



**County Employees Retirement System
Board of Trustees – Quarterly Meeting
November 10, 2021 at 2:00 PM EST
Live Video Conference/Facebook Live**

AGENDA

- | | |
|---|--|
| 1. Call to Order | Betty Pendergrass |
| 2. Opening Statement | Betty Pendergrass |
| 3. Roll Call | Sherry Rankin |
| 4. Public Comment | Sherry Rankin |
| 5. Trustee Recognition | Betty Pendergrass
Jerry Powell |
| 6. Approval of Minutes* -- September 29, 2021 | Betty Pendergrass |
| 7. CERS Finance Committee Report <ul style="list-style-type: none">a. Quarterly Financial Reportsb. Hazardous Duty Requests* | Bill O'Mara |
| 8. CERS Actuarial Committee Report <ul style="list-style-type: none">a. Draft Actuarial Valuation | Dr. Patricia Carver
Danny White, GRS
Janie Shaw, GRS |
| 9. CERS Investment Committee Report <ul style="list-style-type: none">a. Investment Policy Statement*b. Quarterly Performance Resultsc. Axiom Update | Dr. Merl Hackbart

Steven Herbert
Joe Gilbert |
| 10. Joint Audit Committee <ul style="list-style-type: none">a. Status Report on External Auditb. IT Security Memo*c. Charter for the Joint Audit Committee*c. Audit Committee Meeting Dates*d. Professional Articles | Betty Pendergrass
Betty Pendergrass
Dominique McKinley
Kristen Coffey
Kristen Coffey
Kristen Coffey |
| 11. CLOSED SESSION* | Betty Pendergrass |
| 12. ADJOURN | Betty Pendergrass |

***Board May Take Action**

**MINUTES OF MEETING
BOARD OF TRUSTEES COUNTY EMPLOYEES RETIREMENT SYSTEM
SPECIAL CALLED MEETING SEPTEMBER 29, 2021 AT 2:00 P.M.
VIA LIVE VIDEO TELECONFERENCE**

At the meeting of the County Employees Retirement System Board of Trustees held on September 29, 2021 the following members were present: Betty Pendergrass (Chair), Dr. Patricia Carver, George Cheatham, Michael Foster, JT Fulkerson, Dr. Martin Milkman, William O'Mara, and Jerry Powell. Staff members present was Ed Owens, III, CERS CEO, David Eager, Rebecca Adkins, Erin Surratt, Michael Board, Connie Pettyjohn, Connie Davis, Ashley Gabbard, D'Juan Surratt, Vicki Hale, Carrie Slayton, Carrie Bass, Kristen Coffey, Sherry Rankin, Shaun Case, Phillip Cook, and Glenna Frasher. Others present included Joseph Bowman and Eric Bronco.

Ms. Pendergrass called the meeting to order and read the Opening Statement relating to a Special Called Meeting.

Ms. Rankin took Roll Call. There was no public comment received.

Ms. Pendergrass introduced agenda item *Approval of Minutes – September 15, 2021*. Ms. Pendergrass noted one addition she would like to make to the minutes. After the Public Comment was read, Ms. Pendergrass had asked Mr. Owens to bring Ms. Combs' comment back to the Board during our November discussion of the 2021 actuarial valuation. Mr. Fulkerson made a motion and Dr. Milkman seconded to approve the minutes with the addition presented today.

Ms. Pendergrass noted that Dr. Carver is present and wanted her noted as such on the roll call. Mr. O'Mara is still having computer issues.

Ms. Pendergrass introduced agenda item *Joint Health Care Committee Report*. Ms. Pendergrass indicated that since these were discussed at length during the last meeting, a vote is all that would be required. Ms. Pendergrass referenced the Committee's recommendations regarding the 2022 plan components and rates for non-Medicare eligible members in the Board's material and opened the floor for a motion on those recommendations. Mr. Fulkerson made a motion and Dr. Milkman

seconded to approve the recommendations for the non-Medicare eligible members. The motion passed unanimously.

Ms. Pendergrass then referenced the Committee's recommendations regarding the 2022 plan components and rates for Medicare eligible members in the Board's material and opened the floor for a motion on those recommendations. Mr. Fulkerson made a motion and Dr. Milkman seconded to approve the recommendations for the Medical eligible members. The motion passed unanimously.

Ms. Pendergrass asked Ms. Pettyjohn if there was any Board action needed on the RFP timeline for Medicare eligible and COBRA, or if this was just for informational purposes. Ms. Pettyjohn indicated that there was no action needed as this was just for information only. Ms. Pendergrass indicated that since this information was previously covered, there would be no update on this agenda item unless the Trustees have any questions for Connie.

Ms. Pendergrass introduced agenda item *Joint Audit Committee Report*. Ms. Pendergrass began by stating we do have a Board Elections Policy, but she has asked Ms. Coffey to hold this item for a later date.

Ms. Pendergrass stated that the Joint Audit Committee met on August 26, 2021 and they approved the Charter for the Division of Internal Audit Administration. Ms. Pendergrass indicated that they also had a long discussion regarding the Charter for the Audit Committee, and there have been some changes made to that one since the Committee met, so she has asked that we take those changes back to the Committee for approval before proceeding with to the Boards for their approval. Ms. Pendergrass recommends that this Board approve the Charter for the Division of Internal Audit Administration. Ms. Pendergrass made a motion and Dr. Milkman seconded to approve the recommendation by the Joint Audit Committee regarding the Charter for the Division of Internal Audit Administration. The motion passed unanimously.

Ms. Pendergrass introduced Ms. Connie Davis to give an update on Fiscal Year 2021 External Audit. Ms. Davis indicated that the external auditors are doing number census data testing today

onsite. Ms. Davis stated that they are working on having a draft copy of the financial section of the Annual Report to the auditors by the end of this week. Ms. Davis indicated that the auditors also have draft copies of the GASB 67 and 74 Reports for review.

Ms. Pendergrass introduced Ms. Kristen Coffey to give an update on the Internal Audit operations. Ms. Coffey indicated that another audit report has been finalized since the last meeting. The completed report will go to the audit committee in November. Ms. Coffey stated that there are 21 different projects ongoing, including audits and reviewing the Annual Report.

Ms. Pendergrass introduced agenda item *KPPA Board Update*, and stated that this update is being provided so that all CERS Board members are aware of the actions taken at the KPPA Board meeting. Ms. Pendergrass stated that the KPPA Board deferred action on the Administrative Investment Policies as work was continuing on these documents.

Ms. Pendergrass noted that Mr. William O'Mara had joined the meeting and to notate his attendance on the roll.

Ms. Pendergrass stated that there was a bit of an oversight with regard to the Administrative Cost Allocation. The KPPA staff had brought a recommendation but they had not had an opportunity to meet with the Ad Hoc Committee that was formed at the last KPPA Board Meeting. Ms. Pendergrass indicated that this is another item that will be brought on a later date for review and action.

Ms. Pendergrass indicated that there were many questions and discussions held regarding the Kentucky Administrative Regulations, and this matter has been deferred to a later date for further review and discussions. Ms. Pendergrass stated that since we have already discussed the Audit and Internal Audit Charters, we would pass this portion of the agenda.

Ms. Pendergrass introduced agenda item *Administrative Policies*. Ms. Pendergrass introduced Ed Owens, III, CERS CEO, who will be discussing these policies and the changes to each of those. Ms. Pendergrass indicated that mainly the changes are editing the items that are unique to CERS,

but there are also some basic principles that will be discussed further. Mr. Owens indicated that he would be reviewing the policies individually. Mr. Owens began with the Confidentiality Policy and Trustee Form, which is designed to indicate that there is going to be no disclosure of information related to the members and no disclosure of information related to material included or discussion had in closed sessions. This policy will be applied to individuals or organizations with either a statutory, contractual or a working relationship with CERS. In addition, that will be inclusive of employees and contractors of KPPA. Mr. Owens indicated that the policy lists those things that will be considered confidential information. This policy states that within 60 days of you being sworn into your position as Trustee, you are to sign the Confidentiality Form. Mr. Owens indicated that this would be the process for any new Trustees, but for the current Board, it will be due within 60 days of the policy being adopted. Mr. Owens stated that within the policy it lists a detailed process should there be a perceived breach of the policy. There being no questions or discussion, Ms. Pendergrass opened the floor for a motion regarding this policy. Mr. Foster made a motion and Mr. Fulkerson seconded to adopt the CERS Confidentiality Policy and related Trustee Form as presented. The motion passed unanimously. Mr. Owens stated that now that the Policy has been adopted, the Trustee Form would be sent to each Trustee at their KPPA email address for their electronic signature.

Mr. Owens then reviewed the Trustee Education Policy, by pointing out 5.e., that continuing education for your professional certifications will be accepted as an approved activity. The policy just states the steps needed to go through to make sure it is captured correctly. Mr. Owens pointed out in section IV. 4, it speaks to conferences and workshops. These will need to be approved by the CERS general counsel for their compliance with 11A and 45A. Therefore, if you are contemplating going to a conference or workshop, contact me with the information and I will get it to our general counsel for approval. Mr. Owens then moved to the New Trustee Orientation Program, there are 8 hours of approved educational activity. In 5. 8., which states that on a quarterly basis, a report will be given to the Board on where each Trustee stands with regard to their orientation program. In VI. it states that for annual training, there will be an additional 4 hours that will be required, so a total of 12 hours. Your new orientation will count toward those 12 hours of annual training. Mr. Owens then moved to the Board Education Program, and this is to let you know what it is in the policy and to notify you that Staff Assistant, Ashley Gabbard, will

be responsible for tracking Trustee education. Her contact information is located on this form. Mr. Owens then reviewed the Initial Orientation Acknowledgement Form and stated that we will develop that orientation packet to give new Trustees to be able to walk them through several pieces of information related to the system. Mr. Owens stated that this packet will be complete and within the next 60 days, will ensure that you as Trustees have this information as well. Mr. Owens then reviewed the External Training Verification Form, as being the form you would submit when you have completed training that will allow us to track the number of hours you have completed toward your 12 hours of annual training. Dr. Milkman questioned the three videos that he has been asked to view since he is a new Trustee and wondered if this form is what he needs to fill out for those. Mr. Owens was not sure what videos he was referring to, but Ms. Pendergrass responded that those 3 videos were the first three, 2-hour sessions, that we had for New Trustee Orientation, one being an orientation of the Systems as a whole, one on Investment, and the last one on actuarial topics. Each of those has the 2-hour video rather than repeat those sessions for one new trustee, she suggested that he watch these videos to hear the same information everyone else heard, and then submit the form that we use for External Training. Since we can use this form for viewing videos that have already been recorded, this would be the form Dr. Milkman would use to submit after watching the three videos. Ms. Pendergrass mentioned that she is not sure that the documents loaded into the board material are the same as what is being presented today, and she feels like more edits may be needed on these policies and forms. Mr. Owens voiced his concern that this policy needs to be adopted as the time for compliance has already started for the Trustees and he wants to ensure that the time limit does not expire. Ms. Pendergrass stated that the 12-month time line would be different for each trustee, as it is based on when you were sworn in. She indicated this is why she suggested the change in the policy, 5.8. to indicate that each Trustee would receive a quarterly report regarding their hours. Mr. Powell stated that maybe the first year the term would begin from the day you are sworn in, but after the first year, it will be the Trustee's term date that would control the timeline for the trustee education. Dr. Milkman asked if conferences would count as Trustee Education. Ms. Pendergrass noted that she has asked for two additional provisions. Under 3.5, there is a list of workshops and conferences presented by four different pension organizations. She would like to add a fifth one to that and it would read "other associations that provide continuing education for a Trustee's professional certification, such as CPA, CFA, CGFM, CFE, or LLB" and will match that list of conferences with item 4.D. Dr.

Milkman indicated that he does not have any of those certification, however, he is an economist and wondered if he attended a conference with the Southern Economic Association, would that suffice. Mr. Owens indicated that this would be an example of providing the information to him for the review of the general counsel to ensure that it qualifies for an approved education activity. Dr. Milkman then asked if CERS pays the fees to attend a conference or are the Trustees responsible for their own. Ms. Pendergrass responded that she does not ask for CERS to pay for classes that she attends for continuing education classes for her CPA license, or AGA classes for her CGFM license, but she does claim those hours toward her 12 hour required training. Ms. Pendergrass indicated that CERS does pay for attendance at the NCPERS and the four organizations listed under Section 3.5. If you are getting certification that relates to both your professional activities and your participation as a Trustee, then you will pay for the registration costs, but could claim the hours. Mr. Cheatham stated that for clarification in the policy, it may be worth detailing that CERS would pay for registration costs for those four particular conferences, but other conferences that you would want to have credited to your education requirement, would need to go through our approval process. Ms. Pendergrass agreed and asked that Section 3.5 be amended to include these details. Seeing no additional questions, Ms. Pendergrass indicated that the Board Education Program and the Initial Orientation Acknowledgement Form are for informational purposes, but the Board needs to approve the CERS Education Policy with the one edit regarding reimbursement of registration fees and the External Training Verification Form. Mr. Cheatham made a motion and Mr. Fulkerson seconded to approve the CERS Education Policy with edits and the External Training Verification Form. The motion passed unanimously.

Mr. Owens then presented the Funding Policy. Mr. Owens began by stating that this is the first year that the Funding Policy has been presented for adoption by the Board. Mr. Owens explained that the policy simply states that the Board of Trustees has a goal of achieving a 100% funding levels for its plans. Mr. Owens referenced Section IV. B., it says that every five years an actuarial investigation comparing our experience with the actuarial assumptions would be completed and the Funding Policy would be reviewed thereafter. Ms. Pendergrass stated she would like to add one additional benchmark to that section, to come after section D, and that would be for the actuarial audit. Ms. Pendergrass indicated that we just had one completed and that report was given to the Board in December 2020. Ms. Pendergrass suggested that Section E read as follows,

“Periodically, but no less than every five years, the Board shall employ an actuarial firm who is a fellow of the Conference of Consulting Actuaries or the member of the American Academy of Actuaries to conduct an actuarial audit of the most recent actuarial evaluation. The purpose of this audit is to conduct a review of the actuarial methods, assumptions and procedures employed by the Board and the actuary selected by KPPA. This review should also include an analysis of the most recent experience study”. Ms. Pendergrass stated that it is a little different focus than the experience study listed in Section B. Mr. Owens asked for any other questions or edits to the policy. Ms. Pendergrass referred to Section I. B. and stated that she feels it may need to clarify how the plans are organized and funded. She stated that this wording is a little confusing and does not indicate that the plan that is noted in (), is funded by a Trust Fund, when in fact, it is. She indicated that the health insurance is also a qualified plan that is approved by the Internal Revenue Service criteria. She would like to change the wording in Section B as outlined in the version she sent out yesterday, so it clearly defines as, “A public employee retirement system with a non-hazardous plan and a hazardous plan that provides pension and health insurance benefits for eligible members and beneficiaries. Both the pension and health insurance benefits are funded through an irrevocable trust funds”. Dr. Milkman asked if we should designate a short-term goal. Ms. Pendergrass responded by indicating that this policy came from research that the KPPA legal staff conducted and as Mr. Owens indicated none of the systems have had a Funding Policy. She stated that she finds this one a little confusing because there is so many of the key factors that are determined not by the Board, but Kentucky General Assembly. If you look in item 2, you see the list of the areas where the General Assembly controls key factors for how the system is funded. She indicated that she would be a little reluctant to look at specific short-term goals because we can be overruled by the General Assembly on a specific topic. For instance, during the 2020 session, we had already talked about the notion of being in year 25 of a 30-year amortization period. But the General Assembly looked at the uncertainties with state and local government employers given the COVID pandemic, and decided that the one change they could make might help in the short term, would be to reset the amortization period back to 30 years. The amortization period is something that is not controlled by the Board, so when the General Assembly changed the amortization period, they changed the funding status. Mr. Powell stated that this is true also with the phase in of the insurance and employer contribution, it really does make it difficult to set short-term goals when you have the influences of the legislature. Mr. Cheatham indicated that you

could go back and look on a 2, 3, or 5 year and match up where you are actually at versus what the projection or goal was, so he feels there is a short-term number out there that you can gauge your performance against, it is just not necessarily a goal, but rather a benchmark. Ms. Pendergrass agreed and stated that we do look at that after the annual evaluation. We do an actuarial evaluation every year and we look at the projection table that the actuary gives us each year to see how that short run is changing and what types of funding levels are likely to happen in that short run. Ms. Pendergrass stated that is not certain that it needs to be included in this particular policy due to the many factors that are outside of the Board's control. After no further questions or comments, Ms. Pendergrass asked if there were any questions or comments on her suggested edits for Sections I. B. and IV. D., and opened the floor for a motion. Mr. O'Mara made a motion and Mr. Fulkerson seconded to approve the Funding Policy with the addition of the two edits. The motion passed unanimously.

Mr. Owens then reviewed the Open Records Request Policy. Mr. Owens stated this is a policy that has been in place for KRS, now KPPA, for some time. Mr. Owens referred to the procedures for accessing public records in Section 3. 6., indicates that only residents of the Commonwealth of Kentucky can inspect public records and it gives a very detailed definition of who is considered to be a resident of the Commonwealth. Ms. Hale indicated that Section 3. G. includes the changes from the new law that took effect at the end of June 2021. Before then, anyone could request open records and now it must be a resident of the Commonwealth of Kentucky. In addition, the law defines who a resident is and does not specifically mean someone who lives within Kentucky, it can also mean someone who works in Kentucky, or has a business in Kentucky, and it includes all journalists. Mr. Cheatham asked if legal could get more clarification. He stated that there are states he does not go to, but he has clients who live there, therefore he has to pay income tax in those states, and secure a state business license. So, he questions the way this section reads, it doesn't sound like if you have a vendor who is purchasing a business license in Kentucky, markets in Kentucky, but does not have a physical location or a owns or rents real estate, that they would not be able to request open records. He questions is that or is that not the case. Ms. Hale responded that if they are registered with the Kentucky Secretary of State, which enables them to do business in the Commonwealth of Kentucky, then they are considered a resident. However, if they just pay taxes here but are not registered with the Secretary of State, then they would be excluded. Ms.

Hale stated if they do own real property here, so if they actually have a business presence here, then they would also be considered a resident. Mr. Powell stated that he was under the impression that it would also apply to those authorized to act on behalf of an individual. Ms. Hale agreed and stated that if, for instance, if someone out of state hires an attorney, and that attorney is allowed to do business in the state of Kentucky, then you are authorized to act on behalf of that individual and would be considered a resident. Ms. Pendergrass then indicated Sections G. C. and G. F. would address those questions. Ms. Hale then indicated that in reality if they check the box on the form, then we accept it, without asking for verification. Mr. Cheatham then asked if that would cause problems if we give out information to someone that was not entitled to receive it. Ms. Hale responded with a no, and indicated because the law does not prohibit you from giving the information; the law just protects you if you choose not to give the information. Mr. Board stated that the point Ms. Hale just made has been clarified by the Attorney General's office, because when this law was passed and before it became effective. In his previous position, he reached out to the Attorney General's office regarding that exact point of concern on whether or not we could be liable for that very reason. The Attorney General's office made that clarification clear and further made that clear in other trainings that they have conducted since the law went into effect. Ms. Pendergrass asked for any questions or concerns, and opened the floor for a motion regarding this policy. Dr. Milkman made a motion and Mr. Powell seconded to approve the Open Records Request Policy. The motion carried unanimously.

Mr. Owens reviewed the Conflict of Interest Policy. He indicated the purpose of this policy is to establish who is covered and to lay out the standard of conduct that is expected. Again, all statutory, contractual and working relationships with CERS and vendors with CERS and KPPA will be covered. Mr. Owens referred to Section 3, it states that by no later than December 1st of each calendar year, this statement will be sent to the Board for it to consider. Mr. Owens indicated that he would be responsible for collection the CERS statements, and Mr. David Eager will be responsible for collection of those sent to the KPPA personnel. Mr. Owens stated that the forms must be completed by December 31st. He indicated that the policy states in detail what failure to comply would mean and how to handle complaints filed against a covered individual. Dr. Milkman asked if this was the same form that he signed within a month after being added to the Board. Ms. Pendergrass indicated that the one he is referencing is the statement that you file with

the Ethics Branch, and that is in addition to this form. Ms. Pendergrass stated that this policy was originally written when we had a temporary change to the Board of Directors, so there are references to CERS Board Members that should be changed to CERS Board Trustee for clarification. In addition, there is a section that speaks to who is notified of a complaint, and she would like the Board Chair and Board Vice-Chair to be added to all of those subsection points. Dr. Milkman asked what happens if the complaint pertains to the Chair or Vice-Chair. Ms. Pendergrass answered that it would need to go to our general counsel. Mr. Owens stated that this does not address if the complaint was on the Chair and Vice-Chair, but rather if it was against the Chair, it would go to the Vice-Chair, and vice versa. Ms. Pendergrass referred to Section 7 that states it would be in consultation with the CERS Board of Trustees not implicated in the complaint. She suggested that the general counsel be included so that with the CERS CEO and general counsel's involvement, so they have the leadership authority to take it where it needs to go. Section 7 requires an Ad Hoc Special Committee to investigate and/or refer to the Executive Ethics Branch Commission. Ms. Pendergrass suggested adding some language to cover that possibility. She then referenced the "General Statement Concerning Executive Branch Ethics" section and stated earlier conversations were held about asking our Trustees to file a copy of their Executive Branch Ethics Statement with CERS. There is currently no statutory requirement to do so, but thought it might be helpful if the Board, not individual Trustees, housed somewhere for the benefit of CERS. That way Mr. Owens has an easy way to check and make sure that each Trustee has complied with the provisions of KRS Chapter 11A. There being no further questions or comments, Ms. Pendergrass opened the floor for a motion to approve the Conflict of Interest Policy and Form with edits including changing the word "Members" with "Trustees", adding the Chair and Vice-Chair to the notifications in Section 4, numbers 4 through 8, and then under the general statement, adding a sentence that just asks the Trustees to file a copy of their statement supplied to the Executive Branch Code of Ethics to the CERS CEO. Dr. Milkman made a motion and Mr. Foster seconded to approve the Conflict of Interest Policy and Form with the edits presented today. The motion passed unanimously.

Mr. Cheatham wanted to address something in the Open Records Request Policy that was just passed. He mentioned the section regarding providing the information on a CD, and with the current technology as it is, can other media options such as flash drives or cloud link be included

in this section. Ms. Hale indicated that the policy being presented to KPPA has been expanded to include that language, and she will get that language to Mr. Owens for inclusion in the CERS policy. Dr. Milkman revised his motion and Mr. Powell seconded to update the approved Open Records Request Policy to include language on electronic records. The motion passed unanimously.

Ms. Pendergrass introduced agenda item *Closed Session*. Mr. Cheatham made a motion and Dr. Milkman seconded to go into closed session for the purpose of litigation. The motion passed unanimously.

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

Ms. Pendergrass stated that there was no action taken on the discussions from closed session.

Dr. Milkman made a motion and Mr. Powell seconded to adjourn the meeting. The motion passed unanimously.

Copies of all documents presented are incorporated as part of the Minutes of the Board of Trustees held September 29, 2021 except documents provided during a closed session conducted pursuant to the open meetings act and exempt under the open records act.

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CERTIFICATION

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

Recording Secretary

I, the Chair of the Board of Trustees of the County Employees Retirement System, do certify that the Minutes of Meeting held on September 29, 2021 were approved on November 10, 2021.

Chair of the Board of Trustees

I have reviewed the Minutes of the September 29, 2021 Board of Trustees Meeting for content, form, and legality.

Executive Director
Office of Legal Services



MEMORANDUM

DATE: November 3, 2021

TO: County Employees Retirement System Board of Trustees

FROM: J. T. Fulkerson, Acting Chair

SUBJECT: Summary of Quarterly CERS Finance Committee, November 3, 2021

The County Employees Retirement System held a regularly scheduled quarterly meeting on November 3, 2021.

1. The following items were approved by the Finance Committee and are being forwarded to the CERS Board of Trustees for ratification.*

- a. Hazardous Duty Requests.** The Finance Committee reviewed six applications for classification as hazardous duty positions from:
- i. Shelby County Fiscal Court (3 EMT positions)
 - ii. Adair County Fiscal Court (1 Emergency Management Director)
 - iii. City of Taylor Mill (1 Assistant Fire Chief)
 - iv. City of Murray (1 Assistant Fire Chief)

RECOMMENDATION: The CERS Finance Committee requests that the CERS Board of Trustees ratify the approval of these requests for hazardous duty classification.

2. The following items were presented for information only.

- a. Blue and Co. provided an update on the progress of the KPPA external audit and Connie Davis reviewed the proposed format for the KPPA statements of net position and changes to net position for the year ended June 30, 2021.
- b. Rebecca Adkins and Connie Davis provided an overview of the quarterly financial reports for the quarter ended September 30, 2021, including interim financial reports, administrative expense compared to budget, contribution report, and accounts receivable reports.
- c. Rebecca Adkins provided an overview of the biennial budget request submitted to the State Budget Director and explained how the KPPA administrative budget is integrated with the state's budget and accounting system.



