**County Employees Retirement System**
**and Kentucky Retirement Systems**
**Joint Audit Committee**
**Special Called Meeting**
**November 30, 2021 at 9:30 a.m. ET**
**Live Video Conference/Facebook Live**

## AGENDA

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| **1.** | **Call to Order** | Betty Pendergrass |
| **2.** | **Opening Video Teleconference Statement** | Betty Pendergrass |
| **3.** | **Roll Call** | Sherry Rankin |
| **4.** | **Public Comment** | Sherry Rankin |
| **5.** | **Approval of November 4, 2021 Joint Audit Committee Minutes*** | Betty Pendergrass |
| **6.** | **External Audit**<br>**a.** **DRAFT Results of annual financial audit, fiscal year ended June 30, 2021***<br>**i.** Includes Financial Section of the Annual Report<br>**ii.** Includes GASB 67 and 74 Reports<br>**b.** Management Letter Comments<br>**c.** Auditor Communications with those Charged with Governance | Blue and Co. |
| **7.** | **Joint Audit Committee Administrative Updates**<br>**a.** Review of Issued Reports<br>**i.** Employer Penalty Invoice Waiver Audit | Kristen Coffey |
| **8.** | **Joint Audit Committee Governance** | Betty Pendergrass |
| **9.** | **Adjourn*** | Betty Pendergrass |

***Action may be required by the Joint Audit Committee**

# MINUTES OF MEETING
# COUNTY EMPLOYEES RETIREMENT SYSTEM
# AND KENTUCKY RETIREMENT SYSTEMS
# BOARD OF TRUSTEES JOINT AUDIT COMMITTEE
# NOVEMBER 4, 2021, 10:00 A.M., E.T.
# VIA LIVE VIDEO TELECONFERENCE

At the November 4, 2021 meeting of the Joint Audit Committee of the Board of Trustees of the County Employees Retirement System and the Kentucky Retirement Systems, the following Committee members were present: Betty Pendergrass, Larry Totten, and Lynn Hampton. Staff members present were David Eager, Erin Surratt, Michael Board, Vicki Hale, Jillian Hall, Connie Davis, Madeline Perry, Matthew Daugherty, Kristen Coffey, Dominique McKinley, Chris Johnson, Ann Case, Ashley Gabbard, Elizabeth Smith, Sherry Rankin, Shaun Case, Phillip Cook, and Glenna Frasher. Others present included Ed Owens, CERS CEO, John Chilton, KRS CEO, Ryan Graham and Alan Norvell with Blue & Company, and Eric Branco with Johnson Bowman Branco, LP.

Ms. Pendergrass called the meeting to order and read that Opening Video Teleconference Statement.

Ms. Rankin called roll.

Being no Public Comment, Ms. Pendergrass introduced the agenda item *Approval of August 26, 2021 Joint Audit Committee Meeting Minutes.* A motion was made by Mr. Totten and seconded by Ms. Hampton to approve the minutes as presented. The motion carried unanimously.

Ms. Pendergrass introduced the agenda item *External Audit.* Ms. Pendergrass introduced Ryan Graham and Alan Norvell with Blue and Company, who is the external auditor in charge of the audit of the Kentucky Public Pensions Authority. After a brief introduction of themselves, being their first audit conducted for the Pensions Authority, Mr. Norvell expressed his thankfulness to the committee, as well as the KPPA Staff, for the additional work that has been done during this entire process. Mr. Graham reemphasized the thankfulness to the KPPA staff in this process and stated that the audit is still currently in progress but is coming to a close. Blue and Company are completing the financial statements and getting a draft ready for committee review. Ms. Pendergrass asked if they have any of the auditors' Communications with those Charged with Governance that need to be addressed today. Mr. Graham responded that they do not at this time as those will come with the final draft audit report. Ms. Pendergrass then stated she wanted to remind the Committee members that another Joint Audit Committee meeting has been scheduled for November 30, 2021 to review the final audit report and its findings. This date was chosen because Board meetings are scheduled for CERS on Wednesday, December 1, 2021, and KRS on Thursday, December 2, 2021, to officially accept all of those reports.

