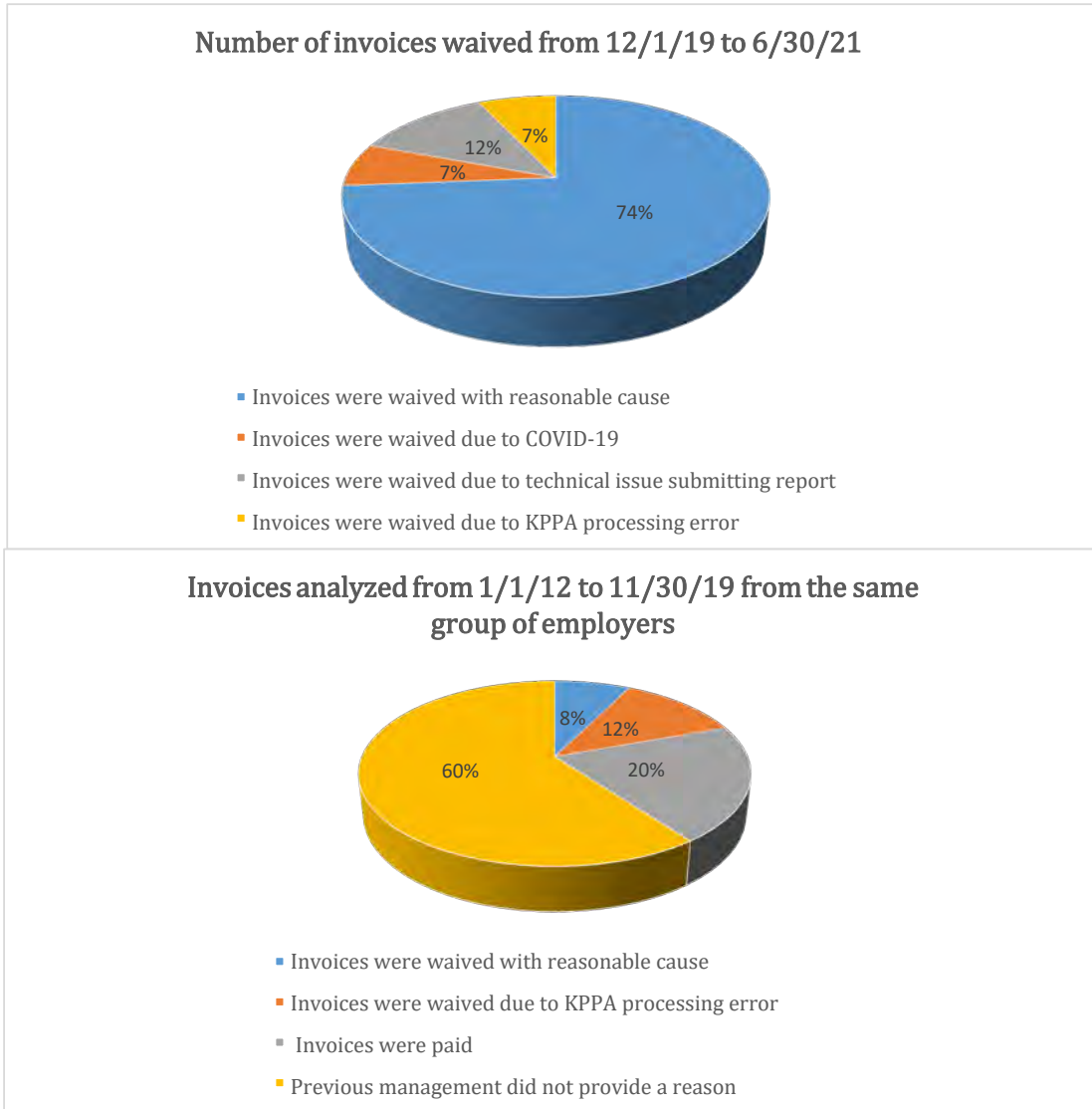
This report is intended solely for use by the Division of Accounting; the Joint Audit Committee; the CERS and KRS Boards; and the Executive Management teams for KPPA, CERS, and KRS. This report is not intended to be, and should not be, used by anyone other than the specified parties. All final reports are subject to Open Records Requests.

Audit Results

Item #1	Support for employer penalty waivers not easily accessible by all staff.
Condition	From December 1, 2019 to June 30, 2021, KPPA created 250 penalty invoices, 57 (23%) of these invoices were waived. Detailed support for these waivers is kept in the Outlook email account of the Division Director of Accounting. Comments in START did not always contain the details regarding the circumstance that led to the waiver.
Criteria	KPPA Employer Penalty Invoice Waiver Policy states, "In all cases where a penalty is waived, a detailed explanation shall be recorded in the START line of business system. The circumstances that caused the penalty to be waived must be provided in detail."
Cause	Current policy requires comments to be left in the START line of business system, but does not require that supporting documents be uploaded to the system or stored in a centralized location.
Effect	If a question were to arise about a penalty invoice waiver and the email account for the Division Director of Accounting were inaccessible, KPPA may not be able to explain why a waiver was allowed or denied.
Recommendation	Support for penalty invoice waivers should be stored in a centralized location accessible to staff involved in the penalty invoice waiver process. If feasible, support for penalty invoice waivers should be uploaded into the START line of business system. If supporting documents are uploaded to START, the comments left for the waivers could reference the uploaded documents, rather than providing specific details pertaining to why the waiver was granted.
Management Response	Management concurs with the recommendation. The Accounting Director will work with the Division of Enterprise and Technology Services to determine if emails may be saved in the START line of business system or another centralized location.
Implementation Date	February 28, 2022

Item #2	Policy and procedures are not up-to-date.
Condition	Employer Penalty Invoice Waiver Policy and related procedures are not up-to-date: <ul style="list-style-type: none"> * Policy was approved in November 2019, but a signed copy is not on file. * Policy and procedures reference Kentucky Retirement Systems rather than KPPA. * Policy does not reference that waivers are required to be reported quarterly to the Joint Audit Committee. * Procedures uploaded to SharePoint include a "draft" watermark.
Criteria	200 Kentucky Administrative Regulation (KAR) 38:070 states, "Each fiscal officer shall develop and document internal controls to both prevent and detect abuse, unintentional errors, and the fraudulent disbursement of funds or use of state assets...An internal control plan shall include...Detailed procedures to be followed in the performance of job duties and functions to emphasize duties that comprise the overall framework of accountability and internal controls, and to help ensure the continuation of agency operations in the event of staffing changes...Assessment of the control environment, risks, impact of abuse, unintentional errors and potential fraud for...disbursements." House Bill 484 (Regular Session 2020) transferred administration of the retirement systems to the newly created KPPA.
Cause	Accounting staff have been working on several things since the transition on April 1, 2021. They have not yet gotten the chance to update the policy referenced in this audit.
Effect	New employees could misinterpret policies and assume they apply only to the Kentucky Retirement Systems Board of Trustees rather than to KPPA as a whole.
Recommendation	Accounting staff should update the Employer Penalty Invoice Waiver Policy and related procedures: <ul style="list-style-type: none"> * Change references from the Kentucky Retirement Systems to KPPA. * Add the step for reporting waivers to the Joint Audit Committee. * Ensure the updated policy is signed by Executive Management. * Remove the "draft" watermark from the procedures saved to SharePoint.
Management Response	Management concurs with the recommendation. The Penalty Waiver Policy and procedures will be updated with the recommended changes.
Implementation Date	February 28, 2022

Exhibit A - Analysis of Reasons for Employer Penalty Invoice Waivers

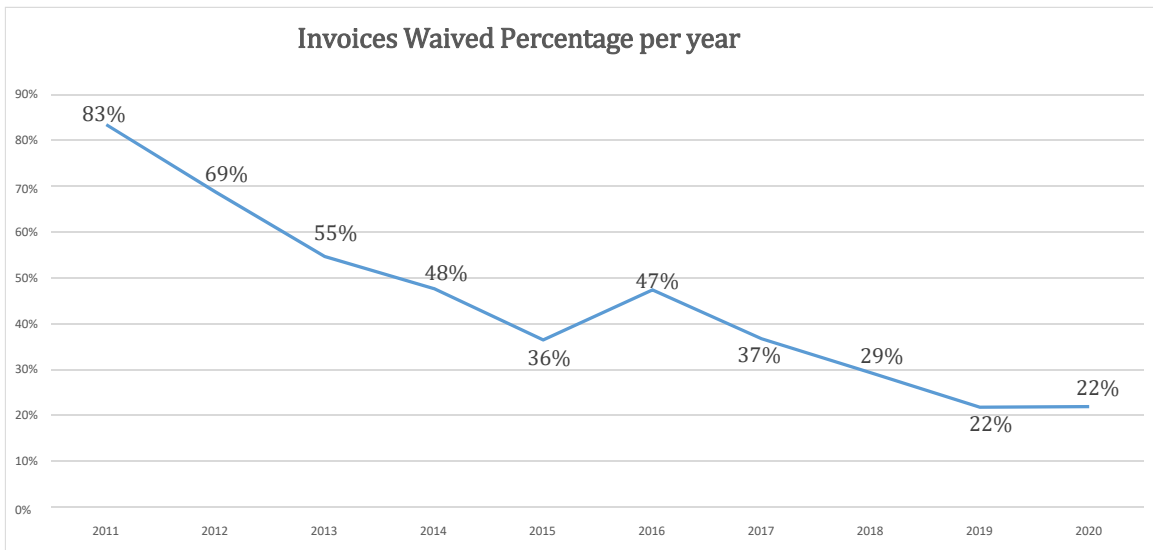
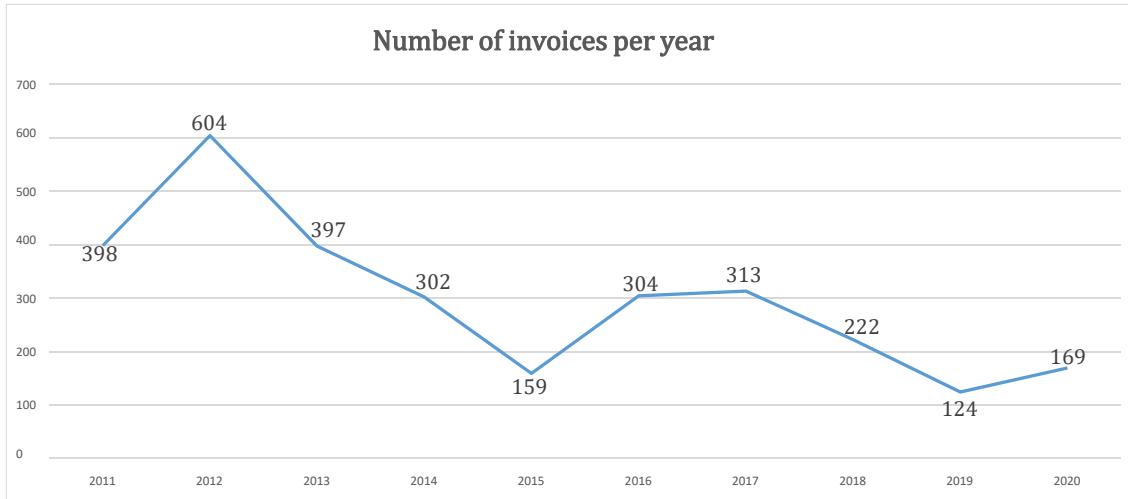


12/1/2019 to 6/30/2021	Number of invoice waived
Invoices were waived with reasonable cause	42
Invoices were waived due to COVID-19	4
Invoices were waived due to technical issue submitting report	7
Invoices were waived due to KPPA processing error	4

1/1/2012 to 11/30/2019 from the employers above	Invoice Analysis
Invoices were waived with reasonable cause	8
Invoices were waived due to KPPA processing error	13
Invoices were paid	22
Previous management did not provide a reason	65

Exhibit B - Analysis of Employer Penalty Invoices 2011 - 2020

Employer Waived Penalties annual report from 2011 to 2020



Year	Number of invoices	Invoices Waived Percentage
2011	398	83%
2012	604	69%
2013	397	55%
2014	302	48%
2015	159	36%
2016	304	47%
2017	313	37%
2018	222	29%
2019	124	22%
2020	169	22%

2020

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	28	3	25	0	27,989.81	10.71%
CERS Non-Hazardous	126	23	62	41	68,579.86	18.25%
KERS Hazardous	1	0	1	0	1,260.31	0.00%
KERS Non-Hazardous	14	11	3	0	3,000.00	78.57%
Total	169	37	91	41	100,829.98	21.89%

2019

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	31	4	27	0	29,076.72	12.90%
CERS Non-Hazardous	85	17	52	16	52,069.24	20.00%
KERS Hazardous	0	0	0	0	0.00	N/A
KERS Non-Hazardous	8	6	2	0	2,000.00	75.00%
Total	124	27	81	16	83,145.96	21.77%

2018

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	58	16	38	4	41,796.50	27.59%
CERS Non-Hazardous	133	35	75	23	75,000.00	26.32%
KERS Hazardous	3	0	3	0	4,485.67	0.00%
KERS Non-Hazardous	28	14	14	0	14,361.40	50.00%
Total	222	65	130	27	135,643.57	29.28%

2017

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	62	20	41	1	41,000.00	32.26%
CERS Non-Hazardous	192	73	95	24	95,000.00	38.02%
KERS Hazardous	5	1	4	0	4,327.38	20.00%
KERS Non-Hazardous	54	21	31	2	41,581.29	38.89%
Total	313	115	171	27	181,908.67	36.74%

2016

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	56	27	25	4	27,160.15	48.21%
CERS Non-Hazardous	198	88	104	6	112,603.68	44.44%
KERS Hazardous	1	1	0	0	0.00	100.00%
KERS Non-Hazardous	49	28	20	1	24,471.31	57.14%
Total	304	144	149	11	164,235.14	47.37%

2015

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	32	8	24	0	27,824.56	25.00%
CERS Non-Hazardous	96	38	46	12	50,402.15	39.58%
KERS Hazardous	0	0	0	0	0.00	N/A
KERS Non-Hazardous	31	12	19	0	25,480.63	38.71%
Total	159	58	89	12	103,707.34	36.48%

2014

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	56	27	25	4	27,160.15	48.21%
CERS Non-Hazardous	196	88	102	6	110,603.68	44.90%
KERS Hazardous	1	1	0	0	0.00	100.00%
KERS Non-Hazardous	49	28	20	1	24,471.32	57.14%
Total	302	144	147	11	162,235.15	47.68%

2013

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	64	38	23	3	25,288.10	59.38%
CERS Non-Hazardous	240	134	100	6	109,689.90	55.83%
KERS Hazardous	6	6	0	0	0.00	100.00%
KERS Non-Hazardous	87	39	48	0	112,148.14	44.83%
Total	397	217	171	9	247,126.14	54.66%

2012

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	106	65	41	0	57,709.13	61.32%
CERS Non-Hazardous	388	270	113	5	121,558.80	69.59%
KERS Hazardous	2	2	0	0	811.78	100.00%
KERS Non-Hazardous	108	78	30	0	53,063.45	72.22%
Total	604	415	184	5	233,143.16	68.71%

2011

Retirement Plan	Invoices Created	Invoices Cancelled/ Waived	Invoices Paid	Outstanding	Amount Collected	Invoice Waived Percentage
CERS Hazardous	64	53	11	0	11,000.00	82.81%
CERS Non-Hazardous	275	226	49	0	49,000.00	82.18%
KERS Hazardous	4	1	3	0	10,098.34	25.00%
KERS Non-Hazardous	55	52	3	0	5,758.93	94.55%
Total	398	332	66	0	75,857.27	83.42%



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	85,830	3,518	8,416	97,763	62,194	57.19%	3
Accounts Receivable - Investments	29,932	7,604	3,652	41,188	111,177	-62.95%	4
Total Receivables	115,762	11,121	12,068	138,951	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	3,380,264	925,971	381,002	4,687,236	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	\$3,211,062	\$882,579	\$361,499	\$4,455,139	\$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	290,439	14,038	15,395	319,871	271,208	17.94%	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	-	-	3
Total Contributions	363,093	18,743	16,625	398,462	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%	4
Interest/Dividends	18,553	6,525	2,225	27,303	19,343	41.15%	5
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%	6
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%	7
Net Investment Income	27,860	9,567	3,275	40,703	156,240		
Total Additions	390,954	28,310	19,901	439,165	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%	8
Administrative Expenses	3,594	371	72	4,036	3,186	26.71%	9
Total Deductions	264,906	20,659	16,062	301,627	292,325		
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits							
	126,047	7,651	3,839	137,537	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	\$3,211,062	\$882,579	\$361,499	\$4,455,139	\$3,518,257		

NOTE - Variance Explanation

1) Employer Contributions increased due to an increase in covered payroll and Employer contribution rates for SPRS, as well as Actuarial Accrued Liability (AAL) contributions received in KERS..

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

3) Employer Cessation contributions received from Kentucky Housing Corporation.

NOTE - Variance Explanation continued on next page.

4) *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.*

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

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

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

8) *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.*

9) *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, 2021, with Comparative Totals as of September 30, 2020 (\$ In Thousands)

	KERS		SPRS	KPPA Total		Percentage of Change	Note
	Non-Hazardous	Hazardous		2022	2021		
ASSETS							
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	13,383	540	787	14,710	16,955	-13.24%	3
Investment Accounts Receivable	11,974	5,369	2,045	19,387	53,047	-63.45%	4
Total Receivables	25,357	5,908	2,832	34,097	70,002	-76.69%	
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	1,528,333	660,767	263,567	2,452,666	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	\$1,378,313	\$629,014	\$248,495	\$2,255,822	\$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 decrease in Accounts Receivable is due a reduced amount of outstanding invoices for employer insurance contributions for KERS and SPRS.
- 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.
- 12) The increase in Opportunistic is due to additional funding and positive market conditions increasing market values.