Combining Statement of Fiduciary Net Position - Pension Funds

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

ASSETS	CERS		TOTAL		Percentage of Change	Notes
	Non-Hazardous	Hazardous	2022	2021		
CASH AND SHORT-TERM INVESTMENTS						
Cash Deposits	\$2,002	\$295	\$2,297	\$1,649	39.31%	1
Short-term Investments	350,941	135,986	486,926	503,577	-3.31%	
Total Cash and Short-term Investments	352,943	136,281	489,224	505,226		
RECEIVABLES						
Accounts Receivable	59,061	20,239	79,300	77,168	2.76%	
Accounts Receivable - Investments	73,114	25,080	98,194	278,125	-64.69%	2
Total Receivables	132,174	45,319	177,494	355,293		
INVESTMENTS, AT FAIR VALUE						
Core Fixed Income	1,053,808	362,780	1,416,588	1,681,089	-15.73%	3
Public Equities	3,964,672	1,335,677	5,300,350	3,913,270	35.45%	4
Private Equities	753,842	253,841	1,007,683	852,954	18.14%	5
Specialty Credit	1,480,734	505,677	1,986,410	1,640,333	21.10%	6
Derivatives	2,149	732	2,882	1,455	98.09%	7
Absolute Return	-	-	-	114,704		8
Real Return	520,786	175,645	696,431	601,079	15.86%	9
Opportunistic	247,734	81,897	329,631	246,073	33.96%	10
Real Estate	382,380	122,102	504,482	431,277	16.97%	11
Total Investments, at Fair Value	8,406,104	2,838,351	11,244,455	9,482,233		
Securities Lending Collateral Invested	250,152	84,798	334,950	194,141	72.53%	12
CAPITAL/INTANGIBLE ASSETS						
Capital Assets	1,701	153	1,854	1,854	0.00%	
Intangible Assets	9,961	827	10,788	10,788	0.00%	
Accumulated Depreciation	(1,701)	(153)	(1,854)	(1,829)	1.37%	
Accumulated Amortization	(9,612)	(819)	(10,431)	(9,997)	4.34%	
Total Capital Assets	349	8	357	816		
Total Assets	9,141,722	3,104,757	12,246,479	10,537,710		
LIABILITIES						
Accounts Payable	5,014	763	5,777	4,797	20.43%	13
Investment Accounts Payable	171,357	58,787	230,144	448,568	-48.69%	14
Securities Lending Collateral	250,152	84,798	334,950	194,141	72.53%	15
Total Liabilities	426,522	144,347	570,870	647,506		
Total Fiduciary Net Position Restricted for Pension Benefits	\$8,715,200	\$2,960,409	\$11,675,609	\$9,890,204		

NOTE - Variance Explanation

Differences due to rounding

- 1) Variance is a result of continuous fluctuation of deposits and transactions that flow through the cash account.
- 2) The variance in Accounts Receivables is due to pending trades.
- 3) The decline in Core Fixed Income is a result of a rebalance to move money from Core Fixed Income to Public Equities and Specialty Credit as a result of the revised IPS.
- 4) The increase in Public Equities is due to positive market conditions throughout FY21 resulting in increased market values.
- 5) The increase in Private Equity is a result of additional funding and positive market conditions in FY21 resulting in increased market values.
- 6) The increase in Specialty Credit is due to additional funding and positive market conditions during FY21 increasing market values.
- 7) Variance is a result of hedging and arbitration of risk within the portfolios.
- 8) The decline in Absolute Return is result of the merging of the Absolute Return asset class with the Real Return asset class.
- 9) The increase in Real Return is a result of the merging of the Absolute Return asset class with the Real Return asset class and positive market conditions resulting in increased market values.
- 10) The increase in Opportunistic is due to additional funding and positive market conditions during FY21 increasing market values.
- 11) The increase in Real Estate is due to additional funding and positive market conditions during FY21 increasing market values.
- 12) Variance is a result of the demands of the Securities Lending Program.
- 13) The increase in Accounts Payable is due to an increase in outstanding Employer Reporting credit invoices.
- 14) The variance in Investment Accounts Payable is due to pending trades.
- 15) Variance is a result of the demands of the Securities Lending Program.



Combining Statement of Changes In Fiduciary Net Position - Pension Funds

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

	CERS		Total		Percentage of Change	Notes
	Non-Hazardous	Hazardous	2022	2021		
ADDITIONS						
Member Contributions	\$40,774	\$16,489	\$57,263	\$55,103	3.92%	
Employer Contributions	122,121	50,872	172,993	153,946	12.37%	1
General Fund Appropriations	-	-	-	-		
Pension Spiking Contributions	20	21	41	39	6.97%	
Health Insurance Contributions (HB1)	-	-	-	-		
Employer Cessation Contributions	-	-	-	-		
Total Contributions	162,914	67,383	230,297	209,087		
INVESTMENT INCOME						
From Investing Activities						
Net Appreciation (Depreciation) in FV of Investments	71,220	24,214	95,433	420,519	-77.31%	2
Interest/Dividends	65,764	22,297	88,061	57,541	53.04%	3
Total Investing Activities Income	136,984	46,511	183,494	478,060		
Less: Investment Expense	10,099	3,369	13,468	12,624	6.68%	
Less: Performance Fees	21,560	7,371	28,931	4,904	489.89%	4
Net Income from Investing Activities	105,325	35,771	141,096	460,531		
From Securities Lending Activities						
Securities Lending Income	143	49	192	161		
Less: Securities Lending Borrower Rebates (Income)/Expense	(381)	(130)	(511)	(134)		
Less: Securities Lending Agent Fees	79	27	105	44		
Net Income from Securities Lending	445	152	597	251	138.07%	5
Net Investment Income	105,770	35,923	141,693	460,782		
Total Additions	268,685	103,306	371,991	669,869		
DEDUCTIONS						
Benefit Payments	212,490	75,409	287,899	275,056	4.67%	
Refunds	5,211	1,337	6,548	5,285	23.88%	6
Administrative Expenses	6,451	572	7,023	5,902	19.01%	7
Total Deductions	224,152	77,318	301,470	286,243		
Net Increase (Decrease) in Fiduciary Net Position Restricted for Pension Benefits	44,533	25,988	70,521	383,626		
Total Fiduciary Net Position Restricted for Pension Benefits						
Beginning of Period	8,670,667	2,934,421	11,605,088	9,506,578		
End of Period	\$8,715,200	\$2,960,409	\$11,675,609	\$9,890,204		

NOTE - Variance Explanation *Differences due to rounding*

- 1) Employer Contributions increased due to an increase in covered payroll as well as an increase in the Employer Contribution rates.
- 2) The decrease in Net Appreciation in Fair Value of Investments is a result of unfavorable market conditions resulting in unrealized losses in public equity for the first quarter of FY22.
- 3) The increase in Interest/Dividends is due to increased income from Private Equity, Core Fixed Income, and Specialty Credit asset classes.
- 4) The increase in Performance fees is due to favorable market conditions resulting in higher performance fees primarily in private equity.
- 5) Variance is a result of the demand of the Securities Lending Program.
- 6) The increase in Refunds was due to an increase in refunds taken by members who terminated employment and were not eligible for a retirement benefit.
- 7) Administrative Expenses increased for the first quarter of FY2022.



Combining Statement of Fiduciary Net Position - Insurance Fund

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

ASSETS	CERS		TOTAL		Percentage of Change	Notes
	Non-Hazardous	Hazardous	2022	2021		
CASH AND SHORT-TERM INVESTMENTS						
Cash Deposits	\$469	\$69	\$539	\$540	-0.26%	
Short-term Investments	351,981	129,441	481,422	201,730	138.65%	1
Total Cash and Short-term Investments	352,450	129,510	481,961	202,270		
RECEIVABLES						
Accounts Receivable	15,123	5,001	20,124	21,226	-5.19%	
Investment Accounts Receivable	26,607	13,470	40,077	112,259	-64.30%	2
Total Receivables	41,730	18,470	60,200	133,484		
INVESTMENTS, AT FAIR VALUE						
Core Fixed Income	375,397	197,637	573,035	667,391	-14.14%	3
Public Equities	1,356,324	697,563	2,053,887	1,526,571	34.54%	4
Specialty Credit	548,508	272,304	820,811	680,764	20.57%	5
Private Equities	294,200	165,498	459,698	390,348	17.77%	6
Derivatives	658	349	1,007	476	111.60%	7
Absolute Return	-	-	-	43,655	-100.00%	8
Real Return	176,355	92,628	268,982	238,524	12.77%	9
Opportunistic	100,030	54,495	154,525	115,354	33.96%	10
Real Estate	131,518	72,090	203,608	172,487	18.04%	11
Total Investments, at Fair Value	2,982,989	1,552,564	4,535,553	3,835,570		
Securities Lending Collateral Invested	60,720	31,040	91,760	72,104	27.26%	12
Total Assets	3,437,890	1,731,584	5,169,474	4,243,429		
LIABILITIES						
Accounts Payable	268	61	329	336	-2.07%	
Investment Accounts Payable	185,647	72,063	257,710	193,973	32.86%	13
Securities Lending Collateral	60,720	31,040	91,760	72,104	27.26%	14
Total Liabilities	246,635	103,164	349,799	266,413		
Total Fiduciary Net Position Restricted for OPEB	\$3,191,255	\$1,628,420	\$4,819,675	\$3,977,016		

NOTE - Variance Explanation *Differences due to rounding*

- 1) Short Term Investments is primarily comprised of the cash on hand with the custodial bank along with any small amounts of cash managers and brokers may have; therefore, the variance is driven by cash flow.
- 2) The variance in Investment Accounts Receivables is due to pending trades.
- 3) The decline in Core Fixed Income is a result of a rebalance to move money from Core Fixed Income to Public Equities and Specialty Credit as a result of the revised IPS.
- 4) The increase in Public Equities is due to additional funding and positive market conditions resulting in increased market values.
- 5) The increase in Specialty Credit is due to additional funding and positive market conditions increasing market values.
- 6) The increase in Private Equity is due to positive market conditions resulting in increased market values.
- 7) Variance is a result of hedging and arbitration of risk within the portfolios.
- 8) The decline in Absolute Return is a result of the merging of the Absolute Return asset class with the Real Return asset class.
- 9) The increase in Real Return is a result of the merging of the Absolute Return asset class with the Real Return asset class and positive market conditions resulting in increased market values.
- 10) The increase in Opportunistic is due to additional funding and positive market conditions increasing market values.
- 11) The increase in Real Estate is due to additional funding and positive market conditions increasing market values.
- 12) Variance is a result of the demands of the Securities Lending Program.
- 13) The variance In Investment Accounts Payable is due to pending trades.
- 14) Variance is a result of the demands of the Securities Lending Program.


Combining Statement of Changes In Fiduciary Net Position - Insurance Fund
 For the fiscal year ending September 30, 2021, with Comparative Totals as of September 30, 2020 (\$ In Thousands)

	CERS		TOTAL		Percentage of Change	Notes
	Non-Hazardous	Hazardous	2022	2021		
ADDITIONS						
Employer Contributions	\$35,524	\$16,512	\$52,036	\$45,009	15.61%	1
Medicare Drug Reimbursement	1	-	1	1	109.12%	2
Insurance Premiums	140	5	146	129	13.36%	3
Humana Gain Share Payment	-	-	-	-		
Retired Re-employed Healthcare	977	338	1,315	2,065	-36.33%	4
Health Insurance Contributions (HB1)	3,359	857	4,216	3,581	17.76%	5
Employer Cessation Contributions	-	-	-	-		
Total Contributions	40,002	17,712	57,714	50,783		
INVESTMENT INCOME						
From Investing Activities						
Net Appreciation (Depreciation) in FV of Investments	34,726	20,557	55,283	164,704	-66.43%	6
Interest/Dividends	21,898	11,452	33,350	23,014	44.91%	7
Total Investing Activities Income	56,623	32,009	88,633	187,718		
Less: Investment Expense	3,721	1,972	5,693	3,928	44.92%	8
Less: Performance Fees	9,662	5,468	15,131	3,124	384.35%	9
Net Income from Investing Activities	43,240	24,570	67,809	180,666		
From Securities Lending Activities						
Securities Lending Income	49	25	74	66		
Less: Securities Lending Borrower Rebates (Income)/Expense	(123)	(63)	(187)	(50)		
Less: Securities Lending Agent Fees	26	13	39	17		
Net Income from Securities Lending	147	75	222	98	125.59%	10
Net Investment Income	43,386	24,644	68,031	180,764		
Total Additions	83,388	42,357	125,745	231,547		
Healthcare Premiums Subsidies	32,734	21,552	54,286	56,482	-3.89%	
Administrative Expenses	238	122	360	331	8.73%	
Self-Funded Healthcare Costs	942	73	1,015	901	12.58%	11
Excise Tax Insurance	6	-	6	-		
Total Deductions	33,919	21,748	55,667	57,715		
Net Increase (Decrease) in Fiduciary Net Position Restricted for OPEB	49,469	20,609	70,078	173,832		
Total Fiduciary Net Position Restricted for OPEB						
Beginning of Period	3,141,786	1,607,811	4,749,597	3,803,183		
End of Period	\$3,191,255	\$1,628,420	\$4,819,675	\$3,977,016		

NOTE - Variance Explanation *Differences due to rounding*

- 1) Employer Contributions increased due to an increase in covered payroll as well as an increase in the Employer Contribution rates.
- 2) Medicare drug reimbursement payments fluctuate year to year based on claims reviewed.
- 3) The increase in Insurance Premiums received is due to fewer refunds processed to hazardous retirees compared to last fiscal year for premiums paid for dependents that should have been covered by KRS.
- 4) The decrease in Retired Re-employed Health Insurance is due to a decrease in retired re-employed members reported for the first quarter of the fiscal year.
- 5) Health Insurance Contributions will continue to rise as Tier 3 members increase.
- 6) The decrease in Net Appreciation in Fair Value of Investments is a result of unfavorable market conditions resulting in unrealized losses in public equity for the first quarter of FY22.
- 7) The increase in Interest/Dividends is due to increased income from Private Equity, Core Fixed Income, and Specialty Credit asset classes.
- 8) The management fees are up due to the increase in market values across all asset classes.
- 9) The increase in Performance fees is due to favorable market conditions resulting in higher performance fees primarily within private equity.
- 10) Variance is a result of the demand of the Securities Lending Program.

NOTE - Variance Explanation continued on next page.

11) The increase in Self Funded Healthcare Claims is due to an increase in claims billed from the self funded insurance plan.

**KPPA ADMINISTRATIVE BUDGET 2021-2022
FOURTH QUARTER BUDGET-TO-ACTUAL ANALYSIS
FY 2022**

Account Name	Budgeted	Actual Expense	Remaining	Percent Remaining	CERS NHZ	CHAZ	Total CERS
					Actual Expense	Actual Expense	Actual Expense
PERSONNEL					59.75%	5.29%	
Salaries	\$16,900,000	\$4,316,718	\$12,583,282	74.46%	\$2,579,239	\$228,354	\$2,807,593
Wages (Overtime)	342,000	48,884	259,603	75.91%	29,208	2,586	31,794
Emp Paid Retirement	14,478,107	3,426,929	11,051,178	76.33%	2,047,590	181,285	2,228,875
Emp Paid Health Ins	2,500,000	735,904	1,764,096	70.56%	439,703	38,929	478,632
Emp Paid Sick Leave	115,650	-	115,650	100.00%	-	-	-
Workers Compensation	77,100	75,163	1,937	2.51%	44,910	3,976	48,886
Unemployment	3,600	-	3,600	100.00%	-	-	-
Other Personnel	1,130,250	309,998	820,252	72.57%	185,224	16,399	201,623
Employee Training	18,400	2,421	15,979	86.84%	1,447	128	1,575
LEGAL & AUDITING SERVICES							
Legal Hearing Officers	84,600	16,665	67,935	80.30%	9,957	882	10,839
Legal (Stoll, Keenon)	180,000	9,199	170,801	94.89%	5,496	487	5,983
Frost Brown (Tax Advisor)	173,000	(11,335)	184,335	106.55%	(6,773)	(600)	(7,372)
Reinhart	24,000	-	24,000	100.00%	-	-	-
Ice Miller	336,000	303	335,697	99.91%	181	16	197
Legal Expense	12,000	-	12,000	100.00%	-	-	-
Auditing	118,350	41,385	76,965	65.03%	24,728	2,189	26,917
CONSULTING SERVICES							
Medical Reviewers	1,200,000	300,493	899,508	74.96%	179,545	15,896	195,441
Escrow for Actuary Fees	12,000	-	12,000	100.00%	-	-	-
CONTRACTUAL SERVICES							
Miscellaneous Contracts	22,750	8,850	13,901	61.10%	5,288	468	5,756
Human Resources Consulting	6,600	5,794	806	12.21%	3,462	307	3,768
Actuarial Services	700,000	81,179	618,821	88.40%	48,504	4,294	52,799
Facility Security Charges	112,000	17,887	94,113	84.03%	10,687	946	\$11,634
PERSONNEL SUBTOTAL	\$38,546,407	\$9,386,436	\$29,159,971	75.65%	\$5,608,396	\$496,542	\$6,104,938
OPERATIONAL							
Natural Gas	\$25,200	\$1,227	\$23,973	95.13%	\$733	\$65	\$798
Electric	138,000	30,238	107,762	78.09%	18,067	1,600	19,667
Rent-NonState Building	52,000	12,661	39,339	75.65%	7,565	670	8,235
Building Rental - PPW	1,100,000	240,524	859,476	78.13%	143,713	12,724	156,437
Copier Rental	122,587	15,890	106,697	87.04%	9,494	841	10,335
Rental Carpool	4,800	970	3,830	79.79%	580	51	631
Vehicle/Equip. Mainten.	1,350	249	1,101	81.56%	149	13	162
Postage	610,000	24,300	585,700	96.02%	14,519	1,285	15,805
Freight	600	114	486	81.00%	68	6	74
Printing (State)	6,000	320	5,680	94.67%	191	17	208
Printing (non-state)	112,500	4,219	108,281	96.25%	2,521	223	2,744
Insurance	6,000	5,422	578	9.63%	3,226	287	3,513
Garbage Collection	6,000	1,324	4,676	77.93%	791	70	861
Conference Expense	\$25,750	4,307	21,444	83.28%	\$2,573	\$228	\$2,801
MARS Usage	52,800	6,775	46,025	87.17%	4,048	358	4,406

Account Name	Budgeted	Actual		Percent Remaining	CERS NHz	CHAZ	Total CERS
		Expense	Remaining		Actual Expense	Actual Expense	Actual Expense
COVID-19 Expenses	168,000	3,716	164,284	97.79%	2,220	197	2,417
Office Supplies	42,600	16,170	26,430	62.04%	9,662	855	10,517
Furniture & Office Equipment	9,600	-	9,600	100.00%	-	-	-
Travel (In-State)	12,600	1,565	11,035	87.58%	935	83	1,018
Travel (Out of State)	45,150	-	45,150	100.00%	-	-	-
Dues & Subscriptions	61,600	15,872	45,728	74.23%	9,484	840	10,323
Miscellaneous	1,600	128	1,472	92.00%	76	7	83
COT Charges	24,000	3,940	20,060	83.58%	2,354	208	2,563
Telephone - Wireless	5,400	1,368	4,032	74.67%	817	72	890
Telephone - Other	120,000	26,541	93,459	77.88%	15,858	1,404	17,262
Computer Equip./Software	2,640,000	696,646	1,943,354	73.61%	416,246	36,853	453,099
OPERATIONAL SUBTOTAL	\$5,394,137	\$1,114,486	\$4,279,651	79.34%	\$665,892	\$58,956	\$724,848
SUBTOTAL	\$43,940,544	\$10,500,922	\$33,439,622	76.10%	\$6,274,287	\$555,499	\$6,829,786
Major Legislative Implementation	4,064,956	-	4,064,956	58.77%	-	-	-
TOTALS	\$48,005,500	\$10,500,922	\$37,504,578	78.13%	\$6,248,048	\$555,499	\$6,803,547

Differences due to rounding

Plan	Budgeted	Actual Expense	% of Total CERS Actual Expense
CERS	\$28,683,286	\$6,274,301	59.75%
CHAZ	\$2,539,491	\$555,499	5.29%
TOTAL	\$31,222,777	\$6,829,800	

Plan - Specific Expenses			
	CERS	CHAZ	Amount
CERS Adjustment	\$-	\$-	\$1,069
CERS Actual	-	-	
KERS Adjustment	-	-	14,522
KERS Legal Actual	-	-	
Subtotal Plan Specific	-	-	15,591
Total Expenses	\$6,274,301	\$555,499	

Pension Fund Contribution Report

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

	County Employees Retirement System			
	Non-Hazardous		Hazardous	
	FY22	FY21	FY22	FY21
Member Contributions	\$40.8	\$37.8	\$16.5	\$17.3
Employer Contributions	122.1	106.1	50.9	47.9
Net Investment Income	34.6	30.2	11.7	10.1
Total Inflows	197.5	174.1	79.1	75.3
Benefit Payments/Refunds	217.7	207.6	76.7	72.7
Administrative Expenses	6.5	5.4	0.6	0.5
Total Outflows	224.2	213.0	77.3	73.2
NET Contributions	(26.7)	(38.9)	1.8	2.1
Realized Gain/(Loss)	78.3	34.5	26.9	11.9
Unrealized Gain/(Loss)	(7.1)	280.1	(2.7)	94.1
Change in Net Position	44.5	275.6	26.0	108.1
Beginning of Period	8,670.7	7,110.9	2,934.4	2,395.7
End of Period	\$8,715.2	\$7,386.5	\$2,960.4	\$2,503.8

*Differences due to rounding.***Insurance Fund Contribution Report**

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

	County Employees Retirement System			
	Non-Hazardous		Hazardous	
	FY22	FY21	FY22	FY21
Employer Contributions	\$35.5	\$28.2	\$16.6	\$16.8
Insurance Premiums	0.1	0.1	-	-
Retired Reemployed Healthcare	1.0	1.8	0.3	0.3
Health Insurance Contributions	3.4	2.8	0.9	0.8
Net Investment Income	8.7	10.7	4.1	5.4
Total Inflows	48.7	43.6	21.8	23.2
Healthcare Premiums	33.7	36.8	21.6	20.6
Administrative Expenses	0.2	0.2	0.2	0.1
Total Outflows	33.9	37.0	21.8	20.7
NET Contributions	14.8	6.6	-	2.5
Realized Gain/(Loss)	36.6	10.2	19.6	5.4
Unrealized Gain/(Loss)	(1.9)	97.8	0.9	51.3
Change in Net Position	49.5	114.6	20.6	59.2
Beginning of Period	3,141.8	2,498.1	1,607.8	1,305.1
End of Period	\$3,191.3	\$2,612.7	\$1,628.4	\$1,364.3

Differences due to rounding.



KENTUCKY PUBLIC PENSIONS AUTHORITY

Outstanding Invoices by Type and Employer

Invoice Type	9/30/2021	6/30/2021	Change H/(L)
Averaging Refund to Employer	\$(431,762)	\$(459,730)	-6%
Employer Free Military and Decompression Service	280,778	58,861	377%
Member Pension Spiking Refund	(28,486)	(25,546)	12%
Monthly Reporting Invoice	(50,017)	(74,761)	-33%
Penalty – Monthly Reporting	249,807	234,473	7%
Reinstatement	275,235	244,823	12%
Total	\$295,555	\$(21,879)	1451%
Actuarially Accrued Liability Contribution	\$428,570	\$-	
Health Insurance Reimbursement	1,484,849	1,198,562	24%
Omitted Employer	1,658,929	1,576,232	5%
Employer Pension Spiking*	1,371,944	1,760,350	-22%
Standard Sick Leave	8,578,095	8,253,827	4%
Total	13,522,387	12,788,971	6%
Grand Total	\$13,817,941	\$12,767,091	8%

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

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

	Total Unpaid Balance	Number of Invoices
CERS	\$1,644,590	2,039
CERH	1,612,753	361
KERS	2,441,195	1,113
KERH	665,119	228
SPRS	7,398,671	131
Grand Total:	\$13,762,329	3,872

	Total Unpaid Balance	Number of Invoices
CERS/CERH	\$3,257,344	2,400
KERS/KERH	3,106,315	1,341
SPRS	7,398,671	131
Grand Total:	\$13,762,328.90	3,872



County Employees Retirement System
 Penalty Waivers Report
 From: 7/1/2021 To: 9/30/2021
 Note: Delinquent Interest amounts are included in the totals for the invoice

Invoice Amount	Invoice Remaining Balance	Delinquent Interest	Invoice Status Date	Invoice Due Date	Invoice Status	Employer Classification	Comments
\$1,000	\$-	\$-	7/7/2021	5/23/2014	CANC	Cities	Agency in good standing with KPPA
1,000	-	-	7/29/2021	10/20/2016	CANC	Development Authorities	New employer reporting official
1,000	-	-	7/29/2021	10/20/2016	CANC	Development Authorities	New employer reporting official
1,000	-	-	7/29/2021	4/19/2017	CANC	Development Authorities	New employer reporting official
1,000	-	-	7/29/2021	4/19/2017	CANC	Development Authorities	New employer reporting official
1,000	-	-	7/29/2021	4/19/2017	CANC	Development Authorities	New employer reporting official
1,000	-	-	7/21/2021	7/5/2019	CANC	Special Districts & Boards	Agency in good standing with KPPA
1,000	-	-	8/25/2021	5/12/2021	CANC	Cities	New employer reporting official
1,000	-	-	8/25/2021	5/12/2021	CANC	Cities	New employer reporting official
1,000	-	-	8/25/2021	5/12/2021	CANC	Cities	New employer reporting official
1,000	-	-	7/30/2021	8/15/2021	CANC	Fiscal Courts	Agency in good standing with KPPA
1,000	-	-	7/29/2021	8/20/2021	CANC	Housing Authorities	New employer reporting official
1,000	-	-	7/30/2021	8/25/2021	CANC	Fiscal Courts	Agency in good standing with KPPA
1,000	-	-	8/31/2021	9/22/2021	CANC	Boards of Education	New employer reporting official
Total	\$14,000						
\$1,000	\$1,000	\$-	7/6/2021	8/5/2021	CRTD	Conservation Districts	
1,000	1,000	-	7/26/2021	8/25/2021	CRTD	Libraries	
1,000	1,000	-	7/28/2021	8/27/2021	CRTD	Cities	
1,000	1,000	-	8/5/2021	9/4/2021	CRTD	Cities	
1,000	1,000	-	8/24/2021	9/23/2021	CRTD	Boards of Education	
1,000	1,000	-	8/26/2021	9/25/2021	CRTD	Boards of Education	
1,000	1,000	-	8/27/2021	9/26/2021	CRTD	Fiscal Courts	
1,000	1,000	-	9/8/2021	10/8/2021	CRTD	Cities	
1,000	1,000	-	9/13/2021	10/13/2021	CRTD	Cities	
1,000	1,000	-	9/22/2021	10/22/2021	CRTD	Cities	
1,360	1,360	-	9/23/2021	10/23/2021	CRTD	Cities	

CERS Quarterly Board Meeting - CERS Finance Committee Report

	Invoice Amount	Invoice Remaining Balance	Delinquent Interest	Invoice Status Date	Invoice Due Date	Invoice Status	Employer Classification	Comments
	1,000	1,000	-	9/28/2021	10/28/2021	CRTD	Housing Authorities	
Total	\$12,360							
	\$1,000	\$-	\$-	7/2/2021	7/12/2021	PAID	Housing Authorities	
	1,000	-	-	7/1/2021	7/11/2021	PAID	Utility Boards	
	1,000	-	-	7/1/2021	7/11/2021	PAID	Utility Boards	
	1,000	-	-	8/27/2021	2/22/2018	PAID	Housing Authorities	
	1,000	-	-	7/1/2021	7/11/2021	PAID	Utility Boards	
	1,000	-	-	8/27/2021	8/9/2019	PAID	Fiscal Courts	
	1,000	-	-	7/1/2021	7/11/2021	PAID	Utility Boards	
	1,000	-	-	8/27/2021	9/22/2019	PAID	Fiscal Courts	
	1,000	-	-	8/27/2021	2/9/2020	PAID	Fiscal Courts	
	1,000	-	-	8/27/2021	5/28/2020	PAID	Fiscal Courts	
	1,082	-	-	7/21/2021	7/31/2021	PAID	Cities	
	1,000	-	-	8/27/2021	8/9/2020	PAID	Fiscal Courts	
	1,000	-	-	7/29/2021	8/23/2020	PAID	County Attorneys	
	1,000	-	-	8/27/2021	11/19/2020	PAID	Fiscal Courts	
	2,282	-	-	8/31/2021	9/10/2021	PAID	Boards of Education	
	1,000	-	-	8/27/2021	12/11/2020	PAID	Fiscal Courts	
	1,000	-	-	8/27/2021	5/9/2021	PAID	Fiscal Courts	
	1,000	-	-	8/27/2021	5/9/2021	PAID	Fiscal Courts	
	1,222	-	-	7/19/2021	7/29/2021	PAID	Cities	
	1,000	-	-	8/27/2021	5/28/2021	PAID	Fiscal Courts	
	1,000	-	-	8/4/2021	6/18/2021	PAID	Boards of Education	
	1,000	-	-	7/29/2021	6/27/2021	PAID	County Attorneys	
	1,000	-	-	9/1/2021	7/14/2021	PAID	Housing Authorities	
	1,145	-	-	7/19/2021	7/29/2021	PAID	Cities	
	1,000	-	-	8/2/2021	8/15/2021	PAID	Airport Boards	
	1,146	-	-	7/21/2021	7/31/2021	PAID	Cities	
	5,726	-	-	8/31/2021	9/10/2021	PAID	Boards of Education	
	1,149	-	-	7/28/2021	8/7/2021	PAID	Cities	
	1,000	-	-	9/7/2021	9/17/2021	PAID	Utility Boards	

CERS Quarterly Board Meeting - CERS Finance Committee Report

Invoice Amount	Invoice Remaining Balance	Delinquent Interest	Invoice Status Date	Invoice Due Date	Invoice Status	Employer Classification	Comments
1,000	-	-	8/27/2021	9/6/2021	PAID	Cities	
1,000	-	-	8/27/2021	8/26/2021	PAID	Fiscal Courts	
1,165	-	-	9/23/2021	10/3/2021	PAID	Cities	
1,000	-	-	9/10/2021	8/28/2021	PAID	County Attorneys	
1,208	-	-	9/23/2021	10/3/2021	PAID	Cities	
1,000	-	-	9/29/2021	9/17/2021	PAID	Community Action Agencies	
1,000	-	-	9/10/2021	9/17/2021	PAID	Utility Boards	
1,000	-	-	9/8/2021	9/17/2021	PAID	Fiscal Courts	
1,016	-	-	9/8/2021	9/29/2021	PAID	Fiscal Courts	
1,970	-	-	9/23/2021	10/3/2021	PAID	Cities	
1,000	-	-	7/29/2021	4/15/2012	PAID	County Attorneys	
Total	\$48,110.44						

Notes:

Invoice Status:

CANC - Cancelled

CRTD - Created

PAID - Paid



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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



To: CERS Finance Committee

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

Date: 11/03/2021

Subject: Hazardous Position Classification

AGENCIES ARE REQUESTING HAZARDOUS DUTY COVERAGE FOR THE FOLLOWING POSITIONS:

<u>Agency</u>	<u>Position</u>	<u>Effective Date</u>
Shelby County Fiscal Court	Captain/Advanced Emergency Medical Technician	12/1/2021
Shelby County Fiscal Court	Sergeant/Advanced Emergency Medical Technician	12/1/2021
Shelby County Fiscal Court	Advanced Emergency Medical Technician	12/1/2021
Adair County Fiscal Court	Emergency Management Director	09/1/2021
City of Taylor Mill	Assistant Fire Chief	09/1/2021
City of Murray	Assistant Fire Chief	11/1/2021

Kentucky Public Pensions Authority has reviewed the above requests and determined that they meet the statutory guidelines for Hazardous coverage. Position Questionnaires and Job Descriptions are attached.