Ms. Davis then spoke about the changes in the future presentation of the Financial Reports given at the Board and Committee meetings. She indicated that during the process of conducting the external audit, it was upon the recommendation of Blue and Company, that the Financial Reports should list the plans as County Employees Retirement System, Kentucky Employees Retirement System, State Police Retirement System, and Insurance. She then reviewed a new report that further breaks down the County Employees Retirement System and Kentucky Employees Retirement System to show the Hazardous and Non-Hazardous funds. Ms. Davis stated that due to the State Police Retirement System being all hazardous, there is no need for a further breakdown of that plan. Ms. Davis also reviewed the new format for the Fiduciary Net Position for Insurance that is broken down to Hazardous and Non-Hazardous for County Employees Retirement System and Kentucky Employees Retirement System and State Police Retirement System. She stated that these changes are also reflected in the Changes in Fiduciary Net Position and these changes were necessary for reporting for GASB. Ms. Pendergrass indicated that she feels this will give a concise view of the Systems' as they are administered and managed, as well as improves the financial reporting.

Ms. Pendergrass introduced the agenda item *Financial Reporting.* Ms. Pendergrass began by indicating the CERS quarterly financial statements are presented to the Finance Committee of the County Employees Retirement Systems and the KRS quarterly financial statements are presented to the Kentucky Retirement Systems Board of Trustees. The quarterly financial statements as a whole have been presented to the Joint Audit Committee since this is the committee with assigned audit functions. Ms. Pendergrass felt that the committee would like to see the combining statements as a whole since these eventually become part of the annual report. Ms. Pendergrass asked the Joint Audit Committee members to consider whether or not the committee wishes to continue to look as these in the future or if those reports should be presented only to the CERS and KRS Boards. Ms. Hampton wanted to respond to Ms. Pendergrass' question. She stated first that everyone has the capability of watching the Finance Committee/Board meetings, so they could see these reports in that way. The one thing that is gained from having these presented to the Audit Committee is the ability to ask questions that were not addressed by the Finance Committee/Board. With that in mind, if questions are asked and action is taken, that could affect the Finance Committee/Board. Ms. Pendergrass answered that since two members are from the County Employees Retirement System and two are from Kentucky Retirement Systems, those representatives can go back to their respective Finance Committees/Board or the Chairs and relay that information about the questions the Joint Audit Committee raised. Ms. Pendergrass stated that she feels we could build a collaborative effort, which is why she thought we should have this with four more sets of eyes looking at these reports and taking a different approach. Ms. Pendergrass indicated that another reason she likes the way things are presented here, is that it provides a nice summary of all of the Systems and the KPPA total, and that does not appear in the individual statements that are given to the CERS and KRS Boards. Ms. Pendergrass stated that as representatives we can build that collaboration between the Joint Audit Committee and the individual Finance Committees/Board. Mr. Totten stated that by the time all the meetings are concluded, he will have reviewed these same reports three different times. However, since this is the first time it has been brought in this format, maybe we should continue with the reports for now and review its need and purpose in a future meeting.

Ms. Davis then reviewed the following financial statements as of September 30, 2021: Combining Statement of Fiduciary Net Position for Pension Funds, Combining Statement of Changes in Fiduciary Net Position for Pension Funds, Combining Statement of Fiduciary Net Position for Insurance Fund, and Combining Statement of Fiduciary Net Position for Insurance Fund. Mr. Eager asked if it would be helpful to see the percentage changes in the totals and subtotals. Ms. Pendergrass answered not necessarily because she looks at the percentage change to identify specific issues. The reasons for the changes in the totals will be a combination of all of those individual items. Therefore, there is not a clear explanation for why the totals change the way they did. She feels the analysis is better suited for the individual line items.

Ms. Davis proceeded to review the Quarterly Budget to Actual Analysis and indicated we are right on target with the quarter. She highlighted the Plan – Specific Expenses and indicated that we are tracking these expenses and are currently awaiting direction from the Ad Hoc work group on how we are going to allocate these expenses. Once this is decided, we will go back and adjust these expenses. Mr. Totten raised a question regarding the line item, Workers Compensation, with an expenditure of over $75,000. He asked was this attributable to the workers compensation case that has been mentioned in previous meetings. Ms. Davis indicated that the workers compensation case was a one-time payment, but this figure is actually our yearly premium for workers compensation insurance. This amount has increased due to the one claim that was settled.

