

**Kentucky Retirement Systems
Investment Committee Meeting
February 14, 2023 at 10:00 a.m. ET (9:00 a.m. CT)
Via Video Teleconference and Facebook Live**

AGENDA

- | | | |
|-----|---|-----------------------------|
| 1. | Call to Order | Prewitt Lane |
| 2. | Opening Legal Statement | Legal Services |
| 3. | Roll Call | Sherry Rankin |
| 4. | Public Comment | Sherry Rankin |
| 5. | Approval of Minutes* - November 10, 2022 and
December 20, 2022 | Prewitt Lane |
| 6. | Quarterly Investment Budget | Steve Willer |
| 7. | Investment Review and Update* | Steve Willer |
| 8. | Investment Compliance Report | Jared Crawford |
| 9. | Staffing Update and Other Planning Issues | David Eager
Steve Willer |
| 10. | Adjourn* | Prewitt Lane |

** Committee Action May be Taken*

**MINUTES OF MEETING
KENTUCKY RETIREMENT SYSTEMS
INVESTMENT COMMITTEE MEETING
NOVEMBER 10, 2022, 10:00 A.M., E.T.
VIA LIVE VIDEO TELECONFERENCE**

At the November 10, 2022 meeting of the Kentucky Retirement Systems' (KRS) Investment Committee, the following Committee members were present: Prewitt Lane (Chair), John Cheshire, Ramsey Bova, David Adkins, and Pamela Thompson. Staff members present were David Eager, Rebecca Adkins, Victoria Hale, Steve Willer, Anthony Chiu, Joseph Gilbert, Jared Crawford, Ashley Gabbard, Phillip Cook, Katie Park, and Sherry Rankin. Also in attendance were Kentucky Retirement Systems' CEO John Chilton and County Employees Retirement System's (CERS) CEO Ed Owens, III. Others in attendance included David Lindberg and Craig Morton with Wilshire Advisors, LLC.

Mr. Lane called the meeting to order.

Ms. Hale read the Opening Statement.

Ms. Rankin took Roll Call.

There being no *Public Comment*, Mr. Lane introduced agenda item *Approval of Minutes – August 9, 2022*. Mr. Cheshire made a motion and was seconded by Mr. Adkins to approve the minutes as presented. The motion passed unanimously.

Mr. Lane introduced agenda item *Quarterly Trust Budget*. Mr. Steve Willer presented the Quarterly Trust Budget. Mr. Willer stated that this was the first year that trust expenditures have been budgeted. He encouraged the KRS Investment Committee to continue to provide feedback and suggestions on the reporting of the Trust Budget. To increase transparency, the Trust Budget will be reported to the CERS and KRS Investment Committees on a quarterly basis moving forward, said Mr. Willer. He advised the Committee that a section was added to include a description of services provided by each vendor, as requested by Trustees.

Mr. Lane introduced agenda item *Investment Review and Update*. Mr. Willer presented the Investment Review and Update. He advised that the theme in markets continues to be elevated volatility. Mr. Willer presented the Wilshire asset class performance chart which illustrated the volatility within the first nine months of 2022. Mr. Willer reported that U.S. public equity markets were down 4.5%, non-U.S. equity markets were down almost 10%, and developed markets were down over 11% for the quarter. Core bonds represented by the Bloomberg Aggregate Index were down almost 5% for the quarter, said Mr. Willer. High-yield bonds were down almost 15% and real assets were also down for the quarter. Mr. Willer highlighted the key struggles occurring in markets. He advised the Committee that elevated volatility is expected and that rates will continue to rise to combat inflation. As a result, growth will slow, and unemployment will rise. Mr. Willer reported that the plans held up relatively well with strong relative performance. The pension plans returned between -2.07% and -2.6% and outperformed the IPS benchmarks by between 116 and 160 basis points, which equals about \$55 million in outperformance. Mr. Willer stated that the current allocations are sound and that the underlying mandates within the allocations are performing well. Performance within the insurance plans was similar, said Mr. Willer, as returns

were between -2.31% and -2.61% for the quarter. These plans outperformed their benchmarks by between 159 and 189 basis points. Next, Mr. Willer presented the Plan Sponsor Peer Group Analysis; return, standard deviation, and sharpe ratio. He advised that the plans remained broadly underweight in real assets allocation targets. There were small underweights to some plans in real estate and corresponding over weights in proxy assets such as specialty credit and cash. Mr. Willer announced that there was a recent capital call in one of the real estate mandates in which capital was committed several months ago and advised that there is still significant capital committed in the real estate space. He expects this remaining capital to be deployed in the coming quarter, depending on the market. In real return and real assets, Mr. Willer stated that he is working on potential mandates and may request a Special Called KRS Investment Committee meeting in the coming weeks to present recommendations for the funding of mandates. Mr. Eager asked Mr. Willer to identify the amount of committed capital in asset classes and how far below the ranges each asset class is. The committed capital is in various asset classes and vary in size, said Mr. Willer. He advised that the committed capital is primarily in real estate (\$300 million), however, there is some committed capital in specialty credit. Further, Mr. Willer stated that several of the plans are within range and others are slightly out of range. He stated that if all the capital were to be called and once the real estate searches are completed, Staff will top off existing real estate mandates which would achieve target or make all plans within range. Mr. Eager asked how close plans are to their ranges once capital is called and gave SPRS as an example. Mr. Willer stated that due to the general fund allocation received in SPRS, the committed capital will not get SPRS into target. Mr. Eager added that it is beneficial to understand how the committed capital helps get into range. Mr. Willer stated that what is committed for KRS will help get the plans into range and anticipates that all will be in range once capital is called. Mr. Anthony Chui touched on the benefits

of prudently deploying capital and the negative side effects of rushing the deployment of capital. Mr. Willer agreed with Mr. Chiu and added that the plans are positioned well.