MEMORANDUM

TO: County Employees Retirement System Board of Trustees

From: Michael Foster, Chair
Actuary Committee

Date: November 10, 2021

Subject: Summary of Actuary Subcommittee Quarterly Meeting

The County Employees Retirement System held a special quarterly Actuary Committee meeting on November 8, 2021.

1. The following items were approved by the Actuary Committee and are being forwarded to the County Employees Retirement System Board of Trustees for ratification.
 - a. There were no actions taken by the Actuary Committee that need ratification from the Board of Trustees.

RECOMMENDATION: The Actuary Committee requests the County Employees Retirement System Board of Trustees ratify the actions taken by the Actuary Committee.

2. The following items were also discussed during the Actuary Committee meeting:
 - a. The Committee received a presentation from GRS that detailed the draft Actuarial Evaluation that will be presented to PPOB on November 10, 20121.
 - b. The Committee engaged in a detailed discussion of COLAs consisting of:
 - a. Historical Perspective
 - b. Legislative Role; and
 - c. Although GRS had prepared a presentation to discuss various COLA options for the Committee, The CERS Board Chair asked that the presentation not go forward because issues regarding COLAs are subject to General Assembly oversight. The presentation material was included in BoardBooks and will be uploaded to the website.
 - c. The Trustees were informed about cybersecurity awareness training. It was explained to them that they would receive training modules via email and upon

their completion of the training modules they would each receive one (1) hour of Trustee Education credit.



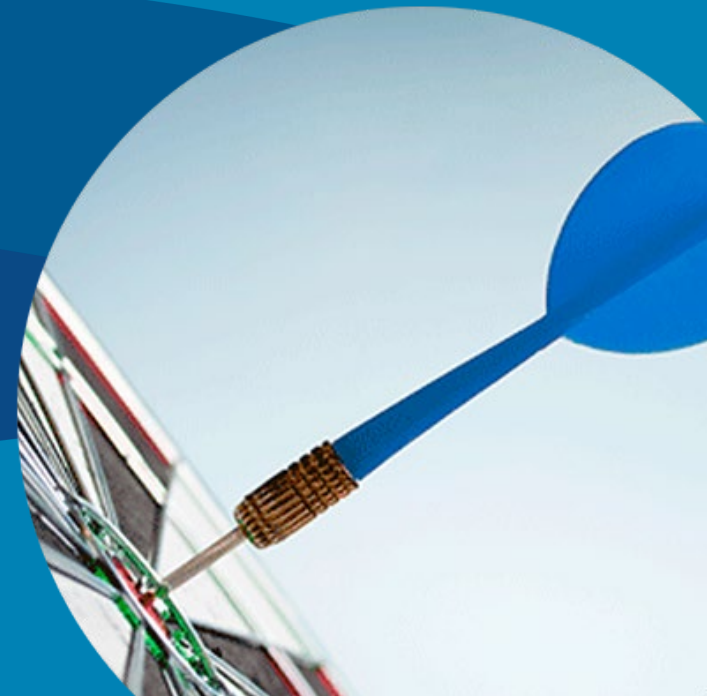
County Employees Retirement System

2021 Actuarial Valuation Results

November 10, 2021

Janie Shaw, ASA, EA, MAAA

Danny White, FSA, EA, MAAA



Comments on Valuation Results

- Overview of legislation passed in 2021
 - SB 169: disability benefit improvements
- Change in active membership and covered payroll
 - Active membership declined across all funds
 - CERS Non-Haz: 1.4% decrease in covered payroll
 - CERS Hazardous: 1.7% increase in covered payroll



Comments on Valuation Results

- FYE 2021 Investment Experience
 - 25% return on market value
 - Assumed rate of return: 6.25%
 - Fund assets \$2,504M more than expected for CERS (\$1,780M pension and \$724M insurance)
 - \$511M in asset gains recognized this year (\$367M pension and \$144M insurance)



Comments on Valuation Results

- Retirement Fund Liability Experience
 - \$47M gain for CERS Non-Hazardous
 - \$53M loss for CERS Hazardous
 - Liability within 1% of expected
- Insurance Fund Liability Experience
 - \$163M gain for both CERS insurance funds combined
 - Both the 2022 non-Medicare and Medicare premiums were lower than expected based on the prior year's actuarial assumptions



Required Employer Contributions

	CERS Non-Hazardous		CERS Hazardous	
	2020 Val	2021 Val	2020 Val	2021 Val
(1)	(2)	(3)	(4)	(5)
Pension Fund	23.88%	23.40%	43.23%	42.81%
Insurance Fund	<u>4.17%</u>	<u>3.39%</u>	<u>8.73%</u>	<u>6.78%</u>
Actuarially Determined Contribution Rate, payable as a percentage of payroll	28.05%	26.79%	51.96%	49.59%
Difference		(1.26)%		(2.37)%
Actual/Recommended Contribution Rate¹	26.95%	26.79%	44.33%	49.59%
Difference		(0.16)%		5.26%

¹ Recommended contribution rates reflect CERS phase-in provisions, which limit the increases in the contribution rates to 12% over the prior fiscal year

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



Required Employer Contributions (\$millions)

	CERS Non-Hazardous		CERS Hazardous	
	2020 Val FYE2022	2021 Val FYE2023	2020 Val FYE2022	2021 Val FYE2023
(1)	(2)	(3)	(4)	(5)
<u>Actuarially Determined Employer Contribution</u>				
Pension Fund	\$ 625	\$ 604	\$ 251	\$ 253
Insurance Fund	<u>108</u>	<u>87</u>	<u>50</u>	<u>40</u>
Total Contribution	\$ 733	\$ 691	\$ 301	\$ 293
Change in Contribution		\$(42)		\$(8)
<u>Actual/Recommended Contribution</u>				
Pension Fund	\$ 596	\$ 604	\$ 206	\$ 253
Insurance Fund	<u>108</u>	<u>87</u>	<u>50</u>	<u>40</u>
Total Contribution	\$ 704	\$ 691	\$ 256	\$ 293
Change in Contribution		\$(13)		\$ 37



Change in Required Employer Contributions

CERS Non-Haz – Actuarially Determined Contribution Rate

	CERS Non-Hazardous (% of pay)		
	Pension	Insurance	Total
Contribution Rate – 2020 Val	23.88%	4.17%	28.05%
Contribution Phase-In	0.09 %	0.00 %	0.09 %
Investment Experience	(0.89)%	(0.32)%	(1.21)%
Demographic Experience	0.27 %	(0.48)%	(0.21)%
Plan Change – SB169	<u>0.05 %</u>	<u>0.02 %</u>	<u>0.07 %</u>
Total Change	(0.48)%	(0.78)%	(1.26)%
Contribution Rate – 2021 Val	23.40%	3.39%	26.79%

Actual Contribution Rate: 26.95%

Return on market value of assets
25% pension & insurance

Covered payroll decreased by 1.4%

2022 health insurance premiums
lower than expected



Change in Required Employer Contributions

CERS Haz – Actuarially Determined Contribution Rate

	CERS Hazardous (% of pay)		
	Pension	Insurance	Total
Contribution Rate – 2020 Val	43.23%	8.73%	51.96%
Contribution Phase-In	0.59 %	0.00 %	0.59 %
Investment Experience	(1.52)%	(0.77)%	(2.29)%
Demographic Experience	0.46 %	(1.24)%	(0.78)%
Plan Change – SB169	<u>0.05 %</u>	<u>0.06 %</u>	<u>0.11 %</u>
Total Change	(0.42)%	(1.95)%	(2.37)%
Contribution Rate – 2021 Val	42.81%	6.78%	49.59%

Actual Contribution Rate: 44.33%

Return on market value of assets
25% pension & insurance

Covered payroll increased by 1.7%

2022 health insurance premiums
lower than expected

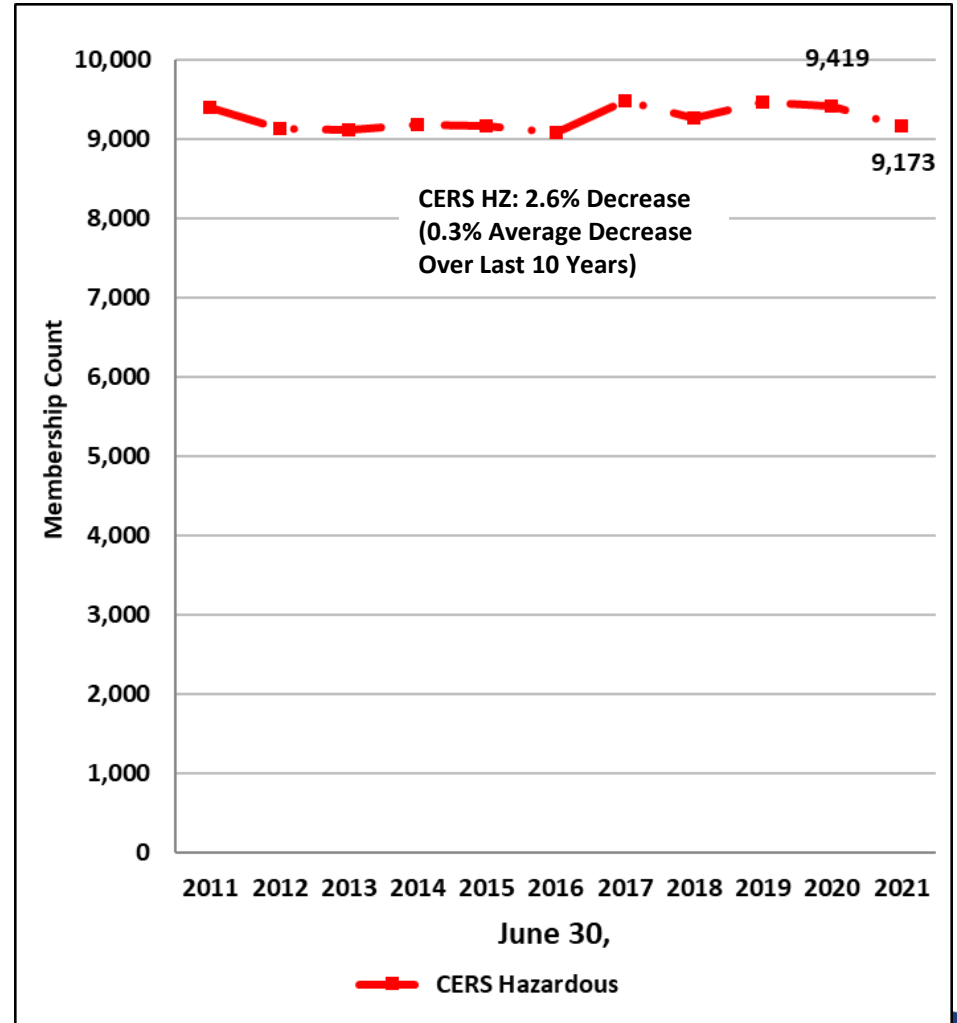
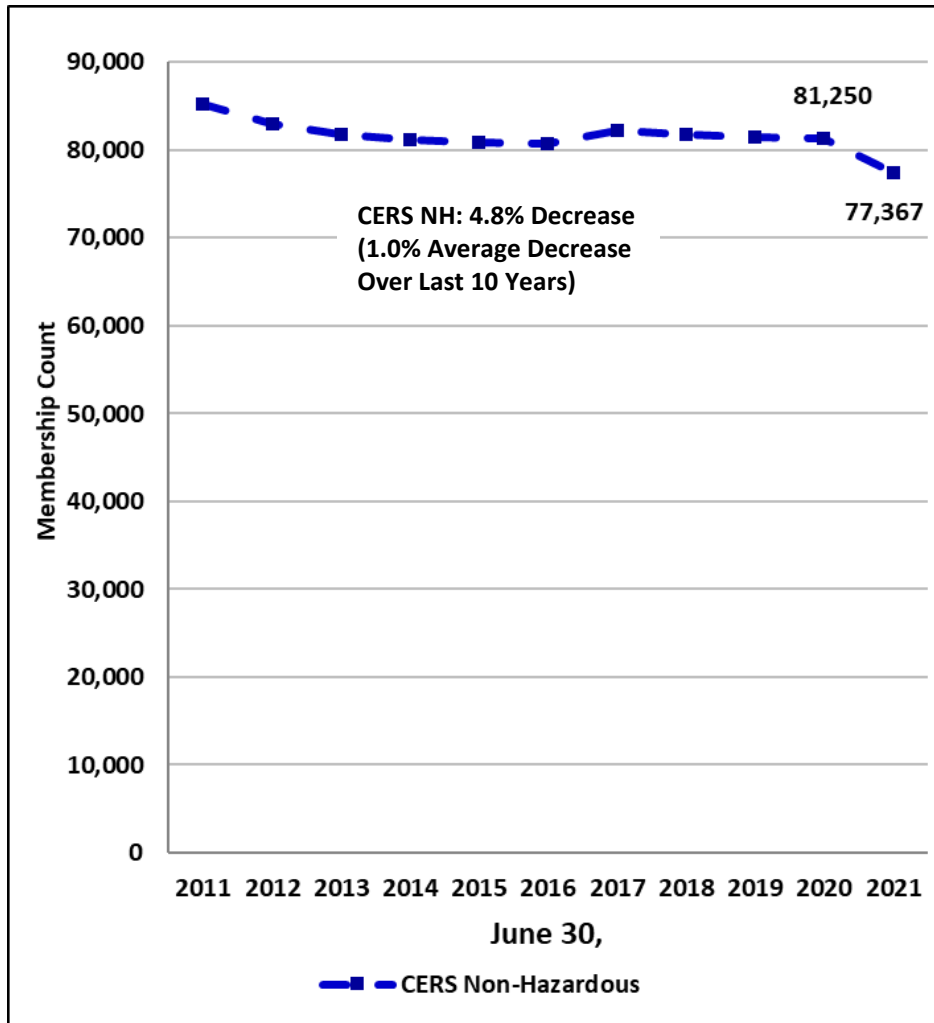


Unfunded Actuarial Accrued Liability – Actuarial Value of Asset Basis (\$ in Billions)

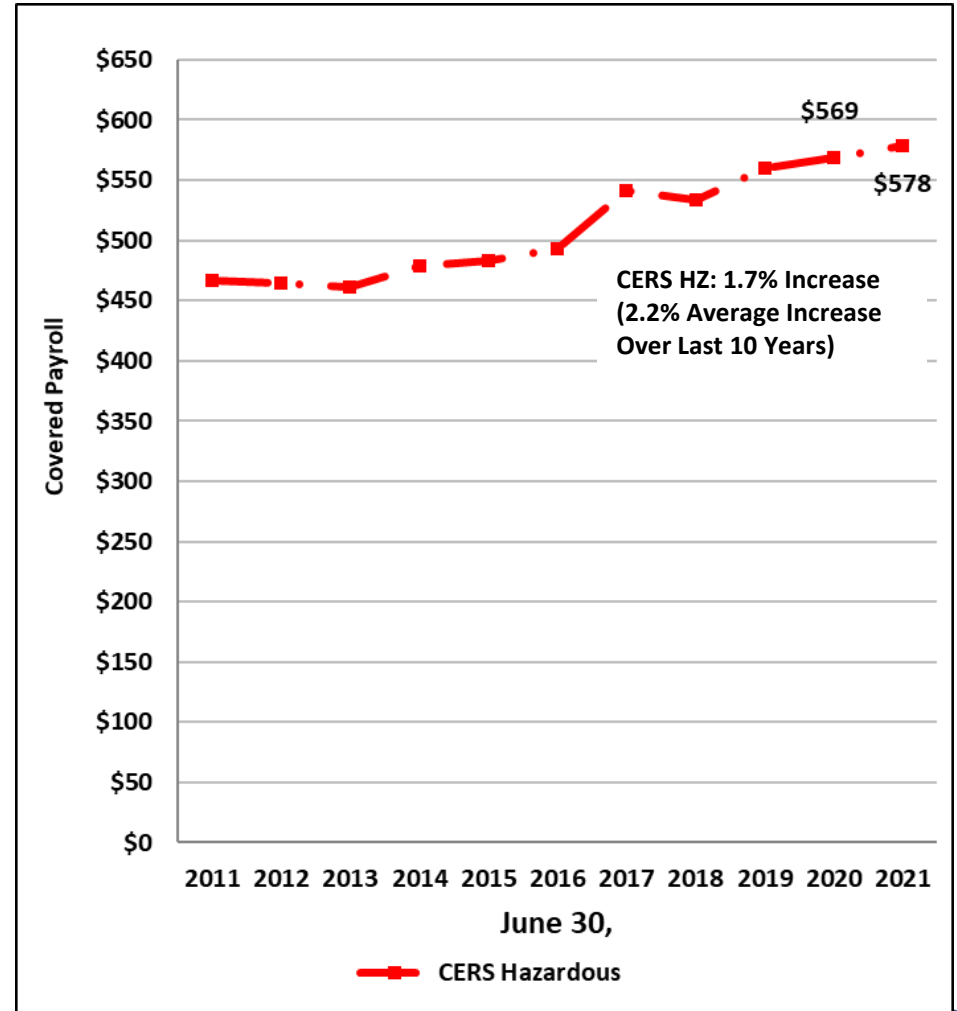
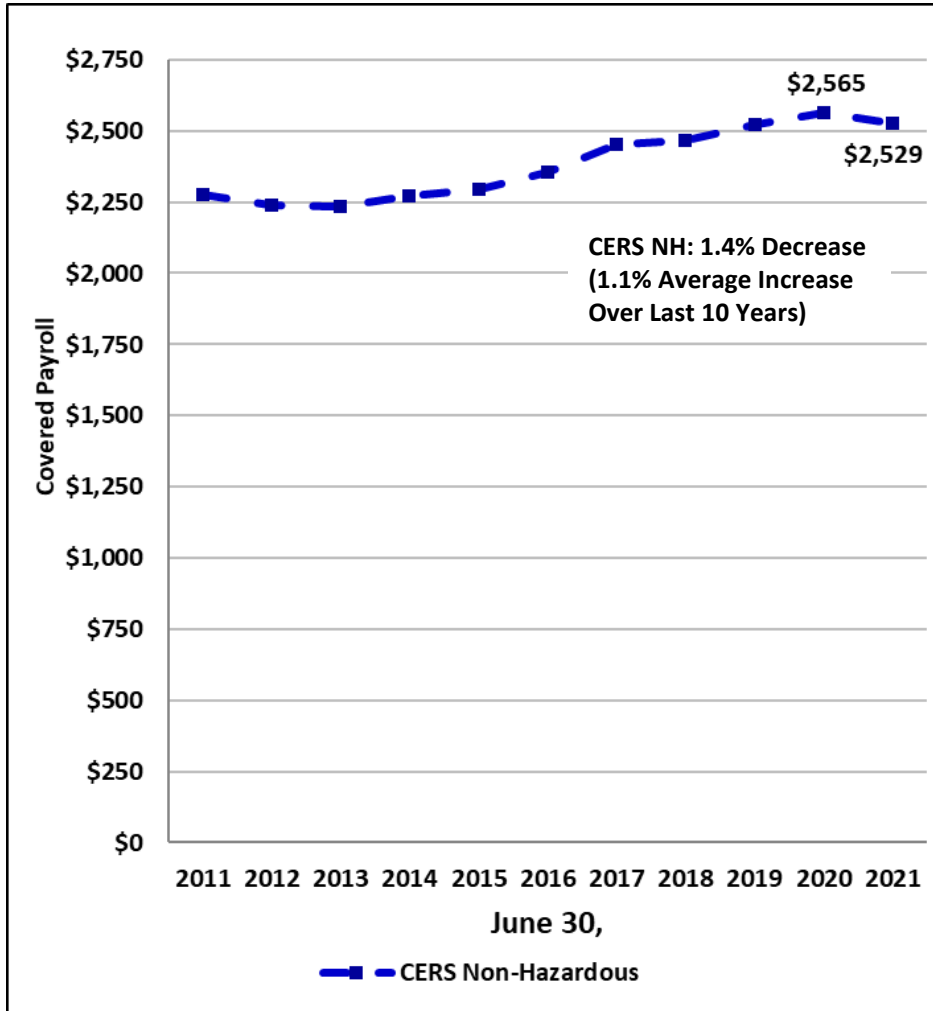
	CERS Non-Hazardous		CERS Hazardous	
	2020 Val	2021 Val	2020 Val	2021 Val
(1)	(2)	(3)	(4)	(5)
Pension Fund	\$ 7.39	\$ 7.18	\$ 2.98	\$ 3.00
Insurance Fund	<u>0.73</u>	<u>0.50</u>	<u>0.38</u>	<u>0.28</u>
Total Unfunded Actuarial Accrued Liability	\$ 8.12	\$ 7.68	\$ 3.36	\$ 3.28
Change in Unfunded Actuarial Accrued Liability		\$ (0.44)		\$ (0.08)