Ms. Davis then reviewed the Contribution Reports for both Pension and Insurance Funds for the County Employees Retirement System, Kentucky Employees Retirement System and State Police Retirement System. She indicated that the Hazardous contribution is down a little from last year because service purchases are down. Ms. Davis stated that we are still using the 12% increase in the contribution, and since that is still in effect, we cannot raise the rate higher than 12% each year, but that should end in a couple of years. For the Kentucky Employees Retirement System, Ms. Davis indicated that the reduction in member contributions in Hazardous is due to a decrease in salaries for that group. Ms. Hampton indicated that in the Kentucky Employees Retirement System Hazardous, there is a significant difference in the outflow compared to inflow, and asked if that is a response to the Committee/Board wanting to get more in balance, or what has contributed to this. Ms. Davis answered that it is still over 100% funded so it will be this way until it under 100% funded. Mr. Totten asked the question of whether or not we received any of the employer buyout payments in the Kentucky Employee Retirement System, non-hazardous plan, because that is a significant increase. Ms. Surratt stated that Mr. Totten is referring to the cessation of Kentucky Housing Corporation. Ms. Davis answered yes. Ms. Elizabeth Smith added to the response provided to Ms. Hampton's question.

The KERS Hazardous Employer Contribution Rate is split and the KERS Hazardous rate is currently at 0% going to the insurance fund because of the funding status. This is why you are not seeing the inflows to offset the outflows. Ms. Hampton stated that basically the employers are contributing what the actuaries have said to contribute. Both Ms. Davis and Ms. Smith answered yes.

Ms. Davis then reviewed the Outstanding Invoices by Type and Employer. Ms. Hampton asked in regard to the Outstanding Invoices listed for the State Police Retirement Systems, do the external auditors look at that as being collectible and do we get any push back from the external auditors on this. Ms. Davis answered that we do look at it as collectible but we do not get any push back from the external auditors. The State Police know this amount is owed and they have received some general fund money specifically for these invoices, but they simply do not have enough funds in their budget right now to make a significant payment toward these invoices. Ms. Pendergrass stated that this is an appropriation issue. The State Police can pay only what the General Assembly puts in their budget and that's all they can pay. Ms. Pendergrass explained that we have been working over the last three to four years to get some additional allocations to their budgetary appropriation so that they can pay down some of this balance. She stated that we have not taken a position of deciding that some balances are uncollectible because these are employer contributions for pension benefits. So, they have to get paid at some point. She stated that the State Police is still a viable organization and they are not going away any time soon, so we are dependent upon the General Assembly to get additional dollars in their budget appropriations to take care of this balance. Mr. Chilton stated that regarding the State Police, the amounts that they owe actually have a fairly long time in which to pay, maybe a year so, that accounts for some of the large balances because the due date on them is so long. Ms. Surratt stated that she believes the majority of the State Police invoices are for sick leave and those are due in 30 days. Ms. Davis agreed. Ms. Surratt explained that the employer pension spiking is the invoice that has a year due date. Mr. Chilton then indicated that if it is majority sick leave, the employer doesn't know what that amount is until the employee retires. Ms. Surratt answered yes and that bill is sent to them generally three months after the employee has retired and the account has settled. But yes, it is after retirement. Mr. Eager indicated that these have been outstanding for quite some time, some are multiple years old. Ms. Surratt agreed with that statement. Ms. Pendergrass indicated that it all comes back to the budgetary appropriations.