NOTE - Variance Explanation continued on next page.

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	\$33,454	\$184	\$2,248	\$35,887	\$41,294	-13.09%	1
Medicare Drug Reimbursement	-	0	-	0	0		
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	-		2
Total Contributions	45,835	782	2,300	48,917	44,654		
INVESTMENT INCOME							
From							
Net Appreciation (Depreciation) in FV of Investments	4,206	6,769	3,139	14,115	78,104	-81.93%	3
Interest/Dividends	8,658	4,552	1,759	14,968	10,167	47.22%	4
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%	5
Less: Performance Fees	2,580	1,974	842	5,397	1,527	253.49%	6
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%	7
Net Investment Income	8,817	8,595	3,761	21,173	85,141		
Total Additions	54,652	9,377	6,061	70,089	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%	8
Excise Tax Insurance	3	-	-	3	-	0.00%	
Total Deductions	29,461	5,253	3,570	38,284	41,073		
Net Increase (Decrease) in Fiduciary Net Position Restricted for OPEB	25,191	4,124	2,491	31,806	88,723		
Total Fiduciary Net Position Restricted for OPEB							
Beginning of Period	1,353,123	624,889	246,004	2,224,016	1,721,483		
End of Period	\$1,378,313	\$629,014	\$248,495	\$2,255,822	\$1,810,206		
NOTE - Variance Explanation Differences due to rounding							
1) Employer Contributions decreased due to lower contribution rates for KERS and SPRS, as well as a decline in covered payroll for KERS and KERH..							
2) Employer Cessation contributions received from Kentucky Housing Corporation.							
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.							
4) The increase in Interest/Dividends is due to increased income from Private Equity, Core Fixed Income, and Specialty Credit asset classes.							
5) The management fees are up due to the increase in market values across all asset classes.							
6) The increase in Performance fees is due to favorable market conditions resulting in higher performance fees primarily within private equity.							
7) Variance is a result of the demand of the Securities Lending Program.							
8) Self-Funded Healthcare Costs fluctuate year to year based on actual claims paid for a small group of retirees.							

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

Account Name	Budgeted	Actual		Percent Remaining	KERS NH	KHAZ	SPRS	KRS Total
		Expenses	Remaining		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		
 KERS Kentucky Employees Retirement System						
 SPRS State Police Retirement System						
Member Contributions	\$22.2	\$22.1	\$4.7	\$5.1	\$1.2	\$1.2
Employer Contributions	340.9	240.2	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	375.4	272.1	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	110.5	15.1	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	126.0	114.8	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	\$3,211.0	\$2,477.0	\$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		
 KERS Kentucky Employees Retirement System						
 SPRS State Police Retirement System						
Employer Contributions	\$43.0	\$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	4.7	4.2	1.8	2.0	0.6	0.8
Total Inflows	50.5	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	21.0	13.4	(2.6)	(2.4)	(0.7)	(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	25.2	60.0	4.1	20.3	2.4	8.4
Beginning of Period	1,353.1	1,006.5	624.9	514.7	246.0	200.2
End of Period	\$1,378.3	\$1,066.5	\$629.0	\$535.0	\$248.4	\$208.6



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)	
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 the invoice date. Employer Pension Spiking is in effect only for retirements prior to July 1, 2018, therefore, unless there has been a recently created invoice for a backdated retirement, all of these invoices are greater than 12 months old.

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

KPPA ADMINISTRATIVE BUDGET REQUEST Fiscal Years 23 and 24						
Acc't #	Account Name	FY21 FYE Expenditures (through 6/30/2021)	FY22 Budgeted	FY22 Q1	FY23 Budget Requested	FY24 Budget Requested
		\$35,750,705	\$48,005,500	\$10,500,921	\$48,255,100	\$48,801,900
PERSONNEL						
111	Salaries/Wages	14,349,829	16,900,000	4,316,718	17,069,000	18,000,000
113	Casual Labor	-	-	-	-	-
114	Wages (Per Diem)	-	-	-	-	-
115	Wages (Overtime)	63,302	300,000	40,397	315,000	320,000
119	Wages (Block 50)	13,015	42,000	8,487	42,500	4,300
120	Benefits	-	-	-	-	-
120	Miscellaneous	-	-	-	-	-
121	Emp Paid FICA	1,024,218	1,127,000	309,041	1,200,000	1,300,000
122	Emp Paid Retirement	11,566,766	14,478,107	3,426,929	14,633,033	14,752,681
123	Emp Paid Health Ins	2,189,835	2,500,000	735,904	2,800,000	3,100,000
124	Emp Paid Life Ins	2,949	3,250	957	3,500	3,800
125	Emp Paid HRA	-	-	-	-	-
126	Health Insurance Admin Fee	-	-	-	-	-
127	HRA Adm Fee	-	-	-	-	-
128	Emp Paid Sick Leave	13,786	115,650	-	116,400	117,500
129	Adoption Assistance Benefit	-	-	-	-	-
111A	Escrow For Admin Fees	-	-	-	-	-
131	Workers Compensation	75,163	77,100	75,163	77,100	77,100
132	Unemployment	-	3,600	-	-	-
133	Employee Training	9,685	13,500	2,421	14,000	14,250
133I	Investment Employee Training	-	2,400	-	2,500	2,600
133T	Audit Employee Training	-	2,500	-	2,500	2,600
135	Bonds	-	-	-	-	-
LEGAL & AUDITING SERVICES						
141	Legal Hearing Officers	77,000	84,600	16,665	87,000	90,000
141A	Legal (Stoll, Keenon)	145,595	180,000	9,199	225,000	250,000
141D	Frost Brown (Tax Advisor)	226,388	173,000	(11,335)	180,000	182,000
141E	Reinhart	10,460	24,000	-	27,000	30,000
141F	Ice Miller	304,712	336,000	303	340,000	340,500
141G	Johnson Bowman Branco	-	150,000	25,375	155,000	160,000
141L	Legal Expense	202	12,000	-	15,000	15,000
142	Auditing	72,047	118,350	41,385	120,000	122,000
CONSULTING SERVICES						
146	Medical Reviewers	316,186	1,200,000	300,493	1,300,000	1,350,000
146A	Medical Reports	-	-	-	-	-
146B	Medical Exams	-	-	-	-	-
146C	Escrow for Actuary Fees	(20,000)	12,000	-	-	-
146E						
CONTRACTUAL SERVICES						
150	Miscellaneous Contracts	12,077	22,750	8,850	25,000	25,000
150C	Health Consultant	-	-	-	-	-
150D	Banking	-	-	-	-	-
150E						

KPPA ADMINISTRATIVE BUDGET REQUEST Fiscal Years 23 and 24						
Acc't #	Account Name	FY21 FYE Expenditures (through 6/30/2021)	FY22 Budgeted	FY22 Q1	FY23 Budget Requested	FY24 Budget Requested
PERSONNEL (continued)						
150F	Lexus Nexus	-	-	-	-	-
150G	Human Resources Consulting	5,794	6,600	5,794	7,000	7,200
150H	Health Insurance Adminstrative Expense	-	-	-	-	-
150I	Investment Consulting	-	-	-	-	-
150J	Pharmacy Claims TPA	-	-	-	-	-
150K	Medical Claims TPA	-	-	-	-	-
159	Actuarial Services	468,490	700,000	81,179	750,000	750,000
162	Facility Security Charges	70,222	112,000	17,887	20,000	22,000
193	Tuition Assistance	-	-	-	-	-
PERSONNEL SUBTOTAL		\$30,997,722	\$38,696,407	\$9,411,811	\$39,526,533	\$41,038,531
OPERATIONAL						
211	Natural Gas	22,951	25,200	1,227	26,460	27,783
212	Electric	124,816	138,000	30,238	144,900	152,145
221	Rent-NonState Building	55,443	52,000	12,661	54,600	57,330
222	Building Rental - PPW	1,005,815	1,100,000	240,524	1,155,000	1,212,750
223	Equipment Rental	7,163	-	-	-	-
224	Copier Rental	55,520	122,587	15,890	128,716	135,152
226	Rental Carpool	3,881	4,800	970	5,040	5,292
232	Vehicle/Equip. Mainten.	912	1,350	249	1,418	1,488
241	Postage	552,199	610,000	24,300	640,500	672,525
242	Freight	-	600	114	630	662
251	Printing (State)	4,992	6,000	320	6,300	6,615
252	Printing (non-state)	102,293	112,500	4,219	118,125	124,031
254	Insurance	3,802	6,000	5,422	6,300	6,615
256	Garbage Collection	5,294	6,000	1,324	6,300	6,615
259	Conference Expense	13,499	18,250	4,307	19,163	20,121
259I	Conference Exp. Investment	-	6,000	-	6,300	6,615
259T	Conference Exp. Audit	720	1,500	-	1,575	1,654
300	MARS Usage	47,646	52,800	6,775	55,440	58,212
302	COVID-19 Expenses	153,032	168,000	3,716	176,400	185,220
321	Office Supplies	38,837	42,600	16,170	44,730	46,967
331	Data Processing Supplies	-	-	-	-	-
343	Motor Fuels & Lubricants	-	-	-	-	-
346	Furniture & Office Equipment	8,215	9,600	-	10,080	10,584
361	Travel (In-State)	1,473	12,000	1,565	12,600	13,230
361I	Travel (In-State) Investment	-	300	-	315	331
361T	Travel (In-State) Audit	-	300	-	315	331
362	Travel (Out of State)	-	6,000	-	6,300	6,615

KPPA ADMINISTRATIVE BUDGET REQUEST Fiscal Years 23 and 24						
Acc't #	Account Name	FY21 FYE Expenditures (through 6/30/2021)	FY22 Budgeted	FY22 Q1	FY23 Budget Requested	FY24 Budget Requested
OPERATIONAL (continued)						
362I	Travel (Out of State) Invest	397	38,700	-	40,635	42,667
362T	Travel (Out of State) Audit	-	450	-	473	496
381	Dues & Subscriptions	44,834	49,000	10,559	51,450	54,023
381I	Dues & Subscriptions Invest	8,551	9,600	3,613	10,080	10,584
381T	Dues & Subscriptions Audit	2,037	3,000	1,700	3,150	3,308
399	Miscellaneous	788	1,200	128	1,260	1,323
399I	Miscellaneous Investment	-	200	-	210	221
399T	Miscellaneous Audit	-	200	-	210	221
601	Capital Outlay	-	-	-	-	-
802	COT Charges	21,640	24,000	3,940	25,200	26,460
814	Telephone - Wireless	4,734	5,400	1,368	5,670	5,954
815	Telephone - Other	100,686	120,000	26,541	126,000	132,300
847	Computer Equip./Software	2,360,814	2,640,000	696,646	2,772,000	2,910,600
847I	Comp. Equip./Software Invest	-	-	-	-	-
847T	Comp. Equip./Software Audit	-	-	-	-	-
	Major Legislative Implementation	-	3,914,956	-	3,064,722	1,816,329
OPERATIONAL SUBTOTAL		\$4,752,984	\$9,309,093	\$1,114,484	\$8,728,567	\$7,763,369
TOTALS		\$35,750,705	\$48,005,500	\$10,526,296	\$48,255,100	\$48,801,900
<i>Differences due to rounding.</i>						



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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



**Kentucky Public
Pensions Authority**

November 1, 2021

Office of the State Budget Director
Governor's Office for Policy and Management
Legislative Research Commission
Capitol Annex, 702 Capitol Avenue
Frankfort, KY 40601

Re: Biennial Budget Request Submission Statement

Ladies and Gentlemen:

This is to advise you that the Kentucky Public Pensions Authority (KPPA) is submitting its Budget Request for Fiscal Years 2023 and 2024 for your review. Accompanying this letter is one (1) complete copy of the budget request for submission to the Governor's Office for Policy and Management and three (3) complete copies of the budget request for submission to the Legislative Research Commission, as specified in the *Branch Budget Request Manual*.

If you have any questions regarding this submission, please contact me at 696-8444.

Sincerely,

David L. Eager /s/ David L. Eager
Executive Director

enclosures

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Total Request: Financial Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD C1/C2		Agency: Kentucky Public Pension Authority				
Governmental Branch: Executive Branch		Appropriation: Kentucky Public Pension Authority				
Cabinet: General Government		Program/Service Unit:				
		Sub Program:				
		Posting Unit:				
	FY 2019-20 Actual	FY 2020-21 Actual	FY 2021-22 Budgeted	FY 2022-23 Requested	FY 2023-24 Requested	
SOURCE OF FUNDS						
General Fund						
Regular Appropriation	1,086,200	384,000	0	0	0	
Surplus Expenditure Plan	60,094,500	0	0	0	0	
Total General Fund	61,180,700	384,000	0	0	0	
Restricted Funds						
Balance Forward	0	0	0	1,220,500	3,493,900	
Current Receipts	23,979	13,497	0	0	0	
Non-Revenue Receipts	35,961,782	35,753,509	50,528,500	50,528,500	50,528,500	
Total Restricted Funds	35,985,761	35,767,006	50,528,500	51,749,000	54,022,400	
TOTAL SOURCE OF FUNDS	97,166,461	36,151,006	50,528,500	51,749,000	54,022,400	
EXPENDITURES BY CLASS						
Personnel Costs	31,729,820	32,070,246	43,171,100	42,118,100	42,664,700	
Operating Expenses	4,255,332	3,612,784	6,136,900	6,137,000	6,137,200	
Grants Loans Benefits	61,179,685	384,000	0	0	0	
Capital Outlay	464	83,977	0	0	0	
TOTAL EXPENDITURES BY CLASS	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900	
EXPENDITURES BY FUND SOURCE						
General Fund	61,179,539	384,000	0	0	0	
Restricted Funds	35,985,761	35,767,006	49,308,000	48,255,100	48,801,900	
TOTAL EXPENDITURES BY FUND	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900	
EXPENDITURES BY UNIT						
Kentucky Public Pension Authority	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900	
TOTAL EXPENDITURES BY UNIT	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900	

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Total Request: Expenditure Detail Summary Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD C-3		Agency: Kentucky Public Pension Authority			
		Appropriation: Kentucky Public Pension Authority			
		Program/Service Unit:			
Governmental Branch: Executive Branch		Sub Program:			
Cabinet: General Government		Posting Unit:			
	FY 2019-20 Actual	FY 2020-21 Actual	FY 2021-22 Budgeted	FY 2022-23 Requested	FY 2023-24 Requested
EXPENDITURES BY FUND SOURCE					
General Fund	61,179,539	384,000	0	0	0
Restricted Fund	35,985,761	35,767,006	49,308,000	48,255,100	48,801,900
TOTAL EXPENDITURES BY FUND	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900
EXPENDITURE CATEGORY					
Personnel Cost					
E111 Regular Salaries & Wages	13,452,214	13,827,013	16,325,000	15,900,700	16,083,800
Other Salaries & Wages	377,599	201,028	5,500	0	0
E121 Employer FICA	1,020,471	1,024,218	1,200,100	1,167,300	1,180,100
E122 Employer Retirement	11,350,048	11,566,766	13,416,800	13,056,400	13,209,400
E123 Health Insurance	2,189,619	2,192,639	2,744,900	2,763,300	3,025,000
E124 Life Insurance	3,005	2,949	300	0	0
Other Fringe Benefits	41,603	13,848	100,000	100,000	100,000
Subtotal Salaries & Fringes	28,434,559	28,828,462	33,792,600	32,987,700	33,598,300
E131 Worker's Compensation	11,719	75,163	75,200	11,100	11,100
Other Personnel Cost (E132-E139)	23,886	20,891	30,500	29,400	29,400
E141 Legal Services	681,760	764,356	3,220,000	3,220,000	3,220,000
E142 Auditing Services	160,351	72,047	500,000	500,000	500,000
Other Professional Services Contracts	2,344,900	2,239,103	5,481,300	5,363,900	5,299,900
E162 Security Guard Services	72,644	70,222	71,500	6,000	6,000
Total Personnel Cost	31,729,820	32,070,246	43,171,100	42,118,100	42,664,700
Operating Expenses					
E210 Utilities & Heating Fuels	180,852	147,767	240,000	240,000	240,000
Facilities & Support Services Charges	934,317	1,005,815	1,000,000	1,000,000	1,000,000
Other Rentals	139,628	122,006	200,000	200,000	200,000
E230 Maintenance & Repairs	1,267,870	792,427	2,729,000	2,729,000	2,729,000
E240 Postage & Related Services	411,556	552,199	426,200	426,200	426,200
E250 Miscellaneous Services	148,095	142,117	639,100	639,200	639,400
E260 Telecommunications	112,649	105,421	258,000	258,000	258,000
E270 Computer Services	66,800	69,286	140,000	140,000	140,000
E320 Supplies	216,548	209,832	150,000	150,000	150,000
E340 Commodities	642,143	417,998	3,000	3,000	3,000
E360 Travel Exp and Exp Allowance	81,371	1,870	149,500	149,500	149,500
E370 Miscellaneous Commodities	53,501	46,047	202,100	202,100	202,100
Total Operating Expenses	4,255,332	3,612,784	6,136,900	6,137,000	6,137,200
Grants/Loans/Benefits					
E460 Subsidies	-1,015	0	0	0	0
Transfers - Grants Loans Benefits	61,180,700	384,000	0	0	0
Total Grants/Loans/Benefits	61,179,685	384,000	0	0	0
Capital Outlay					
E606 Buildings/Fixed Equipment	464	0	0	0	0
E620 Computer Equipment	0	83,977	0	0	0
Total Capital Outlay	464	83,977	0	0	0
TOTAL EXPENDITURES	97,165,300	36,151,006	49,308,000	48,255,100	48,801,900