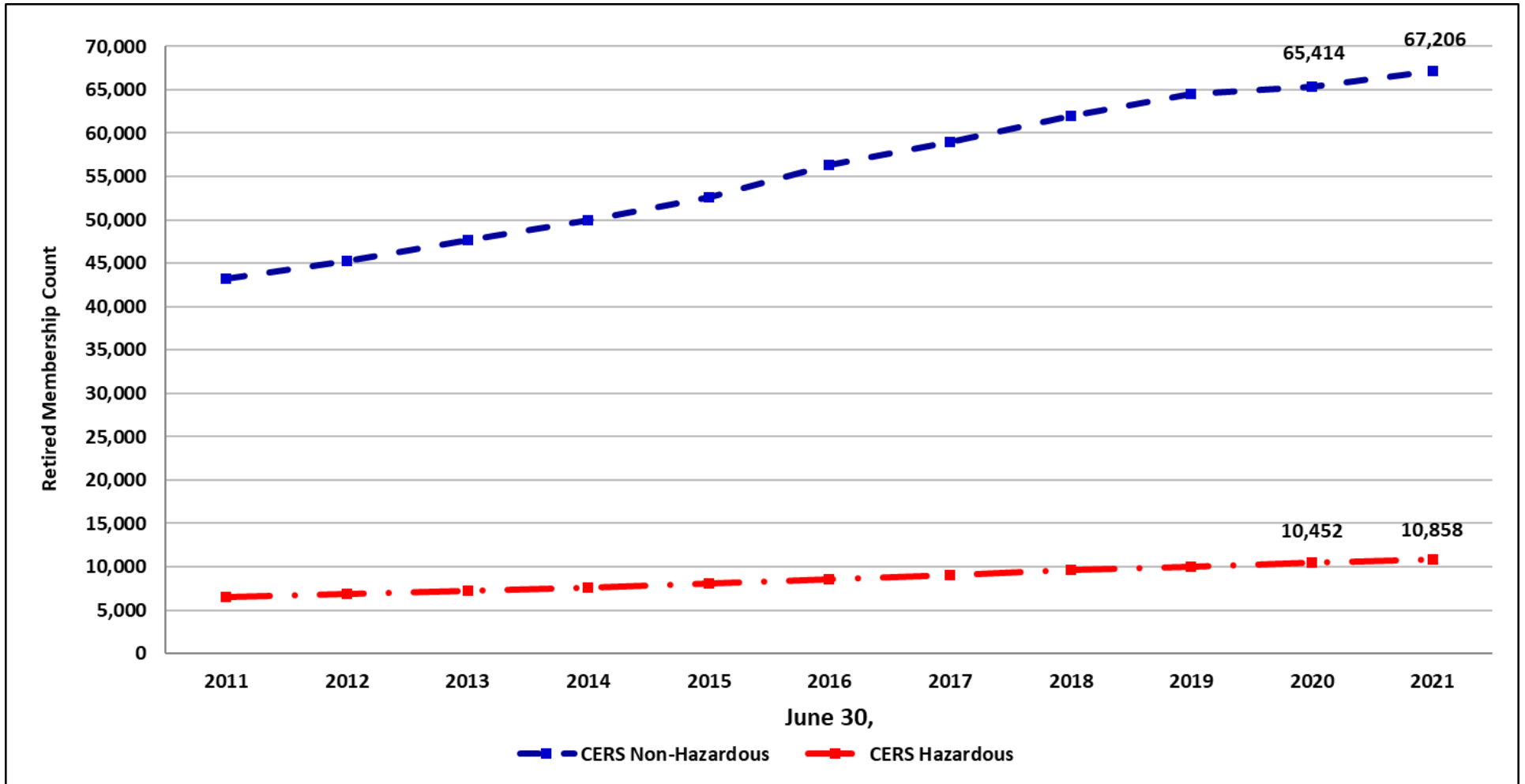
Active Membership Count



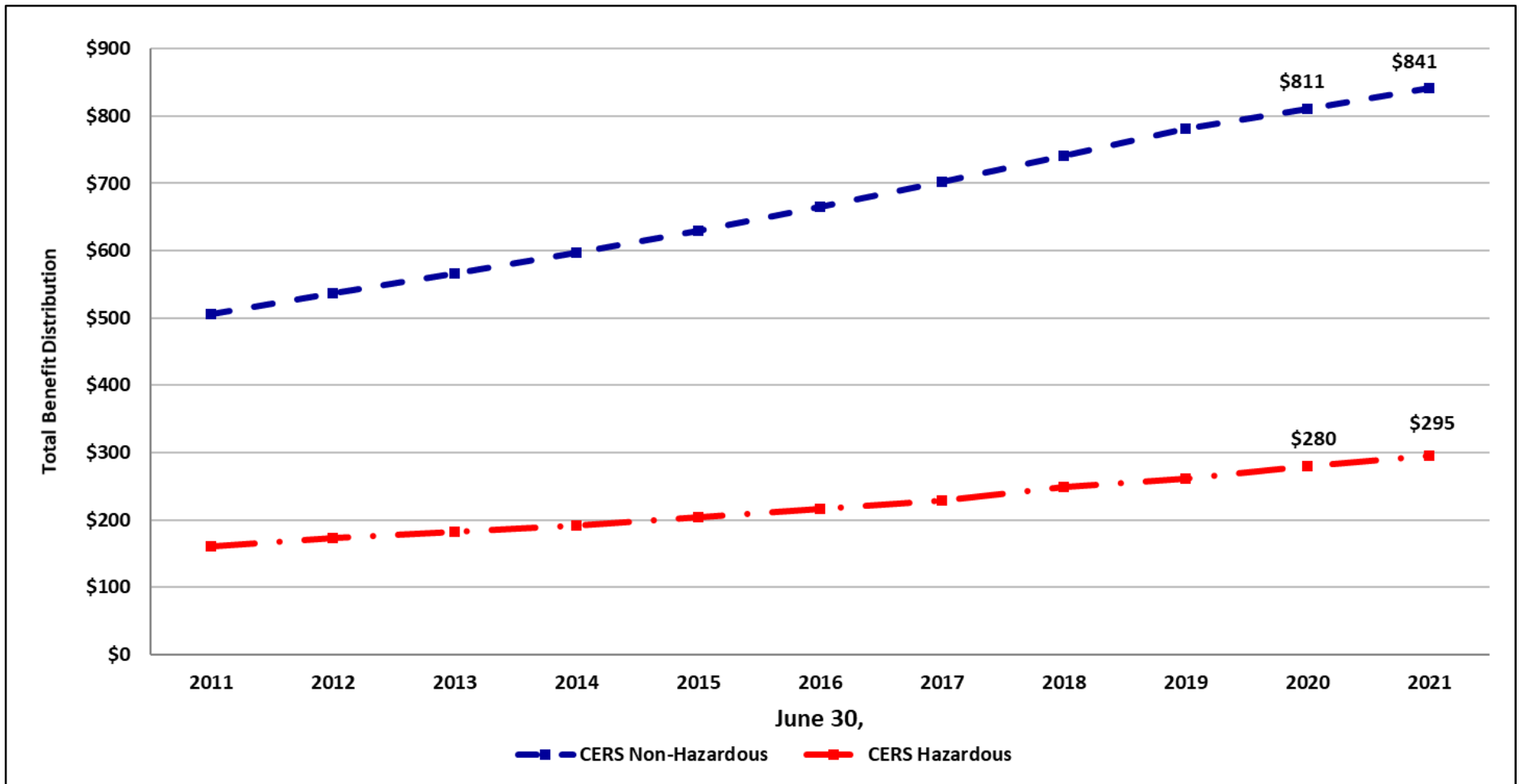
Covered Payroll (\$ in Millions)



Retired Membership Count



Pension Benefit Distributions (\$ in Millions)



Funding Results – CERS (\$ in millions)

Item	Non-Hazardous System				Hazardous System			
	Pension		Insurance		Pension		Insurance	
	2020	2021	2020	2021	2020	2021	2020	2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total Normal Cost Rate	10.59%	10.44%	3.17%	3.07%	18.65%	18.39%	5.33%	4.83%
Member Rate	<u>(5.00%)</u>	<u>(5.00%)</u>	<u>(0.52%)</u>	<u>(0.55%)</u>	<u>(8.00%)</u>	<u>(8.00%)</u>	<u>(0.51%)</u>	<u>(0.55%)</u>
Employer Normal Cost Rate	5.59%	5.44%	2.65%	2.52%	10.65%	10.39%	4.82%	4.28%
Administrative Expenses	0.87%	0.86%	0.04%	0.04%	0.35%	0.32%	0.08%	0.09%
Amortization Cost	<u>17.42%</u>	<u>17.10%</u>	<u>1.48%</u>	<u>0.83%</u>	<u>32.23%</u>	<u>32.10%</u>	<u>3.83%</u>	<u>2.41%</u>
Total Actuarially Determined Rate	23.88%	23.40%	4.17%	3.39%	43.23%	42.81%	8.73%	6.78%
Actuarial Accrued Liability (AAL)	\$14,611	\$14,895	\$3,392	\$3,450	\$5,431	\$5,629	\$1,741	\$1,751
Actuarial Value of Assets	<u>7,221</u>	<u>7,716</u>	<u>2,661</u>	<u>2,947</u>	<u>2,448</u>	<u>2,629</u>	<u>1,362</u>	<u>1,476</u>
Unfunded AAL	\$7,390	\$7,179	\$731	\$503	\$2,983	\$3,000	\$379	\$276
Funded Ratio	49.4%	51.8%	78.5%	85.4%	45.1%	46.7%	78.2%	84.3%



PROJECTION INFORMATION PENSION AND INSURANCE



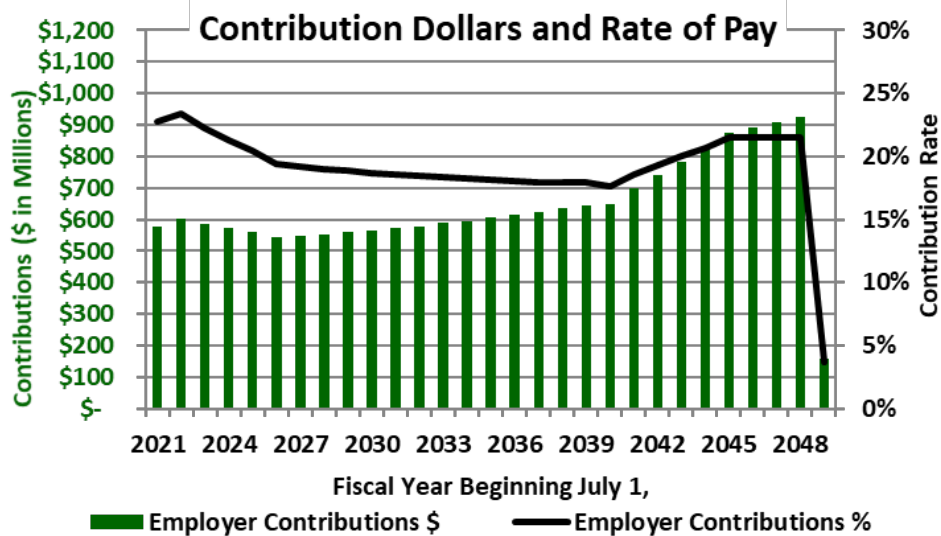
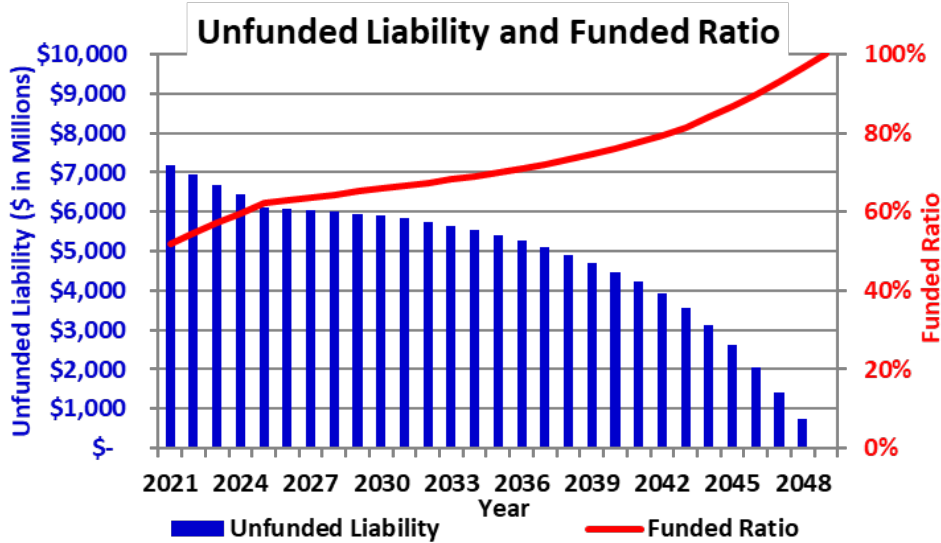
Projection Assumptions

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

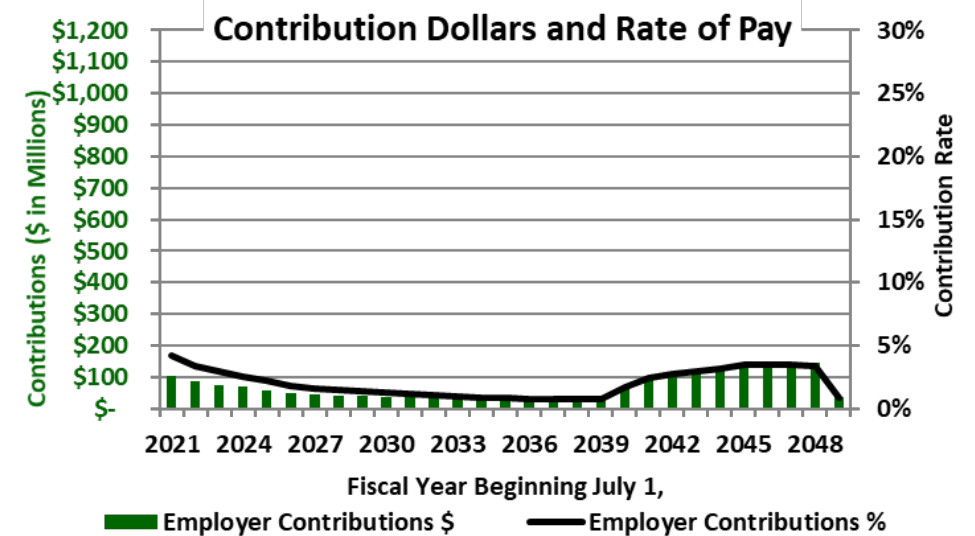
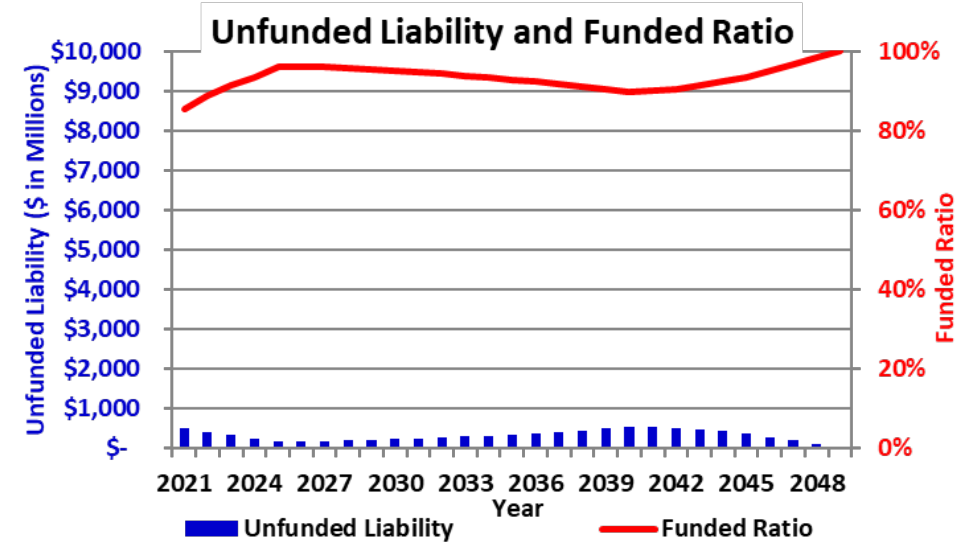


CERS Non-Hazardous Projection

Pension

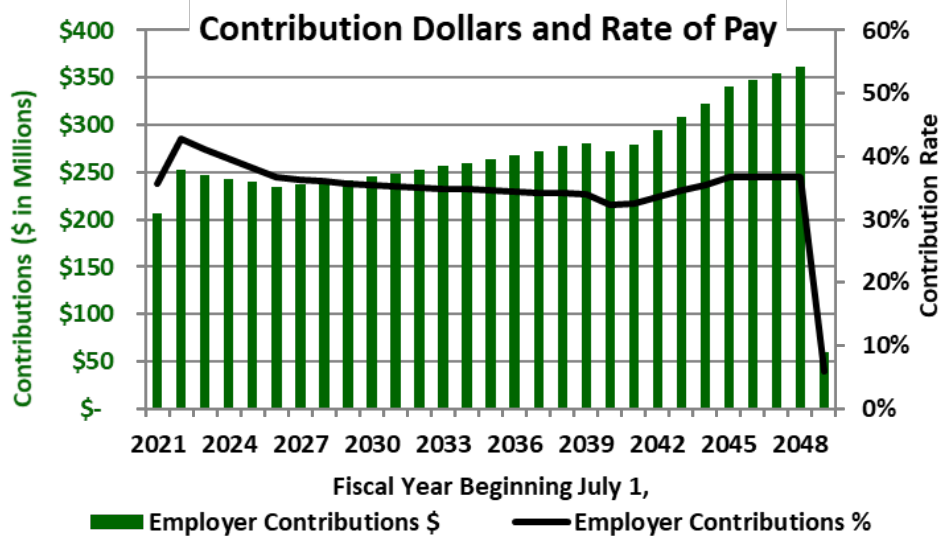
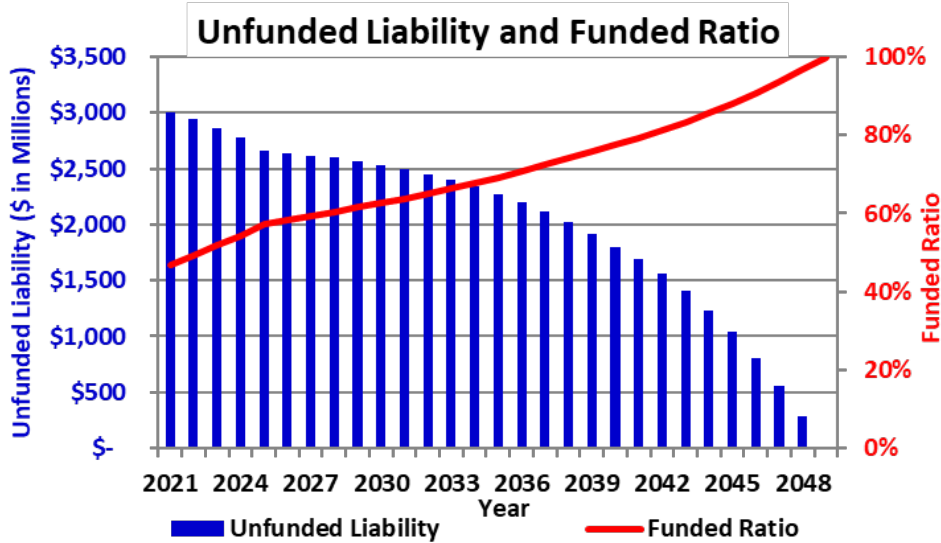


Insurance

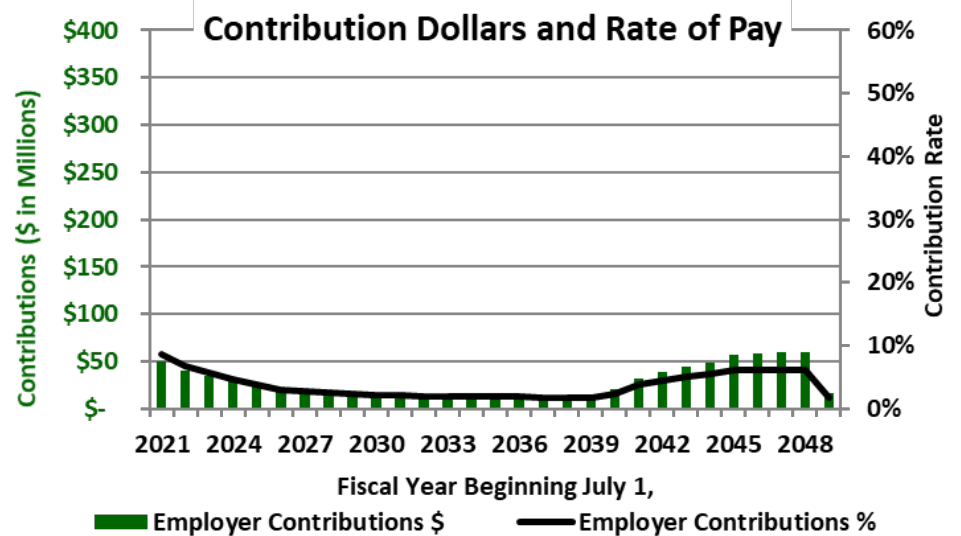
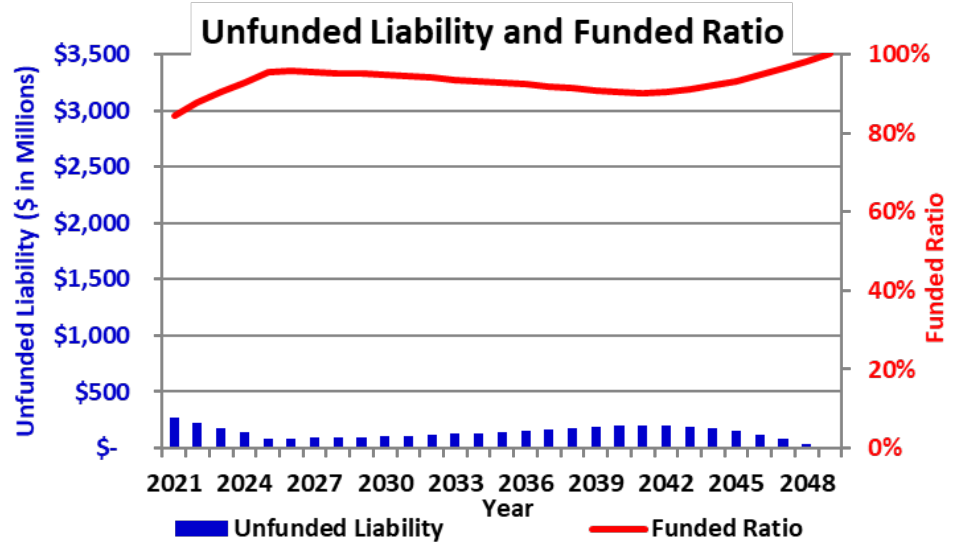


CERS Hazardous Projection

Pension



Insurance



Closing Comments on 2021 Valuation Results

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



Disclaimers

- This presentation is intended to be used in conjunction with the actuarial valuation as of June 30, 2021. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.





MEMORANDUM

TO: County Employees Retirement System Board of Trustees

From: Dr. Merl Hackbart, Chair
Investment Committee

Date: November 10, 2021

Subject: Summary of Investment Committee Special Meeting

The County Employees Retirement System held a regularly schedule Investment Committee meeting on November 8, 2021.

1. The following items were approved by the Investment Committee and are being forwarded to the County Employees Retirement System Board of Trustees for ratification*
 - a. Approval of the Investment Policy Statement (IPS) – The Investment Committee approved the IPS by unanimous vote of the Committee.

RECOMMENDATION: The Investment Committee requests the County Employees Retirement System Board of Trustees ratify the actions taken by the Investment Committee.

2. The following items were also discussed during the Investment Committee meeting:
 - a. Actuarial Sensitivity Analysis for CERS (Hazardous and Non-Hazardous) Pension and Insurance Fund results were presented by Gabriel, Roeder, Smith & Company (GRS).
 - i. The analysis looked at the raising/lowering of the discount rate by 25 and 50 basis points and the effect that would have on the unfunded liability status of the various Funds.
 - b. The quarterly performance review was presented to the Committee by KPPA investment staff.

- c. An update on the status of the Non-U.S. Small Cap manager, Axiom Investors, was provided to the Committee. The Investment Committee selected Axiom Investors to provide Non-U.S. Small Cap services by unanimous vote at the previous Investment Committee meeting pending successful investment management agreement negotiations.
- d. The Trustees were informed about cybersecurity awareness training. It was explained to them that they would receive training modules via email and upon their completion of the training modules they would each receive one (1) hour of Trustee Education credit.

***Board of Trustees Action Required**



County Employees Retirement Systems
Investment Policy Statement
Adopted November 10, 2021

This Investment Policy Statement (IPS) is issued by the CERS Board of Trustees (CERS Board or CERS Trustees) of the County Employees Retirement System (CERS) in connection with investing in the pension and insurance trust funds (Funds) of CERS.

I. Introduction

A. Purpose

The purpose of this IPS is to define the framework for investing the assets of CERS. This IPS is intended to provide general principles for establishing the goals of CERS, the allocation of assets, employment of outside asset management, and monitoring the results of the respective Funds.

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

B. Philosophy

The CERS Trustees recognize their fiduciary duty not only to invest CERS funds in formal compliance with the Prudent Person Rule, but also to manage those assets in continued recognition of the basic long-term nature of CERS. The CERS Trustees interpret this to mean, in addition to the specific guidelines and restrictions set forth in the law and this document, that the assets of CERS shall be proactively managed—that is, investment decisions regarding the particular asset classes, strategies, and securities to be purchased or sold shall be the result of a long-term investment strategy. Being a long-term investor means that CERS Trustees are willing to accept a certain amount of risk in pursuit of potentially higher reward and that the Trustees can afford to be patient for a longer period of time.

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

The CERS Trustees recognize that there is generally an inverse relationship between market efficiency and the ability for active management to produce excess returns. Therefore,

investments in efficient markets will be made using index or index-like investments with the goal of replicating, or exceeding, index returns with low management fees and low tracking errors. Active management will be pursued in less efficient markets accepting higher tracking error and paying higher management fees with the expectation of producing excess returns over the long term. This allows the KPPA Office of Investments staff (KPPA Investment Staff) and consultant(s) to focus their efforts on identifying, selecting, and monitoring managers, as well as the overall management of fees paid, in the areas of the market most likely to produce excess returns.

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

The CERS Trustees recognize the importance of responsible investing. Accordingly, the Trustees acknowledge that integrating Environment, Social, and Governance (ESG) policy principles that engages the issue from a risk, opportunity and fiduciary duty perspective will enhance investment results. The overriding consideration for the Trustees will continue to be investing to maximize the long-term returns for plan beneficiaries.

II. Responsibilities

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

Additionally, the Trustees and other fiduciaries shall not engage in any transaction which results in a substantial diversion of CERS income or assets. Every fiduciary shall provide adequate security and a reasonable rate of return to a disqualified person or in any other prohibited transaction described in Internal Revenue Code Section 503(b).

A. CERS Board of Trustees

The CERS Investment Committee is created by Kentucky Revised Statutes 78.790(1)(b) and the CERS Board as set forth in the CERS Board's Statement of Bylaws and Committee Organization (Section 2.2(e)). The Chair authorizes and directs the appointment of a CERS Investment Committee with full power to act for the CERS Board in the acquisition, sale and management of the securities and funds of CERS in accordance with the provisions of any applicable statutes, and policies of the CERS Board. The CERS Investment Committee has the power to act on behalf of the CERS Board on all investment related matters, including the acquisition, sale, safeguarding, monitoring and management of the assets, securities and funds of CERS. The CERS Board shall require a vote of six (6) Trustees to ratify the actions of the CERS Investment Committee at the

CERS Board meeting following the CERS Investment Committee meeting where such action was taken.

B. CERS Investment Committee

The CERS Board of Trustees shall establish an investment committee as required by KRS 78.790(b). The CERS Investment Committee shall consist of five members of the CERS Board and shall be specifically composed as follows: The three (3) members with investment experience appointed by the Governor under KRS 78.782(1)(b); one (1) elected member to be appointed by the CERS Board Chair; and one (1) member appointed by the Governor under KRS 78.782(1)(b) with retirement experience, to be appointed by the CERS Board Chair. The CERS Investment Committee has the authority to implement the investment policies adopted by the CERS Board and to act on behalf of the CERS Board on all investment related matters.

The CERS Investment Committee has the following oversight responsibilities:

1. Assure compliance with this IPS and all applicable laws and regulations.
2. Approve the selection and termination of service providers. If the need arises to terminate a manager between CERS Board meetings, the KPPA Executive Director, Office of Investments, (CIO) will have discretion to do so after receiving approval from either the CERS Board Chair or the CERS Investment Committee Chair, with concurrence by the CERS CEO. The CERS Investment Committee and the CERS Board must be notified of the manager termination at the next scheduled CERS Investment Committee and CERS Board meetings.
3. Meet no less than quarterly to evaluate whether this IPS, the investment activities and management controls and processes continue to be consistent in meeting CERS goals. Mandate actions necessary to maintain the overall effectiveness of the investment program.
4. Review assessment of investment program management processes and procedures, and this IPS relative to meeting stated goals.

C. KPPA Investment Staff

The CIO, is responsible for the administration of investment assets of CERS consistent with the policies, guidelines and limits established by the federal and state laws, the CERS Board, and the CERS Investment Committee.