Ms. Davis then reviewed the Penalty Waiver Report. There being no questions, she then reviewed the Draft Management Response to the Fiscal Year 2020 GFOA letter. Ms. Davis indicated that we had five comments, the first being with the letter of transmittal. We concurred with all of their comments and we are taking steps to ensure we include these items in this year's ACFR. Ms. Davis indicated that the last two comments were regarding using "fair value" instead of "market value", and to use "covered payroll" as the measure of payroll since the contributions to the plan are based on a measure of pay. Ms. Pendergrass pointed out that the achievement of this particular award is a very nice feather in the caps of all of the staff that work on the Annual Financial Reports and do such a great job of getting those reports assembled and put together in a professional manner. Ms. Pendergrass indicated that the comments in this letter are fairly minor. The last one regarding the term "covered payroll" actually came from a GASB omnibus standard that was issued a year or so ago and those types of changes are hard to notice. Again, this is very minor and she commends the staff. She indicated that we always get comments, but this level of comment where we have some editorial changes speaks to the fact of what a great job our staff has done in putting our Annual Reports together. Ms. Pendergrass expressed her gratitude to Ms. Adkins, Ms. Davis, Ms. Smith and all of the staff that worked together on the Annual Report. Ms. Hampton stated that as a person who has graded these reports in the past, she seconds everything that Ms. Pendergrass has stated. Mr. Chilton asked if these comments relate to the last Annual Report. Ms. Pendergrass and Ms. Davis both answered yes. Mr. Chilton questioned the date on the letter being December 2021 which hasn't occurred yet. Ms. Davis indicated that this letter will be submitted with our new 2021 Annual Report and she dated the letter December 15, 2021, the date of the KPPA Board Meeting, when the Annual Report will be approved and ready to be issued. Ms. Pendergrass stated that it can take up to a year to get the reports reviewed and to receive the comments, so that is why it coincides with the issuance of the next year's Annual Financial Report. Mr. Totten asked about the update on the Annual Report and SAFR timetable. Ms. Davis indicated that the Communications Department is working on the SAFR and it should be completed so that it can be sent to the Legislators in January. She indicated that as stated before, the Annual Report will be sent once it has been approved in December, but it must reach the GFOA office by December 31, 2021. Mr. Eager stated that last year a total of 5,500 copies were made and distributed. Each employer is sent two copies. Two copies are sent to each legislator's office. We also make it available to LRC as well. Ms. Pendergrass stated that for most of the fiscal year, except for the last quarter, things were consolidated and we decided early on to only have one SAFR this year. Between now and this time next year, we will have discussions on having separate SAFRs for the County Employees Retirement System and the Kentucky Retirement Systems. She indicated that those conversations will start after the first of the year. Ms. Pendergrass added that we may want to make sure that copies of the SAFR go to the libraries across the state to put in their catalogs.

Ms. Pendergrass introduced the agenda item *IT Security Updates.* Ms. McKinley reviewed the request for approval to contract with an external vendor to perform an infrastructure security assessment. She indicated that these assessments are done yearly to ensure that we are maintaining best practices and our security posture remains intact. The request is for approval of an expenditure of up to $70,000 on an infrastructure assessment. Mr. Totten asked if a provider already been chosen for this service. Ms. McKinley indicated that the State of Kentucky has a master agreement with Crowe, LLC and we will be utilizing those services. Mr. Totten made a motion and Ms. Hampton seconded to approve this expenditure. The motion passed unanimously.

Ms. Pendergrass introduced the agenda item *Joint Audit Committee Administrative Updates.* Ms. Coffey began with the review of the Charter for the Joint Audit Committee. She indicated that we looked at this back in August 2021, but there were some changes that were requested and we made those changes but they were a little more significant than we originally thought. Therefore, we wanted to bring it back for another review and to vote on those changes. Ms. Pendergrass stated that the key change that we did not get a chance to discuss is found in Section Six, under Internal Audit where it speaks of the appointment, dismissal and replacement of the Internal Audit Director. Ms. Pendergrass indicated that the wording in this section was changed due to the research conducted by Mr. Board and the legal staff. Ms. Hampton expressed her appreciation for Mr. Board's input and appears it does not take away the executive powers. Ms.

Pendergrass indicated that is important. Ms. Hampton made a motion and Mr. Totten seconded to approve the Charter for the Joint Audit Committee. The motion passed unanimously.

Ms. Coffey then discussed the Memorandum concerning the establishment of the Joint Audit Committee Meeting Dates for the 2022 calendar year. She indicated that the Bylaws of both County Employees Retirement System and Kentucky Retirement Systems outline when the meetings take place. We are requesting approval of those dates, as well as the starting times for those meetings, which we have left at 10:00 a.m. ET (9:00 a.m. CT). She also indicated they are seeking approval for the Special Called Joint Audit Committee meeting to be scheduled for November 30, 2021 with a start time of 9:30 a.m. ET (8:30 a.m. CT). This special called meeting will include the fiscal year 2021 external audit and any internal audits that have been released since the last Joint Audit Committee meeting. Ms. Pendergrass pointed out that she feels it would be good to start the November 30th meeting a little earlier. The Annual audit deserves a certain amount of focus, and she does not want run short on time for that review. Mr. Totten made the comment that three of the dates listed are on Eastern Daylight Time and he makes a suggestion to just strike the word "Standard" and simply indicate Eastern Time (ET). Mr. Totten made a motion and Ms. Hampton to approve the dates and starting times of the Joint Audit Committee Meetings for the calendar year 2022 and the Special Called Meeting scheduled for November 30, 2021 to begin at 9:30 ET, with the change of using Eastern Time (ET) to denote the times of the meetings. The motion passed unanimously.