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Baseline Budget Request: Financial Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD A1/A2		Agency: Kentucky Public Pension Authority				
Governmental Branch: Executive Branch		Appropriation: Kentucky Public Pension Authority				
Cabinet: General Government		Program/Service Unit:				
		Sub Program:				
		Posting Unit:				
	FY 2019-20 Actual	FY 2020-21 Actual	FY 2021-22 Budgeted	FY 2022-23 Requested	FY 2023-24 Requested	
SOURCE OF FUNDS						
General Fund						
Regular Appropriation	1,086,200	384,000	0	0	0	
Surplus Expenditure Plan	60,094,500	0	0	0	0	
Total General Fund	61,180,700	384,000	0	0	0	
Restricted Funds						
Balance Forward	0	0	0	1,220,500	3,493,900	
Current Receipts	23,979	13,497	0	0	0	
Non-Revenue Receipts	35,961,782	35,753,509	49,226,000	50,278,900	49,732,100	
Total Restricted Funds	35,985,761	35,767,006	49,226,000	51,499,400	53,226,000	
TOTAL SOURCE OF FUNDS	97,166,461	36,151,006	49,226,000	51,499,400	53,226,000	
EXPENDITURES BY CLASS						
Personnel Costs	31,729,820	32,070,246	41,868,600	41,868,600	41,868,600	
Operating Expenses	4,255,332	3,612,784	6,136,900	6,136,900	6,136,900	
Grants Loans Benefits	61,179,685	384,000	0	0	0	
Capital Outlay	464	83,977	0	0	0	
TOTAL EXPENDITURES BY CLASS	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500	
EXPENDITURES BY FUND SOURCE						
General Fund	61,179,539	384,000	0	0	0	
Restricted Funds	35,985,761	35,767,006	48,005,500	48,005,500	48,005,500	
TOTAL EXPENDITURES BY FUND	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500	
EXPENDITURES BY UNIT						
Kentucky Public Pension Authority	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500	
TOTAL EXPENDITURES BY UNIT	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500	

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Baseline Budget Request: Expenditure Detail Summary Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD A-3		Agency: Kentucky Public Pension Authority			
		Appropriation: Kentucky Public Pension Authority			
		Program/Service Unit:			
Governmental Branch: Executive Branch		Sub Program:			
Cabinet: General Government		Posting Unit:			
	FY 2019-20 Actual	FY 2020-21 Actual	FY 2021-22 Budgeted	FY 2022-23 Requested	FY 2023-24 Requested
EXPENDITURES BY FUND SOURCE					
General Fund	61,179,539	384,000	0	0	0
Restricted Fund	35,985,761	35,767,006	48,005,500	48,005,500	48,005,500
TOTAL EXPENDITURES BY FUND	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500
EXPENDITURE CATEGORY					
Personnel Cost					
E111 Regular Salaries & Wages	13,452,214	13,827,013	15,745,800	15,808,000	15,841,900
Other Salaries & Wages	377,599	201,028	0	0	0
E121 Employer FICA	1,020,471	1,024,218	1,157,100	1,161,000	1,163,100
E122 Employer Retirement	11,350,048	11,566,766	12,927,400	12,978,700	13,006,700
E123 Health Insurance	2,189,619	2,192,639	2,559,800	2,559,800	2,559,800
E124 Life Insurance	3,005	2,949	0	0	0
Other Fringe Benefits	41,603	13,848	100,000	100,000	100,000
Subtotal Salaries & Fringes	28,434,559	28,828,462	32,490,100	32,607,500	32,671,500
E131 Worker's Compensation	11,719	75,163	75,200	75,200	75,200
Other Personnel Cost (E132-E139)	23,886	20,891	30,500	30,500	30,500
E141 Legal Services	681,760	764,356	3,220,000	3,220,000	3,220,000
E142 Auditing Services	160,351	72,047	500,000	500,000	500,000
Other Professional Services Contracts	2,344,900	2,239,103	5,481,300	5,363,900	5,299,900
E162 Security Guard Services	72,644	70,222	71,500	71,500	71,500
Total Personnel Cost	31,729,820	32,070,246	41,868,600	41,868,600	41,868,600
Operating Expenses					
E210 Utilities & Heating Fuels	180,852	147,767	240,000	240,000	240,000
Facilities & Support Services Charges	934,317	1,005,815	1,000,000	1,000,000	1,000,000
Other Rentals	139,628	122,006	200,000	200,000	200,000
E230 Maintenance & Repairs	1,267,870	792,427	2,729,000	2,729,000	2,729,000
E240 Postage & Related Services	411,556	552,199	426,200	426,200	426,200
E250 Miscellaneous Services	148,095	142,117	639,100	639,100	639,100
E260 Telecommunications	112,649	105,421	258,000	258,000	258,000
E270 Computer Services	66,800	69,286	140,000	140,000	140,000
E320 Supplies	216,548	209,832	150,000	150,000	150,000
E340 Commodities	642,143	417,998	3,000	3,000	3,000
E360 Travel Exp and Exp Allowance	81,371	1,870	149,500	149,500	149,500
E370 Miscellaneous Commodities	53,501	46,047	202,100	202,100	202,100
Total Operating Expenses	4,255,332	3,612,784	6,136,900	6,136,900	6,136,900
Grants/Loans/Benefits					
E460 Subsidies	-1,015	0	0	0	0
Transfers - Grants Loans Benefits	61,180,700	384,000	0	0	0
Total Grants/Loans/Benefits	61,179,685	384,000	0	0	0
Capital Outlay					
E606 Buildings/Fixed Equipment	464	0	0	0	0
E620 Computer Equipment	0	83,977	0	0	0
Total Capital Outlay	464	83,977	0	0	0
TOTAL EXPENDITURES	97,165,300	36,151,006	48,005,500	48,005,500	48,005,500

2022-2024 KENTUCKY BRANCH BUDGET
Baseline Budget Request: Program Narrative/Documentation Record

OPERATING BUDGET REPORT A-4

Agency: Kentucky Public Pensions Authority
 Appropriation Unit: Kentucky Public Pensions Authority
 Program/Service Unit: Kentucky Public Pensions Authority
 Sub Program:
 Posting Unit:

Governmental Branch: Executive Branch
 Cabinet/Function: General Government

PROGRAM/RESULTS DOCUMENTATION

I. PROGRAM DESCRIPTION/PURPOSE

	Actual FY 2019-20	Actual FY 2020-21	Budgeted FY 2021-22	Budget Request FY 2022-23	Budget Request FY 2023-24
Total Funding	\$ 47,702,500	\$ 48,888,200	\$ 48,005,500	\$ 48,005,500	\$ 48,005,500
Tier 1 (prior 2008)	52,424	47,528	42,775	38,498	34,648
Tier 2 (2008-2013)	22,330	20,760	18,944	17,286	15,774
Tier 3 (2014-present)	54,154	55,521	64,127	74,068	85,549
Active Members	128,908	123,809	125,380	129,852	135,971
Inactive Members	148,367	155,506	160,171	164,976	169,926
Retirees & Beneficiaries	117,665	121,728	125,380	129,141	133,015
Total Membership	394,940	401,043	411,397	423,969	438,912
Employers	1,468	1,468	1,468	1,468	1,468
Call Center Inbound Volume	275,163	283,012	291,084	299,388	307,928
Retirement & Death Benefits Paid	\$ 2,205,859,488	\$ 2,263,388,289	\$ 2,322,417,440	\$ 2,382,986,071	\$ 2,445,134,331
Refunds Paid	\$ 33,510,689	\$ 32,129,724	\$ 30,805,668	\$ 29,536,175	\$ 28,318,998
Medical Insurance Plan	\$ 5,986,675	\$ 5,464,690	\$ 4,988,218	\$ 4,553,290	\$ 4,156,284
Insurance Premiums Paid	\$ 375,793,133	\$ 375,598,593	\$ 375,404,153	\$ 375,209,813	\$ 375,015,575
Retirements	7,289	6,545	6,545	6,545	6,545

II. PROGRAM DESCRIPTION/PURPOSE

Kentucky Public Pensions Authority (KPPA) is the administrative arm of three retirement systems which are qualified governmental defined benefit plans under Section 401(a) of the Internal Revenue Code:

- **County Employees Retirement System (CERS)** is made up of employees of cities, counties, local government entities, and classified employees of school boards, is governed by the County Employees Retirement System Board of Trustees and is controlled by KRS 78.510 – 78.990;

- **Kentucky Employees Retirement System (KERS)** is made up of employees of state government, universities, health departments, certain boards, is governed by the Kentucky Retirement Systems Board of Trustees and is controlled by KRS 61.510 – 61.705; and
- **State Police Retirement System (SPRS)** includes only the uniformed officers of Kentucky State Police, is governed by the Kentucky Retirement Systems Board of Trustees and is controlled by KRS 16.505 – 16.652.

KRS 61.701, 61.702, and 78.5536 govern medical insurance benefits provided to retirees. The systems were established in the 1950s to provide a pension benefit that, when coupled with Social Security, would give career public employees a sufficient retirement income to maintain the employee's pre-retirement standard of living. The benefits provided serve employers by providing both a recruitment and retention tool.

In addition to the state laws and regulations applicable to its retirement plans, KPPA must comply with a multitude of federal tax laws governing the management of pension assets and payments in order to maintain the tax-exempt status of its pension plans. KPPA must also comply with other federal laws such as the Health Insurance Portability and Accountability Act (HIPAA), which established national standards for electronic healthcare transactions and national identifiers for providers, health plans, and employers. HIPAA also established requirements for the security and privacy of health data. Other compliance requirements have been added with the Affordable Care Act.

House Bill 484, passed during the 2020 Regular Session of the Kentucky General Assembly, and House Bill 9, passed during the 2021 Regular Session of the General Assembly, made significant changes to the governance and administrative structure of the Kentucky Public Pensions Authority. Most notably, the governance of the County Employees Retirement System was transferred to a separate 9-member board of trustees called the County Employees Retirement System (CERS). Another 9-member board of trustees called the Kentucky Retirement Systems (KRS) was established to oversee the Kentucky Employees Retirement System and the State Police Retirement System. The administrative entity comprising the office of counselors and professional staff that had previously been known as Kentucky Retirement Systems had its name changed to the Kentucky Public Pensions Authority (KPPA). It is governed by a third 8-member board composed of trustees from CERS and KRS. Daily system activities, including administrative support, investment management, benefits counseling, accounting and payroll functions, and legal services are performed by a staff of professional employees working at the state agency named KPPA.

All trustees have a fiduciary (legal) obligation to work solely in the best interests of the members of the systems their board administers, without preference to any particular group. All boards, including the 8-member KPPA board, are statutorily required to "... administer the retirement system in an efficient and cost effective manner for the taxpayers of the Commonwealth of Kentucky and shall take all actions available under the law to contain costs for the trusts, including costs for participating employers, members, and retirees." Additionally, the boards are required to invest the funds under the Prudent Person Rule. Investments are diversified among common stock, government and private bonds, real estate, private equity and cash equivalents. In-house investment staff manages approximately 20% of KRS' trust assets. A number of external managers invest the remainder of the assets in accordance with the Investment Policy Statement of each Board and subject to oversight by the Investment Committee of each Board, the CERS Board of Trustees, the KRS Board of Trustees, the KPPA staff, and independent investment consultants. An actuarial valuation must be conducted each year to determine the funded status of the 10 funds and to establish actuarially recommended employer contribution rates. KPPA is the umbrella agency for 3 retirement systems, two of which (KERS and CERS) have both a hazardous and a non-hazardous components. All five pension funds and the corresponding five insurance funds are actuarially separate funds. Therefore, the annual actuarial valuation determines the funded status of each of these ten funds and establishes actuarially recommended employer contribution rates for each. An annual independent audit is also performed. KPPA also provides updates on performance, funding, and other issues to the monthly meetings of the Public Pension Oversight Board of the Kentucky General Assembly.

Employers contribute a percentage of gross payroll determined by the annual actuarial valuation. KERS Non-hazardous employers contribute an additional flat amount based on their assigned percentage of the total unfunded liability as calculated within the annual valuation. This KERS Non-Hazardous-specific change was effective July 1, 2021, and was the result of HB 8 which passed in the 2021 Regular Session of the Kentucky General Assembly. Employees contribute at a fixed rate set by statute. The assets of the system are considered trust funds as defined by federal law and as such are not part of the Kentucky General Fund. KPPA provides daily assistance to almost 1,500 employers concerning their monthly reporting of contributions.

Retirement benefits are determined by a formula using years of service, a benefit factor, and a high five, high three or last five years average final salary. Benefits are payable for the retiree's lifetime. At retirement, the member receives a portion of the state's contribution toward medical insurance depending on years of service. There are enhanced benefits for employees in positions considered hazardous. Additional benefits also include death benefits and long-term disability. Disability recipients undergo a periodic review to determine their continued eligibility for benefits.

The total membership of the systems, which includes active, inactive, and retired members, is over 400,000 members. KPPA provides pre-retirement webinars and counseling to the more than 279,000 active employees and inactive members, including the provision of benefit estimates and service purchase cost calculations. When an employee retires, the retirement system processes the retirement application and then administers the monthly payment of retirement benefits and health insurance benefits for retirees and beneficiaries. Pre-Medicare eligible retirees participate in the Kentucky Employees Health Plan. Medicare eligible retirees participate in fully insured Medicare Advantage plans provided by Humana Insurance Company. A relatively small number of Medicare eligible retirees participate in plans that mirror the Medicare Advantage plans offered by Humana or in a Medical Only plan self-insured by KPPA. As of June 30, 2021, there were 121,728 retirees and beneficiaries receiving monthly benefit payments that totaled \$2.3 Billion.

III. PROGRAM RESULTS/FISCAL JUSTIFICATION

Kentucky Public Pensions Authority's administrative expenses are paid from the pension trust funds. No general fund dollars are used for administrative expenses. KPPA has submitted a 2023-2024 biennial budget request at the same expenditure level as the FY2022 budget period. Actual expenditures for fiscal year 2021 increased mainly due to increased employer contributions for retirement. It is anticipated that expenditures for computer software and equipment will increase with the implementation of a few Information Technology projects that are critical for security especially in the area of maintaining up-to-date software to meet data security compliance requirements including KRS 61.931 through 61.934 (RS 2014 HB5) and HIPAA. The software spending that is anticipated to increase includes the upgrade of the Microsoft Office suite to Microsoft 365, enhancements to self-service and security upgrades. The major governance and administrative changes to KPPA made by House Bill 484, passed during the 2020 Regular Session of the Kentucky General Assembly, and House Bill 9, passed during the 2021 Regular Session of the General Assembly have increased expenditures. These changes have added executive staff and require expenditures to support the three boards. The establishment of new Boards has increased expenditures in staffing and vendor contracts.

Additionally, KPPA has experienced increased spending on disability reviews due to a new vendor who supplies a holistic solution to the disability review process. KPPA was forced to select this course due to being unable to acquire the resources to piece-meal the tasks as we had traditionally. We experienced repeated poor responses to RFPs for medical examiners and delayed services due to limited numbers of medical examiners. A full cost analysis was performed before making this decision and although more expensive now, in the long run it is anticipated this will provide cost-savings, improved efficiency and improved service to our members.

It remains financially untenable to obtain liability insurance for Kentucky Public Pensions Authority and its boards; therefore, the boards elected to self-insure for liability insurance. This continues to provide a cost savings for insurance premiums but is a potential significant unplanned outlay if forced to pay for services that would have been paid in a claim against the liability insurance. The same is true for cyber insurance. The cost of the premiums has made it unreasonable to purchase cyber insurance; therefore, this is another potentially significant unplanned outlay if KPPA experienced a major security breach.

KPPA currently faces and will continue to face for the foreseeable future, numerous challenges from ongoing litigation, investment regulations, and increased actuarial services for GASB 67, 68, 71, 72, 74, 75, and actuarial analysis of a dramatically increasing number of House and Senate bills related to pensions due to the low funding status of the funds administered by the CERS and KRS boards.

In summary, within the last twenty years, KPPA has gone from managing simplistic, single-tiered pension and insurance plans for each system (CERS, KERS and SPRS) controlled by one board, to a current model whereby KPPA is charged with administering complex, multi-tiered pension and insurance plans under the control of three unique boards. This biennial budget request reflects our commitment to meeting our member's needs and implementing pension-related bills, while maintaining fiscal responsibility.