The CIO receives direction from and reports to the KPPA Executive Director. The CIO shall provide information to the CERS Investment Committee on all investment matters, including but not limited to the following:

- i. Maintaining the diversification and risk exposure of the Funds consistent with policies and guidelines.
- ii. Assessing and reporting on the performance and risk exposure of the overall investment program relative to goals, objectives, policies and guidelines.
- iii. Monitoring and assessing service providers to assure that they meet expectations and conform to policies and guidelines.
- iv. Recommending changes to service providers, statutes, policies or guidelines as needed to maintain a productive relationship between the investment program and its goals; and acting as liaison on all investment related matters.
- v. Identifying issues for consideration by the CERS Investment Committee and preparing recommendations or reports regarding such matters.
- vi. Preparing a memo for the CERS Investment Committee for each proposed investment

- which shall cover the pertinent details of the investment, which should include, but not be limited to: the amount of the investment, type of investment, purpose, opportunity/goal, risks, volatility assumptions, liquidity, structure, fees, background of investment firm with reasons for selection, list of other firms considered, which CERS funds will invest, and the specific reasons, if any, why a CERS plan may be excluded from the investment.
- vii. Engaging in a monthly meeting with the CERS Investment Committee Chair and the CERS CEO to discuss market trends and all things relevant to the CERS plans positioning.

The CIO or designee is authorized to execute trades on fixed income and equity securities (including exchange-traded funds (ETFs) and to execute proxies for the CERS Board consistent with this IPS.

To carry out this IPS and any investment related decisions of the CERS Board, the CERS Chief Executive Officer (CEO), and the CIO or designee are authorized to execute agreements and other necessary or proper documents pertaining to investment managers, consultants, investment related transactions, or other investment functions. All investment decisions of the CEO and/or the CIO not addressed in this IPS will be ratified by the Investment Committee and the Board of CERS.

D. Investment Managers

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

- i. Investment Managers shall be qualified and agree to serve as a fiduciary to CERS and should be of institutional quality as deemed by KPPA Investment Staff in collaboration with the investment consultant(s).
- ii. Notwithstanding the CIO responsibilities when selecting a new investment, when the KPPA Investment Staff seeks a new external Investment Manager, the Investment Committee shall interview the top three candidates identified and considered by KPPA Investment Staff and the Investment Committee will participate in the selection of the Manager.
- iii. Investment Managers shall manage assets in accordance with this IPS and any additional guidelines established by contract, as may be modified in writing from time to time.
- iv. Total assets assigned to the selected manager shall not exceed 25% of that firm's total assets under management and shall not exceed 25% of a firm's total assets under management in a commingled product. Separate accounts or funds of one are not included in this 25% limitation for commingled products.
- v. The assets managed by any one active or passive investment manager shall not exceed 15% of the overall assets in the pension and insurance funds.
- vi. All investment management services will be contracted according to the CERS Investment Procurement Policy established by the CERS Board.

E. Custody Bank

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

F. Investment Consultants

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

G. Selection

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

III. Asset Allocation Guidelines

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

This asset allocation is the result of an update to the Investment Policy enacted on January 1, 2021. The changes to the asset allocation were arrived upon after the Asset Allocation study of November 2020 and an Efficient Frontier analysis conducted in November 2021. The CERS Board has established the following Asset Allocation Guidelines, effective November 10, 2021.

Asset Class	Target	Minimum	Maximum
Equity			
Public Equity	50%	35%	65%
Private Equity	10%	7%	13%
Fixed Income			
Core Fixed Income	10%	8%	12%
Specialty Credit*	10%	7%	13%
Cash	0%	0%	3%
Inflation Protected			
Real Estate	7%	5%	9%
Real Return	13%	9%	17%

*includes High Yield Fixed Income

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

The individual CERS plan level asset allocations will be reviewed monthly by KPPA Investment Staff relative to its target asset class allocation taking into account any tactical asset allocation shift directed by the CERS Investment Committee.

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

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

Investments in private assets are generally less liquid than investments in public markets securities and are typically implemented via periodic commitments to funds with limited partnership structures. As a result, actual allocations to these asset classes may deviate from their strategic targets for extended periods. Actual vs. target deviations for these asset classes shall not be considered in violation of the Asset Allocation Guidelines. However, when identified by the KPPA Investment Staff the deviation must be reported to the CERS Investment Committee Chair within ten (10) business days and at the next Quarterly CERS Investment Committee meeting and each Investment Committee meeting thereafter until the allocation is in compliance with the target. Under/overweights to these asset classes shall be invested in public markets securities with the most similar risk/return characteristics as a short-term proxy for the private asset classes.

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

guidelines and restrictions.

A. Equity

Public Equity

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

The KPPA Investment Staff internally manages approximately fifteen (15%) percent of US equity index funds that are intended, consistent with the governing Plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. The KPPA Investment Staff may passively manage up to twenty (20%) percent of the overall portfolio dedicated to these efficient markets. Beyond this level the CIO shall seek the approval of the Investment Committee by explaining how further passive management would help achieve the overall portfolio objectives. These objectives can be achieved through several management techniques, including, but not limited to, portfolio optimization, non-reinvestment of index dividends, and other management techniques intended to help achieve the investment objectives of CERS.

Private Equity Investments

Subject to specific approval of the CERS Investment Committee, investments may be made for the purpose of creating a diversified portfolio of alternative investments. Private equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from private equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments. Examples of such investments include, but are not limited to: private investments into venture capital; leveraged buyouts; special situations; distressed debt; private debt; timberland, oil and gas partnerships; infrastructure; commodities; and private placements. While it is expected that the majority of these assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

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

Investment Strategy and Plan Guidelines

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

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

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

General Partner Diversification: KPPA Investment Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their deal flow. No more than fifteen (15) percent of CERS Pension or Insurance total allocation to private equity investments may be committed to any one partnership.

Total Exposure to Private Equity: Given the illiquid nature of the asset and the complexity of each private equity transaction, it is important that the CIO actively manage the maximum amount of CERS Plan assets allocated to this asset class. The asset allocation authorizes a maximum of thirteen (13%) percent of total CERS Plan assets to this asset class. Should circumstances arise and the allocation go beyond the maximum allocation, the CIO will inform the Investment Committee Chair as soon as possible and report to the Investment Committee Chair and the CEO at the next monthly strategic planning meeting and all subsequent quarterly CERS Investment Committee meetings until the allocation is back in compliance.

B. Fixed Income

Core Fixed Income

The core fixed income accounts may include, but are not limited to the following fixed income securities: U.S. Government and Agency bonds; investment grade U.S. corporate credit; investment grade non-U.S. corporate credit; municipal bonds; Non-U.S. sovereign debt; mortgages including residential mortgage backed securities; commercial mortgage backed securities; and whole loans, asset-backed securities, and asset class relevant ETFs.

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

Each individual core fixed income account shall have a comprehensive set of investment guidelines prepared by the CIO which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

Specialty Credit

Each individual Specialty Credit account shall have a comprehensive set of investment guidelines prepared by the CIO which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

Cash Equivalent Securities

Selection of particular short-term instruments, whether viewed as liquidity reserves or as investment vehicles, should be determined primarily by the safety and liquidity of the investment and only secondarily by the available yield. The following short-term investment vehicles are considered acceptable: Publicly traded investment grade corporate bonds; variable rate demand notes; government and agency bonds; mortgages, municipal bonds, and collective short-term investment funds (STIFs), money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed 397 days. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

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

C. Inflation Protected

Real Estate

Investments are made in equity and debt real estate for the purpose of achieving the highest total rate of return possible consistent with a prudent level of risk. Allowable real estate investments include open-end and closed-end commingled real estate funds, joint venture investments, public and private real estate investment trusts (REITs), public real estate operating companies, and real estate related debt. CERS has determined that the primary role of the real estate asset class is to provide for the following:

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

Real Return

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

The real return opportunity set may include numerous vehicles to access a wide variety of investment styles and strategies. These investment vehicles may include mutual funds, ETFs, separately managed accounts as well as hedge funds (open-end limited partnerships) and private equity (close-end limited partnerships). The list of strategies that CERS' Real Return Portfolio

may use includes, but is not limited to, the following:

- **Global Tactical Asset Allocation (GTAA)/Global Macro:** GTAA or macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. GTAA and macro strategies typically invest in all major assets classes including equity markets, credit and debt instruments, currencies/interest rates, and commodities. These strategies tend to focus on economic factors that would suggest an opportune time to invest in a given asset class, and will change their allocations actively over time. These strategies may use inflation as the economic factor to gain exposure to and will target a real rate of return over time.
- **Inflation Linked Securities** are securities that directly tie coupon payments or principal increases to an inflation index, such as Consumer Price Index (CPI). These strategies could include not only US TIPS, but also global sovereign inflation linked bonds, corporate or infrastructure inflation linked bonds, and possibly short duration floating rate bonds.
- **Inflation Sensitive Equities** include publicly traded equity and equity related securities in companies which have a high sensitivity to inflation in their profit margins via the nature of their operating assets, such as energy companies, basic materials and miners, natural resource stocks, and listed infrastructure. This category can also include, but are not limited to, REITs, MLPs as well as ETFs and index products on REITs, MLPs, and natural resource stocks.
- **Commodities:** Commodities are the raw materials that are physical inputs into the production process. Managers that invest in liquid commodity strategies using exchange traded futures can span from simple indexing (matching a long-only commodities index), to enhanced indexing or active long (selecting positions that vary from the index but within fairly tight ranges), as well as unconstrained long-short managers.
- **Private Property:** For the purposes of this IPS, private property refers to the ownership of an idiosyncratic, physical asset that is predominately fixed and/or permanent or at least substantially long-lived. This includes real estate, such as land and any improvements to or on the land, as well as timberland and farmland. Timberland investing involves the institutional ownership of forest for the purpose of growing and harvesting the timber. The timber may be used for furniture, housing lumber, flooring, pulp for paper, woodchips, and charcoal, among other things. Farmland investing entails ownership of land used primarily, if not exclusively, for agricultural production both for crops, including row crops and permanent crops, as well as livestock. Private property can also include infrastructure investing, which refers to financing the manufacture or development of the underlying fundamental assets and basic core infrastructure that are necessary for an economy whereby such assets are largely fixed and long-lived. These tend to be high cost, capital-intensive investments that are vital to a society's prosperity and facilitate the transfer, distribution, or production of basic goods and services.
- **Natural Resources:** Natural resources can include investing in the financing, development, extraction, and production of minerals, basic materials, petroleum products, and water as well as renewable resources such as agricultural commodities and solar energy. As opposed to property, the returns generated in these investment strategies come more from the actual production of the resource itself. Further, these are depleting and/or consumable assets that are also portable and fungible and which in the aggregate

comprise a majority of the inputs into most measurements of inflation.

- **Private Assets:** Private assets can include tangible or intangible assets that are not easily sold in the regular course of a business' operations for cash, and which are held for their role in contributing directly to the business' ability to generate profit. As the useful life of the asset tends to extend across many years and the assets tend to be capital intensive as well, they have some similarity to private infrastructure. Further, given that the assets contribute directly to the production process as well as often retaining intrinsic value, there is a fundamental link to inflation somewhat similar to natural resources.
- **Other (Opportunistic Inflation Hedge):** Other/opportunistic strategies include those that have a propensity to provide a positive real return or positive correlation with inflation over time. Liquid strategies such as inflation swaps, diversified inflation hedging mutual funds, or nominal bonds backed by inflation sensitive assets may be included in this allocation, while other illiquid strategies that may provide the same real profile can include private equity in inflation sensitive companies, hard asset-backed private credit, and structured inflation-linked products among others.

Portfolio Guidelines

No more than 50% of the total net assets of the Real Return portfolio may be invested in any one registered investment vehicle, mutual fund, or separately managed account.

No more than 20% of the total net assets of the Real Return portfolio may be invested in any single closed-end or open-end limited partnership or other unregistered investment vehicle.

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

D. Co-Investment Policy

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

The maximum investment in any co-investment vehicle shall not exceed 50 percent of the total capital committed by all partners at the time of the final closing. The maximum investment in any single direct co-investment shall not exceed 20 percent of the original partnership commitment. Total investment in direct co-investments shall not exceed 20 percent of the asset class portfolio on a cost basis at the time of investment.

IV. Monitoring

Performance Measurement

CERS overall fund performance is measured relative to CERS Pension or Insurance Total Fund Benchmark. The benchmark is calculated by means of a weighted average methodology. This method is consistent with the CFA Institute Global Investment Performance Standards (GIPS®),

a set of standardized, industry-wide ethical principles that guide investment managers and asset owners on how to fairly calculate and present their investment results, with the goal of promoting performance transparency and comparability. It is the product of the various component weights (i.e., asset classes' percentages) by their respective performance (returns). Due to market fluctuations and acceptable divergence, the asset classes' weights (percentages) are often not equivalent to the benchmark's weights. Therefore, the performance may indicate that the Funds have outperformed (underperformed) relative to their respective benchmarks, even when the preponderance of lesser weighted categories have underperformed (outperformed) their indices.

CERS measures its asset classes, sub-asset classes, sectors, strategies, portfolios, and instruments (investment) performance with indices that are recognized and published). These indices are determined to be appropriate measures of investments and composites of investments with identical or similar investments profiles, characteristics, and strategies. The benchmarks and indexes are intended to be objective, investable, replicable, representative and measurable of the investment mandate and, developed from publicly available information that is acceptable to CERS and the investment manager/advisor as the neutral position consistent with the underlying investor status. The CERS investment consultant and KPPA Investment staff recommend the benchmarks and indexes. These measures shall be subject to the review and approval of the CERS Investment Committee with ratification by the CERS Board when asset allocation studies are performed, or when a change to existing benchmarks is recommended by KPPA Investment Staff and the CERS investment consultant. The current asset class benchmarks, effective as of November 10, 2021 with the adoption of the asset allocation, are as follows:

Asset Class	Benchmark
Equity	
Public Equity	MSCI ACWI
Private Equity	Russell 3000 + 300 bps (lagged)
Fixed Income	
Core Fixed Income	Bloomberg Barclays US Aggregate
Specialty Credit	50% Bloomberg Barclays US High Yield/ 50% S&P LSTA
Cash	Citi Grp 3-mos Treasury Bill
Inflation Protected	
Real Estate	NCREIF ODCE
Real Return	US CPI + 3%
Absolute Return	HFRI Diversified Fund of Fund Composite

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

Total Public Asset Class Allocations

Short-term

- For periods less than five years or a full market cycle, the Asset Class Allocation should exceed the returns of the appropriate Index.

Intermediate & Long-term

- For periods greater than five years or a full market cycle, the Asset Class Allocation should exceed the appropriate Index, compare favorably on a risk-

adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the Index.

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

Short-term

- For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market goal or benchmark.

Intermediate & Long-term

- For periods greater than five years or a full market cycle, individual portfolios should exceed the return of their market goal or benchmark, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the benchmark.

Alternative Assets:

Private Equity

The Private Equity portfolio should also seek to achieve both short-term and intermediate/long term Net Internal Rate of Returns (IRR) that provide yields in excess of core equity investments. The KPPA Investment Staff shall quarterly complete a comparison of performance between equity portfolio performance and Private Equity portfolio returns. The KPPA Investment Staff will report to the Investment Committee the following:

Short-term

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

Intermediate & Long-term

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

Inflation Protected

Real Estate

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

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

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

Real Return

The total Real Return investments shall seek to:

1. **Short-term benchmark:** For periods less than five (5) years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (the weighted average return of the underlying investment benchmarks) annually over a complete market cycle, net of all investment management fees.
2. **Strategic objective:** For periods greater than five (5) years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds (CPI + 300 basis points) as well.
3. **Achieve a positive risk/reward trade-off** when compared to similar style Real Return Investment Managers.

Performance Review

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

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

The following restrictions shall be tested at least monthly:

1. The amount of stock in the domestic or international equity allocation in any single corporation shall not exceed 5% of the aggregate market value of CERS' assets.
2. The amount of stock held in the domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation.
3. Investment in frontier markets (those countries not included in the MSCI EM Index) shall not exceed 5% of CERS' international equity assets.

4. The duration of the core fixed income portfolios combined shall not vary from that of CERS' Fixed Income Index by more than +/- 25% duration as measured by effective duration, modified duration, or dollar duration except when the CERS Investment Committee has determined a target duration to be used for an interim basis.
5. The amount invested in the debt of a single issuer shall not exceed 5% of the total market value of CERS' fixed income assets, with the exception of U.S. Government issued, guaranteed or agency obligations (or securities collateralized by same), and derivative securities used for exposure, cost efficiency, or risk management purposes in compliance with Section VII of this policy.
6. 50% of the core fixed income assets must have stated liquidity that is trade date plus three days or better.

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

Under the CIO's direction, KPPA Investment Staff shall perform site visits with all current CERS investment managers over 3-year rolling market cycles, with at least 1/3 of all current managers occurring on a yearly basis.

V Additional Items

Derivatives Permitted Use:

CERS permits external managers and KPPA Investment Staff to invest in derivative securities, or strategies which make use of derivative investments, for exposure, cost efficiency and risk management purposes, if such investments do not cause the portfolio to be leveraged beyond a 100% invested position. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price. Typical uses of derivatives in the portfolio are broadly defined below:

Exposure:

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

Cost Efficiency:

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

Risk Management:

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

Derivatives Restricted Use:

Settlement:

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

Position Limits:

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

Over-the-Counter (OTC):

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

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

Derivatives Applications Not Permitted:

Speculation:

Except for investments in Real Return investments, derivatives may not be used for any activity for which the primary purpose is speculation or to profit while materially increasing risk to CERS. Derivatives are considered speculative if their uses have no material relation to

objectives and strategies specified by the CERS IPS or applicable to the CERS portfolio. Derivatives may not be used for circumventing any limitations or restrictions imposed by the CERS IPS or applicable regulatory requirements.

Leverage:

Leverage is inherent in derivative contracts since only a small cash deposit is required to establish a much larger economic impact position. Thus, relative to the cash markets, where in most cases the cash outlay is equal to the asset acquired, derivative investments offer the possibility of establishing substantially larger market risk exposures with the same amount of cash as a traditional cash market portfolio. Therefore, risk management and control processes must focus on the total risk, i.e. the net notional value, assumed in a derivative investment.

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

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

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

[ISS U.S. Proxy Voting Guidelines.com](https://www.issproxy.com/ISS-U.S.-Proxy-Voting-Guidelines.com)

Additional CERS Investment Administrative Policies

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

Signatories

As Adopted by the CERS Investment Committee

Date: _____

Signature: _____

Dr. Merl Hackbart

Chair, CERS Investment Committee

As Adopted by the CERS Board of Trustees

Date: _____

Signature: _____

Ms. Betty Pendergrass

Chair, CERS Board of Trustees

Wilshire

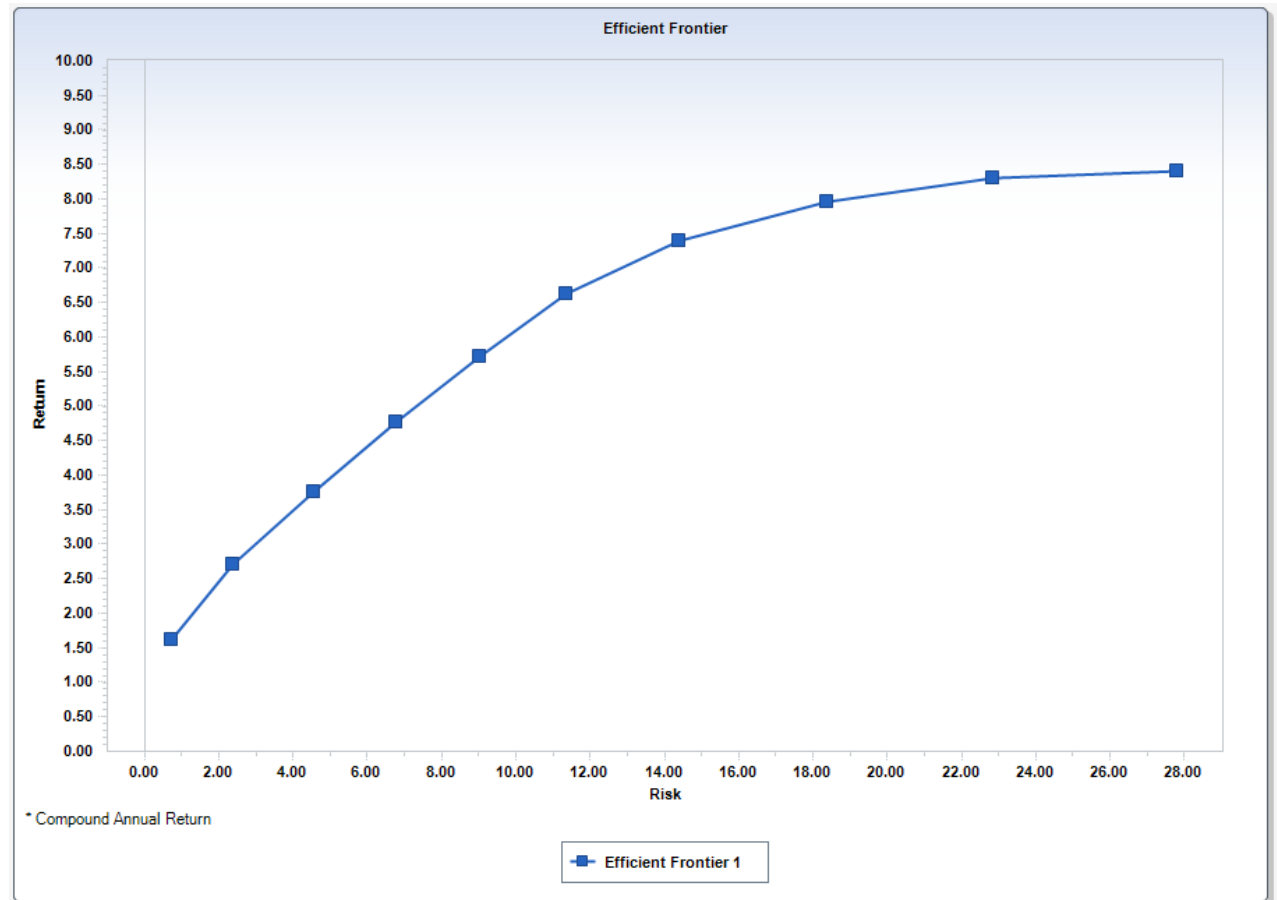
CERS Investment Policy Update

Asset Allocation Review

November 8, 2021

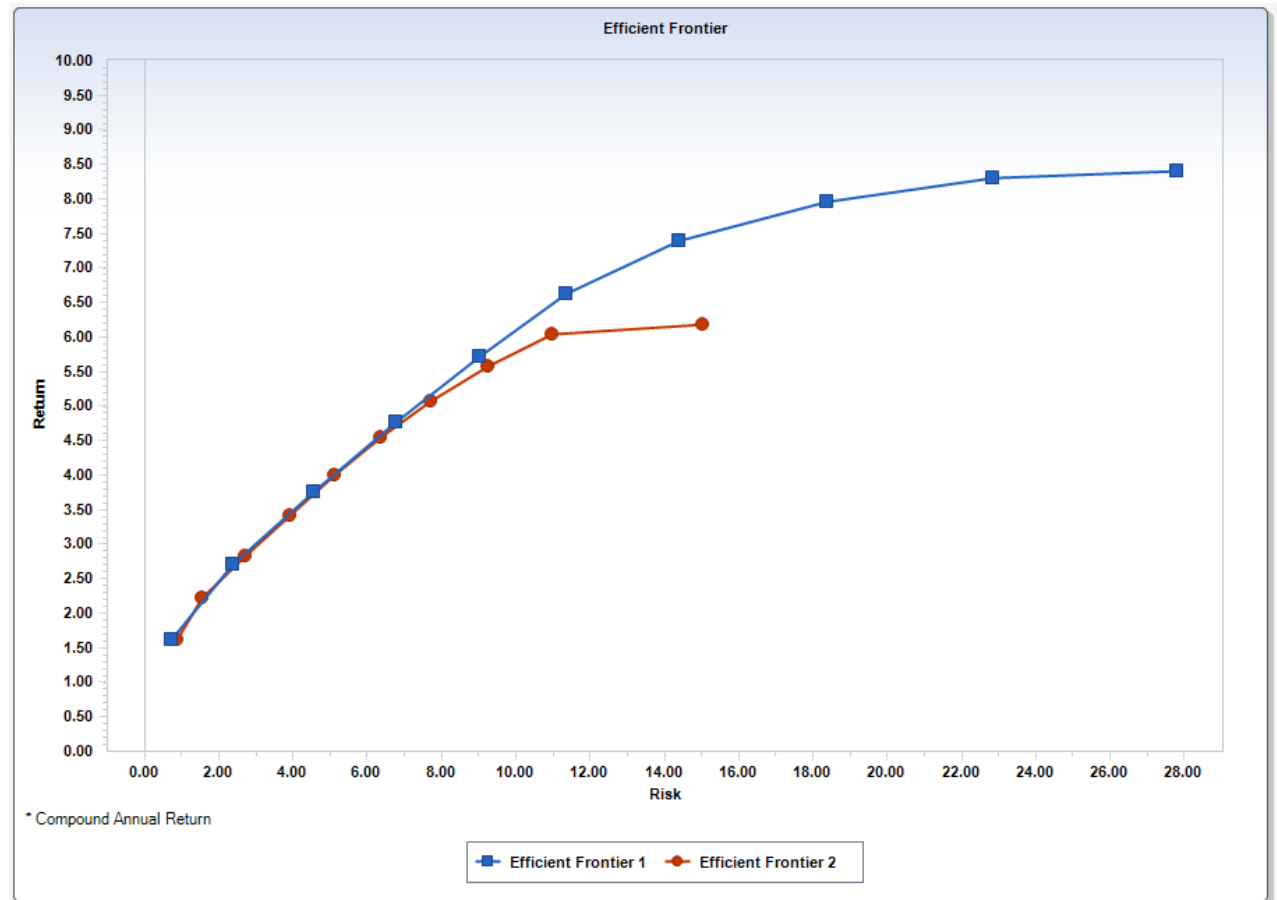
Unconstrained

- The unconstrained efficient frontier shows portfolios with the maximum level of return possible for various levels of risk
- At this point the only risk being considered is volatility risk
- The unconstrained frontier results in portfolios that are highly concentrated and illiquid