Mr. Lane introduced agenda item *Investment Policy Statement Discussion*. Mr. Willer stated that there have been several discussions regarding the under allocation to certain asset classes and being below the range in the Investment Policy Statement (IPS). The drivers of these issues and how to address them have also been a topic of extensive discussion, said Mr. Willer. Mr. Lane stated that it has been difficult to get a substantial increase in the asset classes. He advised that he and Mr. Willer are reviewing a few options that will be added to the IPS. The change would phase-in over 18 months, said Mr. Lane. He emphasized the need to be in compliance and stated that a recommendation will be presented to the KRS Investment Committee soon. Mr. Cheshire thanked Mr. Lane and Mr. Willer for not rushing through the issue. Mr. Willer commented that there may be pressure at times to deploy capital quickly or to be in compliance, but he advised that there is general language in the IPS which may provide some flexibility, such as proxy voting language. Mr. Willer reminded the Committee that these changes to the allocations will take time. Mr. Cheshire commented that money rushed to be placed does not typically provide the best outcome. Mr. Lane agreed with Mr. Cheshire.

Mr. Lane introduced agenda item *Investment Compliance Report*. Mr. Jared Crawford, Investment Research Officer and Compliance Officer, stated that he and the Office of Investments are working to reduce redundancy in the Investment Compliance Report. He emphasized the need for the Compliance Report to accurately reflect the Investment Policy Statement. Mr. Willer added that the Office of Investments has researched best practices for fractional shares and is requesting that

the Investment Committee adopt a de minimis exception for the internally managed S&P portfolio. Mr. Willer advised that this exception would exclude positions that are individually less than \$10,000 and in aggregate are less than \$100,000; therefore, the fractional shares would be excluded from the Compliance Report. Mr. Joseph Gilbert advised that he reached out to the custodian and consultant and that there is no universally agreed upon best practice, however, he reported that others transfer the fractional shares out of the internal account to a different holding account, write-off the fractional shares due to their market value, or implement the de minimis exception. Mr. Lane emphasized the importance of transparency. Mr. Gilbert stated that a de minimis exception would not erase the fractional shares and that they would continue to be shown on the quarterly report which shows every holding. This report can be reviewed on the KPPA website. Mr. Willer added that the role of the Compliance Report is to highlight important issues needing attention. Mr. Eager stated that this has been an ongoing discussion and asked Ms. Hale if Staff could make the decision or if Board approval is required. Ms. Hale advised that Board action is required to change the Investment Policy Statement (IPS); however, Staff may present an amended IPS for presentation and recommendation to the Board. Mr. Willer stated that the Office of Investments will redline the IPS. He asked Ms. Hale to clarify what is needed of the KRS Investment Committee to bring the amended IPS before the KRS Board of Trustees. Ms. Hale advised that the Committee must approve the amendments and bring the action to the Board of Trustees for ratification, or it may be added to an agenda for a Special Called KRS Investment Committee meeting. Lastly, Mr. Gilbert provided an update on proxy voting. Ms. Hale advised that the Board had already voted and approved what they wished the proxy voting policy to be; therefore, Staff is authorized to amend and implement the policy. Mr. Willer stated that the Office of Investments is working to implement the policy. Mr. Chilton asked if there are guidelines given to managers

regarding how to vote. Mr. Willer stated that KRS and CERS each have a proxy voting policy and that the managers vote according to the provided proxy voting policy. Ms. Thompson asked if there is a reviewing process to see how managers have voted. Mr. Gilbert stated that he receives proxy voting reports which may be reviewed, if needed. Ms. Hale also advised that the Compliance Officer may conduct an internal audit of those votes to confirm that the managers voted according to the policy. Mr. Adkins asked Mr. Eager if there has been any effort to coordinate voting on issues among State pension plans. Mr. Eager stated that there has been collaboration at the State Attorney General level regarding ESG issues.

Mr. Lane introduced agenda item *Staffing Update and Other Planning Issues*. Mr. Eager stated that he was asked by the Public Pensions Oversight Board (PPOB) if/how proxy voting is monitored. Mr. Eager expressed that he would be comfortable with auditing a sampling of votes and urged Staff to complete that audit as soon as possible. He reported that the approved Senior Investment Analyst position was approved by the Personnel Cabinet and that the request for the compensation for that position is with the Governor's office. Mr. Willer has requested support to begin recruiting for the Private Equity Portfolio Manager position, said Mr. Eager. Mr. Eager advised that conversations with Mr. Willer and Dr. Hackbart have taken place regarding staffing needs. It was agreed to begin researching the utilization of more passive assets and bringing additional assets in-house. Mr. Eager stated that approximately \$215 million is spent on investment management fees and would like to bring an additional 10% of assets in-house. Mr. Willer added that the immediate need is to fill existing positions to provide relief to Staff. Mr. Lane mentioned a target of 35% of assets in-house, said Mr. Willer, and believed that to be a realistic and long-term goal once fully staffed. Ms. Thompson asked how often the fee with Wilshire Associates is

reviewed. Mr. Willer stated that the contract needs to be amended and that relationship is continually being evaluated. Mr. Eager added that the relationship with Wilshire has been about five years thus far and should be reviewed and evaluated to ensure that they are meeting current needs. Mr. Adkins asked if multiple states have thought to come together to create an investment office. Mr. Willer stated that he was not aware of this but agreed that it would make sense from an investment standpoint. Mr. Eager commented that KPPA is doing that, in a way, as the Office of Investments runs five different pensions and five different insurances. Mr. Eager stated that the topic of a broader combining effort in Kentucky with Kentucky Teachers' Retirement and Deferred Compensation has been on the table in the past but gains no traction. Ms. Hale stated that she is unaware of any cross-border occurrences; however, she indicated that approximately six states have investment boards. These state investment boards invest for local, municipal, and state systems which subscribe. Mr. Lane stated that he had completed an analysis in the past which indicated that the State would save approximately seven million dollars to merge all Bloomberg contracts, consulting, etc.

There being no further business, Mr. Cheshire made a motion and was seconded by Mr. Adkins to adjourn the meeting. The motion passed unanimously.