2022-2024 KENTUCKY BRANCH BUDGET
Agency Publication Exhibit

Cabinet/Agency:
Appropriation Unit:

Publication Title	Quantity	Fund Source		FY 2021-22	FY 2022-23	FY 2023-24
		Restricted	Restricted			
Business Cards	-	350	200	200	-	-
Disability Retirement Brochure	1,000	-	850	-	-	-
Medicare Insurance Plans						
Medicare Mirror Plan Book	400	2,500	3,000	3,000	3,500	3,500
Medicare Medical Only Book	4,600	6,500	7,000	7,000	7,500	7,500
Non Medicare Insurance Plans						
Open Enrollment Book	40,000	5,000	5,500	5,500	6,000	6,000
Default Letter	3,000	-	1,000	1,000	1,000	1,000
Qualifying Events Book	2,500	1,500	2,000	2,000	2,500	2,500
New Retiree Book	22,000	6,000	6,500	6,500	7,000	7,000
Board Election Notices	70,000	4,000	1,000	1,000	-	-
1099	145,000	20,000	22,000	22,000	24,000	24,000
Sympathy Cards	5,000	-	3,000	3,000	-	-
Summary Annual Financial Report	4,000	4,500	5,000	5,000	5,500	5,500
PreRetirement Education Program Materials	5,000	-	10,000	10,000	10,000	10,000
Employer Training Program Materials	1,000	-	3,500	3,500	3,500	3,500
Active Member Mailing - Quasi Cessation	5,500	2,000	-	-	-	-
Paperless Election Notice	400,000	-	60,000	60,000	-	-
Miscellaneous Publication Expenses	40,000	10,000	10,000	10,000	10,000	10,000
Total		\$62,350	\$140,550	\$140,550	\$80,700	\$80,700

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Defined Calculations Budget Request: Financial Record
 All requested columns rounded to nearest \$100

PRIORITY
 Cabinet #: 1
 Agency #: 1

OPERATING BUDGET RECORD DCB-1/B2

Agency: Kentucky Public Pensions Authority

Appropriation: Kentucky Public Pensions Authority

Governmental Branch: Executive Branch
 Cabinet: General Government

Program/Service Unit:

Sub Program:

Posting Unit:

	FY 2022-23 Requested	FY 2023-24 Requested
SOURCE OF FUNDS		
Restricted Funds		
Non-Revenue Receipts	72,900	334,800
Total Restricted Funds	72,900	334,800
TOTAL SOURCE OF FUNDS	72,900	334,800
EXPENDITURES BY CLASS		
Personnel Costs	72,800	334,500
Operating Expenses	100	300
TOTAL EXPENDITURES BY CLASS	72,900	334,800
EXPENDITURES BY FUND		
Restricted Funds	72,900	334,800
TOTAL EXPENDITURES BY FUND	72,900	334,800
BUDGET POSITIONS COST BY FUND SOURCE		
Restricted Fds Cost of Positions	203,500	465,200
TOTAL FUNDS	203,500	465,200

2022-2024 Kentucky Branch Budget
Baseline Budget Request: Expenditure Detail Summary Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD A5		Agency: Kentucky Public Pension Authority				
Governmental Branch: Executive Branch		Appropriation: Kentucky Public Pension Authority				
Cabinet: General Government		Program/Service Unit:				
		Sub Program:				
		Posting Unit:				
Personnel Budget by Source of Funds	FY 2019-20 Actual	FY 2020-21 Actual	FY 2021-22 Budgeted	FY 2022-23 Requested	FY 2023-24 Requested	
Number of Positions						
Full Time Positions						
Filled	256	256	256	270	270	
Vacant	0	0	0	35	0	
Total Full Time Positions	256	256	256	305	270	
Part Time Positions						
Filled	1	1	1	3	3	
Total Part Time Positions	1	1	1	3	3	
Other Positions						
Filled	5	5	5	10	10	
Total Other Positions	5	5	5	10	10	
GRAND TOTAL						
1. Number of Positions						
Filled	28,057,222	28,627,696	32,490,362	32,607,783	32,671,783	
Vacant	0	0	0	35	0	
Total Positions	28,057,222	28,627,696	32,490,362	32,607,818	32,671,783	
2. Source of Funds (\$)						
Restricted Fds Cost of Positions	28,056,960	28,627,434	32,490,100	32,607,500	32,671,500	
Total Funds	28,056,960	28,627,434	32,490,100	32,607,500	32,671,500	

2022-2024 Kentucky Branch Budget
Defined Calculations Budget Request: Expenditure Detail Summary Record
All requested columns rounded to nearest \$100

PRIORITY
Cabinet #: 1
Agency #: 1

OPERATING BUDGET RECORD DCB-3
Governmental Branch: Executive Branch
Cabinet: General Government

Agency: Kentucky Public Pensions Authority
Appropriation: Kentucky Public Pensions Authority
Program/Service Unit:
Sub Program:
Posting Unit:

REQUEST TITLE: DEFINED CALCULATIONS

	FY 2022-23 Requested	FY 2023-24 Requested
EXPENDITURES BY FUND		
Restricted Fund	72,900	334,800
<u>TOTAL EXPENDITURES BY FUND</u>	<u>72,900</u>	<u>334,800</u>
EXPENDITURE CATEGORY		
<u>Personnel Cost</u>		
E123 Health Insurance	203,500	465,200
Subtotal Salaries & Fringes	203,500	465,200
E131 Worker's Compensation	-64,100	-64,100
Other Personnel Cost (E132-E139)	-1,100	-1,100
E162 Security Guard Services	-65,500	-65,500
<u>Total Personnel Cost</u>	<u>72,800</u>	<u>334,500</u>
<u>Operating Expenses</u>		
E250 Miscellaneous Services	100	300
<u>Total Operating Expenses</u>	<u>100</u>	<u>300</u>
TOTAL EXPENDITURES	<u>72,900</u>	<u>334,800</u>

APPENDIX G

Schedule of Planned Contract Activity

Cabinet/Agency: General Government/Kentucky Public Pensions Authority
Appropriation Unit: Kentucky Public Pensions Authority

	FY 2021-22 Total Amount	FY 2022-23 Total Amount	FY 2023-24 Total Amount
Memorandum of Agreement			
Personnel Service Contracts			
Legal Counsel; Disability Hearing Officers; Medical Reviewers; Medical Reports; Medical Exams; Human Resource Consulting; Actuarial Services; Investment Consulting; Auditing Services	5,895,000.00	8,124,100.00	8,124,100.00

**2022-2024 Kentucky Branch Budget
Operating Budget Request: Restricted Fund Summary Record
All requested columns rounded to nearest \$100**

OPERATING BUDGET SUMMARY RECORD D

**Governmental Branch: Executive Branch
Cabinet: General Government**

**Agency: Kentucky Public Pensions Authority
Appropriation: Kentucky Public Pensions Authority**

		Actual FY 2019 - 20	Actual FY 2020 - 21	Budgeted FY 2021 - 22	Requested FY 2022 - 23	Requested FY 2023 - 24
Summary of Resources:						
Balance Forward (E Form)		0	0	0	1,220,500	3,493,900
Current Receipts-Existing (E Form)		23,979	13,497	0	0	0
Non-Revenue Receipts (E form)		35,961,782	35,753,509	50,528,500	50,528,500	50,528,500
Total Resources		35,985,761	35,767,006	50,528,500	51,749,000	54,022,400
Summary of Expenditures:						
Baseline Budget Expenditures		35,985,761	35,767,006	48,005,500	48,005,500	48,005,500
Defined Calculations Expenditures		0	0	0	72,900	334,800
Additional Budget Request Expenditures		0	0	1,302,500	176,700	461,600
Total Expenditures		35,985,761	35,767,006	49,308,000	48,255,100	48,801,900
Cash Control Account	Title	Actual FY 2019 - 20	Actual FY 2020 - 21	Budgeted FY 2021 - 22	Requested FY 2022 - 23	Requested FY 2023 - 24
132E-2224	Ky Retirement Systems Fund	35,985,761	35,767,006	49,308,000	48,255,100	48,801,900
	Total Expenditures	35,985,761	35,767,006	49,308,000	48,255,100	48,801,900

2022-2024 Kentucky Branch Budget
Operating Budget Request: Restricted Fund Record
 All requested columns rounded to nearest \$100

OPERATING BUDGET RECORD E

Governmental Branch: Executive Branch
Cabinet: General Government

Agency: Kentucky Public Pensions Authority
Appropriation: Kentucky Public Pensions Authority

I. FUND SOURCE DATA

Account Title: Ky Retirement Systems Fund
 eMARS Fund Code: 132E
 Legal Authority Citation: KRS 61.645

II. RESTRICTED FUNDS DESCRIPTION: Restricted Uses (Yes/No): Yes

Pursuant to KRS 61.645, the administrative expenses of the Kentucky Retirement Systems are paid from Pension Trust Funds on a pro-rata basis based on percentage of membership in each of the trusts.

III. RECEIPT STRUCTURE

Receipts by Revenue Source Code (Both Revenue and Non-revenue)		Actual FY 2019 - 20	Actual FY 2020 - 21	Budgeted FY 2021 - 22	Requested FY 2022 - 23	Requested FY 2023 - 24
CASH	Cash	0	0	0	0	0
N151	Operating Transfer from Ky Employees Ret Fund	11,439,443	11,314,269	16,073,200	16,073,200	16,073,200
N152	Operating Transfer from State Police Ret Fund	251,732	239,711	353,700	353,700	353,700
N156	Operating Transfer from County Retirement Fund	21,282,183	21,128,180	29,902,700	29,902,700	29,902,700
N158	Operating Transfer from Emp Haz Fund	1,118,411	1,209,884	1,571,500	1,571,500	1,571,500
N159	Operating Transfer from County Haz Fund	1,870,013	1,861,465	2,627,400	2,627,400	2,627,400
R731	Contributions-Employer	71	0	0	0	0
R821	Proceeds from Asset Disposition	0	0	0	0	0
R829	Undistributed Receipts	23,909	13,497	0	0	0
	Total Receipts	35,985,761	35,767,006	50,528,500	50,528,500	50,528,500

IV. RESTRICTED FUNDS BUDGETS SUMMARY		Actual FY 2019 - 20	Actual FY 2020 - 21	Budgeted FY 2021 - 22	Requested FY 2022 - 23	Requested FY 2023 - 24
(A) Resources:						
	Balance Forward (E Form)	0	0	0	1,220,500	3,493,900
	Current Receipts-Existing (E Form)	23,979	13,497	0	0	0
	Non-Revenue Receipts (E form)	35,961,782	35,753,509	50,528,500	50,528,500	50,528,500
	Total Resources	35,985,761	35,767,006	50,528,500	51,749,000	54,022,400
(B) Expenditures:						
	Additional Budget Request Expenditures	0	0	1,302,500	176,700	461,600
	Baseline Budget Expenditures	35,985,761	35,767,006	48,005,500	48,005,500	48,005,500
	Defined Calculations Expenditures	0	0	0	72,900	334,800
	Total Expenditures	35,985,761	35,767,006	49,308,000	48,255,100	48,801,900

V. Explain the current receipt structure, type of fee, description of fee, current rate and any proposed rate changes during the 2022 - 2024 biennium. Indicate the date the/rate was last changed. Also, explain any rate /fee changes that have been implemented during the 2020 - 2022 biennium. Identify the rate/fee change, the amounts affected and authority for change.

Specifically identify and explain any rate/fee changes that were not incorporated in the 2020 - 2022 budget as enacted by the 2020 General Assembly.

2022-2024 KENTUCKY BRANCH BUDGET
Additional Budget Request: Program Narrative/Documentation Record

PRIORITY
Cabinet #: General Government
Agency #: Kentucky Retirement Systems

OPERATING BUDGET REPORT B-4

Agency: Kentucky Public Pensions Authority
Appropriation Unit: Kentucky Public Pensions Authority
Program/Service Unit: Kentucky Public Pensions Authority
Sub Program:
Posting Unit:
REQUEST TITLE:

Governmental Branch: Executive Branch
Cabinet/Function: General Government

PROGRAM/RESULTS DOCUMENTATION

I. PROGRAM DESCRIPTION/PURPOSE

	Actual FY 2019-20	Actual FY 2020-21	Budgeted FY 2021-22	Budget Request FY 2022-23	Budget Request FY 2023-24
Total Funding	\$ 47,702,500	\$ 48,888,200	\$ 48,005,500	\$ 48,005,500	\$ 48,005,500
Tier 1 (prior 2008)	52,424	47,528	42,775	38,498	34,648
Tier 2 (2008-2013)	22,330	20,760	18,944	17,286	15,774
Tier 3 (2014-present)	54,154	55,521	64,127	74,068	85,549
Active Members	128,908	123,809	125,380	129,852	135,971
Inactive Members	148,367	155,506	160,171	164,976	169,926
Retirees & Beneficiaries	117,665	121,728	125,380	129,141	133,015
Total Membership	394,940	401,043	411,397	423,969	438,912
Employers	1,468	1,468	1,468	1,468	1,468
Call Center Inbound Volume	275,163	283,012	291,084	299,388	307,928
Retirement & Death Benefits Paid	\$ 2,205,859,488	\$ 2,263,388,289	\$ 2,322,417,440	\$ 2,382,986,071	\$ 2,445,134,331
Refunds Paid	\$ 33,510,689	\$ 32,129,724	\$ 30,805,668	\$ 29,536,175	\$ 28,318,998
Medical Insurance Plan	\$ 5,986,675	\$ 5,464,690	\$ 4,988,218	\$ 4,553,290	\$ 4,156,284
Insurance Premiums Paid	\$ 375,793,133	\$ 375,598,593	\$ 375,404,153	\$ 375,209,813	\$ 375,015,575
Retirements	7,289	6,545	6,545	6,545	6,545

II. PROGRAM DESCRIPTION/PURPOSE

Kentucky Public Pensions Authority (KPPA) is the administrative arm of three retirement systems which are qualified governmental defined benefit plans under Section 401(a) of the Internal Revenue Code:

- **County Employees Retirement System (CERS)** is made up of employees of cities, counties, local government entities, and classified employees of school boards, is governed by the County Employees Retirement System Board of Trustees and is controlled by KRS 78.510 – 78.990;
- **Kentucky Employees Retirement System (KERS)** is made up of employees of state government, universities, health departments, certain boards, is governed by the Kentucky Retirement Systems Board of Trustees and is controlled by KRS 61.510 – 61.705; and
- **State Police Retirement System (SPRS)** includes only the uniformed officers of Kentucky State Police, is governed by the Kentucky Retirement Systems Board of Trustees and is controlled by KRS 16.505 – 16.652.

KRS 61.701, 61.702, and 78.5536 govern medical insurance benefits provided to retirees. The systems were established in the 1950s to provide a pension benefit that, when coupled with Social Security, would give career public employees a sufficient retirement income to maintain the employee's pre-retirement standard of living. The benefits provided serve employers by providing both a recruitment and retention tool.

In addition to the state laws and regulations applicable to its retirement plans, KPPA must comply with a multitude of federal tax laws governing the management of pension assets and payments in order to maintain the tax-exempt status of its pension plans. KPPA must also comply with other federal laws such as the Health Insurance Portability and Accountability Act (HIPAA), which established national standards for electronic healthcare transactions and national identifiers for providers, health plans, and employers. HIPAA also established requirements for the security and privacy of health data. Other compliance requirements have been added with the Affordable Care Act.

House Bill 484, passed during the 2020 Regular Session of the Kentucky General Assembly, and House Bill 9, passed during the 2021 Regular Session of the General Assembly, made significant changes to the governance and administrative structure of the Kentucky Public Pensions Authority. Most notably, the governance of the County Employees Retirement System was transferred to a separate 9-member board of trustees called the County Employees Retirement System (CERS). Another 9-member board of trustees called the Kentucky Retirement Systems (KRS) was established to oversee the Kentucky Employees Retirement System and the State Police Retirement System. The administrative entity comprising the office of counselors and professional staff that had previously been known as Kentucky Retirement Systems had its name changed to the Kentucky Public Pensions Authority (KPPA). It is governed by a third 8-member board composed of trustees from CERS and KRS. Daily system activities, including administrative support, investment management, benefits counseling, accounting and payroll functions, and legal services are performed by a staff of professional employees working at the state agency named KPPA.

All trustees have a fiduciary (legal) obligation to work solely in the best interests of the members of the systems their board administers, without preference to any particular group. All boards, including the 8-member KPPA board, are statutorily required to "... administer the retirement system in an efficient and cost effective manner for the taxpayers of the Commonwealth of Kentucky and shall take all actions available under the law to contain costs for the trusts, including costs for participating employers, members, and retirees." Additionally, the boards are required to invest the funds under the Prudent Person Rule. Investments are diversified among common stock, government and private bonds, real estate, private equity and cash equivalents. In-house investment staff manages approximately 20% of KRS' trust assets. A number of external managers invest the remainder of the assets in accordance with the Investment Policy Statement of each Board and subject to oversight by the Investment Committee of each Board, the CERS Board of Trustees, the KRS Board of Trustees, the KPPA staff, and independent investment consultants. An actuarial valuation must be conducted each year to determine the funded status of the 10 funds and to establish actuarially recommended employer contribution rates. KPPA is the umbrella agency for 3 retirement systems, two of which (KERS and CERS) have both a hazardous and a non-hazardous components. All five pension funds and the corresponding five insurance funds are actuarially separate funds. Therefore, the annual actuarial valuation determines the funded status of each of these ten funds and establishes actuarially recommended employer contribution rates for each. An annual independent audit is also performed. KPPA also provides updates on performance, funding, and other issues to the monthly meetings of the Public Pension Oversight Board of the Kentucky General Assembly.

Employers contribute a percentage of gross payroll determined by the annual actuarial valuation. KERS Non-hazardous employers contribute an additional flat amount based on their assigned percentage of the total unfunded liability as calculated within the annual valuation. This KERS Non-Hazardous-specific change was effective July 1, 2021, and was the result of HB 8 which passed in the 2021 Regular Session of the Kentucky General Assembly. Employees contribute at a fixed rate set by statute. The assets of the system are considered trust funds as defined by federal law and as such are not part of the Kentucky General Fund. KPPA provides daily assistance to almost 1,500 employers concerning their monthly reporting of contributions.

Retirement benefits are determined by a formula using years of service, a benefit factor, and a high five, high three or last five years average final salary. Benefits are payable for the retiree's lifetime. At retirement, the member receives a portion of the state's contribution toward medical insurance depending on years of service. There are enhanced benefits for employees in positions considered hazardous. Additional benefits also include death benefits and long-term disability. Disability recipients undergo a periodic review to determine their continued eligibility for benefits.

The total membership of the systems, which includes active, inactive, and retired members, is over 400,000 members. KPPA provides pre-retirement webinars and counseling to the more than 279,000 active employees and inactive members, including the provision of benefit estimates and service purchase cost calculations. When an employee retires, the retirement system processes the retirement application and then administers the monthly payment of retirement benefits and health insurance benefits for retirees and beneficiaries. Pre-Medicare eligible retirees participate in the Kentucky Employees Health Plan. Medicare eligible retirees participate in fully insured Medicare Advantage plans provided by Humana Insurance Company. A relatively small number of Medicare eligible retirees participate in plans that mirror the Medicare Advantage plans offered by Humana or in a Medical Only plan self-insured by KPPA. As of June 30, 2021, there were 121,728 retirees and beneficiaries receiving monthly benefit payments that totaled \$2.3 Billion.