Ms. Hall presented the Summary of Potential Disclosures/Breaches Report for the Third Quarter of Calendar Year 2021. Ms. Hall proceeded to present the Anonymous Tips Report since the last meeting. There being no questions, the meeting proceeded.

Ms. Coffey reviewed the Fiscal Year 2022 Internal Audit Budget as of September 30, 2021. She indicated that there may be some adjustments to this as she heard that the Finance Cabinet has announced a 25th pay period for this fiscal year. Ms. Coffey indicated that if this does occur, she will make the changes necessary to this budget. Ms. Pendergrass added that for the past decade or so, the State of Kentucky has balanced its budget by moving the June 30th pay period to July 1st. This administration has decided that they are going to put payroll back to when the payroll occurs, resulting in one extra pay period in the Fiscal Year 2022. Mr. Eager indicated that the Budget Director has indicated that it is on the table for consideration, but that a decision has yet to be made. Ms. Coffey stated that something else that may affect this budget is the fact that we lost one of our auditors, and we will be posting that open position soon. The salary of the new hire will be less than the salary of the employee we lost, so there will be some differences noted in the budget. Ms. Hampton asked about why the taxes and employer paid expenses are more than the salaries. Ms. Coffey answered that it is most likely the retirement line item, which is at around 83% to 84% of the salary amounts due to the contribution rates. Ms. Hampton stated that hopefully when the unfunded liability is paid down, those amounts will decrease. Ms. Coffey agreed.

Ms. Coffey then reviewed a report regarding the Status of Current Projects within the Division of Internal Audit Administration. There being no questions, Ms. Coffey reviewed the Final Audit Report regarding the Security Access Review. This audit resulted in 7 of 271 employees had access greater than what was required for their current roles. This was found to be attributable to employees moving from one division of the agency to another. By the end of audit, access for only one of the seven employees had not yet been corrected. Mr. Chilton asked what action has been taken to remedy some of these deficiencies. Ms. Coffey responded that management has reached out to those who had not completed those reviews and those reviews are being taken care of. She indicated that for the timeline that is in place, they are taking additional steps, like sending out a reminder that the review is still needed, and adding a step of reaching out to the Executive Management if warranted.

Ms. Pendergrass introduced the agenda item *Professional Articles.* Ms. Coffey reviewed the following professional articles: Recognizing the Value of Independent Assurance and Confronting the Cybersecurity Monster. Both articles are from the publication Tone at the Top published by the Institute of Internal Auditors. Ms. Pendergrass stated that at the same time that Trustee Education is being conducted, it may be a good idea to circulate these articles to the rest of the Trustees that may not have had a chance to see it in this material. She indicated it is an excellent article and doesn't think we can overemphasize enough the importance of remembering cybersecurity monster.

There being no further business a motion was made by Mr. Totten and seconded by Ms. Hampton to adjourn the meeting. Copies of all documents presented are incorporated as part of the minutes of theAudit Committee meeting as of November 4, 2021.

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# CERTIFICATION

I do certify that I was present at this meeting and I have recorded above the action of the Committee 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 connection with this meeting.

____________________________
Recording Secretary

I, as Chair of the Joint Audit Committee of the Board of Trustees of the County Employees Retirement System and the Kentucky Retirement Systems, do certify that the Minutes of the meeting held on November 4, 2021 were approved by the Joint Audit Committee on November 30, 2021.

____________________________
Committee Chair

I have reviewed the Minutes of the Audit Committee Meeting on November 4, 2021 for form,content, and legality.