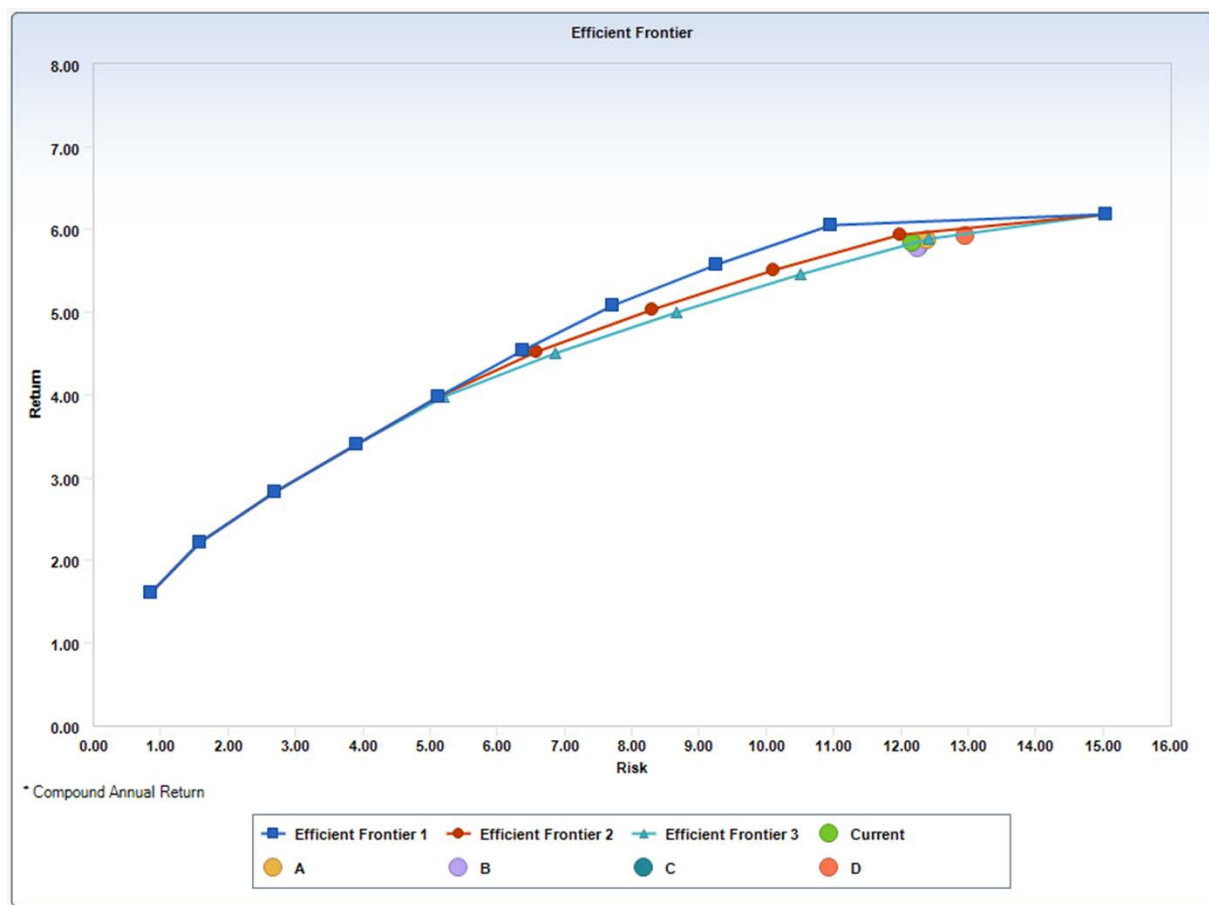
Asset Class Risk

- To control asset class risk concentration, practitioners apply constraints that reduce the maximum allowable allocation to specific asset classes
- Here we see the impact of these constraints, moving from the unconstrained EF1 to the asset constrained EF2



Liquidity Risk

- The efficient frontier can be further constrained to control the overall level of illiquid assets allowable
- Here we see EF1, which is the asset risk constrained portfolio from the previous page, which is then further constrained to only allow 35% (EF2) or 30% (EF3) illiquid assets
- Private equity and real estate are illiquid, while specialty credit and real return are treated as 50% illiquid



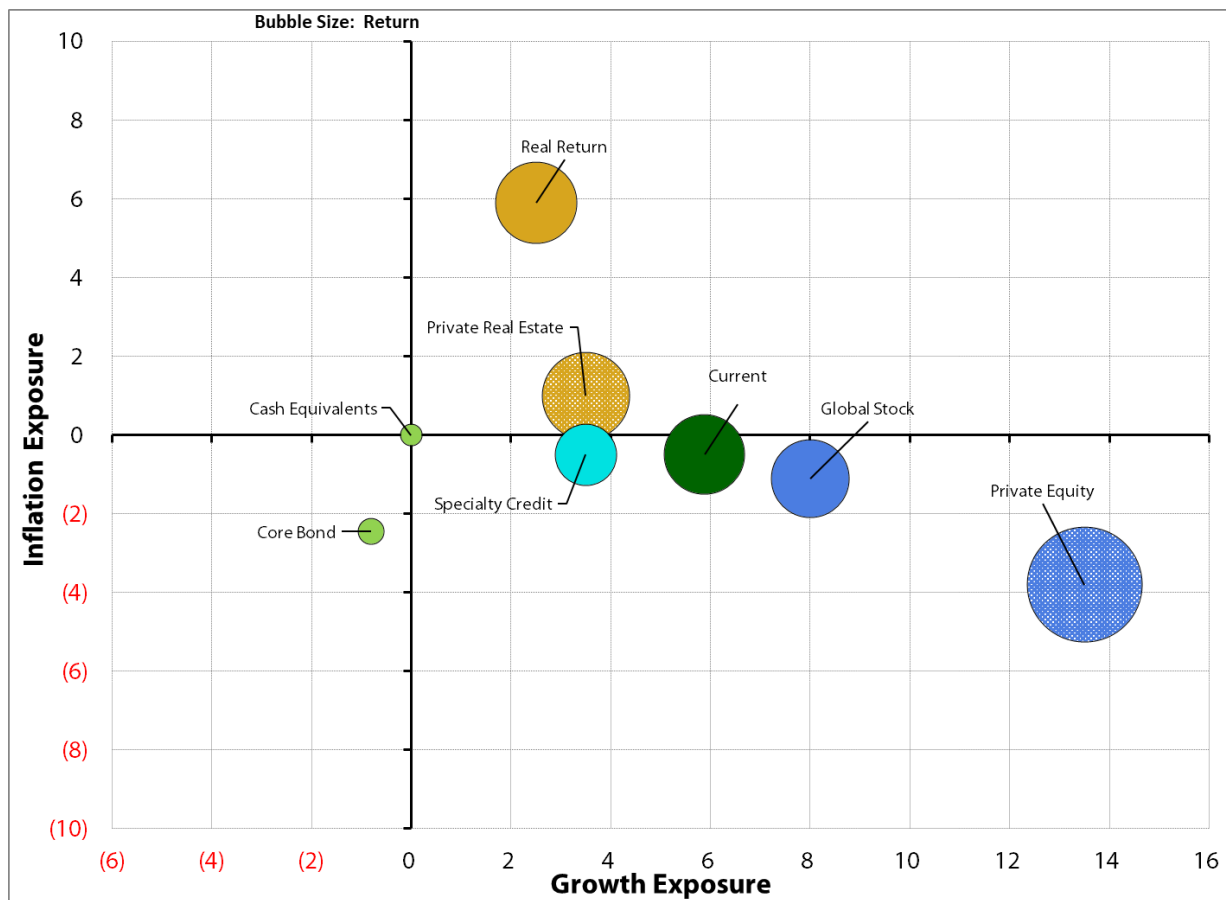
Modelled Portfolio Details

The following portfolios were chosen from the 30% illiquid efficient frontier for further consideration :

Asset	Constraints	Current	A	D
Public Equity	0-60	43.5	45.0	50.0
Private Equity	0-15	10.0	10.0	10.0
Core Fixed Income	10-100	10.0	10.0	10.0
Specialty Credit	0-20	15.0	15.0	10.0
Cash	0-100	1.5	0.0	0.0
Real Estate	0-15	10.0	7.5	7.5
Real Return	0-20	10.0	12.5	12.5
Return - 10 Year		5.84	5.88	5.92
Risk		12.18	12.40	12.97
Return/Risk		0.48	0.47	0.46
Yield		2.60	2.60	2.33
Growth Factor Exposure		5.88	5.97	6.19
Inflation Factor Exposure		-0.49	-0.38	-0.41
Liquidity (Market Level)		0.55	0.55	0.58
Liquidity (Stressed)		0.10	0.09	0.09
Return - 30 Year		7.12	7.17	7.22

The Growth and Inflation factor exposures, as well as the Liquidity metrics, are proprietary Wilshire metrics that will be discussed further in the meeting.

Factor Exposure Chart



Asset Class Assumptions

Wilshire's forward looking, 10 year asset class assumptions as of 9/30/2021 were used for this analysis

10 Year Asset Class Assumptions

	Public Equity	Private Equity	Core Fixed Income	Specialty Credit	Cash	Real Estate	Real Return
Return	5.65	8.41	1.85	4.50	1.55	6.34	5.90
Risk	17.15	27.78	4.30	8.16	0.75	13.93	11.44
Yield	1.75	0.00	3.00	7.15	1.55	2.29	2.12

Correlations

Public Equity	1.00						
Private Equity	0.74	1.00					
Core Fixed Income	0.20	0.32	1.00				
Specialty Credit	0.56	0.32	0.18	1.00			
Cash	-0.07	0.00	0.19	-0.10	1.00		
Real Estate	0.53	0.52	0.19	0.63	-0.05	1.00	
Real Return	0.62	0.51	0.16	0.61	-0.01	0.51	1.00

Specialty Credit is a 50%/50% blend of high yield and direct lending; Real Return is a 50%/50% blend of public and private real assets, split evenly between TIPS, Commodities, Listed Infrastructure, Timber, Oil & Gas, and Private Infrastructure

Important Information

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Kentucky Public Pensions Authority, Office of Investments
Pension Trust Fiscal Year 2022
Investment Review for the Quarter Ended September 30, 2021 Presented to the County Employees Retirement System Investment
Committee



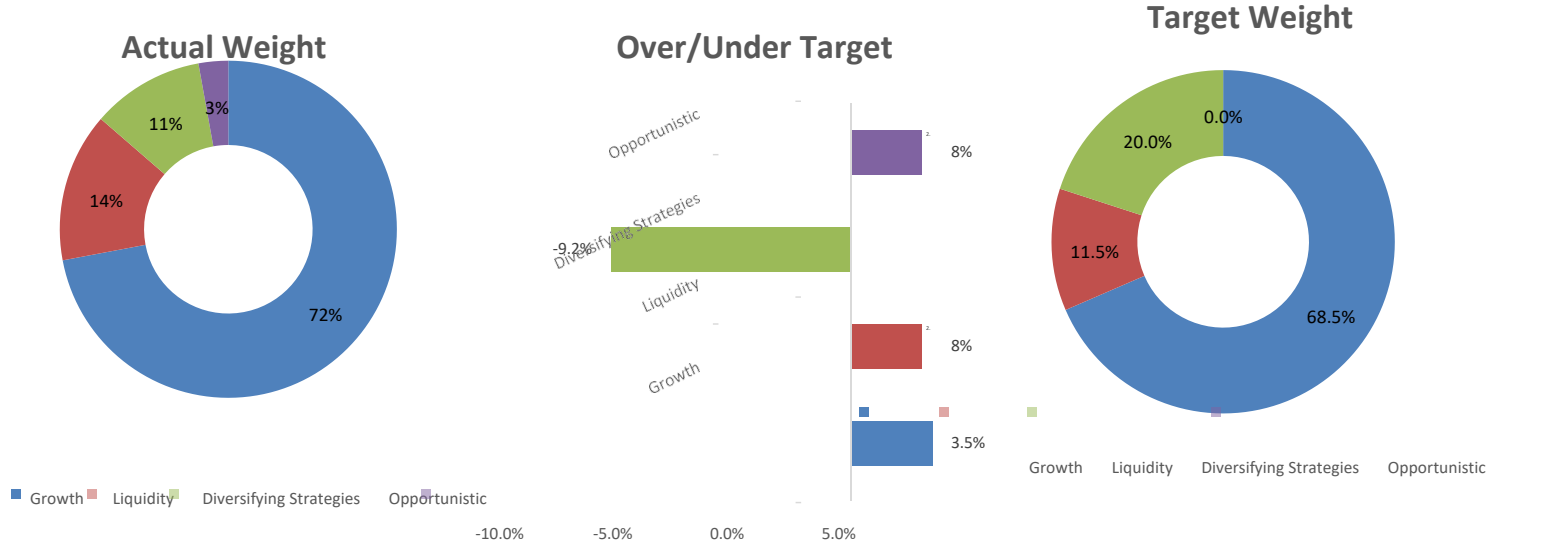
Total CERS & CERS-H
 Risk Categorization Summary As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 11,599,448,895	100.0%	-0.9%	1.2%	11.1%	21.3%							
CERS Pension IPS Policy Index			-0.4%	1.0%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
CERS-H Pension IPS Policy Index			-0.4%	1.0%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 8,357,116,273	72.0%	-1.5%	1.1%	13.3%	26.7%							
Growth Custom Benchmark			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 1,659,958,717	14.3%	-0.1%	0.1%	0.7%	2.0%							
Liquidity Custom Benchmark			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 1,253,326,753	10.8%	1.1%	2.8%	12.4%	19.4%							
Diversifying Strategies Custom			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 329,630,549	2.8%	1.1%	2.9%	8.7%								



Total CERS & CERS-H
Asset Allocation vs Targets
As of September 30, 2021

Actual vs Target Weights



Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative	
Growth	\$8,357,116,273	72.0%	68.5%	3.5%	
Liquidity	\$1,659,958,717	14.3%	11.5%	2.8%	
Diversifying Strategies	\$1,253,326,753	10.8%	20.0%	-9.2%	
Opportunistic	\$329,630,549	2.8%	0.0%	2.8%	
Asset Allocation	Actual	Target	Target Difference	IPS Min	IPS Max
US Equity	22.54%	21.75%	0.79%	15.23%	28.28%
Non-US Equity	22.05%	21.75%	0.30%	15.23%	28.28%
Private Equity	9.38%	10.00%	-0.63%	7.00%	13.00%
High Yield/Specialty Credit	15.65%	15.00%	0.65%	10.50%	19.50%
Core Fixed Income	8.53%	10.00%	-1.47%	8.00%	12.00%
Cash	3.73%	1.50%	2.23%	0.00%	3.00%
Real Return	5.89%	10.00%	-4.11%	7.00%	13.00%
Real Estate	5.38%	10.00%	-4.63%	7.00%	13.00%
Opportunistic	3.06%	0.00%	3.06%	0.00%	5.00%

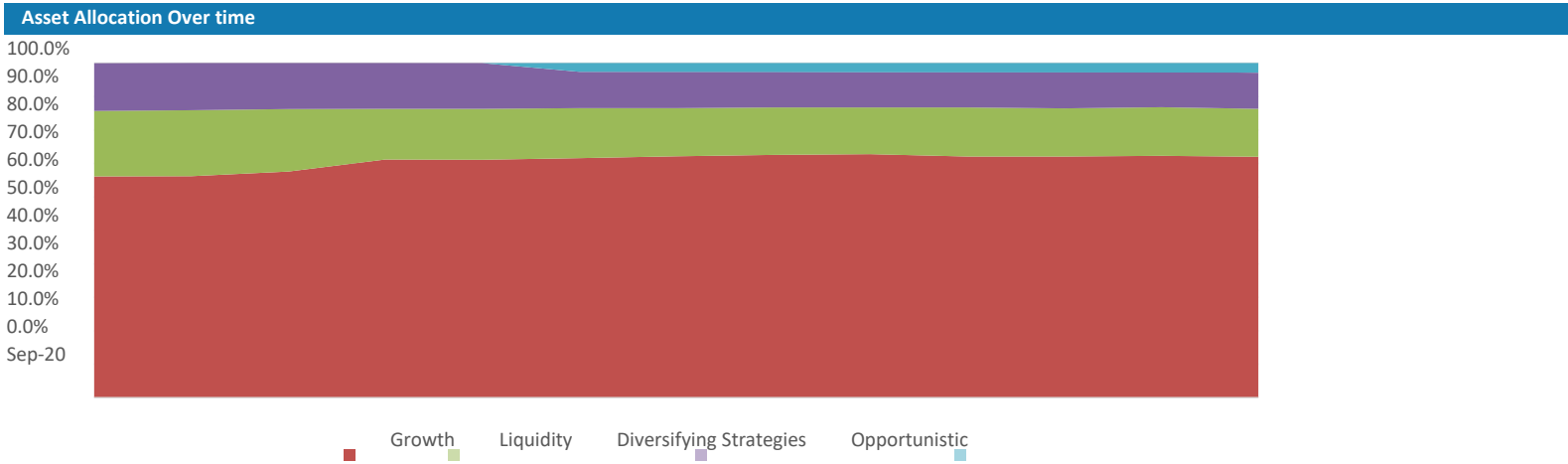


Total CERS & CERS-H
Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 11,599,448,895	100.0%	-0.9%	1.2%	11.1%								21.3%
<i>CERS Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
<i>CERS-H Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 8,357,116,273	72.0%	-1.5%	1.1%	13.3%	26.7%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 5,368,937,282	46.3%	-4.1%	-1.0%	11.6%	29.7%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 2,741,469,880	23.6%	-4.4%	-0.2%	15.5%	33.1%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 2,627,467,402	22.7%	-3.9%	-1.8%	7.6%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 1,007,699,917	8.7%	9.6%	11.2%	37.6%	47.1%							
<i>Pension Private Equity Custom Benchmark</i>			2.7%	4.2%	28.9%	37.8%	16.2%	15.9%	15.4%				11.6%
High Yield/Specialty Credit	\$ 1,980,479,074	17.1%	0.8%	2.0%	8.0%	12.7%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 1,659,958,717	14.3%	-0.1%	0.1%	2.0%								
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 1,478,055,226	12.7%	-0.1%	0.1%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 181,903,491	1.6%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 1,253,326,753	10.8%	1.1%	2.8%	12.4%	19.4%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 748,844,478	6.5%	-0.3%	0.4%	11.4%	21.7%							
<i>Pension Real Return Custom Bmk</i>			0.3%	0.9%	12.0%	22.3%	5.8%	4.1%	3.5%				3.5%
Real Estate	\$ 504,482,275	4.3%	3.2%	6.7%	13.7%	17.8%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 329,630,549	2.8%	1.1%	2.9%	8.7%								



Total CERS & CERS-H
Asset Allocation Over Time
As of September 30, 2021

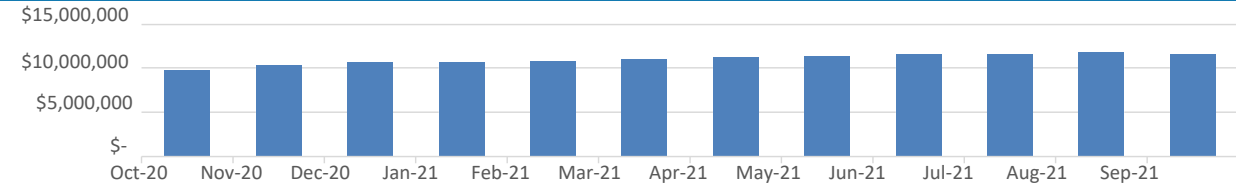


Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	72.59%	72.80%	72.10%	72.11%	72.29%	72.05%
Liquidity	14.14%	13.93%	14.64%	14.37%	14.53%	14.31%
Diversifying Strategies	10.70%	10.64%	10.60%	10.84%	10.59%	10.81%
Opportunistic	2.57%	2.63%	2.67%	2.69%	2.60%	2.84%

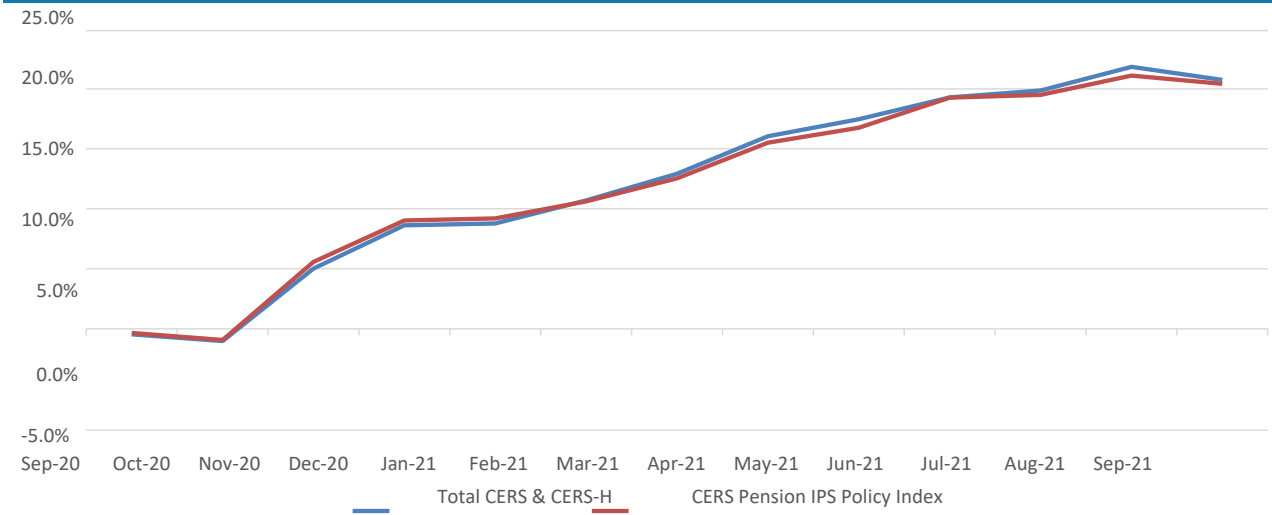


Total CERS & CERS-H
 Summary
 As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





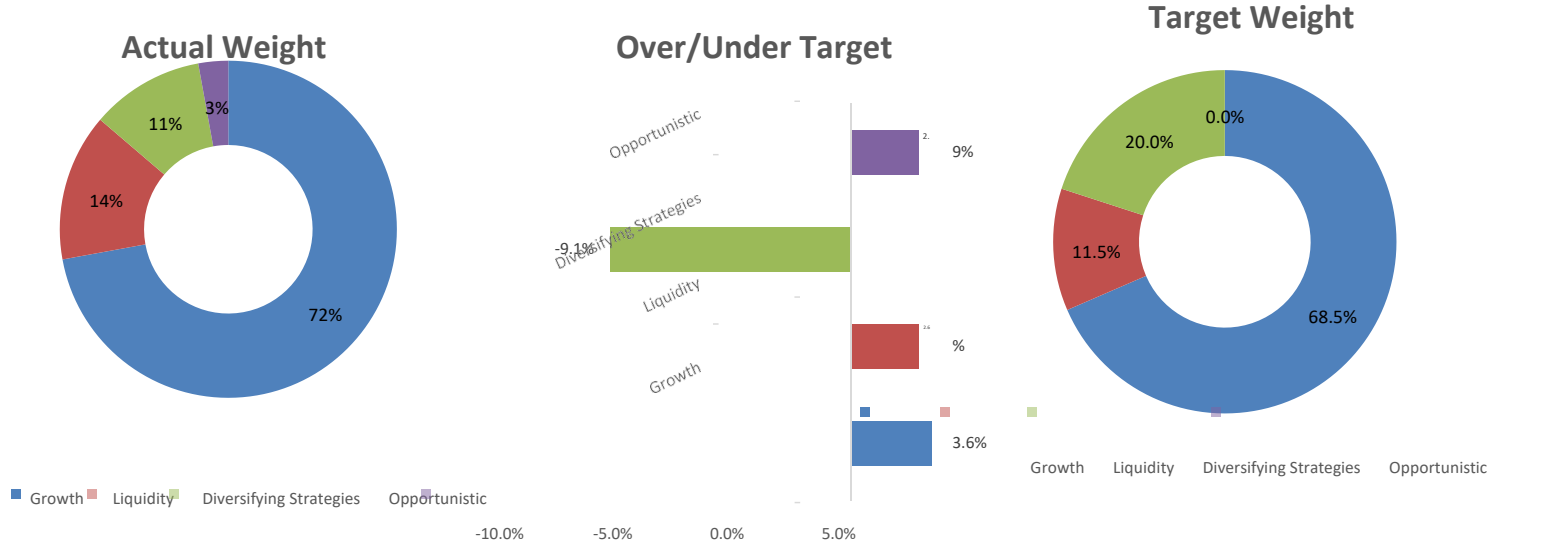
Total CERS
Risk Categorization Summary As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 8,658,814,690	100.0%	-0.9%	1.2%	1.2%	21.3%	9.9%	10.0%	9.0%	7.2%	8.3%	9.2%	21.4%
<i>CERS Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 6,245,935,412	72.1%	-1.5%	1.1%	13.3%	26.7%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 1,223,412,494	14.1%	-0.1%	0.1%	0.7%	2.0%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 942,168,840	10.9%	1.1%	2.8%	12.4%	19.4%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 247,733,644	2.9%	1.1%	2.9%	8.7%								



Total CERS
Asset Allocation vs Targets
As of September 30, 2021

Actual vs Target Weights



Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative
Growth	\$6,245,935,412	72.1%	68.5%	3.6%
Liquidity	\$1,223,412,494	14.1%	11.5%	2.6%
Diversifying Strategies	\$942,168,840	10.9%	20.0%	-9.1%
Opportunistic	\$247,733,644	2.9%	0.0%	2.9%

Asset Allocation	Actual	Target	Target Difference	IPS Min	IPS Max
US Equity	24.18%	21.75%	2.43%	15.23%	28.28%
Non-US Equity	23.21%	21.75%	1.46%	15.23%	28.28%
Private Equity	8.36%	10.00%	-1.64%	7.00%	13.00%
High Yield/Specialty Credit	15.73%	15.00%	0.73%	10.50%	19.50%
Core Fixed Income	12.73%	10.00%	2.73%	8.00%	12.00%
Cash	1.63%	1.50%	0.13%	0.00%	3.00%
Real Return	6.18%	10.00%	-3.82%	7.00%	13.00%
Real Estate	5.24%	10.00%	-4.76%	7.00%	13.00%
Opportunistic	2.67%	0.00%	2.67%	0.00%	5.00%



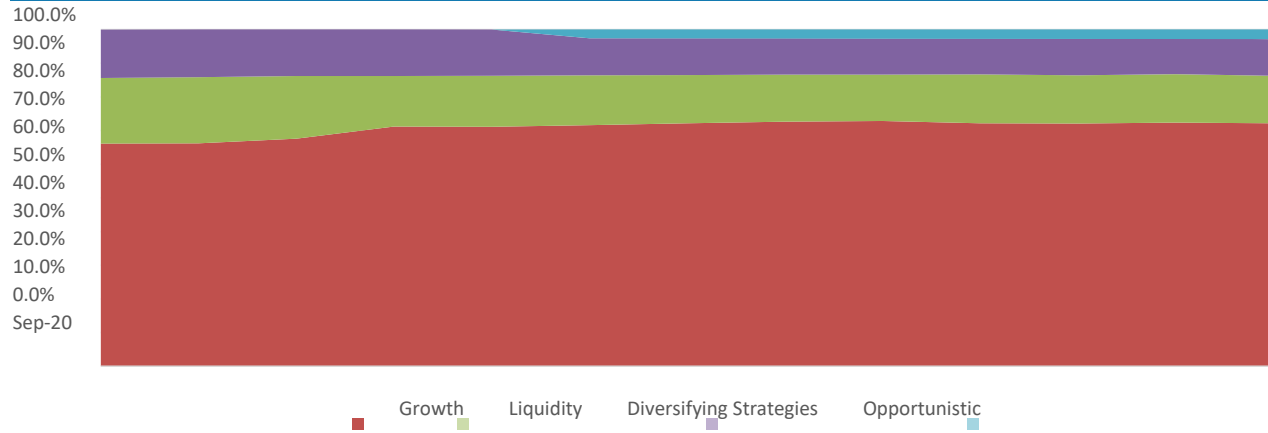
Total CERS
Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 8,658,814,690	100.0%	-0.9%	1.2%	1.2%	21.3%	9.9%	10.0%	9.0%	7.2%	8.3%	9.2%	21.4%
<i>CERS Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 6,245,935,412	72.1%	-1.5%	1.1%	13.3%	26.7%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 4,015,970,369	46.4%	-4.1%	-1.0%	11.6%	29.7%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 2,051,160,482	23.7%	-4.4%	-0.2%	15.5%	33.1%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 1,964,809,887	22.7%	-3.9%	-1.8%	7.6%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 753,854,896	8.7%	9.6%	11.2%	37.6%	47.1%							
<i>Pension Private Equity Custom Benchmark</i>			2.7%	4.2%	28.9%	37.8%	16.2%	15.9%	15.4%				11.6%
High Yield/Specialty Credit	\$ 1,476,110,147	17.0%	0.8%	2.0%	8.0%	12.7%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 1,223,412,494	14.1%	-0.1%	0.1%	0.7%	2.0%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 1,099,533,657	12.7%	-0.1%	0.1%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 123,878,837	1.4%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 942,168,840	10.9%	1.1%	2.8%	12.4%	19.4%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 559,788,525	6.5%	-0.3%	0.4%	11.4%	21.7%							
<i>Pension Real Return Custom Bmk</i>			0.3%	0.9%	12.0%	22.3%	5.8%	4.1%	3.5%				3.5%
Real Estate	\$ 382,380,314	4.4%	3.2%	6.7%	13.7%	17.8%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 247,733,644	2.9%	1.1%	2.9%	8.7%								