III. PROGRAM RESULTS/FISCAL JUSTIFICATION

Kentucky Public Pensions Authority's administrative expenses are paid from the pension trust funds. No general fund dollars are used for administrative expenses. KPPA has submitted a 2023-2024 biennial budget request at the same expenditure level as the FY2022 budget period. Actual expenditures for fiscal year 2021 increased mainly due to increased employer contributions for retirement. It is anticipated that expenditures for computer software and equipment will increase with the implementation of a few Information Technology projects that are critical for security especially in the area of maintaining up-to-date software to meet data security compliance requirements including KRS 61.931 through 61.934 (RS 2014 HB5) and HIPAA. The software spending that is anticipated to increase includes the upgrade of the Microsoft Office suite to Microsoft 365, enhancements to self-service and security upgrades. The major governance and administrative changes to KPPA made by House Bill 484, passed during the 2020 Regular Session of the Kentucky General Assembly, and House Bill 9, passed during the 2021 Regular Session of the General Assembly have increased expenditures. These changes have added executive staff and require expenditures to support the three boards. The establishment of new Boards has increased expenditures in staffing and vendor contracts.

Additionally, KPPA has experienced increased spending on disability reviews due to a new vendor who supplies a holistic solution to the disability review process. KPPA was forced to select this course due to being unable to acquire the resources to piece-meal the tasks as we had traditionally. We experienced repeated poor responses to RFPs for medical examiners and delayed services due to limited numbers of medical examiners. A full cost analysis was performed before making this decision and although more expensive now, in the long run it is anticipated this will provide cost-savings, improved efficiency and improved service to our members.

It remains financially untenable to obtain liability insurance for Kentucky Public Pensions Authority and its boards; therefore, the boards elected to self-insure for liability insurance. This continues to provide a cost savings for insurance premiums but is a potential significant unplanned outlay if forced to pay for services that would have been paid in a claim against the liability insurance. The same is true for cyber insurance. The cost of the premiums has made it unreasonable to purchase cyber insurance; therefore, this is another potentially significant unplanned outlay if KPPA experienced a major security breach.

KPPA currently faces and will continue to face for the foreseeable future, numerous challenges from ongoing litigation, investment regulations, and increased actuarial services for GASB 67, 68, 71, 72, 74, 75, and actuarial analysis of a

dramatically increasing number of House and Senate bills related to pensions due to the low funding status of the funds administered by the CERS and KRS boards.

In summary, within the last twenty years, KPPA has gone from managing simplistic, single-tiered pension and insurance plans for each system (CERS, KERS and SPRS) controlled by one board, to a current model whereby KPPA is charged with administering complex, multi-tiered pension and insurance plans under the control of three unique boards. This biennial budget request reflects our commitment to meeting our member's needs and implementing pension-related bills, while maintaining fiscal responsibility.

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Additional Budget Request: Financial Record
 All requested columns rounded to nearest \$100

PRIORITY
 Cabinet #: 2
 Agency #: 2

OPERATING BUDGET RECORD B-1/B-2

Governmental Branch: Executive Branch
 Cabinet: General Government

Agency: Kentucky Public Pension Authority
 Appropriation: Kentucky Public Pension Authority
 Program/Service Unit:
 Sub Program:
 Posting Unit:

REQUEST TITLE: One Per Cent Salary Increase

REQUEST TYPE: 1% Increase	FY 2021-22 Requested	FY 2022-23 Requested	FY 2023-24 Requested
SOURCE OF FUNDS			
Restricted Funds			
Non-Revenue Receipts	0	176,700	461,600
<u>Total Restricted Funds</u>	<u>0</u>	<u>176,700</u>	<u>461,600</u>
TOTAL SOURCE OF FUNDS	0	176,700	461,600
EXPENDITURES BY CLASS			
Personnel Costs	0	176,700	461,600
TOTAL EXPENDITURES BY CLASS	0	176,700	461,600
EXPENDITURES BY FUND SOURCE			
Restricted Funds	0	176,700	461,600
TOTAL EXPENDITURES BY FUND	0	176,700	461,600
PERSONNEL POSITIONS			
Number of Positions	0	0	0
GRAND TOTAL - Number of Positions	0	0	0
BUDGET POSITIONS COST BY FUND SOURCE			
Restricted Fds Cost of Positions	0	176,700	461,600
TOTAL FUNDS	0	176,700	461,600

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Additional Budget Request: Expenditure Detail Summary Record
 All requested columns rounded to nearest \$100

PRIORITY
 Cabinet #: 2
 Agency #: 2

OPERATING BUDGET RECORD B-3		Agency: Kentucky Public Pension Authority		
Governmental Branch: Executive Branch		Appropriation: Kentucky Public Pension Authority		
Cabinet: General Government		Program/Service Unit:		
		Sub Program:		
		Posting Unit:		
		REQUEST TITLE: One Per Cent Salary Increase		
REQUEST TYPE	1% Increase	FY 2021-22 Requested	FY 2022-23 Requested	FY 2023-24 Requested
EXPENDITURES BY FUND				
	Restricted Fund	0	176,700	461,600
	TOTAL EXPENDITURES BY FUND	0	176,700	461,600
EXPENDITURE CATEGORY				
Personnel Cost				
	E111 Regular Salaries & Wages	0	92,700	241,900
	E121 Employer FICA	0	6,300	17,000
	E122 Employer Retirement	0	77,700	202,700
	Subtotal Salaries & Fringes	0	176,700	461,600
	Total Personnel Cost	0	176,700	461,600
	TOTAL EXPENDITURES	0	176,700	461,600

2022-2024 KENTUCKY BRANCH BUDGET
Additional Budget Request: Program Narrative/Documentation Record

PRIORITY
 Cabinet #: General Government
 Agency #: Kentucky Retirement Systems

OPERATING BUDGET REPORT B-4

Agency: Kentucky Public Pensions Authority
 Appropriation Unit: Kentucky Public Pensions Authority
 Program/Service Unit: Kentucky Public Pensions Authority
 Sub Program:
 Posting Unit:
REQUEST TITLE:

Governmental Branch: Executive Branch
 Cabinet/Function: General Government

PROGRAM/RESULTS DOCUMENTATION

I. PROGRAM DESCRIPTION/PURPOSE

	Actual FY 2019-20	Actual FY 2020-21	Budgeted FY 2021-22	Budget Request FY 2022-23	Budget Request FY 2023-24
Total Funding	\$ 47,702,500	\$ 48,888,200	\$ 48,005,500	\$ 48,005,500	\$ 48,005,500
Tier 1 (prior 2008)	52,424	47,528	42,775	38,498	34,648
Tier 2 (2008-2013)	22,330	20,760	18,944	17,286	15,774
Tier 3 (2014-present)	54,154	55,521	64,127	74,068	85,549
Active Members	128,908	123,809	125,380	129,852	135,971
Inactive Members	148,367	155,506	160,171	164,976	169,926
Retirees & Beneficiaries	117,665	121,728	125,380	129,141	133,015
Total Membership	394,940	401,043	411,397	423,969	438,912
Employers	1,468	1,468	1,468	1,468	1,468
Call Center Inbound Volume	275,163	283,012	291,084	299,388	307,928
Retirement & Death Benefits Paid	\$ 2,205,859,488	\$ 2,263,388,289	\$ 2,322,417,440	\$ 2,382,986,071	\$ 2,445,134,331
Refunds Paid	\$ 33,510,689	\$ 32,129,724	\$ 30,805,668	\$ 29,536,175	\$ 28,318,998
Medical Insurance Plan	\$ 5,986,675	\$ 5,464,690	\$ 4,988,218	\$ 4,553,290	\$ 4,156,284
Insurance Premiums Paid	\$ 375,793,133	\$ 375,598,593	\$ 375,404,153	\$ 375,209,813	\$ 375,015,575
Retirements	7,289	6,545	6,545	6,545	6,545

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Additional Budget Request: Financial Record
 All requested columns rounded to nearest \$100

PRIORITY
 Cabinet #: 3
 Agency #: 3

OPERATING BUDGET RECORD B-1/B-2

Agency: Kentucky Public Pensions Authority

Appropriation: Kentucky Public Pensions Authority

Governmental Branch: Executive Branch
 Cabinet: General Government

Program/Service Unit:

Sub Program:

Posting Unit:

REQUEST TITLE: Deferred Payroll

REQUEST TYPE: Deferred Payroll	FY 2021-22 Requested	FY 2022-23 Requested	FY 2023-24 Requested
SOURCE OF FUNDS			
Restricted Funds			
Non-Revenue Receipts	1,302,500	0	0
<u>Total Restricted Funds</u>	<u>1,302,500</u>	<u>0</u>	<u>0</u>
TOTAL SOURCE OF FUNDS	1,302,500	0	0
EXPENDITURES BY CLASS			
Personnel Costs	1,302,500	0	0
TOTAL EXPENDITURES BY CLASS	1,302,500	0	0
EXPENDITURES BY FUND SOURCE			
Restricted Funds	1,302,500	0	0
TOTAL EXPENDITURES BY FUND	1,302,500	0	0
PERSONNEL POSITIONS			
Number of Positions			
	0	0	0
GRAND TOTAL - Number of Positions	0	0	0
BUDGET POSITIONS COST BY FUND SOURCE			
Restricted Fds Cost of Positions	1,302,500	0	0
TOTAL FUNDS	1,302,500	0	0

KRS Board Meeting - Biennial Budget Request

2022-2024 Kentucky Branch Budget
 Additional Budget Request: Expenditure Detail Summary Record
 All requested columns rounded to nearest \$100

PRIORITY
 Cabinet #: 3
 Agency #: 3

OPERATING BUDGET RECORD B-3

Agency: Kentucky Public Pensions Authority

Appropriation: Kentucky Public Pensions Authority

Governmental Branch: Executive Branch
 Cabinet: General Government

Program/Service Unit:

Sub Program:

Posting Unit:

REQUEST TITLE: Deferred Payroll

REQUEST TYPE	Deferred Payroll	FY 2021-22 Requested	FY 2022-23 Requested	FY 2023-24 Requested
EXPENDITURES BY FUND				
	Restricted Fund	1,302,500	0	0
	TOTAL EXPENDITURES BY FUND	<u>1,302,500</u>	<u>0</u>	<u>0</u>
EXPENDITURE CATEGORY				
<u>Personnel Cost</u>				
	E111 Regular Salaries & Wages	579,200	0	0
	Other Salaries & Wages	5,500	0	0
	E121 Employer FICA	43,000	0	0
	E122 Employer Retirement	489,400	0	0
	E123 Health Insurance	185,100	0	0
	E124 Life Insurance	300	0	0
	Subtotal Salaries & Fringes	1,302,500	0	0
	Total Personnel Cost	<u>1,302,500</u>	<u>0</u>	<u>0</u>
TOTAL EXPENDITURES		<u>1,302,500</u>	<u>0</u>	<u>0</u>

**KENTUCKY RETIREMENT SYSTEMS
BOARD OF TRUSTEES**

STATEMENT OF BYLAWS AND COMMITTEE ORGANIZATION

As Amended: ~~May 20~~December 2, 2021

Section 1.1 GENERAL ADMINISTRATION.

This Statement of Bylaws and Committee Organization of the Board of Trustees of the Kentucky Retirement Systems is adopted pursuant to the authority of KRS 61.645. State and Federal law shall control any inconsistency that exists or may exist between the law and this Statement of Bylaws and Committee Organization.

a. **Definitions.**

1. AAC: “AAC” refers to the Joint CERS and Kentucky Retirement Systems Administrative Appeals Committee.
2. Board: “The Board” refers to the Board of Trustees of the Kentucky Retirement Systems.
3. Board Year: The Board Year shall be from April 1 of each calendar year through March 31 of the following year.
4. Bylaws: “Bylaws” refers to the Statement of Bylaws and Committee Organization.
5. CEO: “CEO” refers to Kentucky Retirement Systems’ Chief Executive Officer, as outlined in KRS 61.645 (9).
6. CERS: refers to the County Employees Retirement System
7. CIO: “CIO” refers to the KPPA Executive Director Office of Investments.
8. Committee member: “Committee member” or “member” used in relation to a Committee refers to a member of the Board of Trustees of the Kentucky Retirement Systems serving on its Standing or *ad hoc* Committees.
9. DAC: “DAC” refers to the Joint CERS and Kentucky Retirement Systems’ Disability Appeals Committee.
10. KPPA: “KPPA” refers to the Kentucky Public Pensions Authority.
11. KRS: “KRS” refers to the Kentucky Revised Statutes.
12. Member: “Member” or “members” used in relation to individuals participating in a system (or systems) administered by the Kentucky Retirement Systems refers to individuals who are active members (i.e., currently participating as an employee), inactive members (i.e., formerly participated as an employee, but is not currently participating as an employee, has not retired, and has not taken a refund), or retired.
13. Retirement Office: “Retirement Office” refers to the offices of the KPPA located at 1260 Louisville Road, Frankfort, Kentucky 40601.

14. Take action on: “Take action on” used in relation to the Board refers a motion being made, seconded, and voted upon by the Board in compliance with Robert’s Rules of Order. [RONR (11th ed., as amended)].
 15. Trustee: “Trustee” refers to a member of the Board of Trustees of the Kentucky Retirement Systems.
- b. **Quorum; Parliamentary Authority.**
1. Board of Trustees: As required by KRS 61.645(8)(c), a majority of the trustees shall constitute a quorum and all actions taken by the Board shall be by affirmative vote of a majority of the trustees present.
 2. Committees of the Board of Trustees: A majority of the trustees on any Committee of the Board appointed pursuant to Sections 2.1-2.5 of these Bylaws shall constitute a quorum of the Committee and all actions taken by the Committee shall be by affirmative vote of a majority of the Committee trustees present.
 3. The most recent edition of Robert’s Rules of Order shall be the parliamentary authority [RONR (11th ed., as amended)], except that if any Committee of the Board is comprised of five (5) or more trustees, the Committee shall not constitute a quorum of the Board and the Board shall be required to take action on all preliminary decisions made by the Committee, unless otherwise specified by these Bylaws.
- c. **Meetings.** Meetings of the Board and its Committees shall be conducted consistent with the Open Meetings Act, KRS 61.805 to 61.850. The Open Meetings Act shall control if any inconsistency exists between the Open Meetings Act and these Bylaws.
- d. **Annual Meeting.** The annual meeting of the Board shall be held on the third Thursday of April of each Board Year.
- e. **Regular Meetings.** Regular meetings of the Board shall be held on the third Thursday of February and May, the second Thursday of September and November, and on the first Thursday of December.
- f. **Special Meetings.**
1. Special meetings of the Board shall be held upon the call of the Chair of the Board or the CEO.
 2. Special meetings of a Standing or *ad hoc* Committee of the Board of Trustees shall be held upon the call of the Committee Chair or the CEO.
 3. A trustee may request that the CEO, Chair of the Board (in the case of a special meeting of the Board), or Committee Chair (in the case of a special meeting of a Committee) call a special meeting by email or other written means. Upon receipt of email or other written requests to call a special meeting from a majority of the trustees, the CEO, Board Chair, or Committee Chair shall call the requested special meeting.

- g. **Notice of Meetings.**
1. **Regular Meetings.** Notice of a regular meeting of the Board shall be posted at least ten (10) days (inclusive of weekends and holidays) before the meeting is scheduled. The notice of a regular meeting shall include the date, time, and location of the meeting, and the agenda for the meeting. The agenda shall be determined under the direction of and approval by the Chair of the Board. Changes or revisions to the agenda may be proposed by the CEO or a trustee; provided such proposal shall be delivered to the Chair for approval not less than ninety-six (96) hours before the meeting is scheduled; and further provided that nothing in this sentence shall deprive a trustee from introducing new items of business during a regular meeting. Approved changes or revisions to the agenda shall be posted not less than seventy-two (72) hours before the meeting is scheduled.
 2. **Special Meetings.** When circumstances warrant a special meeting of the Board or of a Committee, notice shall be posted as soon as reasonably possible, but not less than twenty-four (24) hours before the meeting is scheduled. The notice of a special meeting shall include the date, time, and location of the special meeting and the agenda for the meeting. Discussions and action at the meeting shall be limited to items listed on the agenda in the notice.
- h. **Change in Meeting Dates.** Any regular or special meeting of the Board may be changed by following the procedure prescribed in these Bylaws for calling special meetings.
- i. **Records of Proceedings.** All official acts of the Board shall be recorded in the minutes of the regular or special meeting at which the action was approved or adopted. The CEO shall cause the minutes to be transcribed and presented for approval or amendment at the next regular meeting. An electronic copy (certified by the Chair and the CEO) shall be on file in the Retirement Office for public inspection and posted on the KPPA website. Electronic copies are maintained on the KPPA Website for Board and Committee actions. Copies that have been archived from the website are available on request.
- j. **Chair and Vice-Chair of the Board.** The Board shall elect a Chair and a Vice-Chair at each annual meeting to hold office for the ensuing Board Year or until their successors are elected. The Chair shall not serve more than four (4) consecutive years as Chair or Vice-Chair (in combination) of the Board. The Vice-Chair shall not serve more than four (4) consecutive years as Chair or Vice-Chair (in combination) of the Board. A trustee who has served four (4) consecutive years as Chair or Vice-Chair of the Board may be elected Chair or Vice-Chair of the Board after an absence of two (2) years from both positions.
- k. **Committees.** The Board may create Committees with such powers and duties as established by the Board. The Chair of the Board, unless otherwise stipulated or determined by the Board, shall appoint the members of each Standing or *ad hoc* Committee, and such appointments shall be recorded in the minutes of the current or next-following regular Board meeting. Committee members shall serve concurrently with the appointing Chair.