____________________________
Executive Director
Office of Legal Services

# FINANCIAL
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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 |
| Heath 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 Non-Hazardous | CERS Hazardous | CERS Total | KERS Non-Hazardous | KERS Hazardous | KERS 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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS | Insurance Total 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** |

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

## 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** |

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

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

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

| | CERS Non-Hazardous | CERS Hazardous | CERS Total | KERS Non-Hazardous | KERS Hazardous | KERS 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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS | Insurance Total 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** |

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

# 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**

| | Pension | | Insurance | | Combined Total | |
|---|---|---|---|---|---|---|
| Fund | 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

| Counterparty | S & P Ratings | CERS Percentage of Net Exposure | KERS Percentage of Net Exposure | SPRS Percentage of Net Exposure |
|---|---|---|---|---|
| | Pension | | | |
| **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<br>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<br>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 |
| Governement Collateralized Mortgage Obligations | 10,645 |
| Government Bonds | 88,879 |
| **Total** | **$2,102,303** |

*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.*

## 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 |
| Unclassifed | 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 |
| Unclassifed | 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 |
| Unclassifed | 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** |

*Note: Differences due to rounding.*

## 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)

| | CERS | | | Total | KERS | | | Total | SPRS | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Level | | | | Level | | | | Level | | | |
| **Asset Type** | **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)

| | CERS | | | | KERS | | | | SPRS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Asset Type** | **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 comminlged 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 1 | Level 2 | Level 3 | Fair Value |
|---|---|---|---|---|
| **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 comminlged 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% |
| | | | | | |
| | CERS | CERS | KERS | KERS | SPRS |
| | Non-Hazardous | Hazardous | Non-Hazardous | Hazardous | |
| **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 Non-Hazardous | | CERS Hazardous | | KERS Non-Hazardous | | KERS Hazardous | | SPRS | |
| | **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 Non-Hazardous | | CERS Hazardous | | KERS Non-Hazardous | | KERS Hazardous | | SPRS | |
| | **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 S*tatement 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 S*tatement 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 Disclosures[1]

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 Non-Hazardous | CERS Hazardous | CERS Total | KERS Non-Hazardous | KERS Hazardous | KERS Total | SPRS |
|---|---|---|---|---|---|---|---|
| | Current 6.25% | Current 6.25% | Current 6.25% | Current 5.25% | Current 6.25% | Current 5.33% | Current 5.25% |
| 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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS | Insurance |
|---|---|---|---|---|---|---|
| | Single 5.20% | Single 5.05% | Single 5.26% | Single 5.01% | Single 5.20% | Single 5.18% |
| **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<br>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<br>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<br>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<br>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<br>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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS | Insurance |
|---|---|---|---|---|---|---|
| **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% |

*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 tor 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%*

*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.*

## 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 Non-Hazardous | CERS Hazardous | CERS Total | KERS Non-Hazardous | KERS Hazardous | SPRS | KRS Total | KPPA 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

# 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 form 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 | 5.25% |
| | | 6.25% for the KERS Hazardous fund assets | |
| **Inflation:** | 2.30% | 2.30% | 2.30% |
| **Salary Increase:** | 3.30% to 10.30%, for non-hazardous members, varies by service | 3.30% to 15.30%, for non-hazardous members, varies by service | 3.55% to 16.05%, varies by service |
| | 3.55 % to 19.05% for hazardous members, varies by service | 3.55% to 20.05% for hazardous 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 | 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<br>As of June 30 ($ in Thousands) | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| **Total OBEP 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% |
| **Salary Increase:** | 3.30% to 10.30%, for CERS non-hazardous members, varies by service.<br>3.55% to 19.05% for CERS hazardous members, varies by service.<br>3.30% to 15.30% for KERS non-hazardous members, varies by service.<br>3.55% to 20.05% for KERS hazardous members, varies by service.<br>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) wihich 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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS |
| **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 Non-Hazardous | CERS Hazardous | KERS Non-Hazardous | KERS Hazardous | SPRS |
| 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
## 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
Page 2 of 5

**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

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.