Copies of all documents presented are incorporated as part of the minutes of the Kentucky Retirement Systems Investment Committee meeting held November 10, 2022.

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CERTIFICATION

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

Recording Secretary

I, as Chair of the Kentucky Retirement Systems Investment Committee, do certify that the Minutes of the meeting held on November 10, 2022 were approved by the Kentucky Retirement Systems Investment Committee on February 14, 2023.

Committee Chair

I have reviewed the Minutes of the Kentucky Retirement Systems Investment Committee Meeting on November 10, 2022 for form, content, and legality.

Office of Legal Services

**MINUTES OF MEETING
KENTUCKY RETIREMENT SYSTEMS
SPECIAL CALLED INVESTMENT COMMITTEE MEETING
DECEMBER 20, 2022, 10:00 A.M., E.T.
VIA LIVE VIDEO TELECONFERENCE**

At the December 20, 2022 Kentucky Retirement Systems' (KRS) Special Called Investment Committee Meeting, the following Committee members were present: C. Prewitt Lane (Chair), John Cheshire, Ramsey Bova, David Adkins, and Pamela Thompson. Staff in attendance included KRS CEO John Chilton, CERS CEO Ed Owens, III, Rebecca Adkins, Erin Surratt, Victoria Hale, Steve Willer, Anthony Chiu, Joseph Gilbert, Jared Crawford, Brian Caldwell, Shaun Case, Ashley Gabbard, Katie Park, and Sherry Rankin. Others in attendance included Marc Friedberg, David Lindberg, Chris Tessman, and Craig Morton with Wilshire Advisors, LLC.

Mr. Lane called the meeting to order.

Ms. Hale read the Opening Statement.

Ms. Rankin called roll.

There being no *Public Comment* submitted, Mr. Lane introduced agenda item *Approval of Real Return Investment Managers*. Mr. Lane thanked all attendees for their participation in the meeting and asked Mr. Steve Willer to further introduce the Real Return Search and Recommendation Summary. Mr. Steve Willer stated that the presented recommendations are the culmination of a competitive search process to identify strategies that provide both favorable and standalone risk-adjusted returns as well as positively correlated to inflation. Further, Mr. Willer advised that the search process across assets included a wide spectrum of potential opportunities; asset classes, different managers and structures for those asset classes researched. The presented mandates were the most compelling opportunities from an asset and mandate perspective, said Mr. Willer. Deputy Chief Investment Officer, Anthony Chiu reported that he and the Office of Investments had been following the presented opportunities for approximately two to three years. He reviewed the three

\$75 million investment opportunities: Ceres Farms LLC, American Rivers Fund, and Arctos Sports Partners II with the KRS Investment Committee.

Ceres Farms, LLC.

Ceres Partners, LLC is a South Bend, Indiana-based firm founded in 2007 targeting investment in US row crop farmland, primarily in the Midwest. Mr. Chiu stated that this opportunity is attractive because farmland is scarce and because Ceres Partners, LLC is a rental business; 80% of their rent is collected from farmer tenants upfront in the spring prior to crops being planted. Other positives include contracted cash flow and passive land appreciation, said Mr. Chiu. Mr. Willer added that the \$75 million would be spread across all the pension and insurance plans on a percent basis based on market conditions. Ms. Bova asked if Ceres Partners, LLC finances land purchases or purchases with cash. Mr. Chiu advised that the land purchases are made with cash as there is little leverage to finance the land. Further, Ms. Bova referenced the unlevered yield of 5% mentioned in the meeting materials for this agenda item and asked what the yield would be after financing costs. Mr. Chiu advised that the yield would be under 10%; however, he does not expect more than 5%. Additionally, Ms. Bova asked what Ceres Partners, LLC paid on average per acre for farmland in 2022. Mr. Chiu stated that a little over \$5,000 per acre was the average cost. Mr. Adkins asked if Ceres Partners, LLC is involved in any conservation efforts. Mr. Chiu stated that Ceres Partners, LLC has sold farms/wetlands in the past to support the conservation and provides solar leasing options on one-third of their land which provides additional income. Further, Mr. Adkins asked if the held land has any wind-powered energy generation and how Ceres Partners, LLC insures their crops. Crops are insured through subsidies provided by the Federal Government, said Mr. Chiu. Mr. Adkins asked if any adverse market conditions could arise from wealthy investors outbidding small/family-owned farms looking to purchase additional land. Mr. Chiu stated that this is not a concern or threat as Ceres Partners, LLC often partners with small farms. Mr. Willer reiterated that this is a characteristic which makes the fund unique and worth considering. Mr. Chilton asked if the funds would be invested in a new LLC and with others. Mr. Chiu advised that Ceres Partners, LLC is an open-end fund; therefore, the investment would have exposure to the entire portfolio. Mr. Chilton also asked what type of investment reporting would be received from the fund. Typically, the fund would release a quarterly investment report, said Mr. Chiu. Lastly, Mr. Chilton asked if a contract agreement had

been executed. Mr. Chiu reported that the KPPA Office of Legal Services was in the process of contract negotiations with all three investment funds being presented. Mr. Willer added that these recommended investments are contingent upon successful contract negotiations. Ms. Hale advised that she actively working on these negotiations.

American Rivers Fund

Maritime Partners is a New Orleans-based firm founded in 2015 targeting investment that provides leasing solutions to the United States inland marine transportation industry governed by the Merchant Marine Act of 1920. Mr. Chiu stated that these leases are contractually strong and that the vessels transport essential goods. Mr. Chilton asked what the current demand is for barges. Mr. Chiu reported that there is a steady demand for barges and tugboats as many shipyards have closed. Mr. Willer added that supply chain issues and the cost of steel have been barriers to new producers and competition. Mr. Chiu stated that this is also an open-end fund. Mr. Chilton asked for a breakdown of the management fees. The fees are 2% on investment capital and 20% carried over the hurdle, said Mr. Chiu.