- l. **Conflicts of Interest.**
 1. Trustees shall file a statement of financial disclosure with the Executive Branch Ethics Commission within thirty (30) days of taking office.
 2. Trustees shall also file a statement of financial disclosure by April 15 of each calendar year, and within thirty (30) days following departure from office as a trustee, or as otherwise provided by law.
 3. Trustees shall also file a written conflict of interest statement as required pursuant to the Kentucky Retirement Systems' Conflict of Interest Policy.
- m. **Confidentiality.** Trustees shall file a written confidentiality statement as required by the Kentucky Retirement Systems' Confidentiality Policy.
- n. **Travel Policy Guidelines.**
 1. All travel for official business of Kentucky Retirement Systems must be done in accordance with the requirements of and be consistent with KRS Chapter 45A and the Kentucky Retirement Systems' Board of Trustees Per Diem and Reimbursement Policy.
 2. No more than four (4) trustees may be passengers in the same common carrier. A Maximum of one (1) executive staff of the Kentucky Retirement Systems may be a passenger in the same common carrier.
 3. To avoid an accidental violation of Kentucky Open Meetings Laws, other than for scheduled meetings, no more than four (4) Trustees may attend the same off-site conference, training, etc., at the same time. The CEO, or his or her designee, shall review Trustee travel requests to coordinate attendance and avoid noncompliance with Kentucky Open Meetings Laws.
- o. **Election Policy Guidelines.** All elections for elected trustees of the Board must be conducted in accordance with the provisions of KRS 61.645, 105 KAR 1:445 and the Kentucky Retirement Systems' Board of Trustees Election Policy and Procedures adopted by the Board.
- p. **Violations of Board Policies and Guidelines.** If a complaint is made that a trustee violated these Bylaws or any policy approved by the Board, the Board shall follow the procedure found in the Conflict of Interest Policy in investigating the complaint.

Section 1.2 BOARD RESPONSIBILITIES.

- a. The Board shall make and maintain Bylaws.
- b. The Board shall appoint a CEO and fix the CEO's salary.
- c. The Board shall appoint a General Counsel and fix the General Counsel's compensation.
- d. The Board shall adopt a Personnel Management policy to outline the job descriptions, qualifications, education, and skills for both the CEO and the General Counsel. This policy should also describe recruitment strategies, performance evaluations, and succession planning for these two positions.
- e. The Board may act on contracts for rental of office space, and professional services, including, but not limited to, the auditor, and legal counsel in accordance with the

requirements of the Commonwealth of Kentucky Model Procurement Act (KRS Chapter 45A).

- f. The Board shall consider and take action on changes to administrative regulations proposed by the staff of the Kentucky Retirement Systems or the KPPA.
- g. The Board shall consider and take action on its financial statements and external audits.
- h. The Board shall consider and take action on the recommendations of all of its Committees, except that the AAC and DAC shall have the authority to act upon the recommendations and reports of the hearing officer on behalf of the Board in accordance with KRS Chapter 13B.
- i. The Board shall work with an actuary, who shall be a Fellow of the Conference of Consulting Actuaries or a member of the American Academy of Actuaries. KPPA will select and contract with the actuary pursuant to KRS 61.645(2)(d) which allows the Board to carry out its obligations in accordance with KRS 61.670. The Board shall consider and act on the recommendations of its actuary.
- j. The Board shall adopt contribution rates toward medical insurance premiums.
- k. The Board shall provide oversight concerning programs and services for Kentucky Retirement Systems' members, beneficiaries, recipients, and participating employers.
- l. The Board shall select candidates for each trustee ballot as provided in KRS 61.645 and 105 KAR 1:445.
- m. The Board shall establish a formal trustee education program for all trustees of the Board, pursuant to the requirements of KRS 61.645(18) and 105 KAR 1:440, and ensure that CEO organizes process for this trustee education to occur.
- n. The Board, and individual trustees, should ordinarily refer all news media inquiries to the CEO and/or the Board Chair, and should not speak on behalf of the Board or Kentucky Retirement Systems with the news media. However, nothing in this subsection is intended to prevent individual trustees from speaking to the media concerning their actions, opinions, and decisions as individual trustees.
- o. The Board shall review the Kentucky Retirement Systems' biennial administrative budget and necessary budget amendments. The CEO (or designee) will schedule meetings, prepare budget documents and supporting schedules, and present them to Board members prior to the date of a meeting.
- p. The Board shall review and investigate the employees whose names have been certified by the applicable authority to meet the criteria of KRS 61.592 and 105 KAR 1:130 for hazardous duty, and also those employees who have been so certified who are not, or who no longer are, working in a hazardous duty position. The Board shall take action on all such employees in accordance with KRS 61.592 and 105 KAR 1:130.
- q. The Board shall review and take action on the Joint Kentucky Retirement Systems and CERS Audit Committee findings related to the administration of the Kentucky Retirement Systems and take action as is necessary to insure the administration of the Kentucky Retirement Systems in compliance with all applicable laws and policies.

- r. The Board shall collaborate with the KPPA on Business Continuity and Disaster Recovery to ensure that the Kentucky Retirement Systems' records and operations are adequately protected and that critical business operations will continue efficiently. The Board may rely on policies and procedures developed by the KPPA to address Business Continuity and Disaster Recovery issues. The Board Chair shall act as temporary CEO in the event the CEO is not available to perform duties outlined in these Bylaws.

Section 1.3 CEO RESPONSIBILITIES.

- a. The CEO shall be responsible for working with the KPPA Executive Director to ensure compliance with Kentucky's Open Records laws. The CEO shall be responsible for designating a records custodian for the Kentucky Retirement Systems and the Board.
- b. The CEO shall develop a biennial budget and necessary budget amendments for approval by the Board. The CEO will coordinate approved budget requests with the KPPA Executive Director to ensure that Kentucky Retirement Systems budget requests are integrated with the KPPA budget request for submission to the Governor's office. The CEO (or designee) shall present a budget-to-actual expenditure analysis to the Board at each regular quarterly meeting of the Board.
- c. The CEO shall coordinate with the KPPA staff to ensure that information and record management is comprehensive and efficient, and shall ensure that a disaster recovery plan, continuity of operations plan, and policies to ensure cyber-security are developed and maintained.
- d. The CEO shall be responsible for implementing a formal trustee education program for all trustees of the Board, pursuant to the requirements of KRS 61.645(18).
- e. The CEO shall develop recommendations for improvements and revisions of Board policies and submit such revisions for Board approval. The CEO shall ensure that approved policies are implemented in conformance with statutes, regulations and Board policies.
- f. The CEO shall collaborate with the KPPA legal staff to monitor litigation affecting Kentucky Retirement Systems' plans. The CEO and KPPA legal staff shall report significant developments to the Board.
- g. The CEO shall act as legislative liaison, and represent the Board at legislative hearings and other legislative meetings. The CEO and KPPA Legal staff will review proposed legislation that is likely to affect the Kentucky Retirement Systems' plans or administrative management and advise the Board about pending legislation.
- h. The CEO shall provide technical assistance to the members of the General Assembly, Governor's office, and state and local government officials, as well as members, recipients, and beneficiaries of the Kentucky Retirement Systems.
- i. The CEO shall recommend legislative or regulatory changes and propose draft language.
- j. The CEO shall work with the Executive Director of KPPA to obtain from the actuary any necessary actuarial analysis of legislation affecting the Kentucky Retirement Systems.

- k. The CEO shall implement any statutory or regulatory changes and take appropriate action to conform to federal law. The CEO shall also collaborate with the KPPA Executive Director to monitor implementation of any changes designated as KPPA's responsibilities.
- l. The CEO shall sign all documents necessary to promulgate or amend an administrative regulation on behalf of the Board as the head of the Kentucky Retirement Systems in accordance with KRS 13A.220.
- m. The CEO shall communicate with the mass media and other agencies, entities or institutions, including responding to correspondence or inquiries addressed to the Board.
- n. The CEO shall coordinate reciprocal benefits with the other state administered retirement systems in Kentucky.
- o. In the case of emergency conditions that threaten the functioning of the Kentucky Retirement Systems, the preservation or protection Kentucky Retirement Systems' property or assets, vital data, or the health and safety of any person, and where a quorum of the Board is unavailable, the Executive Director may take actions necessary to prevent or mitigate the threat, even if a vote of the Board would otherwise be necessary to take such action. When a quorum of the Board becomes available, any such actions taken by the Executive Director shall be reviewed and ratified as necessary.

Section 2.1 STANDING COMMITTEES.

The Board shall have the Standing Committees specified in Section 2.2, each of them to have the duties and responsibilities as therein set forth, together with such other duties and responsibilities as the Board may by resolution determine. In each Board Year, the Chair, elected at the annual meeting, shall appoint trustees to Committees as specified in Section 2.2, unless otherwise determined by the Board. Each Committee shall have a Chair and the Board Chair shall appoint the Chair of each Committee, unless otherwise determined by the Board. A Committee may (but is not required to) elect a Vice-Chair from among its Committee members by a majority vote of the Committee. A Vice-Chair so elected shall preside at meetings of the Committee in the absence or inability to act of the Committee Chair. Any trustee may attend any meeting of any Committee of which he or she is not a Committee member, but shall not have a vote.

Section 2.2 STANDING COMMITTEES; DUTIES AND RESPONSIBILITIES.

The Standing Committees of the Board are, and shall have respective duties and responsibilities, as follows:

- a. **Administrative Appeals Committee.** The Board shall collaborate with the CERS Board to develop a timely disability and administrative appeals process. The Board and the CERS Board will coordinate the Administrative Appeals process with two AAC between the two Boards. These AACs may be combined with the DACs, in compliance with KRS 61.645(16) and KRS 78.782(16). Consistent with the provisions of KRS Chapter 13B, the AACs shall meet in alternate months, as needed, to act in matters of administrative appeals. Each Committee shall consist of three (3) members; however, the members appointed to one Committee may also serve from time to time

on the other Committee. One of the AAC shall consist of two (2) CERS Trustees and one (1) Kentucky Retirement Systems Trustee. The other AAC shall consist of one (1) CERS Trustee and two (2) Kentucky Retirement Systems Trustees. The Committees shall ensure that the laws governing Kentucky Retirement Systems are administered impartially and uniformly, and that the actions of the Kentucky Retirement Systems resulting in the appeal were correct and fair under the applicable statutes and regulations.

1. **Committee Responsibilities.** In matters of administrative appeals, the Committee members shall consider the administrative record, including the recommended order and any exceptions filed in compliance with KRS 13B.120. The Committee shall act on behalf of the entire Board as the agency head in making a final order of the Board in accordance with KRS 13B.120. The Committee may adopt the hearing officer's recommended order; or it may reject or modify, in whole or in part, the recommended order; or it may remand the matter, in whole or in part, to the hearing officer for further proceedings as appropriate; or it may act on cases properly remanded by a court of competent jurisdiction. The Committee may also recommend legislative changes to improve the administration of the benefits. Any recommended legislative changes shall be referred to the CEO for study.
 2. **KPPA Executive Director Office of Benefits Responsibilities.** The KPPA Executive Director Office of Benefits or designated staff, in coordination with KPPA's Office of Legal Services staff, will coordinate meeting dates and determine which cases will be reviewed. Designated staff will compile the administrative records and distribute the files to the Committee members prior to each meeting. Staff may provide legal or technical advice to the Committee.
- b. **Disability Appeals Committee.** The Board shall collaborate with the CERS Board to develop a timely disability and administrative appeals process. The Board and the CERS Board will coordinate the Disability Appeals process with two DAC between the two Boards. The DACs may be combined with the AACs, in compliance with KRS 61.645(16) and KRS 78.782(16). Consistent with the provisions of KRS Chapter 13B, the Committees shall meet in alternate months, as needed, to act in matters of disability appeals. Each Committee shall consist of three (3) members; however, the members appointed to one Committee may serve from time to time on the other Committee. One of the DAC shall consist of two (2) CERS Trustees and one (1) Kentucky Retirement Systems Trustee. The other DAC shall consist of one (1) CERS Trustee and two (2) Kentucky Retirement Systems Trustees. The Committees shall ensure that the disability retirement laws are administered impartially and uniformly, that all members of Kentucky Retirement Systems who apply for disability retirement benefits and qualify under the applicable statutes are approved for benefits and that the actions of the Kentucky Retirement Systems resulting in the appeal were correct and fair under the applicable statutes and regulations.
1. **Committee Responsibilities.** In matters of disability appeals, the Committee members shall consider the administrative record, including the recommended order and any exceptions filed in compliance with KRS 13B.120. The Committee shall act on behalf of the entire Board as the agency head in making a final order of the Board in accordance with KRS 13B.120. The Committee may adopt the

hearing officer's recommended order; or it may reject or modify, in whole or in part, the recommended order; or it may remand the matter, in whole or in part, to the hearing officer for further proceedings as appropriate; or it may act on cases properly remanded by a court of competent jurisdiction. The Committee may also recommend legislative changes to improve the administration of the benefits. Any recommended legislative changes shall be referred to the CEO for study.

2. KPPA Executive Director Office of Benefits Responsibilities. The KPPA Executive Director, Office of Benefits, or designated staff, in coordination with KPPA Office of Legal Services staff, will coordinate meeting dates and determine which cases will be reviewed. Designated staff will compile the administrative records and distribute the files to the Committee members prior to each meeting. Staff may provide legal or technical advice to the Committee.

- d. Investment Committee. The Committee shall consist of five (5) members, as follows: (i) the three (3) trustees with investment experience appointed by the Governor pursuant to KRS 61.645(1)(c), (ii) one (1) trustee with retirement experience appointed by the Governor pursuant to KRS 61.645(1)(c) appointed by the Board Chair, and (iii) one (1) elected trustee pursuant to KRS 61.645(1)(a)-(b) appointed by the Board Chair.

1. Committee Responsibilities.

- A. The Investment Committee shall have authority to implement the investment policies adopted by the Board, including without limitation the Board's Investment Policy Statement (pensions and health), and to recommend action on behalf of the Board on all investment-related matters, and to acquire, sell, safeguard, monitor, and manage the assets and securities of the several funds, subject to the Board's approval.
- B. The Investment Committee will meet quarterly to review reports from investment staff, investment consultants, and investment managers with authority to convene additional meetings as circumstances require. The regular quarterly meetings shall be held on the first Tuesday of February and May, the fourth Tuesday of August, and the first Wednesday of November.
- C. The Committee will monitor investment performance and management practices and make reports and recommendations to the Board. The Committee will recommend the selection and termination of investment managers, investment products, custodial relationship and investment consultants. The Committee will evaluate whether the Investment Policy, the investment activities, and management controls and processes continue to be consistent with meeting the Kentucky Retirement Systems' goals, and perform other duties specified in the Investment Policy Statement.

- D. Actuarial Subcommittee.

1. The Chair of the Investment Committee shall appoint an Actuarial Subcommittee comprised of three (3) members, with the concurrence of the Board Chair as to each appointee, as follows: (i) one (1) trustee appointed by the Governor pursuant to KRS 61.645(1)(c); (ii) one (1) trustee elected by members of the Kentucky Employees Retirement System; (iii) one (1)

trustee elected by members of the State Police Retirement System. The Investment Committee Chair shall appoint a Chair of the Actuarial Subcommittee. The Actuarial Subcommittee will meet as necessary upon call of the Chair of the Actuarial Subcommittee.

2. Upon appointment, the Subcommittee will review and evaluate actuarial assumptions, funding methods and tables proposed by the actuary (including without limitation all economic, mortality, disability, etc. assumptions) for each system within Kentucky Retirement Systems that affect: (i) the annual determination of the actuarial valuation of assets and liabilities of the systems within the meaning of KRS 61.670; (ii) the factors that apply to amounts payable to members (e.g., early commencement, commutation, repayment, etc.); and (iii) the actuarially recommended contribution rate foremployers required under KRS 61.510 to 61.692 and KRS 16.505 to 16.652, except as otherwise determined by law or regulation.
 3. The Subcommittee will report its findings and recommendations of each such review or evaluation to the Investment Committee. Upon review and approval, the Investment Committee shall forward the results and its recommendations to the Board for ratification.
- E. The Investment Committee may also recommend legislative changes to the Board to improve the administration of investment-related matters.

2. **KPPA Executive Director Office of Investments Responsibilities.**

- A. KPPA Executive Director, Office of Investments, also known as the Chief Investment Officer (CIO), shall administer the assets of the Kentucky Retirement Systems consistent with the policies, guidelines, and limits established by the law, the Investment Committee and the Investment Policy Statement.
 - B. The CIO shall provide members of the Investment Committee with assessments of service providers and performance reports and shall have authority, subject to the approval of the Chair of the Investment Committee or the Chair of the Board of Trustees, to reduce or increase assets assigned to an investment manager that has already been hired..
 - C. The CIO shall identify issues for consideration by the Investment Committee and prepare recommendations regarding those issues.
 - D. The CIO shall recommend changes to the Investment Committee regarding service providers, statutes, policies or guidelines, as needed, to maintain a productive relationship between the investment program and its goals.
 - E. The CIO shall communicate with the mass media and other agencies, entities, or institutions regarding investment related issues.
3. **Investment Policy.** The “Investment Policy Statement” and the “Investment Procurement Policy” are hereby incorporated by reference.