**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.

***

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

**Kentucky Public Pensions Authority**

Internal Audit Administration

Kentucky Public Pensions Authority

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**

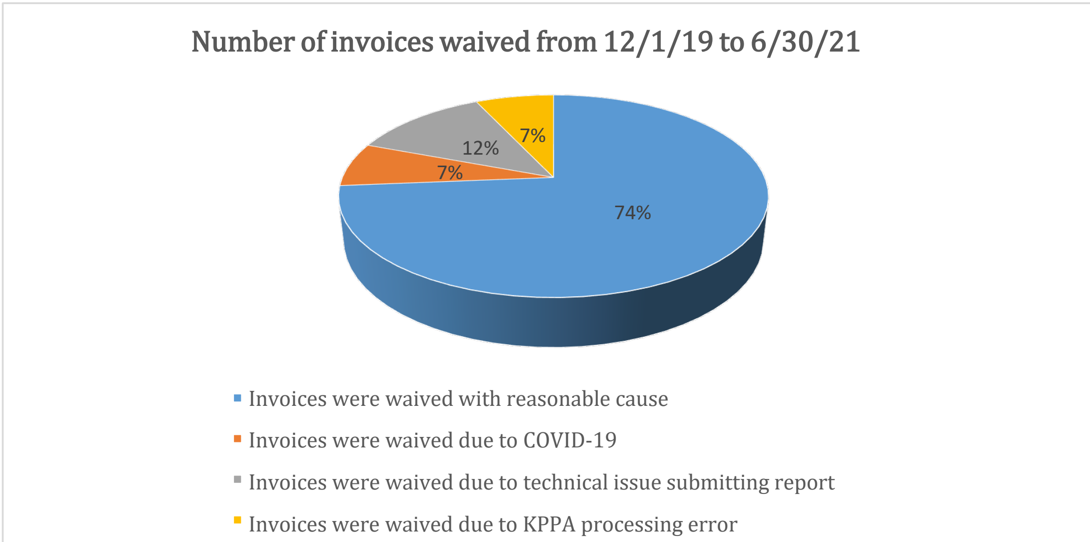
**Item #1** **Support for employer penalty waivers not easily accessible by all staff.**

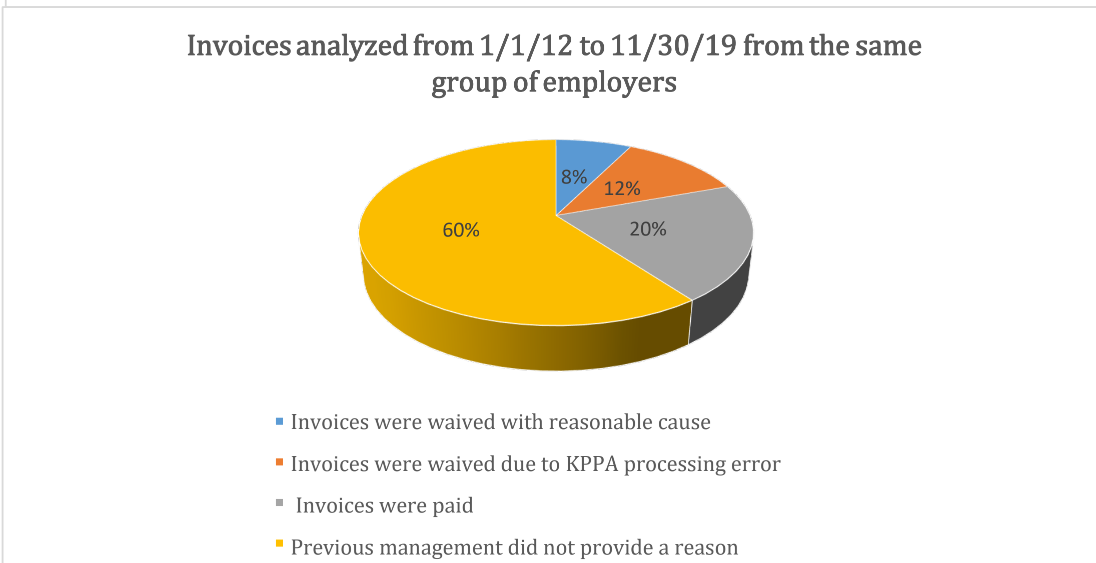
| | |
|---|---|
| **Condition** | From December 1, 2019 to June 30, 2021, KPPA created 250 penalty invoices, 57 (23%) of these invoices were waived. Detailed support for these waivers is kept in the Outlook email account of the Division Director of Accounting. Comments in START did not always contain 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:<br>* Policy was approved in November 2019, but a signed copy is not on file.<br>* Policy and procedures reference Kentucky Retirement Systems rather than KPPA.<br>* Policy does not reference that waivers are required to be reported quarterly to the Joint Audit Committee.<br>* 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."<br><br>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:<br>* Change references from the Kentucky Retirement Systems to KPPA.<br>* Add the step for reporting waivers to the Joint Audit Committee.<br>* Ensure the updated policy is signed by Executive Management.<br>* 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