Arctos Sports Partners II

Arctos Sports Partners is a Dallas-based investment firm founded in 2019 targeting investments in the professional sports industry. The Firm seeks to provide strong, uncorrelated returns by purchasing a diversified portfolio of non-control stakes in professional sports franchises at attractive valuations, as well as providing bespoke liquidity solutions and structured growth capital to major professional sports franchises and their owners. Mr. Willer added that there would be a coinvest available in the future and would be better economic terms, should the recommended investment move forward. Mr. Lane asked Mr. Chiu to describe the structure of Arctos Sports Partners II for the Committee. He advised that the recommendation is like a typical private equity fund, however, the term is undetermined. Ms. Bova asked if the Committee members would be able to review the investment agreements for each recommendation. Ms. Hale advised that she reviewed all agreements thoroughly and is in the negotiations process. Further, Ms. Hale stated that she will report to the Committee if negotiations are unsuccessful and why. Mr. Adkins asked if the management fees for these investments are prudent, reasonable, and align with the fiduciary duty of the Committee. Mr. Friedberg with Wilshire Advisors, LLC. advised that they work

diligently to negotiate the best fees and features which meet the alignment of the client. Ms. Hale added that the fees were typical based on past investments and not out of the ordinary or extreme. Mr. Adkins also asked if there should be any concern with the people KRS would be investing regarding their propriety, past business practices, corporate citizenship, and investment in the community. Mr. Adkins asked for assurance that these players represent the type of integrity that KRS seeks. Mr. Willer stated that the Office of Investments does their due diligence and checks references with suppliers, clients, former employees, people in the business etc. He advised that there were no red flags identified during these checks and Mr. Chiu commented that many of these reference checks were stellar. Mr. Friedberg reported that operational background checks through a third-party are also conducted. Representations are also required by each, said Ms. Hale.

Mr. Adkins made a motion to approve, subject to successful contract negotiations, Ceres Farms, LLC, Maritime Partners American Rivers Fund, and Arctos Sports Partners Fund II as Real Return Investment Managers for KRS as presented. Mr. Cheshire seconded the motion. Ms. Bova opposed; however, the motion carried.

There being no further business, Mr. Cheshire made a motion to adjourn and was seconded by Mr. Adkins. The motion passed unanimously.

Copies of all documents presented are incorporated as part of the minutes of the Kentucky Retirement Systems Investment Committee meeting held December 20, 2022.

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CERTIFICATION

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

Recording Secretary

I, Chair of the Kentucky Retirement Systems Investment Committee of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of the meeting held on December 20, 2022 were approved by the Kentucky Retirement Systems Investment Committee on February 14, 2023.

Committee Chair

I have reviewed the Minutes of the Kentucky Retirement Systems Special Called Investment Committee Meeting on December 20, 2022 for form, content, and legality.

Office of Legal Services

Kentucky Retirement Systems

Investment Budget Update

Quarter Ending: December 31, 2022

KRS Investment Committee Meeting - Quarterly Investment Budget

KENTUCKY PUBLIC PENSIONS AUTHORITY									
Investment Budget									
For the six month period ending December 31, 2022									
Account Name	FY 2019	FY 2020	FY 2021	FY 2022	Trust Budget FY 2023	Q2 2023	FYTD 2023	Remaining	Percentage Spent
CONSULTING SERVICES									
Wilshire Associates	\$ 1,021,799	\$ 1,238,170	\$ 1,225,671	\$ 1,021,175	\$ 1,190,000		\$ 288,972	\$ 901,028	24%
Albourne	-	-	-	-	270,000	67,500	171,750	98,250	64%
MercerInsight	-	-	-	-	160,000			160,000	0%
SUBTOTAL	1,021,799	1,238,170	1,225,671	1,021,175	1,620,000	67,500	460,722	1,159,278	28%
LEGAL & AUDITING SERVICES									
Faegre Drinker			96,039	202,502	375,000	5,177	8,721	366,279	2%
Intelligent Management Solutions (IMS)	620,001	202,140	155,700	69,884	75,000		73,859	1,141	98%
McClain/Goldberg			891	-	25,000			25,000	0%
Reinhart	317,909	671,269	663,689	619,509	437,500	33,445	57,068	380,432	13%
Stoll-Keenon-Ogden	10,314	135,353	254,211	463,560	250,000	261,025	350,408	(100,408)	140%
Haystack			-	-	140,000			140,000	0%
Umberg Zipser			289,100	498,058	360,000	102,732	147,684	212,316	41%
Frost Brown Todd			-	-	50,000			50,000	0%
Swansburg & Smith	-	-	-	-	-	4,275	4,275	(4,275)	
Eddins Domine	-	-	-	-	-	13,823	13,823	(13,823)	
Taft	-	-	-	-	-	66,916	66,916	(66,916)	
Miscellaneous					200,000			200,000	0%
SUBTOTAL	948,225	1,008,762	1,459,630	1,853,513	1,912,500	487,392	722,754	1,189,746	38%
CONTRACTURAL SERVICES									
Bloomberg	68,722	71,810	98,163	102,243	150,000	25,712	51,425	98,575	34%
BNYM Custodial Fees	2,056,390	2,088,475	2,379,838	2,565,169	4,000,000	561,561	1,130,187	2,869,813	28%
eVestment (Solovis RMS)			-	30,000	35,000		33,800	1,200	97%
Solovis (Reporting & Analytics)			-	245,000	265,000		257,250	7,750	97%
FactSet	222,476	162,295	109,662	140,098	150,000	31,657	62,097	87,903	41%
Russell Index Subscription	1,075	1,250	1,000	1,000	1,500	250	500	1,000	33%
S&P Global		94,500	26,250	68,250	75,000			75,000	0%
TradeWeb			-	6,000	7,500	2,401	3,601	3,899	48%
State Street/Elkins McSherry	10,000	5,000	15,000	10,000	10,000		5,000	5,000	50%
ISS	32,050	32,050	28,288	35,813	37,000	11,775	16,025	20,975	43%
MSCI	1,000	1,000	1,000	1,000	1,000		1,000	-	100%
KPMG Tax Guarantor Services		7,606	22,050	7,350	7,500			7,500	0%
Jayant Ghevaria and CO		10,050	-	52,085	55,000			55,000	0%
India Renewal Fee (SEBI)			-	3,000	3,000			3,000	0%
Miscellaneous & New Services	-	-	-	-	250,000		9,520	240,480	4%
SUBTOTAL	2,391,713	2,474,036	2,681,251	3,267,008	5,047,500	633,356	1,570,405	3,477,095	31%