4. **KPPA Executive Director Responsibilities.**

The Executive Director of the KPPA shall be responsible for KPPA executing all aspects of the KPPA duties including the management of the assets for Kentucky Retirement Systems and CERS in accordance with their Investment Policy Statements and their Funding Policies. The Executive Director will coordinate with the CEO and the Chair of the Investment Committee of the Kentucky Retirement Systems and the CEO and Chair of the Investment Committee of the CERS to insure they are able to fully satisfy their fiduciary responsibilities and monitor their assets by providing the required information and reports from the KPPA custodian and consultant(s) and access to and meeting with the employees of the KPPA investment department,.

e. **Joint Kentucky Retirement Systems and CERS Retiree Health Plan Committee.**

The Committee shall consist of four (4) Trustees total, two (2) Trustees appointed from the CERS Board by the CERS Chair and two (2) Trustees appointed from the Kentucky Retirement Systems Board by the Kentucky Retirement Systems' Chair. The Committee shall elect a Chair and Vice Chair and shall assist the Board in providing a group hospital and medical insurance plan for present and future recipients of a retirement allowance from the systems administered by Kentucky Retirement Systems as required by KRS 61.702.

1. **Committee Responsibilities.**

A. The Committee will meet quarterly to review reports from KPPA staff and retiree health insurance consultants with authority to convene additional meetings, as circumstances require. The regular quarterly meetings shall be held on the second Tuesday of February and May, the first Thursday of September, and the second Tuesday of November.

B. The Committee will monitor retiree health insurance matters and make reports and recommendations to the Board. The Committee will evaluate retiree health insurance issues and obligations set forth in state and federal law. The Committee may, as deemed necessary, evaluate health insurance companies, health maintenance organizations, self-insurance proposals, and other ways of providing a group hospital and medical insurance plan for retired members as provided in KRS 61.702.

C. The Committee may negotiate and recommend appropriate contracts for execution by the Board, in accordance with the requirements of the Commonwealth of Kentucky Model Procurement Act (KRS 45A). The Committee may solicit reports and actuarial analyses in order to analyze issues regarding retiree health insurance. The Committee may also recommend legislative changes to improve the administration of retiree health insurance related matters. Any recommended legislative changes shall be referred to the CEO for study.

2. **KPPA Executive Director Responsibilities.** The KPPA Executive Director and designated staff will maintain and provide the Committee with necessary information to execute its responsibilities. The KPPA Executive Director or designated staff will provide advice regarding state and federal laws and

regulations. Staff will identify issues for consideration by the Committee and prepare recommendations regarding those issues.

f. **Joint Kentucky Retirement Systems and CERS Audit Committee.** The Committee shall consist of four (4) Trustees total, two (2) Trustees appointed from the CERS Board by the CERS Chair and two (2) Trustees appointed from the Kentucky Retirement Systems Board by the Kentucky Retirement Systems' Chair and shall elect a Chair and Vice Chair. The Committee will act on behalf of the Board in fulfilling its oversight responsibilities for the system of internal control, the internal and external audit processes, and the process for monitoring compliance with laws, regulations and the code of conduct.

1. **Committee Responsibilities.** The Committee will meet quarterly, with authority to convene additional meetings, as circumstances require. The regular quarterly meetings shall be held on the first Thursday of February and May, the fourth Thursday of August, and the first Thursday of November. The Committee shall have the authority to review reports by the Internal Auditor and to recommend appropriate policies and procedures. Additional responsibilities are enumerated in the Audit Committee Charter

2. **Internal Auditor Responsibilities.** The KPPA Internal Auditor will be responsible for the planning, implementation, and reporting of audits and internal audit plans. The Internal Auditor will also be responsible for the functional control and audit activities in the relation to the objectives of the KPPA Division of Internal Audit. Additional responsibilities are enumerated in the KPPA Division of Internal Audit Charter.

3. **Audit Charters** The Audit Committee Charter and the KPPA Division of Internal Audit Charter are hereby incorporated by reference.

g. In addition to the duties and responsibilities described in this Section 2.2, each Standing Committee may develop appropriate additional policies and proposals to be ratified by the Board.

Section 2.3 DELEGATIONS OF AUTHORITY BY THE BOARD.

Delegation of Authority. Except as may be prohibited by or inconsistent with law, the Board may delegate to any Standing Committee of the Board any power, authority, duty, or responsibility conferred on the Board by law. In the case of any such delegation, the decision or action of the Committee within the scope of its delegated authority shall constitute the decision or action of the Board. The Board may at any time rescind the delegated authority as a whole or in part, except that a rescission of authority with respect to quasi-judicial matters delegated to a Committee shall not operate to affect the proceedings or the final action of any such matter pending before the Committee when the Board acts to rescind. This exception is designed to preclude the Board from using its authority to rescind a delegation to interfere with the process or outcome of a quasi-judicial proceeding then in progress before a Committee which had properly commenced the proceeding within the scope of its authority.

Section 2.4 AD HOC COMMITTEES.

In addition to the Standing Committees specified in Section 2.2, the Chair or the Board may at any time establish an *ad hoc* Committee of the Board and fix its duties and responsibilities for any purpose which, in the judgment of the Chair or the Board, is better served by a temporary rather than Standing Committee. Each such Committee shall consist of such number of members as the Chair shall determine, and the Chair shall also then appoint the Chair and designate the other members of the Committee, unless otherwise determined by the Board.

Section 2.5 LIMITATIONS ON AUTHORITY.

No Committee shall have any power or authority, nor shall the Board delegate to itself, power or authority, as to any of the following:

- a. The amendment or repeal of any Board resolution.
- b. Action on other matters committed by Board resolution or by Kentucky law (including the common law of trusts respecting the delegation or the non-delegation of fiduciary responsibilities) to the Board under terms or provisions that make such action non-delegable.

Section 2.6 AMENDMENT OF BYLAWS.

These Bylaws may be amended at any regular or special meeting of the Board of Trustees by a vote of a majority of the entire membership of the Board. The Board shall be provided a copy of the proposed changes at least fifteen (15) calendar days prior to the meeting of the Board of Trustees where this vote shall be taken.

Section 3.0 CERTIFICATION OF STATEMENT OF BYLAWS AND COMMITTEE ORGANIZATION.

We, the Chair of the Board of Trustees and the Chief Executive Officer of the Kentucky Retirement Systems, do certify that this Statement of Bylaws and Committee Organization was approved and adopted by the Board on the ~~20th-2nd~~ day of ~~May~~December, 2021.

Chair of the Board of Trustees
Kentucky Retirement Systems

Date

Chief Executive Officer
Kentucky Retirement Systems

Date



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

1260 Louisville Road • Frankfort, Kentucky 40601
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To: KRS Board of Trustees

From: Rebecca H Adkins
Executive Director, Office of Operations

Date: December 2, 2021

Subject: House Bill 8 Appeals

The 2021 Regular Session of the Kentucky General Assembly passed House Bill 8 (HB 8). The bill changed the calculation methodology for the KERS Nonhazardous employer contributions from a percent of payroll to normal cost plus a flat amount which is equal to each agency's assigned percentage of the annual total unfunded actuarially accrued liability of the KERS Nonhazardous fund over a closed period. The assigned percentage is based on the liability that was attributable to the agency as of June 30, 2019.

HB 8 allowed agencies affected by this change to submit a one-time appeal of the members who made up the assigned liability percentage. It limited the type of appeals that could be submitted to or considered by the Board. The three valid bases of appeal are as follows:

- 1) Appeal Basis 1 – the agency can claim that it was not the member's last participating employer
- 2) Appeal Basis 2 – the member was hired through a contract between the executive branch and the employer to provide services to the executive branch
- 3) Appeal Basis 3 – the member was employed by the appealing agency because a community mental health center was contracted to provide services at a facility previously operated by the executive branch

HB 8 places the burden of proof regarding appeals on the appealing employer.

Forty-seven (47) agencies appealed a total of 5,191 members. These are the appeals the Board is being asked to review and on which a final Board decision is due before December 31, 2021. On behalf of the Board, KPPA legal and benefits staff carefully researched each appeal. A detailed process was developed and followed for each appeal. The process is defined below.

Action Needed: We request the Board review the attached material and make a final approve/deny decision on the HB 8 agency appeals that were received.

HB 8 Appeals Statistics

There were 178 agencies eligible to appeal under HB 8. The agencies that are defined by HB 8 to be included under the executive, legislative or judicial branches are not eligible to appeal.

Employer	Number of Members	Accrued Liability as of 6/30/19
Legislative	1,489	\$343,338,931
Judicial	4,700	\$469,266,488
Executive	85,345	\$14,434,001,594
Not Eligible To Appeal	91,534	\$15,246,607,013
Agencies (178)		
Total Eligible To Appeal	40,880	\$3,880,919,950

Of the 178 eligible agencies, forty-seven (47) agencies submitted appeals on or before the July 1, 2021, deadline. The appeal affecting the largest number of members was Appeal Basis 3 followed closely by Appeal Basis 1.

Appeal Type	Number of Employers	Number of Members	Amount
Not Last Employer	33	2,224	\$119,489,395
Contract with Executive branch	23	404	\$37,216,183
Previous state mental health facility	3	2,563	\$209,099,868
TOTAL		5,191	\$365,805,446

Appeals by Employer Classification Code

Employer Classification	Appeals	Appeals by Type					
		Not Last Employer		Contract with Executive branch		Previous state mental health facility	
		Members	Accrued Liability	Members	Accrued Liability	Members	Accrued Liability
Health Departments	25	72	\$6,513,201	90	\$16,147,664		
Non-P1 State Agencies	4	7	723,227	-	-	-	-
Regional Mental Health Units	10	1,403	63,926,769	-	-	2,563	209,099,868
Universities	4	650	28,788,954	308	20,550,842	-	-
County Attorneys	4	92	19,537,244	6	517,677	-	-
TOTAL	47	2,224	\$119,489,395	404	\$37,216,183	2,563	\$209,099,868

House Bill 8 Appeal Process Summary

Appeal Basis 1 was divided among staff within the Office of Benefits. A benefits team comprised of trained auditors, counselors, a director and staff assistant reviewed each member under Basis 1 to determine whether KPPA records support the appealing agency's claim that they were not the member's last KERS Nonhazardous employer as of June 30, 2019. The primary documents examined to make a determination were:

1. Form 2020, Personnel Action Form- indicates a member's status, appointment, separation and the date the action was taken
2. Form 4225, Verification of Past Employment- reporting officials verify period(s) of service, position and status for eligible service purchases
3. Form 4240, Payroll Records
4. Form 6000, Section H- Employer Certification of Leave Balances and Final Salary
5. Form 6500, Sick Leave Verification
6. Form 6630, Employer Verification of Term Wages
7. Last Contribution Details and termination posted in Employer Self Service by the appealing agency

Any combination of these forms completed by the appealing agency permitted the reviewer to update the status of the appeal as a recommended "denial". For those accounts that KPPA staff could not conclusively recommend an approve/deny due to a lack of supporting documentation, an affidavit was mailed to the member and the appealing agency. These particular IDs commonly had a Form 2001, KRS Membership form completed by the member which indicates employment with the appealing agency and/or Detail File Statements which breaks down the member wages, contributions, service and employer code based on fiscal year. Members were given ten (10) days to respond to the request for an affidavit. Employers were given five (5) business days to respond. KPPA Executive staff and Legal Counsel determined processes for recommending approval/denial of appeals if the member affidavit was returned, the employer affidavit was returned, both were returned or neither were returned. If no affidavit was returned from the member or the employer, the appeal status was updated as a recommended "denial" since the last contribution detail and detail file statement are consistent with the information used by the actuary, adding support that the appealing agency is the last KERS Nonhazardous employer. If a valid member affidavit or employer affidavit was returned, KPPA staff were to update the recommended appeal status based on the information verified on the single affidavit received. If both a member and employer affidavit were returned, the member affidavit would determine the status of the appeal.

Twenty-two (22) IDs filed by six (6) of the forty-seven (47) appealing agencies were marked as a recommended "denial" due to "No basis for appeal." As stated above,

House Bill 8 defines the three appeal reasons as: 1. Not last Employer, 2. Contract with the Executive Branch or 3. Previous State Mental Health Facility. Any ID received with an appeal reason outside of those outlined by the bill were included in the total count for Appeal Basis 1. Where there was an appeal reason outside of the three valid reasons, the recommendation is “denial”. The most common invalid reasons that employers appealed were:

1. Employee is deceased.
2. Employee not eligible to retire at time of termination
3. Employee refunded contributions
4. Employee not vested at time of termination

Appeals Basis 2 and Appeals Basis 3 were divided among 4 non-advocacy attorneys for KPPA. The initial information for each employer and employee was reviewed, including contracts and other submitted information. Several of the employers included a letter from the Department of Public Health (DPH) which is a branch of the Cabinet for Health and Family Services (CHFS) where CHFS stated they were assuming liability on behalf of the executive branch for the named employees for purposes of HB 8. Upon discussions with KPPA staff and the State Budget Director, it was determined that these letters would suffice for recommending approval of the appeals and reassigning liability to the executive branch.

For employers/employees that did not have a submitted CHFS letter, KPPA staff reached out to CHFS to determine if they intended to acknowledge liability, and if not, the reason therefor. These letters were handled the same as above.

With mental health facilities that did not fall under the Department of Public Health branch of CHFS, KPPA staff reached out to the Mental Health branch of CHFS to seek similar letters and acknowledgements of executive branch liability. For those employees acknowledged by the Mental Health branch of CHFS, the appeals were recommended to be approved and the liability transferred to the executive branch.

For those employees who were not acknowledged by CHFS, the contracts and other documents were examined including contractual language, internal KPPA reports as to contribution dates and employers, and any other submitted documentation to determine if liability should lie with the executive branch. Employers were provided additional opportunities throughout this process to submit documentation supporting their burden of proving they are not liable for the actuarially unfunded liability for each appealed employee. In particular, KPPA non-advocacy attorneys looked at whether the appealed employee was hired under a specific contract; the dates comply with the statutorily enumerated last date of employment with participating employer or June 30, 2019, whichever occurred first; the position description fits the statutory language; and any other extraneous documentation to help determine the recommended outcome.

The appeals ultimately resulting in a recommendation of denial occurred under two primary circumstances:

- CHFS provided an explanation as to why the employee/employer was not covered under their acknowledgement, and the employer did not provide contrary documentation.
- The employer failed to submit documentation that provided KPPA staff an opportunity to connect a specific employee with a specific contract, including lack of information regarding dates. Several of these appeals lacked any accompanying information relating to individual employees.

Although the burden of proof rests with the employers pursuant to the language in HB 8, KPPA staff nevertheless took multiple steps to reach out to the member, appealing agency, and departments within CHFS to obtain information supporting a recommendation on approval or denial of individual appeals. CHFS, through DPH and the Mental Health department, were extremely responsive and their proactive acceptance of liability was sufficient to recommend approval the named individuals and agencies.

House Bill 8 Appeal Staff Recommendations

Appeal 1 – Last Employer is in Error

- 1) Recommend denial of those for whom forms completed by the appealing agency are available in the KPPA system that determines the employer was the last employer
- 2) If no documentation can be found, ask for an affidavit from the member and from the appealing employer
 - a. Recommend denial if neither of the affidavits are returned
 - b. Recommend approval when an affidavit is returned that verifies the error in last employer
 - c. Recommend denial when an affidavit is returned that does not verify the error in last employer
 - d. If returned affidavits conflict, the member's affidavit takes precedence

Appeal 2 – Contract with Executive Branch

- 1) Recommend approval for those which were confirmed by CHFS DPH in a letter as being hired based on a contract between CHFS and the appealing agency
- 2) For agencies who did not submit a letter from CHFS, reach out to CHFS for confirmation. Recommend approval of those confirmed by CHFS
- 3) Recommend denial if CHFS provides an explanation as to why the employee/employer was not covered under their acknowledgement, and the employer does not provide contrary documentation
- 4) Recommend denial if the employer fails to submit documentation that provides KPPA staff an opportunity to connect a specific employee with a specific contract, including lack of information regarding dates

Appeal 3 – Mental health facility previously operated by the executive branch

- 1) Recommend approval of those which were confirmed by CHFS Mental Health branch in a letter as being hired to operate a mental health facility previously operated by the executive branch
- 2) For agencies who did not submit a letter from CHFS, reach out to CHFS for confirmation. Recommend approval for those confirmed by CHFS
- 3) If CHFS cannot confirm the existence of a contract, research agency-submitted documentation, system documentation and other extraneous documentation
 - a. Recommend approval for those for whom a contract can be identified
 - b. Recommend denial for those for whom a contract cannot be identified

Other Appeals

Recommend denial of all appeals based on criteria other than the three allowed by HB 8

House Bill 8 Appeals Staff Recommendations Statistics

Recommendation to Approve/Deny Percentages

Appeal Type	Number of Appeals	Number Approved	Percent Approved	Number Denied	Percent Denied
Not Last Employer	2,224	49	2%	2,175	98%
Contract with Executive branch	404	78	19%	326	81%
Previous state mental health facility	2,563	2,563	100%	0	0%
TOTAL	5,191	2,690	52%	2,501	48%

Affidavit Sent/Returned

Affidavits for Appeal Basis 1	Number of Affidavits	Percentage
Employer Affidavits Sent	212	9.5% of total appeals
Employer Affidavits Returned	15	7% returned
Member Affidavits Sent	177	8% of total appeals
Member Affidavits Returned	15	8% returned

Kentucky Employees Retirement Plan (Non-Hazardous)
2021 HB8 Appeals Decisions by Employer