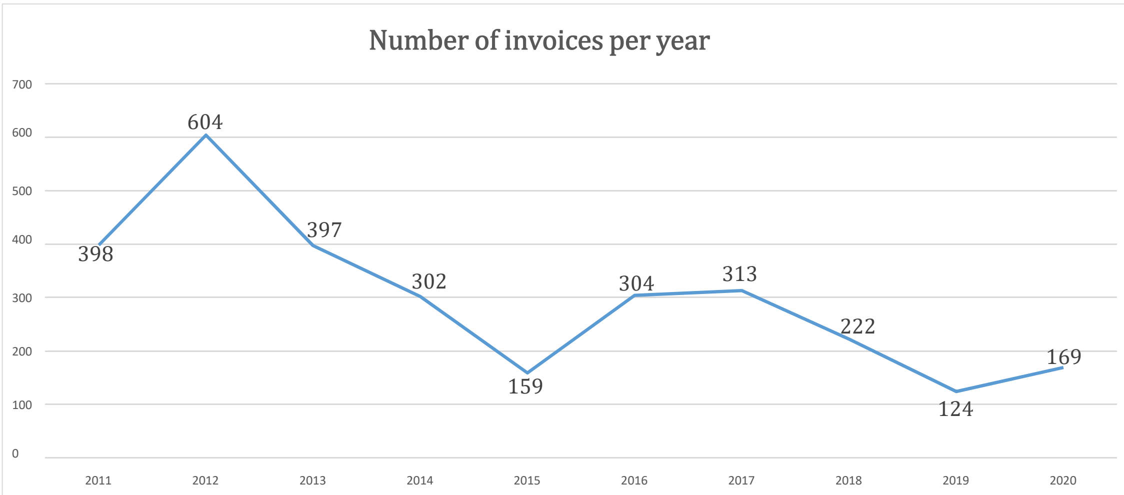



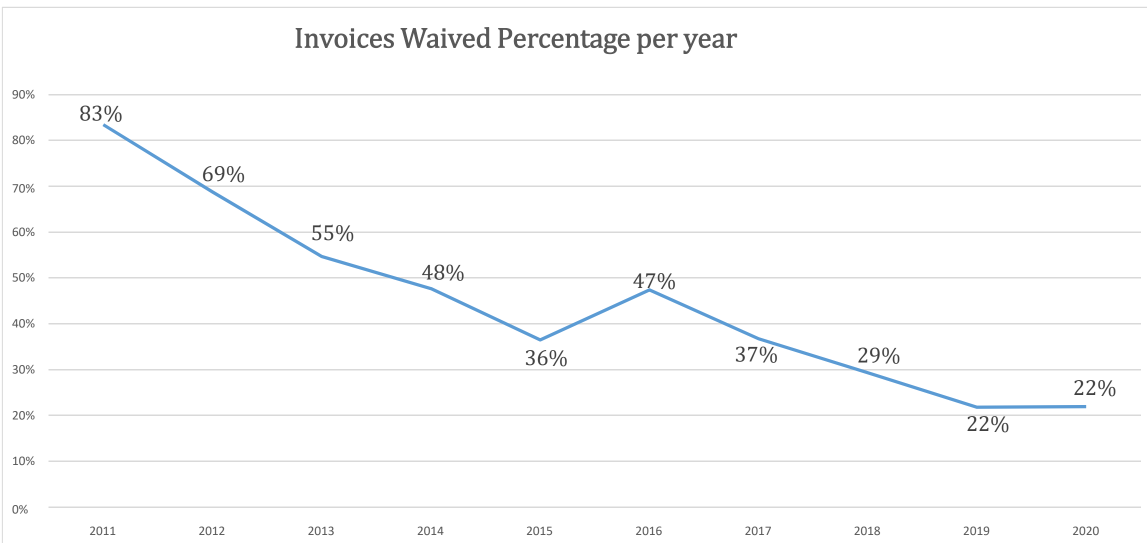

| 12/1/2019 to 6/30/2021 | Number of invoice waived |
|---|---|
| Invoices were waived with reasonable cause | 42 |
| Invoices were waived due to COVID-19 | 4 |
| Invoices were waived due to technical issue submitting report | 7 |
| Invoices were waived due to KPPA processing error | 4 |

| 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% |