Total CERS
Asset Allocation Over Time
As of September 30, 2021

Asset Allocation Over time

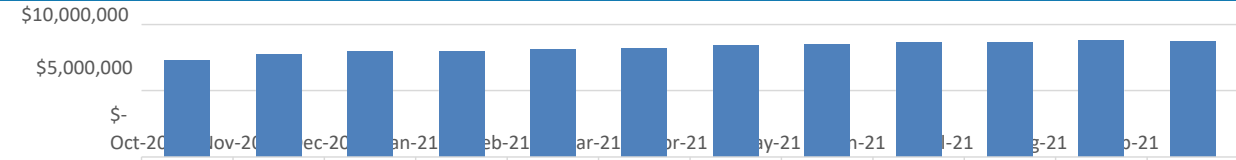


Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	72.63%	72.84%	72.16%	72.12%	72.35%	72.13%
Liquidity	14.01%	13.80%	14.50%	14.28%	14.38%	14.13%
Diversifying Strategies	10.77%	10.71%	10.67%	10.91%	10.66%	10.88%
Opportunistic	2.59%	2.65%	2.68%	2.70%	2.61%	2.86%

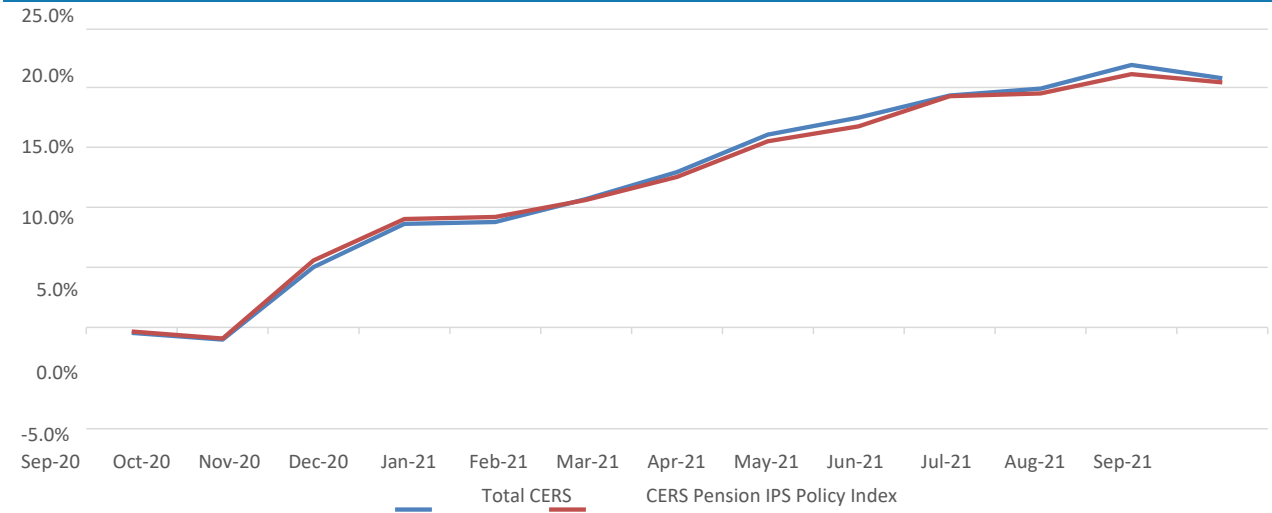


Total CERS
Summary
As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





Total CERS - H
Risk Categorization Summary As of September 30, 2021

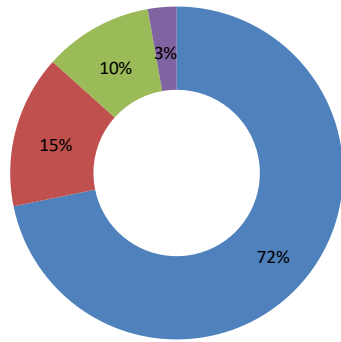
	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 2,940,634,205	100.0%	-0.9%	1.2%	1.2%	21.2%	9.8%	10.0%	9.0%	7.2%	8.3%	9.2%	21.3%
<i>CERS-H Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 2,111,180,861	71.8%	-1.5%	1.1%	13.3%	26.7%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 436,546,223	14.8%	-0.1%	0.1%	0.7%	2.0%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 311,157,914	10.6%	1.1%	2.8%	12.4%	19.4%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 81,896,904	2.8%	1.1%	2.9%	8.7%								



Total CERS - H
Asset Allocation vs Targets
As of September 30, 2021

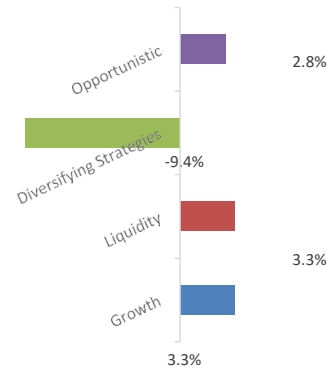
Actual vs Target Weights

Actual Weight

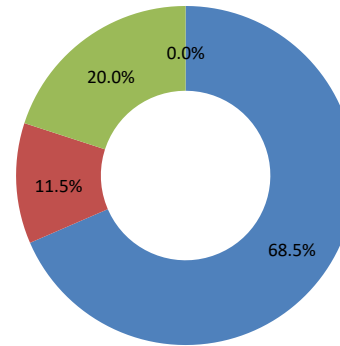


■ Growth -15.0%
 ■ Liquidity -10.0%
 ■ Diversifying Strategies -5.0%
 ■ Opportunistic 0.0%
 ■ 5.0%
 ■

Over/Under Target



Target Weight



■ Growth
 ■ Liquidity
 ■ Diversifying Strategies
 ■ Opportunistic

Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative
Growth	\$2,111,180,861	71.8%	68.5%	3.3%
Liquidity	\$436,546,223	14.8%	11.5%	3.3%
Diversifying Strategies	\$311,157,914	10.6%	20.0%	-9.4%
Opportunistic	\$81,896,904	2.8%	0.0%	2.8%

Asset Allocation	Actual	Target	Target Difference	IPS Min	IPS Max
US Equity	24.01%	21.75%	2.26%	15.23%	28.28%
Non-US Equity	23.11%	21.75%	1.36%	15.23%	28.28%
Private Equity	8.29%	10.00%	-1.71%	7.00%	13.00%
High Yield/Specialty Credit	15.95%	15.00%	0.95%	10.50%	19.50%
Core Fixed Income	12.94%	10.00%	2.94%	8.00%	12.00%
Cash	1.94%	1.50%	0.44%	0.00%	3.00%
Real Return	6.16%	10.00%	-3.84%	7.00%	13.00%
Real Estate	4.88%	10.00%	-5.12%	7.00%	13.00%
Opportunistic	2.61%	0.00%	2.61%	0.00%	5.00%



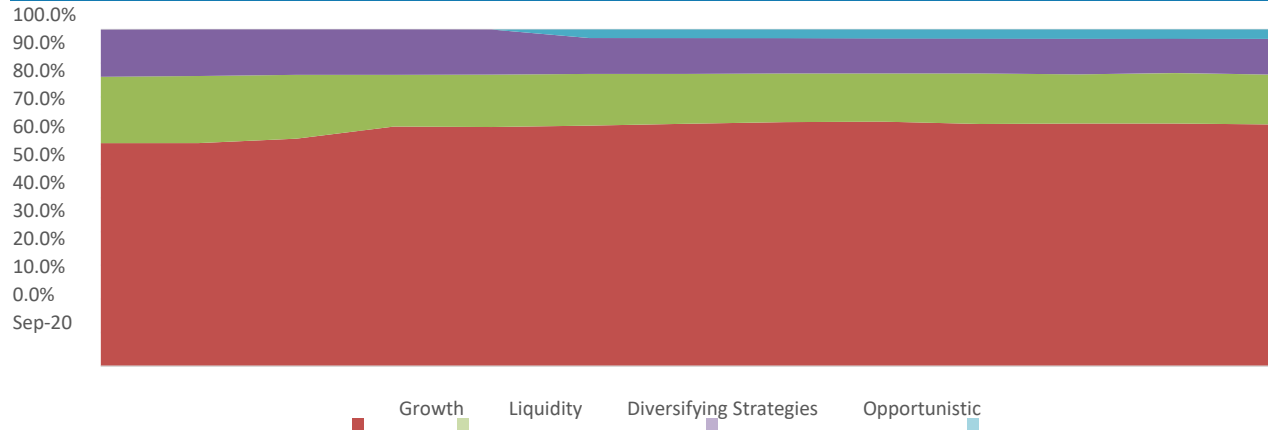
Total CERS - H
Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 2,940,634,205	100.0%	-0.9%	1.2%	1.2%	21.2%	9.8%	10.0%	9.0%	7.2%	8.3%	9.2%	21.3%
<i>CERS-H Pension IPS Policy Index</i>			-0.4%	1.1%	1.1%	21.0%	9.6%	9.6%	8.9%	7.2%	8.2%	9.2%	21.0%
Growth	\$ 2,111,180,861	71.8%	-1.5%	1.1%	13.3%	26.7%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 1,352,966,913	46.0%	-4.1%	-1.0%	11.6%	29.7%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 690,309,398	23.5%	-4.4%	-0.2%	15.5%	33.1%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 662,657,515	22.5%	-3.9%	-1.8%	7.6%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 253,845,021	8.6%	9.6%	11.2%	37.6%	47.1%							
<i>Pension Private Equity Custom Benchmark</i>			2.7%	4.2%	28.9%	37.8%	16.2%	15.9%	15.4%				11.6%
High Yield/Specialty Credit	\$ 504,368,927	17.2%	0.8%	2.0%	8.0%	12.7%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 436,546,223	14.8%	-0.1%	0.1%	0.7%	2.0%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 378,521,569	12.9%	-0.1%	0.1%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 58,024,653	2.0%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 311,157,914	10.6%	1.1%	2.8%	12.4%	19.4%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 189,055,953	6.4%	-0.3%	0.4%	11.4%	21.7%							
<i>Pension Real Return Custom Bmk</i>			0.3%	0.9%	12.0%	22.3%	5.8%	4.1%	3.5%				3.5%
Real Estate	\$ 122,101,961	4.2%	3.2%	6.7%	13.7%	17.8%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 81,896,904	2.8%	1.1%	2.9%	8.7%								



Total CERS - H
Asset Allocation Over Time
As of September 30, 2021

Asset Allocation Over time

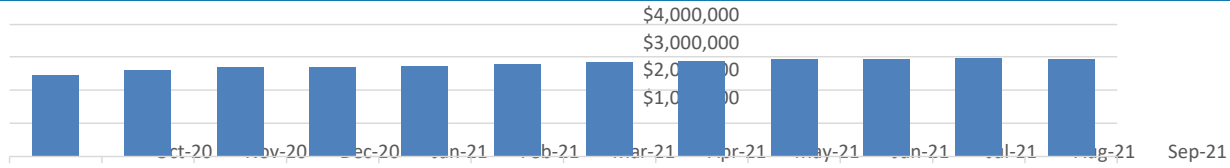


Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	72.48%	72.66%	71.92%	72.08%	72.11%	71.79%
Liquidity	14.50%	14.31%	15.06%	14.62%	14.96%	14.85%
Diversifying Strategies	10.50%	10.45%	10.41%	10.66%	10.39%	10.58%
Opportunistic	2.53%	2.58%	2.62%	2.64%	2.55%	2.79%

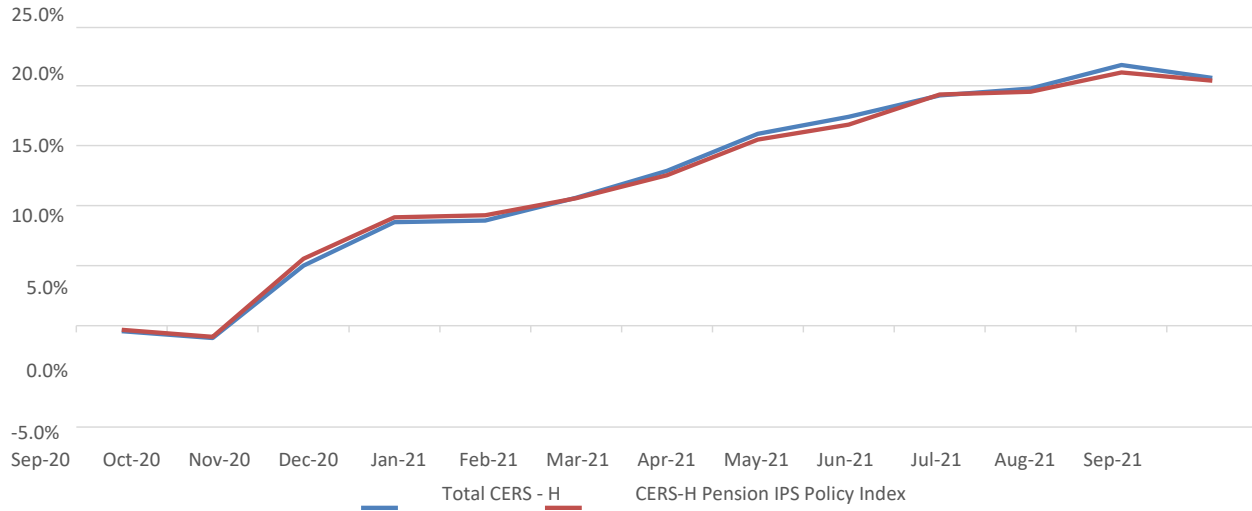


Total CERS - H
Summary
As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





Kentucky Public Pensions Authority, Office of Investments

Insurance Fiscal Year 2022

Investment Review for the Quarter Ended September 30, 2021 Presented to the County Employees Retirement System Investment Committee



Total CERS INS & CERS-H INS
 Risk Categorization Summary As of September 30, 2021

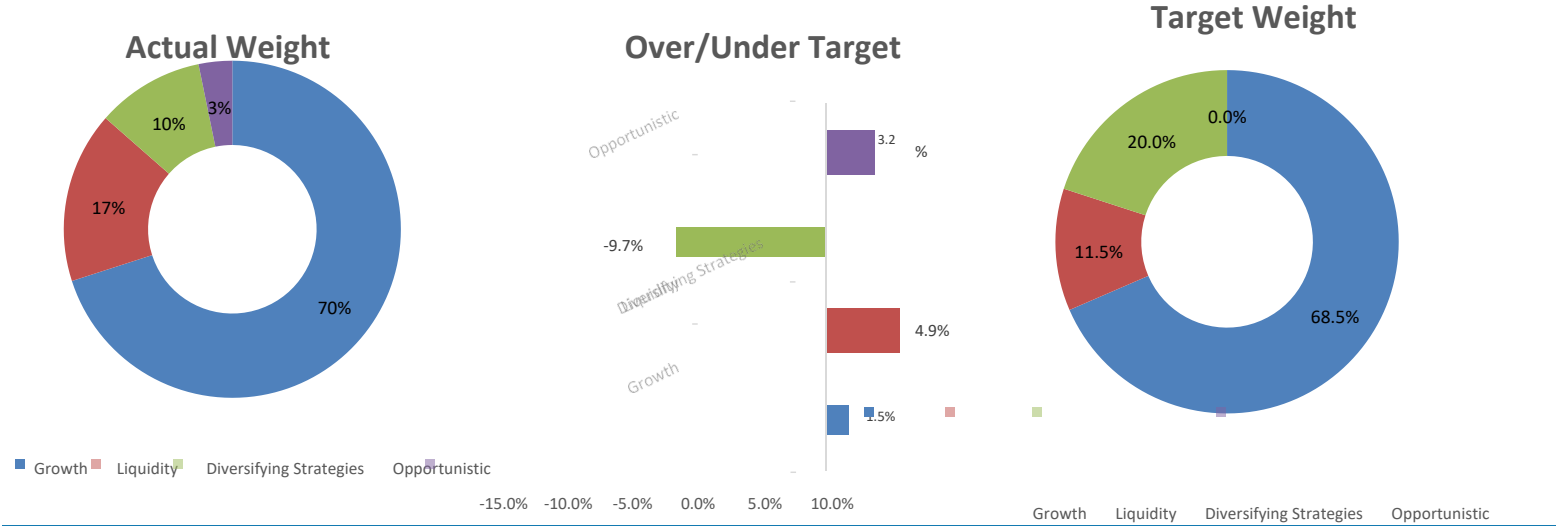
	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 4,799,344,458	100.0%	-0.6%	1.4%	10.9%	20.9%							
<i>CERS Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
<i>CERS-H Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	8.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 3,361,361,824	70.0%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 788,330,563	16.4%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 495,461,207	10.3%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 154,524,502	3.2%	1.1%	2.9%	8.7%								



Total CERS INS & CERS-H INS

Asset Allocation vs Targets
As of September 30, 2021

Actual vs Target Weights



Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative
Growth	\$3,361,361,824	70.0%	68.5%	1.5%
Liquidity	\$788,330,563	16.4%	11.5%	4.9%
Diversifying Strategies	\$495,461,207	10.3%	20.0%	-9.7%
Opportunistic	\$154,524,502	3.2%	0.0%	3.2%

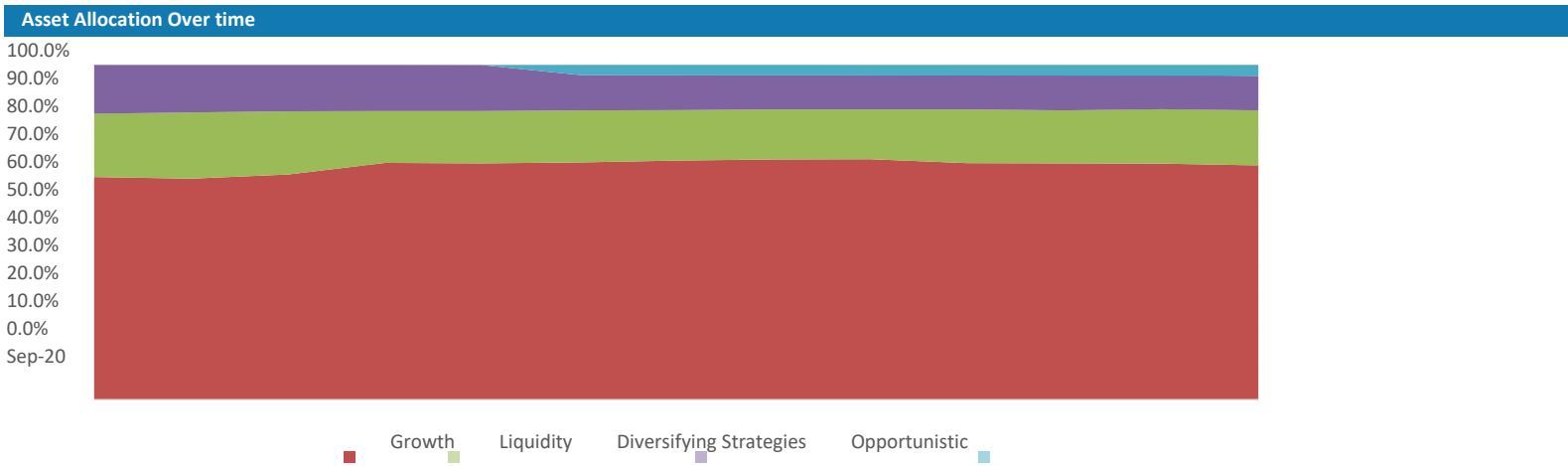


Total CERS INS & CERS-H INS
 Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 4,799,344,458	100.0%	-0.6%	1.4%	10.9%								20.9%
<i>CERS Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
<i>CERS-H Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 3,361,361,824	70.0%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 2,079,487,145	43.3%	-4.1%	-1.0%	11.6%	29.6%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 1,052,637,336	21.9%	-4.4%	-0.2%	15.5%	33.0%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 1,026,849,810	21.4%	-3.8%	-1.7%	7.7%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 459,699,987	9.6%	11.4%	12.9%	33.5%	44.9%							
<i>Insurance Private Equity Custom Benchmark</i>			1.4%	1.4%	19.9%	30.1%	11.2%	13.6%	14.3%				10.6%
High Yield/Specialty Credit	\$ 822,174,693	17.1%	0.7%	1.8%	7.7%	12.3%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 788,330,563	16.4%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 583,869,850	12.2%	-0.2%	0.2%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 204,460,713	4.3%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 495,461,207	10.3%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 291,852,889	6.1%	-0.5%	0.4%	10.1%	19.7%							
<i>Insurance Real Return Custom Bmk</i>			0.9%	0.9%	10.7%	20.3%	6.4%	4.3%	3.6%				3.6%
Real Estate	\$ 203,608,317	4.2%	3.4%	6.5%	13.5%	17.4%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 154,524,502	3.2%	1.1%	2.9%	8.7%								



Total CERS INS & CERS-H INS
Asset Allocation Over Time
As of September 30, 2021



Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	71.81%	71.88%	70.69%	70.60%	70.57%	70.04%
Liquidity	14.91%	14.86%	16.08%	15.88%	16.29%	16.43%
Diversifying Strategies	10.34%	10.26%	10.19%	10.45%	10.19%	10.32%
Opportunistic	2.95%	3.01%	3.05%	3.07%	2.96%	3.22%

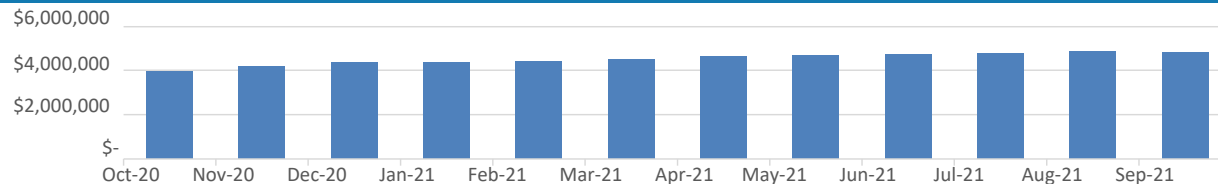


Total CERS INS & CERS-H INS

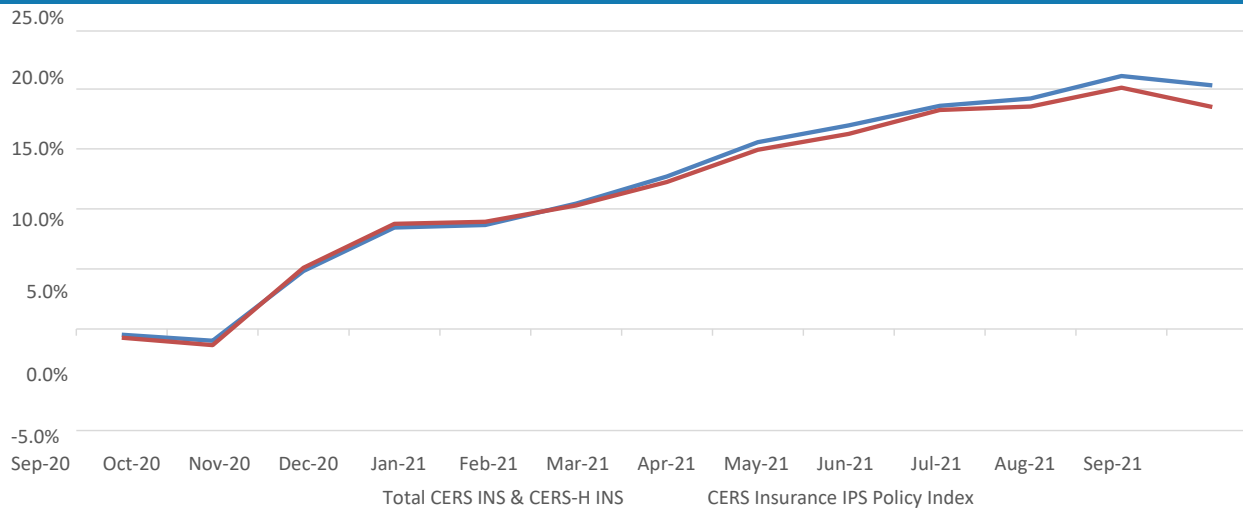
Summary

As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





Total CERS INS
Risk Categorization Summary As of September 30, 2021

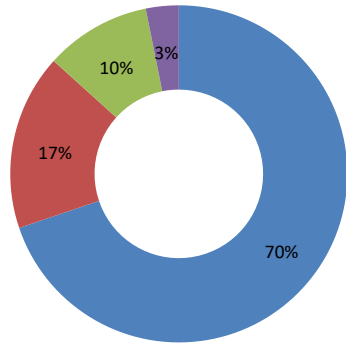
	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 3,175,932,503	100.0%	-0.7%	1.4%	1.4%	20.8%	9.5%	9.9%	8.8%	6.8%	7.5%	7.7%	20.8%
<i>CERS Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 2,217,024,084	69.8%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 536,140,949	16.9%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 322,958,682	10.2%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 100,029,566	3.1%	1.1%	2.9%	8.7%								



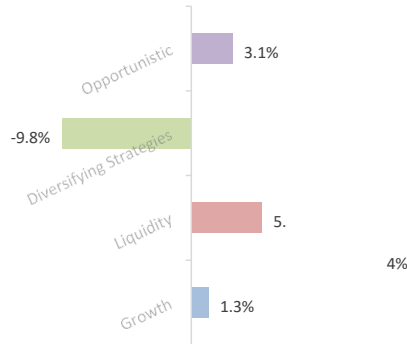
Total CERS INS
Asset Allocation vs Targets
As of September 30, 2021