KRS Investment Committee Meeting - Quarterly Investment Budget

KENTUCKY PUBLIC PENSIONS AUTHORITY									
Investment Budget									
For the six month period ending December 31, 2022									
Account Name	FY 2019	FY 2020	FY 2021	FY 2022	Trust Budget FY 2023	Q2 2023	FYTD 2023	Remaining	Percentage Spent
INACTIVE CONTRACTURAL SERVICES									
Dean Dorton	9,719		-	-	-		250	(250)	
Hirschler		4,794	-	-	-				
INFORMA	12,904		-	-	-				
Lighthouse Solutions	3,093		-	-	-				
London Stock Exchange GBP (GREAT BRITISH POUNDS)	6,467	3,544	-	-	-				
Deutsche Bank Trust	3,000		3,000	-	-				
Morris James LLP	94,192	20,154	-	-	-				
Calcaterra Pollack			1,200,000	-	-				
Manatt		90,798	30,757	-	-				
ORG	162,344		-	-	-				
SUBTOTAL	291,718	119,290	1,233,757	-	-	-	250	(250)	
TOTAL	\$ 4,653,455	\$ 4,840,258	\$ 6,600,309	\$ 6,141,696	\$ 8,580,000	\$ 1,188,248	\$ 2,754,131	\$ 5,825,869	32%

KRS Investment Committee Meeting - Quarterly Investment Budget

INVESTMENT BUDGET

CONSULTING SERVICES	
Wilshire Associates	General Investment Consulting Services, Manager Research and Due Dilligence, Reporting, Asset Allocation
Albourne	Investment Consultant Research database - Private Markets Manager Research, Private Markets Research, Pension Markets Research
MercerInsight	Investment Consultant Research database - Public Markets Manager Research, Public Markets Research, Pension Markets Research
LEGAL & AUDITING SERVICES	
Faegre Drinker	Delaware litigation counsel
Intelligent Management Solutions (IMS)	IMS is an expert witness in the Bay Hills case.
McClain/Goldberg	Blackstone litigation counsel for the Trustees and Officers
Reinhart	Bay Hills counsel and investment counsel for contract negotiations
Stoll-Keenon-Ogden	Mayberry counsel
Haystack	Conduct Mayberry eDiscovery
Umberg Zipser	PAAMCO-Prisma (California litigation)
Frost Brown Todd	Currently has no investment-related cases
Swansburg & Smith	Reimbursement of Fiduciary Legal Expenses (KKR)
Eddins Domine	Reimbursement of Fiduciary Legal Expenses (KKR)
Taft	Reimbursement of Fiduciary Legal Expenses (Calcaterra Pollack)
CONTRACTURAL SERVICES	
Bloomberg	Bloomberg Professional Services, Data Analytics and Tools, Market Information and News, Research Portal
BNYM Custodial Fees	Full Service Custodial Services, Investment Accounting, Investment Operations, Transaction Services, Performance and Attribution, Reporting
eVestment (Solovis RMS)	Research Management Program organizing internal and external research
Solovis (Reporting & Analytics)	Portfolio and Risk Analytics, Perfomance Measurement and Attribution, Reporting
FactSet	Workstation and Quant/Risk Applications for managing Public Equity Portfolios
Russell Index Subscription	Access to Russell Indexes for Portfolio Management, Reporting and Performance
S&P Global	Data on the S & P US Index / License to 10,000 Identifiers for Portfolio Management, Reporting and Performance
TradeWeb	Electronic Trading Platform for Internal Management
State Street/Elkins McSherry	Public Equity Trade Cost Analysis
ISS	Portfolio Monitoring and Proxy Voting Services
MSCI	International Public Equity Data Package
KPMG Tax Guarantor Services	Tax Accounting Services - Taiwan
Jayant Ghevaria and CO	Tax Accounting Services - India
India Renewal Fee (SEBI)	Registration of India Local Market Accounts