Agency Code	Agency Name	Agency Classification	Appealed Total, All Bases				
			# of ER Appeals	# Approved	% Approved	# Denied	% Denied
Appealing Employers							
8205	ADANTA/BEHAVIORAL HLTH SR	Reg Mental Hlth Units	638	7	1%	631	99%
5470	KCTCS	Universities	493	2	0%	491	100%
8202	NORTHERN KY REG MHMR BD	Reg Mental Hlth Units	345	14	4%	331	96%
8221	MOUNTAIN COMP CARE CENTER	Reg Mental Hlth Units	280	-	0%	280	100%
W056	JEFFERSON CO ATTORNEY	County Attorneys	79	2	3%	77	97%
1430	EASTERN KY UNIV	Universities	351	-	0%	351	100%
1440	MOREHEAD STATE UNIVERSITY	Universities	88	5	6%	83	94%
8204	COMMUNICARE INC	Reg Mental Hlth Units	51	1	2%	50	98%
8220	LIFESKILLS INC	Reg Mental Hlth Units	134	102	76%	32	24%
3044	N CENTRAL DIST HLTH DEPT	Health Departments	23	-	0%	23	100%
1445	MURRAY STATE UNIV	Universities	26	-	0%	26	100%
3028	LINCOLN TRL DIST HLTH DEP	Health Departments	40	9	23%	31	78%
8208	CUMBERLAND RIVER MHMR	Reg Mental Hlth Units	18	-	0%	18	100%
8216	COMPREHEND INC REG MHMR B	Reg Mental Hlth Units	16	-	0%	16	100%
8210	NEW VISTA OF THE BLUEGRASS, INC.	Reg Mental Hlth Units	2,361	2,351	100%	10	0%
W076	MADISON COUNTY ATTORNEY	County Attorneys	10	10	100%	-	0%
3083	GRAVES CO HEALTH CENTER	Health Departments	6	-	0%	6	100%
8213	GREEN RVR REG MHMR BD	Reg Mental Hlth Units	121	115	95%	6	5%
3029	PURCHASE DIST HLTH DEPT	Health Departments	9	3	33%	6	67%
3027	GREEN RVR DIST HLTH DEPT	Health Departments	7	2	29%	5	71%
3038	PIKE CO HEALTH DEPT	Health Departments	6	3	50%	3	50%
7417	KY ASSOC OF REGIONAL PROG	Non-P1 State Agencies	3	-	0%	3	100%
3023	LAKE CUMBERLAND DISTRICT	Health Departments	3	-	0%	3	100%
1492	CSG HEADQUARTERS	Non-P1 State Assoc/Corp.	2	-	0%	2	100%
W087	MONTGOMERY CO ATTORNEY	County Attorneys	8	-	0%	8	100%
3054	THREE RIVERS DIST HLTH	Health Departments	2	-	0%	2	100%
8209	WESTERN KY REG MHMR ADV	Reg Mental Hlth Units	2	-	0%	2	100%
1435	CHILD WATCH ADVOCACY CTR	Non-P1 State Agencies	1	1	100%	-	0%
024A	CHRISTIAN COUNTY ATTORNEY	County Attorneys	1	-	0%	1	100%
3067	FRANKLIN CO HEALTH DEPT	Health Departments	5	4	80%	1	20%
3064	JOHNSON CO HEALTH DEPT	Health Departments	1	-	0%	1	100%
1480	KASAP	Non-P1 State Agencies	1	-	0%	1	100%
3060	POWELL CO HEALTH DEPT	Health Departments	1	-	0%	1	100%
3081	ASHLAND BOYD CO HEALTH DP	Health Departments	1	1	100%	-	0%
3026	BARREN RVR DIST HLTH DEPT	Health Departments	2	2	100%	-	0%
3034	BOURBON CO HEALTH CENTER	Health Departments	11	11	100%	-	0%
3047	BREATHITT CO HEALTH DEPT	Health Departments	1	1	100%	-	0%
3035	CLARK CO HEALTH DEPT	Health Departments	9	9	100%	-	0%
3059	JESSAMINE CO HEALTH DEPT	Health Departments	3	3	100%	-	0%
3033	KY RIVER DIST HEALTH DEPT	Health Departments	3	3	100%	-	0%
3022	LEX FAYETTE CO HLTH DEPT	Health Departments	4	4	100%	-	0%
3062	MADISON CO HEALTH DEP	Health Departments	1	1	100%	-	0%
3073	MARSHALL CO HEALTH DEPT	Health Departments	6	6	100%	-	0%
3030	MERCER CO HEALTH DEPT	Health Departments	4	4	100%	-	0%
3078	MONTGOMERY CO HEALTH DEPT	Health Departments	5	5	100%	-	0%
3045	PENNYRILE DIST HLTH DEPT	Health Departments	7	7	100%	-	0%
3039	FLOYD CO HEALTH CENTER	Health Departments	2	2	100%	-	0%
Subtotal - Appealing Employers			5,191	2,690	52%	2,501	48%

**Kentucky Employees Retirement Plan (Non-Hazardous)
2021 HB8 Appeals Decisions by Employer**

Appeal 1

Agency Code	Agency Name	Agency Classification	Appealed Not Last Employer 'Basis 1'				
			# of ER Appeals	# Approved	% Approved	# Denied	% Denied
Appealing Employers							
8205	ADANTA/BEHAVIORAL HLTH SR	Reg Mental Hlth Units	638	7	1%	631	99%
5470	KCTCS	Universities	493	2	0%	491	100%
8202	NORTHERN KY REG MHMR BD	Reg Mental Hlth Units	345	14	4%	331	96%
8221	MOUNTAIN COMP CARE CENTER	Reg Mental Hlth Units	280	-	0%	280	100%
W056	JEFFERSON CO ATTORNEY	County Attorneys	79	2	3%	77	97%
1430	EASTERN KY UNIV	Universities	78	-	0%	78	100%
1440	MOREHEAD STATE UNIVERSITY	Universities	57	5	9%	52	91%
8204	COMMUNICARE INC	Reg Mental Hlth Units	51	1	2%	50	98%
8220	LIFESKILLS INC	Reg Mental Hlth Units	33	1	3%	32	97%
3044	N CENTRAL DIST HLTH DEPT	Health Departments	23	-	0%	23	100%
1445	MURRAY STATE UNIV	Universities	22	-	0%	22	100%
3028	LINCOLN TRL DIST HLTH DEP	Health Departments	19	-	0%	19	100%
8208	CUMBERLAND RIVER MHMR	Reg Mental Hlth Units	18	-	0%	18	100%
8216	COMPREHEND INC REG MHMR B	Reg Mental Hlth Units	16	-	0%	16	100%
8210	NEW VISTA OF THE BLUEGRASS, INC.	Reg Mental Hlth Units	14	4	29%	10	71%
W076	MADISON COUNTY ATTORNEY	County Attorneys	10	10	100%	-	0%
3083	GRAVES CO HEALTH CENTER	Health Departments	6	-	0%	6	100%
8213	GREEN RVR REG MHMR BD	Reg Mental Hlth Units	6	-	0%	6	100%
3029	PURCHASE DIST HLTH DEPT	Health Departments	6	-	0%	6	100%
3027	GREEN RVR DIST HLTH DEPT	Health Departments	5	-	0%	5	100%
3038	PIKE CO HEALTH DEPT	Health Departments	5	2	40%	3	60%
7417	KY ASSOC OF REGIONAL PROG	Non-P1 State Agencies	3	-	0%	3	100%
3023	LAKE CUMBERLAND DISTRICT	Health Departments	3	-	0%	3	100%
1492	CSG HEADQUARTERS	Non-P1 State Assoc/Corp.	2	-	0%	2	100%
W087	MONTGOMERY CO ATTORNEY	County Attorneys	2	-	0%	2	100%
3054	THREE RIVERS DIST HLTH	Health Departments	2	-	0%	2	100%
8209	WESTERN KY REG MHMR ADV	Reg Mental Hlth Units	2	-	0%	2	100%
1435	CHILD WATCH ADVOCACY CTR	Non-P1 State Agencies	1	1	100%	-	0%
024A	CHRISTIAN COUNTY ATTORNEY	County Attorneys	1	-	0%	1	100%
3067	FRANKLIN CO HEALTH DEPT	Health Departments	1	-	0%	1	100%
3064	JOHNSON CO HEALTH DEPT	Health Departments	1	-	0%	1	100%
1480	KASAP	Non-P1 State Agencies	1	-	0%	1	100%
3060	POWELL CO HEALTH DEPT	Health Departments	1	-	0%	1	100%
3081	ASHLAND BOYD CO HEALTH DP	Health Departments	-				
3026	BARREN RVR DIST HLTH DEPT	Health Departments	-				
3034	BOURBON CO HEALTH CENTER	Health Departments	-				
3047	BREATHITT CO HEALTH DEPT	Health Departments	-				
3035	CLARK CO HEALTH DEPT	Health Departments	-				
3059	JESSAMINE CO HEALTH DEPT	Health Departments	-				
3033	KY RIVER DIST HEALTH DEPT	Health Departments	-				
3022	LEX FAYETTE CO HLTH DEPT	Health Departments	-				
3062	MADISON CO HEALTH DEP	Health Departments	-				
3073	MARSHALL CO HEALTH DEPT	Health Departments	-				
3030	MERCER CO HEALTH DEPT	Health Departments	-				
3078	MONTGOMERY CO HEALTH DEPT	Health Departments	-				
3045	PENNYRILE DIST HLTH DEPT	Health Departments	-				
3039	FLOYD CO HEALTH CENTER	Health Departments	-				
Subtotal - Appealing Employers			2,224	49	2%	2,175	98%

Kentucky Employees Retirement Plan (Non-Hazardous)

2021 HB8 Appeals Decisions by Employer

Appeal 2

Agency Code	Agency Name	Agency Classification	Appealed Contract w Exec Branch 'Basis 2'				
			# of ER Appeals	# Approved	% Approved	# Denied	% Denied
Appealing Employers							
8205	ADANTA/BEHAVIORAL HLTH SR	Reg Mental Hlth Units	-				
5470	KCTCS	Universities	-				
8202	NORTHERN KY REG MHMR BD	Reg Mental Hlth Units	-				
8221	MOUNTAIN COMP CARE CENTER	Reg Mental Hlth Units	-				
W056	JEFFERSON CO ATTORNEY	County Attorneys	-				
1430	EASTERN KY UNIV	Universities	273	-	0%	273	100%
1440	MOREHEAD STATE UNIVERSITY	Universities	31	-	0%	31	100%
8204	COMMUNICARE INC	Reg Mental Hlth Units	-				
8220	LIFESKILLS INC	Reg Mental Hlth Units	-				
3044	N CENTRAL DIST HLTH DEPT	Health Departments	-				
1445	MURRAY STATE UNIV	Universities	4	-	0%	4	100%
3028	LINCOLN TRL DIST HLTH DEP	Health Departments	21	9	43%	12	57%
8208	CUMBERLAND RIVER MHMR	Reg Mental Hlth Units	-				
8216	COMPREHEND INC REG MHMR B	Reg Mental Hlth Units	-				
8210	NEW VISTA OF THE BLUEGRASS, INC.	Reg Mental Hlth Units	-				
W076	MADISON COUNTY ATTORNEY	County Attorneys	-				
3083	GRAVES CO HEALTH CENTER	Health Departments	-				
8213	GREEN RVR REG MHMR BD	Reg Mental Hlth Units	-				
3029	PURCHASE DIST HLTH DEPT	Health Departments	3	3	100%	-	0%
3027	GREEN RVR DIST HLTH DEPT	Health Departments	2	2	100%	-	0%
3038	PIKE CO HEALTH DEPT	Health Departments	1	1	100%	-	0%
7417	KY ASSOC OF REGIONAL PROG	Non-P1 State Agencies	-				
3023	LAKE CUMBERLAND DISTRICT	Health Departments	-				
1492	CSG HEADQUARTERS	Non-P1 State Assoc/Corp.	-				
W087	MONTGOMERY CO ATTORNEY	County Attorneys	6	-	0%	6	100%
3054	THREE RIVERS DIST HLTH	Health Departments	-				
8209	WESTERN KY REG MHMR ADV	Reg Mental Hlth Units	-				
1435	CHILD WATCH ADVOCACY CTR	Non-P1 State Agencies	-				
024A	CHRISTIAN COUNTY ATTORNEY	County Attorneys	-				
3067	FRANKLIN CO HEALTH DEPT	Health Departments	4	4	100%	-	0%
3064	JOHNSON CO HEALTH DEPT	Health Departments	-				
1480	KASAP	Non-P1 State Agencies	-				
3060	POWELL CO HEALTH DEPT	Health Departments	-				
3081	ASHLAND BOYD CO HEALTH DP	Health Departments	1	1	100%	-	0%
3026	BARREN RVR DIST HLTH DEPT	Health Departments	2	2	100%	-	0%
3034	BOURBON CO HEALTH CENTER	Health Departments	11	11	100%	-	0%
3047	BREATHITT CO HEALTH DEPT	Health Departments	1	1	100%	-	0%
3035	CLARK CO HEALTH DEPT	Health Departments	9	9	100%	-	0%
3059	JESSAMINE CO HEALTH DEPT	Health Departments	3	3	100%	-	0%
3033	KY RIVER DIST HEALTH DEPT	Health Departments	3	3	100%	-	0%
3022	LEX FAYETTE CO HLTH DEPT	Health Departments	4	4	100%	-	0%
3062	MADISON CO HEALTH DEP	Health Departments	1	1	100%	-	0%
3073	MARSHALL CO HEALTH DEPT	Health Departments	6	6	100%	-	0%
3030	MERCER CO HEALTH DEPT	Health Departments	4	4	100%	-	0%
3078	MONTGOMERY CO HEALTH DEPT	Health Departments	5	5	100%	-	0%
3045	PENNYRILE DIST HLTH DEPT	Health Departments	7	7	100%	-	0%
3039	FLOYD CO HEALTH CENTER	Health Departments	2	2	100%	-	0%
Subtotal - Appealing Employers			404	78	19%	326	81%

**Kentucky Employees Retirement Plan (Non-Hazardous)
2021 HB8 Appeals Decisions by Employer
Appeal 3**

Agency Code	Agency Name	Agency Classification	Appealed Prev St MH Facility 'Basis 3'			
			# of ER Appeals	# Approved	% Approved	# Denied
Appealing Employers						
8205	ADANTA/BEHAVIORAL HLTH SR	Reg Mental Hlth Units	-			
5470	KCTCS	Universities	-			
8202	NORTHERN KY REG MHMR BD	Reg Mental Hlth Units	-			
8221	MOUNTAIN COMP CARE CENTER	Reg Mental Hlth Units	-			
W056	JEFFERSON CO ATTORNEY	County Attorneys	-			
1430	EASTERN KY UNIV	Universities	-			
1440	MOREHEAD STATE UNIVERSITY	Universities	-			
8204	COMMUNICARE INC	Reg Mental Hlth Units	-			
8220	LIFESKILLS INC	Reg Mental Hlth Units	101	101	100%	- 0%
3044	N CENTRAL DIST HLTH DEPT	Health Departments	-			
1445	MURRAY STATE UNIV	Universities	-			
3028	LINCOLN TRL DIST HLTH DEP	Health Departments	-			
8208	CUMBERLAND RIVER MHMR	Reg Mental Hlth Units	-			
8216	COMPREHEND INC REG MHMR B	Reg Mental Hlth Units	-			
8210	NEW VISTA OF THE BLUEGRASS, INC.	Reg Mental Hlth Units	2,347	2,347	100%	- 0%
W076	MADISON COUNTY ATTORNEY	County Attorneys	-			
3083	GRAVES CO HEALTH CENTER	Health Departments	-			
8213	GREEN RVR REG MHMR BD	Reg Mental Hlth Units	115	115	100%	- 0%
3029	PURCHASE DIST HLTH DEPT	Health Departments	-			
3027	GREEN RVR DIST HLTH DEPT	Health Departments	-			
3038	PIKE CO HEALTH DEPT	Health Departments	-			
7417	KY ASSOC OF REGIONAL PROG	Non-P1 State Agencies	-			
3023	LAKE CUMBERLAND DISTRICT	Health Departments	-			
1492	CSG HEADQUARTERS	Non-P1 State Assoc/Corp.	-			
W087	MONTGOMERY CO ATTORNEY	County Attorneys	-			
3054	THREE RIVERS DIST HLTH	Health Departments	-			
8209	WESTERN KY REG MHMR ADV	Reg Mental Hlth Units	-			
1435	CHILD WATCH ADVOCACY CTR	Non-P1 State Agencies	-			
024A	CHRISTIAN COUNTY ATTORNEY	County Attorneys	-			
3067	FRANKLIN CO HEALTH DEPT	Health Departments	-			
3064	JOHNSON CO HEALTH DEPT	Health Departments	-			
1480	KASAP	Non-P1 State Agencies	-			
3060	POWELL CO HEALTH DEPT	Health Departments	-			
3081	ASHLAND BOYD CO HEALTH DP	Health Departments	-			
3026	BARREN RVR DIST HLTH DEPT	Health Departments	-			
3034	BOURBON CO HEALTH CENTER	Health Departments	-			
3047	BREATHITT CO HEALTH DEPT	Health Departments	-			
3035	CLARK CO HEALTH DEPT	Health Departments	-			
3059	JESSAMINE CO HEALTH DEPT	Health Departments	-			
3033	KY RIVER DIST HEALTH DEPT	Health Departments	-			
3022	LEX FAYETTE CO HLTH DEPT	Health Departments	-			
3062	MADISON CO HEALTH DEP	Health Departments	-			
3073	MARSHALL CO HEALTH DEPT	Health Departments	-			
3030	MERCER CO HEALTH DEPT	Health Departments	-			
3078	MONTGOMERY CO HEALTH DEPT	Health Departments	-			
3045	PENNYRILE DIST HLTH DEPT	Health Departments	-			
3039	FLOYD CO HEALTH CENTER	Health Departments	-			
Subtotal - Appealing Employers			2,563	2,563	100%	- 0%