Actual vs Target Weights

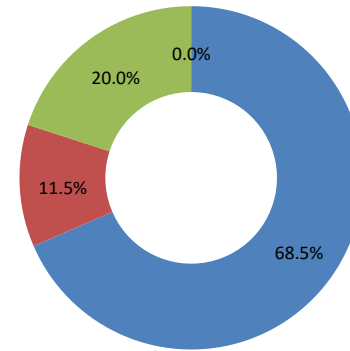
Actual Weight



Over/Under Target



Target Weight



Legend for Actual Weight and Over/Under Target charts:
 Growth (Blue), Liquidity (Red), Diversifying Strategies (Green), Opportunistic (Purple)

Legend for Target Weight chart:
 Growth (Blue), Liquidity (Red), Diversifying Strategies (Green), Opportunistic (Purple)

Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative
Growth	\$2,217,024,084	69.8%	68.5%	1.3%
Liquidity	\$536,140,949	16.9%	11.5%	5.4%
Diversifying Strategies	\$322,958,682	10.2%	20.0%	-9.8%
Opportunistic	\$100,029,566	3.1%	0.0%	3.1%

Asset Allocation	Actual	Target	Target Difference	IPS Min	IPS Max
US Equity	22.48%	21.75%	0.73%	15.23%	28.28%
Non-US Equity	21.96%	21.75%	0.21%	15.23%	28.28%
Private Equity	8.94%	10.00%	-1.06%	7.00%	13.00%
High Yield/Specialty Credit	15.95%	15.00%	0.95%	10.50%	19.50%
Core Fixed Income	12.13%	10.00%	2.13%	8.00%	12.00%
Cash	4.56%	1.50%	3.06%	0.00%	3.00%
Real Return	5.81%	10.00%	-4.19%	7.00%	13.00%
Real Estate	5.18%	10.00%	-4.82%	7.00%	13.00%
Opportunistic	2.96%	0.00%	2.96%	0.00%	5.00%



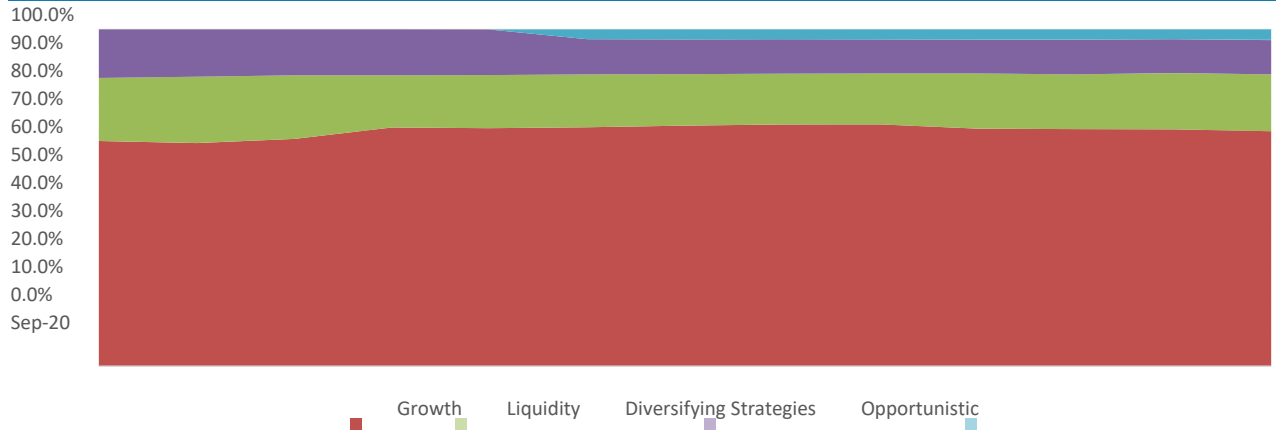
Total CERS INS
Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 3,175,932,503	100.0%	-0.7%	1.4%	1.4%	20.8%	9.5%	9.9%	8.8%	6.8%	7.5%	7.7%	20.8%
<i>CERS Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 2,217,024,084	69.8%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 1,373,223,511	43.2%	-4.1%	-1.0%	11.6%	29.6%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 695,501,543	21.9%	-4.4%	-0.2%	15.5%	33.0%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 677,721,968	21.3%	-3.9%	-1.7%	7.7%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 294,201,681	9.3%	11.4%	12.9%	33.5%	44.9%							
<i>Insurance Private Equity Custom Benchmark</i>				1.4%	19.9%	30.1%	11.2%	13.6%	14.3%				10.6%
High Yield/Specialty Credit	\$ 549,598,892	17.3%	0.7%	1.8%	7.7%	12.3%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 536,140,949	16.9%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 382,495,648	12.0%	-0.2%	0.2%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 153,645,301	4.8%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 322,958,682	10.2%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 191,440,394	6.0%	-0.5%	0.4%	10.1%	19.7%							
<i>Insurance Real Return Custom Bmk</i>				0.9%	10.7%	20.3%	6.4%	4.3%	3.6%				3.6%
Real Estate	\$ 131,518,288	4.1%	3.4%	6.5%	13.5%	17.4%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 100,029,566	3.1%	1.1%	2.9%	8.7%								



Total CERS INS
Asset Allocation Over Time
As of September 30, 2021

Asset Allocation Over time

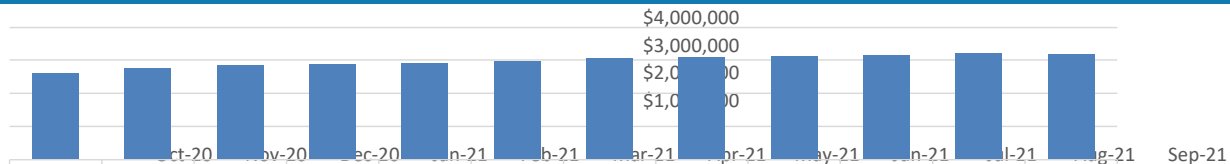


Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	71.81%	71.84%	70.55%	70.39%	70.36%	69.81%
Liquidity	15.10%	15.09%	16.42%	16.31%	16.71%	16.88%
Diversifying Strategies	10.20%	10.13%	10.05%	10.30%	10.04%	10.17%
Opportunistic	2.89%	2.95%	2.98%	3.00%	2.89%	3.15%

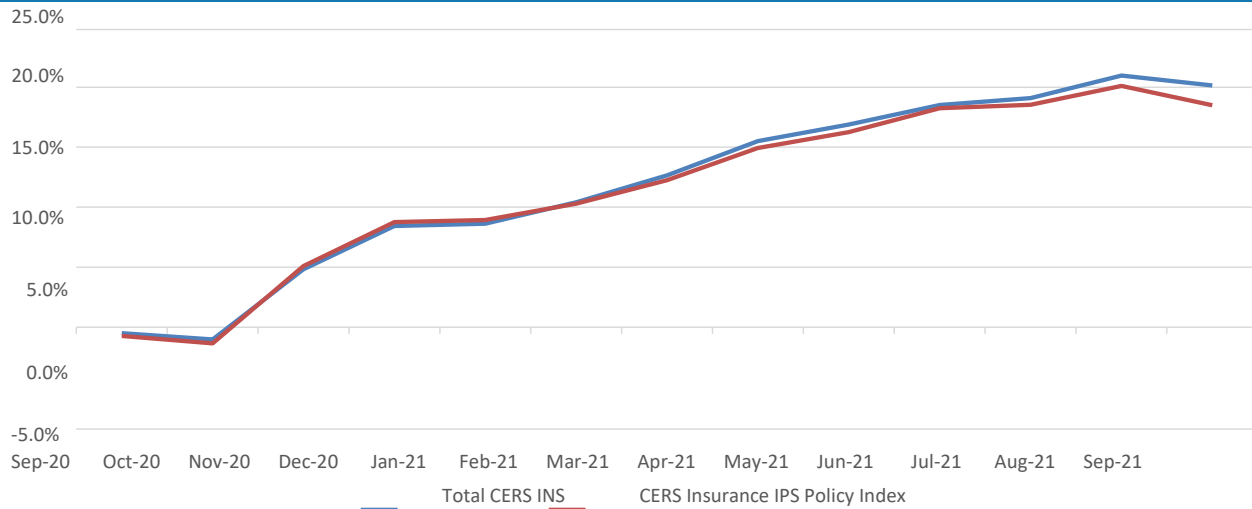


Total CERS INS
 Summary
 As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





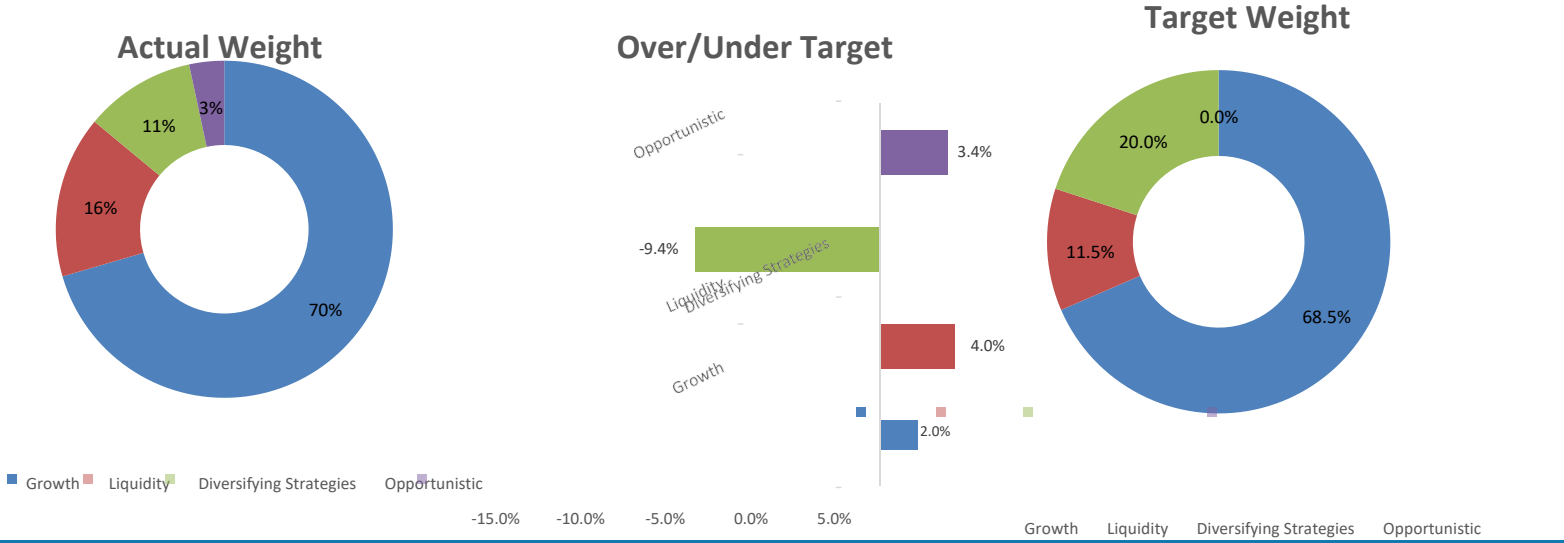
Total CERS - H INS
 Risk Categorization Summary As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 1,623,411,954	100.0%	-0.6%	1.5%	1.5%	21.1%	9.6%	10.0%	8.8%	6.8%	7.5%	7.7%	21.2%
<i>CERS-H Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 1,144,337,741	70.5%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Liquidity	\$ 252,189,614	15.5%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Diversifying Strategies	\$ 172,502,525	10.6%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Opportunistic	\$ 54,494,935	3.4%	1.1%	2.9%	8.7%								



Total CERS - H INS
Asset Allocation vs Targets
As of September 30, 2021

Actual vs Target Weights



Risk Categorization	Ending Market Value (\$USD)	Actual Weight	Target Weight	Relative
Growth	\$1,144,337,741	70.5%	68.5%	2.0%
Liquidity	\$252,189,614	15.5%	11.5%	4.0%
Diversifying Strategies	\$172,502,525	10.6%	20.0%	-9.4%
Opportunistic	\$54,494,935	3.4%	0.0%	3.4%

Asset Allocation	Actual	Target	Target Difference	IPS Min	IPS Max
US Equity	22.59%	21.75%	0.84%	15.23%	28.28%
Non-US Equity	22.14%	21.75%	0.39%	15.23%	28.28%
Private Equity	9.81%	10.00%	-0.19%	7.00%	13.00%
High Yield/Specialty Credit	15.34%	15.00%	0.34%	10.50%	19.50%
Core Fixed Income	12.50%	10.00%	2.50%	8.00%	12.00%
Cash	2.89%	1.50%	1.39%	0.00%	3.00%
Real Return	5.97%	10.00%	-4.03%	7.00%	13.00%
Real Estate	5.57%	10.00%	-4.43%	7.00%	13.00%
Opportunistic	3.16%	0.00%	3.16%	0.00%	5.00%



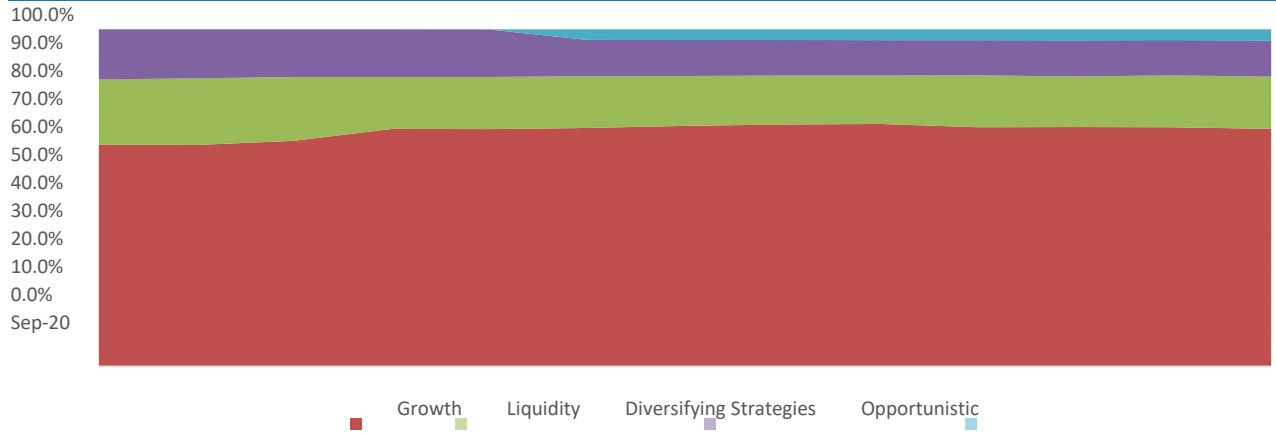
Total CERS - H INS
Risk Categorization Performance As of September 30, 2021

	Market Value (\$USD)	% of Portfolio	MTD	QTD	YTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year	Inception	IRR 1 YR
Total Portfolio	\$ 1,623,411,954	100.0%	-0.6%	1.5%	1.5%	21.1%	9.6%	10.0%	8.8%	6.8%	7.5%	7.7%	21.2%
<i>CERS-H Insurance IPS Policy Index</i>			-0.3%	1.3%	1.3%	20.7%	9.2%	9.4%	8.8%	6.9%	7.6%	7.9%	20.7%
Growth	\$ 1,144,337,741	70.5%	-1.2%	1.3%	13.1%	26.5%							
<i>Growth Custom Benchmark</i>			-1.9%	0.8%	12.8%	27.3%	13.0%						13.1%
Public Equity	\$ 706,263,635	43.5%	-4.1%	-1.0%	11.6%	29.6%							
<i>Global Equity Blended Index</i>			-3.8%	-1.3%	10.9%	28.6%	12.2%	13.1%	11.9%	7.9%	9.2%		10.6%
U.S. Equity	\$ 357,135,793	22.0%	-4.4%	-0.2%	15.5%	33.0%							
<i>KY Domestic Equity Blend</i>			-4.5%	-0.1%	15.0%	31.9%	16.0%	16.8%	16.6%	10.0%	10.8%		11.9%
Non U.S. Equity	\$ 349,127,842	21.5%	-3.8%	-1.7%	7.7%	26.2%							
<i>KY Ret. Int'l Eq. Blended Index</i>			-3.2%	-2.6%	6.8%	25.2%	8.3%	9.2%	7.9%	6.9%	6.9%		8.2%
Private Equity	\$ 165,498,306	10.2%	11.4%	12.9%	33.5%	44.9%							
<i>Insurance Private Equity Custom Benchmark</i>				1.4%	19.9%	30.1%	11.2%	13.6%	14.3%				10.6%
High Yield/Specialty Credit	\$ 272,575,800	16.8%	0.7%	1.8%	7.7%	12.3%							
<i>High Yield Custom Benchmark</i>			0.3%	1.0%	4.5%	9.8%	5.5%						5.2%
Liquidity	\$ 252,189,614	15.5%	-0.1%	0.2%	0.6%	1.9%							
<i>Liquidity Custom Benchmark</i>			-0.8%	0.0%	-1.5%	-0.8%	5.1%						4.7%
Core Fixed Income	\$ 201,374,202	12.4%	-0.2%	0.2%	0.8%	2.2%							
<i>Bloomberg Barclays U.S. Aggregate Bond Index</i>			-0.9%	0.0%	-1.6%	-0.9%	5.4%	2.9%	3.0%				4.0%
Cash	\$ 50,815,412	3.1%	0.0%	0.0%	0.1%	0.1%							
<i>FTSE Treasury Bill-3 Month</i>			0.0%	0.0%	0.0%	0.1%	1.1%	1.1%	0.6%	1.3%	2.4%		2.9%
Diversifying Strategies	\$ 172,502,525	10.6%	1.0%	2.7%	11.5%	18.2%							
<i>Diversifying Strategies Custom</i>			1.1%	2.5%	7.0%	8.7%	5.6%						5.5%
Real Return	\$ 100,412,495	6.2%	-0.5%	0.4%	10.1%	19.7%							
<i>Insurance Real Return Custom Bmk</i>				0.9%	10.7%	20.3%	6.4%	4.3%	3.6%				3.6%
Real Estate	\$ 72,090,030	4.4%	3.4%	6.5%	13.5%	17.4%							
<i>NCREIF NFI ODCE Net 1Qtr in Arrears Index</i>			3.7%	3.7%	6.8%	7.1%	4.6%	5.6%	8.6%	6.6%	6.6%		6.3%
Opportunistic	\$ 54,494,935	3.4%	1.1%	2.9%	8.7%								



Total CERS - H INS
Asset Allocation Over Time
As of September 30, 2021

Asset Allocation Over time

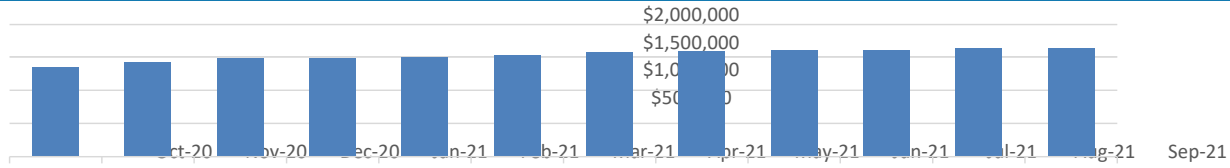


Risk Categorization	April 2021	May 2021	June 2021	July 2021	August 2021	September 2021
Growth	71.81%	71.96%	70.95%	71.02%	70.97%	70.49%
Liquidity	14.54%	14.40%	15.42%	15.04%	15.47%	15.53%
Diversifying Strategies	10.59%	10.53%	10.46%	10.76%	10.49%	10.63%
Opportunistic	3.06%	3.13%	3.17%	3.20%	3.08%	3.36%

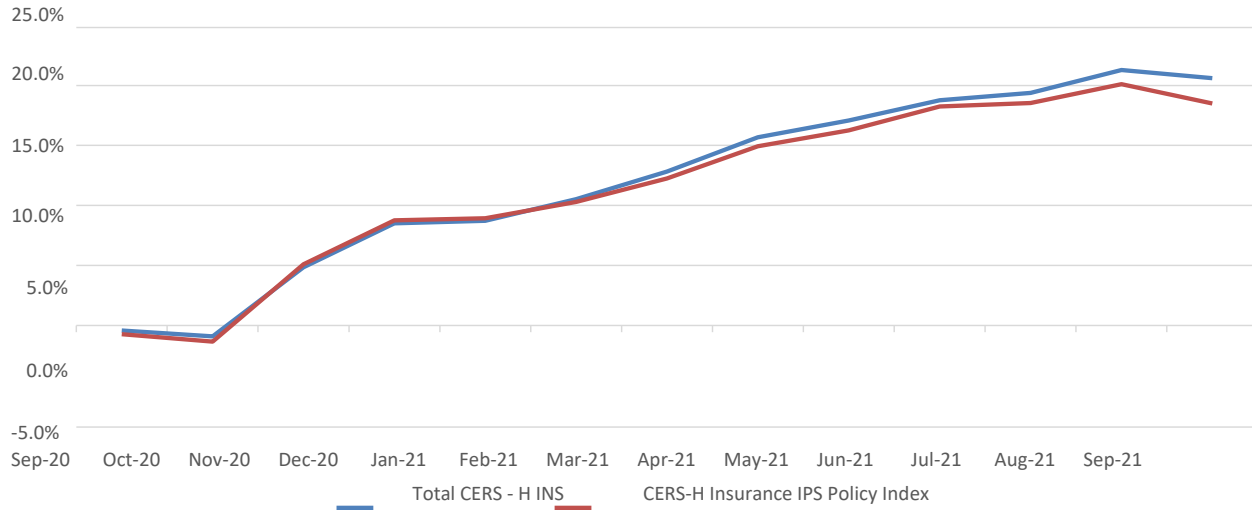


Total CERS - H INS
Summary
As of September 30, 2021

Market Value Over Time (\$USD 000)



Cumulative Performance Over 1 Year





UPDATE:
AXIOM INVESTORS
INTERNATIONAL SMALL CAP EQUITY

Date: November 3, 2021
To: KRS Investment Committee
From: Joe Gilbert, Director of Equity

Overview

The KPPPA Office of Investments' recommendation for Axiom Investors to manage an active non-U.S. small cap equity mandate was approved by the KRS & CERS Investment Committees on August 24th & 25th, respectively. Both committees approved the recommendation contingent on successful investment management agreement negotiations. The CERS Investment Committee approval was also subject to final approval at its November meeting.

The KRS & CERS Board of Directors subsequently ratified the decision of their corresponding investment committees on September 9th & 15th, respectively.

Staff was notified of the resignation of Kurt Polk, President, who oversaw the operations side of the business on August 24th. Staff's assessment was that there would be no deterioration in Axiom's business due to Mr. Polk's departure. Since the firm's announcement, staff has maintained that Mr. Polk's departure should not affect the decision to move forward with funding the investment mandate. Any risk of business disruptions are mitigated by the continued leadership of tenured department heads of operations, compliance, distribution, and marketing who continue to report to the same managerial committee as before.

The Wilshire manager research team's position on Mr. Polk's departure aligns with the view of KPPA investment staff. The following is an extract from a statement Wilshire released at the time of Axiom's announcement:

"... There will be no impact to Axiom's Investment teams or strategies and the firm does not plan on hiring a replacement. Manager research views the departure as a non-material event and there will be no ratings changes as a result of this announcement."

Update

Since the investment committee meetings, KPPA investment staff has continued to research and monitor Axiom with particular focus on their non-U.S. small cap equity business. Specifically, whether any issues arose from Mr. Polk's impending departure surrounding client stability. The following is an excerpt received from Axiom management:

"..., there have been no client losses (or notification of upcoming client terminations) or concerns (we have actually had several new accounts fund); ... just support ... and comfort with the current coverage of non-investment functions..."

The firm has added six new accounts to the strategy post the announcement of Mr. Polk's departure. The total number of clients employing the International Small Cap product now stands at 72, with assets just under \$1.2 billion. The strategy has not lost any accounts since the announcement.

Current Standing

The manager and staff have agreed to investment guidelines that strike a balance between the flexibility required to manage the strategy as intended and provide sufficient guardrails to ensure proper diversification. The two parties have exchanged in the first round of comments regarding the investment management agreement, and are negotiating points of disagreement. Investment and operations staffs have engaged the custodial bank to begin the account opening and unitization schematic process. In summary, staff continues to move forward with the operational side of establishing a new mandate so that funding can occur quickly once final approval is given.

Moving Forward

Given our updated research and original conviction in Axiom, we ask that the committee grant final approval to move forward in funding the Axiom International Small Cap mandate. We anticipate the IMA negotiations and final preparations for transition funding to take place over the next few weeks.



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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



To: County Employees Retirement System Board of Trustees

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

Date: November 10, 2022

Subject: Summary of Joint Audit Committee Meeting

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

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

RECOMMENDATION: The Joint Audit Committee requests the County Employees Retirement System Board of Trustees ratify the actions taken by the Audit Committee.

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

***Board of Trustees Action Requested**



KENTUCKY PUBLIC PENSIONS AUTHORITY

David L. Eager, Executive Director

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



To: Members of the Audit Committee

Through: Rebecca H Adkins
Executive Director, Office of Operations

From: Dominique McKinley
Director, Enterprise and Technology Services

Date: November 4, 2021

Subject: Cyber Security – Infrastructure Assessment by external vendor

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

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

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



Kentucky Public Pensions Authority

Internal Audit Administration



To: Members of the County Employees Retirement System Board of Trustees
From: Kristen N. Coffey, CICA *KNC*
Division Director, Internal Audit Administration
Date: November 10, 2021
Subject: Annual Review of the Charter for the Joint Audit

Annually, the Charter for the Joint Audit Committee and the Charter for the Division of Internal Audit Administration are reviewed and updated as needed. The updates are presented to the Joint Audit Committee for approval and then provided to the Boards of Trustees for ratification. The Charter for the Division of Internal Audit Administration was previously approved by the CERS Board of Trustees at the September 29, 2021 meeting.

Action Needed: We request the CERS Board of Trustees ratify the Joint Audit Committee's approval of the updated Charter for the Joint Audit Committee.

Attachment

County Employees Retirement System and Kentucky Retirement Systems

Charter for the Joint Audit Committee

I. Charter

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

II. Purpose

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

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

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

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

III. Authority

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

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

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

IV. Composition

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

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

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

V. Meetings

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

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

¹ See Sarbanes-Oxley Act of 2002 § 407.

VI. Responsibilities

The Joint Audit Committee is responsible for the following activities.

Internal Controls and Compliance for KPPA, CERS, and KRS

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

Internal Audit

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

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

External Audit

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

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

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

Reporting

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

Other

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

VII. Responsibilities of Other Parties

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

VIII. Approvals

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

Joint Audit Committee Chair Date

Board Chair Date
County Employees Retirement System

Board Chair Date
Kentucky Retirement Systems

History: Approval Date: November 16, 2021
Amended:

DRAFT



Kentucky Public Pensions Authority

Internal Audit Administration



To: Members of the Joint Audit Committee

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

Date: November 4, 2021

Subject: Establishment of Joint Audit Committee Meeting Dates

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

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

February 3, 2022	August 25, 2022
May 5, 2022	November 3, 2022

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

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