KENTUCKY PUBLIC PENSIONS AUTHORITY						
Investment Fees and Expenses						
For the six month period ending December 31, 2022						
Pension						
	2023		2022		2021	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Absolute Return					262,462	142,519,762
<i>Investment Advisory Fees</i>					262,462	
<i>Carried Interest</i>						
<i>Miscellaneous Fees and Expenses</i>						
	<i>Absolute Return was absorbed by Real Return in December 2020</i>					
Core Fixed Income	1,412,142	1,982,992,065	1,591,391	2,344,396,966	1,401,242	2,282,848,163
<i>Investment Advisory Fees</i>	1,073,446		1,558,075		1,375,451	
<i>Carried Interest</i>	313,985				-	
<i>Miscellaneous Fees and Expenses</i>	24,711		33,316		25,791	
Opportunistic					1,132,942	370,905,924
<i>Investment Advisory Fees</i>					-	
<i>Carried Interest</i>					1,132,942	
<i>Miscellaneous Fees and Expenses</i>					-	
	<i>Opportunistic was absorbed by Specialty Credit in December 2021</i>					
Public Equity	6,326,122	6,860,008,005	7,390,244	7,258,279,054	5,850,569	6,295,655,905
<i>Investment Advisory Fees</i>	6,216,244		7,204,226		5,712,166	
<i>Miscellaneous Fees and Expenses</i>	109,877		186,018		138,403	
Specialty Credit Fixed Income	26,763,395	3,169,416,226	25,775,685	3,159,992,882	17,264,718	2,435,764,675
<i>Investment Advisory Fees</i>	8,272,318		8,375,883		7,320,545	
<i>Carried Interest</i>	7,246,973		12,762,781		8,459,198	
<i>Miscellaneous Fees and Expenses</i>	11,244,103		4,637,021		1,484,975	
Real Estate	5,120,746	980,167,711	16,451,186	780,082,609	980,198	584,165,093
<i>Investment Advisory Fees</i>	4,590,896		2,401,864		2,324,269	
<i>Carried Interest</i>	(380,882)		12,653,860		(2,070,445)	
<i>Miscellaneous Fees and Expenses</i>	910,732		1,395,462		726,374	
Real Return	2,108,571	451,152,401	2,632,576	1,021,821,360	3,216,441	847,105,839
<i>Investment Advisory Fees</i>	1,176,185		2,001,915		1,985,069	
<i>Carried Interest</i>	493,101		679,897		1,259,862	
<i>Miscellaneous Fees and Expenses</i>	439,285		(49,236)		(28,490)	
Private Equity	(1,217,614)	1,143,362,622	39,968,415	1,262,539,645	24,365,092	1,139,236,934
<i>Investment Advisory Fees</i>	3,652,032		3,928,841		4,294,168	
<i>Carried Interest</i>	(6,838,180)		33,350,556		17,523,541	
<i>Miscellaneous Fees and Expenses</i>	1,968,535		2,689,018		2,547,383	
Administrative Expense/Cash	1,574,490	813,973,145	1,878,932	612,903,688	1,435,169	266,674,138
Total Investment Mgmt Fees	42,087,852	15,401,072,174	95,688,429	16,440,016,204	54,513,429	13,851,450,747

KENTUCKY PUBLIC PENSIONS AUTHORITY Investment Fees and Expenses For the six month period ending December 31, 2022 Insurance						
	2023		2022		2021	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Absolute Return					115,024	58,349,008
<i>Investment Advisory Fees</i>					105,411	
<i>Carried Interest</i>					-	
<i>Miscellaneous Fees and Expenses</i>					9,613	
Core Fixed Income	526,658	755,273,150	587,743	855,261,654	568,510	873,074,122
<i>Investment Advisory Fees</i>	406,870		457,920		558,897	
<i>Carried Interest</i>	112,040		117,337		-	
<i>Miscellaneous Fees and Expenses</i>	7,748		12,486		9,613	
Opportunistic					576,902	188,867,580
<i>Investment Advisory Fees</i>					-	
<i>Carried Interest</i>					576,902	
<i>Miscellaneous Fees and Expenses</i>					-	
Public Equity	2,916,264	3,159,950,145	3,221,274	3,246,444,061	2,616,659	2,840,620,347
<i>Investment Advisory Fees</i>	2,866,269		3,161,508		2,557,467	
<i>Miscellaneous Fees and Expenses</i>	49,995		59,766		59,192	
Specialty Credit Fixed Income	12,006,819	1,440,474,508	11,449,880	1,449,432,096	7,239,534	1,085,313,532
<i>Investment Advisory Fees</i>	3,715,203		3,748,168		3,373,550	
<i>Carried Interest</i>	3,460,460		5,702,991		3,344,830	
<i>Miscellaneous Fees and Expenses</i>	4,831,156		1,998,721		521,154	
Real Estate	2,141,670	414,400,346	6,801,703	330,413,444	536,259	246,753,396
<i>Investment Advisory Fees</i>	1,913,144		1,021,218		1,015,005	
<i>Carried Interest</i>	(161,966)		5,182,012		(795,199)	
<i>Miscellaneous Fees and Expenses</i>	390,492		598,473		316,453	
Real Return	938,266	175,390,319	1,140,159	432,244,515	1,245,054	361,358,291
<i>Investment Advisory Fees</i>	530,992		889,226		842,984	
<i>Carried Interest</i>	201,933		266,344		419,601	
<i>Miscellaneous Fees and Expenses</i>	205,341		(15,411)		(17,531)	
Private Equity	275,237	573,107,746	22,563,618	595,876,977	16,438,474	548,052,248
<i>Investment Advisory Fees</i>	2,427,153		2,772,848		2,892,530	
<i>Carried Interest</i>	(3,062,207)		18,845,205		12,027,941	
<i>Miscellaneous Fees and Expenses</i>	910,292		945,565		1,518,003	
Administrative Expense/Cash	821,924	223,048,022	963,210	401,003,570	842,635	108,497,980
Total Investment Mgmt Fees	\$ 19,626,840	\$ 6,741,644,236	\$ 46,727,587	\$ 7,310,676,317	\$ 29,487,125	\$ 6,063,669,916

KENTUCKY PUBLIC PENSIONS AUTHORITY						
Investment Fees and Expenses						
For the six month period ending December 31, 2022						
Pension						
	KERS		KERS Hazardous		SPRS	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Core Fixed Income	437,326	645,246,364	72,705	107,272,871	77,227	113,943,714
<i>Investment Advisory Fees</i>	333,800		55,494		58,945	
<i>Carried Interest</i>	95,972		15,955		16,948	
<i>Miscellaneous Fees and Expenses</i>	7,553		1,256		1,334	
Public Equity	934,743	1,005,532,940	336,798	356,357,539	169,126	177,399,670
<i>Investment Advisory Fees</i>	918,352		330,771		166,182	
<i>Miscellaneous Fees and Expenses</i>	16,391		6,027		2,943	
Specialty Credit Fixed Income	4,645,336	597,664,904	1,448,316	178,277,966	598,598	92,751,055
<i>Investment Advisory Fees</i>	1,412,744		458,482		206,220	
<i>Carried Interest</i>	1,206,463		381,945		142,918	
<i>Miscellaneous Fees and Expenses</i>	2,026,129		607,889		249,460	
Real Estate	866,330	132,049,280	264,265	36,260,111	112,606	15,223,388
<i>Investment Advisory Fees</i>	797,225		235,797		101,176	
<i>Carried Interest</i>	(94,185)		(18,389)		(8,239)	
<i>Miscellaneous Fees and Expenses</i>	163,290		46,857		19,668	
Real Return	90,620	121,261,754	124,753	38,562,079	55,091	16,725,324
<i>Investment Advisory Fees</i>	72,501		68,672		30,485	
<i>Carried Interest</i>	1,559		30,120		12,988	
<i>Miscellaneous Fees and Expenses</i>	16,560		25,961		11,618	
Private Equity	(971,125)	162,397,892	(17,431)	62,082,995	(13,270)	16,728,373
<i>Investment Advisory Fees</i>	233,447		209,567		49,856	
<i>Carried Interest</i>	(1,414,021)		(337,141)		(88,646)	
<i>Miscellaneous Fees and Expenses</i>	209,449		110,143		25,521	
Administrative Expenses/Cash	323,051	514,182,209	85,245	56,449,865	56,787	123,952,483
Total Investment Mgmt Fees	6,326,281	3,178,335,342	2,314,650	835,263,425	1,056,166	556,724,008

KENTUCKY PUBLIC PENSIONS AUTHORITY						
Investment Fees and Expenses						
For the six month period ending December 31, 2022						
Insurance						
	KERS		KERS Hazardous		SPRS	
	FYTD Fees	Market Value	FYTD Fees	Market Value	FYTD Fees	Market Value
Core Fixed Income	109,544	160,651,884	47,988	70,377,952	18,832	27,617,660
<i>Investment Advisory Fees</i>	84,808		37,152		14,579	
<i>Carried Interest</i>	23,136		10,135		3,977	
<i>Miscellaneous Fees and Expenses</i>	1,600		701		275	
Public Equity	569,787	571,418,351	240,960	252,152,995	97,953	100,043,812
<i>Investment Advisory Fees</i>	560,379		236,776		96,303	
<i>Miscellaneous Fees and Expenses</i>	9,408		4,184		1,650	
Specialty Credit Fixed Income	2,118,994	275,219,068	1,155,765	131,259,118	438,010	52,113,157
<i>Investment Advisory Fees</i>	688,015		353,638		133,746	
<i>Carried Interest</i>	578,305		344,561		127,831	
<i>Miscellaneous Fees and Expenses</i>	852,674		457,566		176,433	
Real Estate	306,254	59,651,375	226,725	43,772,991	86,563	16,742,992
<i>Investment Advisory Fees</i>	273,822		202,453		77,327	
<i>Carried Interest</i>	(23,013)		(17,199)		(6,609)	
<i>Miscellaneous Fees and Expenses</i>	55,445		41,470		15,845	
Real Return	152,333	29,995,193	98,206	17,322,924	35,765	6,470,027
<i>Investment Advisory Fees</i>	85,750		54,998		20,268	
<i>Carried Interest</i>	35,417		21,790		7,666	
<i>Miscellaneous Fees and Expenses</i>	31,167		21,418		7,831	
Private Equity	1,081,675	85,530,831	(53,990)	52,530,454	(19,600)	23,430,873
<i>Investment Advisory Fees</i>	258,010		225,892		100,810	
<i>Carried Interest</i>	551,842		(347,017)		(152,527)	
<i>Miscellaneous Fees and Expenses</i>	271,824		67,135		32,118	
Administrative Expenses/Cash	161,685	150,206,198	71,213	15,909,991	28,230	5,075,876
Total Investment Mgmt Fees	\$ 4,500,272	\$ 1,332,672,900	\$ 1,786,867	\$ 583,326,425	\$ 685,753	\$ 231,494,396

Kentucky Retirement Systems

Investment Review and Update

Quarter Ending: December 31, 2022

Kentucky Retirement Systems

Economic and Market Update

Quarter Ending: December 31, 2022

Asset Class Performance

Asset Class Returns - Best to Worst

2017	2018	2019	2020	2021	2022 YTD	Annualized 5-Year as of 12/22
Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	REITs 46.2%	Commodities 16.1%	U.S. Equity 9.0%
Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	Commodities 27.1%	T-Bills 1.3%	Commodities 6.4%
U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 26.7%	High Yield -11.2%	REITs 3.4%
High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 11.8%	U.S. TIPS -11.8%	High Yield 2.3%
REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	U.S. TIPS 6.0%	Core Bond -13.0%	U.S. TIPS 2.1%
Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	High Yield 5.3%	Developed -14.0%	Developed 2.0%
U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	U.S. Equity -19.0%	T-Bills 1.2%
Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Core Bond -1.5%	Emrg Mrkts -19.7%	Core Bond 0.0%
T-Bills 0.8%	Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Emrg Mrkts -2.2%	REITs -26.8%	Emrg Mrkts -1.0%

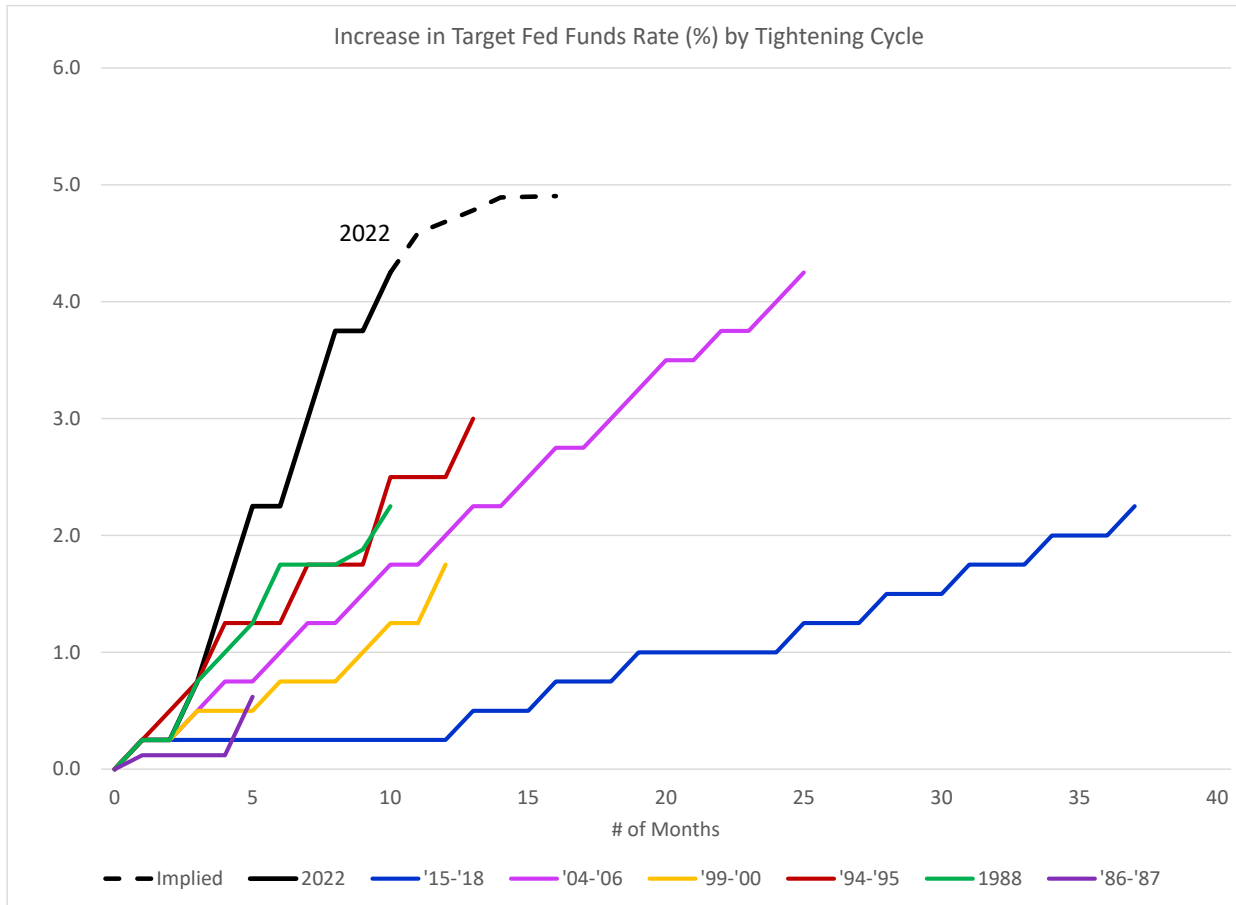
Data Sources: Bloomberg

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

December 2022 Asset Class Assumptions

	Equity						Fixed Income						Real Assets						
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	TIPS	High Yield	Private Credit	Dev ex-US Bond (Hdg)	US RES	Global RES	Private RE	Cmdty	Real Assets	US CPI
Compound Return (%)	6.50	7.25	7.50	7.60	7.05	9.90	4.00	4.90	4.90	3.95	6.55	8.85	3.05	5.65	5.80	6.20	6.25	6.65	2.25
Expected Risk (%)	17.00	18.00	26.00	19.10	17.10	29.00	0.75	4.70	9.80	6.00	10.00	12.75	4.00	17.50	16.45	14.00	16.00	12.35	1.75
Cash Yield (%)	1.75	3.25	2.80	3.10	2.25	0.00	4.00	5.10	5.25	4.40	9.65	5.10	3.75	3.95	3.95	2.25	4.00	3.15	0.00
Growth Exposure	8.00	8.00	8.00	8.00	8.00	14.00	0.00	-0.95	-2.40	-3.00	4.00	5.10	-1.00	6.00	6.00	3.50	0.00	2.70	0.00
Inflation Exposure	-3.00	0.00	5.00	1.45	-1.30	-3.75	0.00	-2.50	-6.80	2.50	-1.00	-1.50	-3.00	1.00	1.80	1.00	12.00	5.25	1.00
Correlations																			
US Stock	1.00																		
Dev ex-US Stock (USD)	0.81	1.00																	
Emerging Mkt Stock	0.74	0.74	1.00																
Global ex-US Stock	0.84	0.95	0.89	1.00															
Global Stock	0.95	0.91	0.84	0.94	1.00														
Private Equity	0.72	0.63	0.61	0.67	0.73	1.00													
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.06	0.00	1.00												
Core Bond	0.28	0.13	0.00	0.08	0.20	0.30	0.18	1.00											
LT Core Bond	0.31	0.15	0.01	0.11	0.24	0.31	0.11	0.94	1.00										
TIPS	-0.05	0.00	0.15	0.06	-0.01	-0.03	0.20	0.60	0.48	1.00									
High Yield Bond	0.54	0.39	0.49	0.46	0.53	0.31	-0.10	0.24	0.32	0.05	1.00								
Private Credit	0.68	0.55	0.58	0.60	0.68	0.44	0.00	0.24	0.30	0.00	0.76	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.16	0.17	0.26	0.10	0.68	0.66	0.39	0.26	0.22	1.00						
US RE Securities	0.58	0.47	0.44	0.49	0.57	0.49	-0.05	0.17	0.22	0.10	0.56	0.62	0.05	1.00					
Global RE Securities	0.64	0.57	0.54	0.60	0.65	0.55	-0.05	0.17	0.21	0.11	0.61	0.68	0.04	0.96	1.00				
Private Real Estate	0.55	0.45	0.45	0.49	0.54	0.50	-0.05	0.19	0.25	0.09	0.58	0.63	0.05	0.79	0.78	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.28	0.00	-0.03	-0.03	0.25	0.29	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.62	0.63	0.65	0.69	0.67	0.57	-0.03	0.22	0.24	0.30	0.64	0.69	0.04	0.78	0.84	0.76	0.64	1.00	
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	0.00	-0.08	0.05	0.04	0.05	0.44	0.22	1.00

The Shift to Tightening: Most Aggressive in Modern Era: Will “Bring Some Pain”



“While higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation. But a failure to restore price stability would mean far greater pain.”

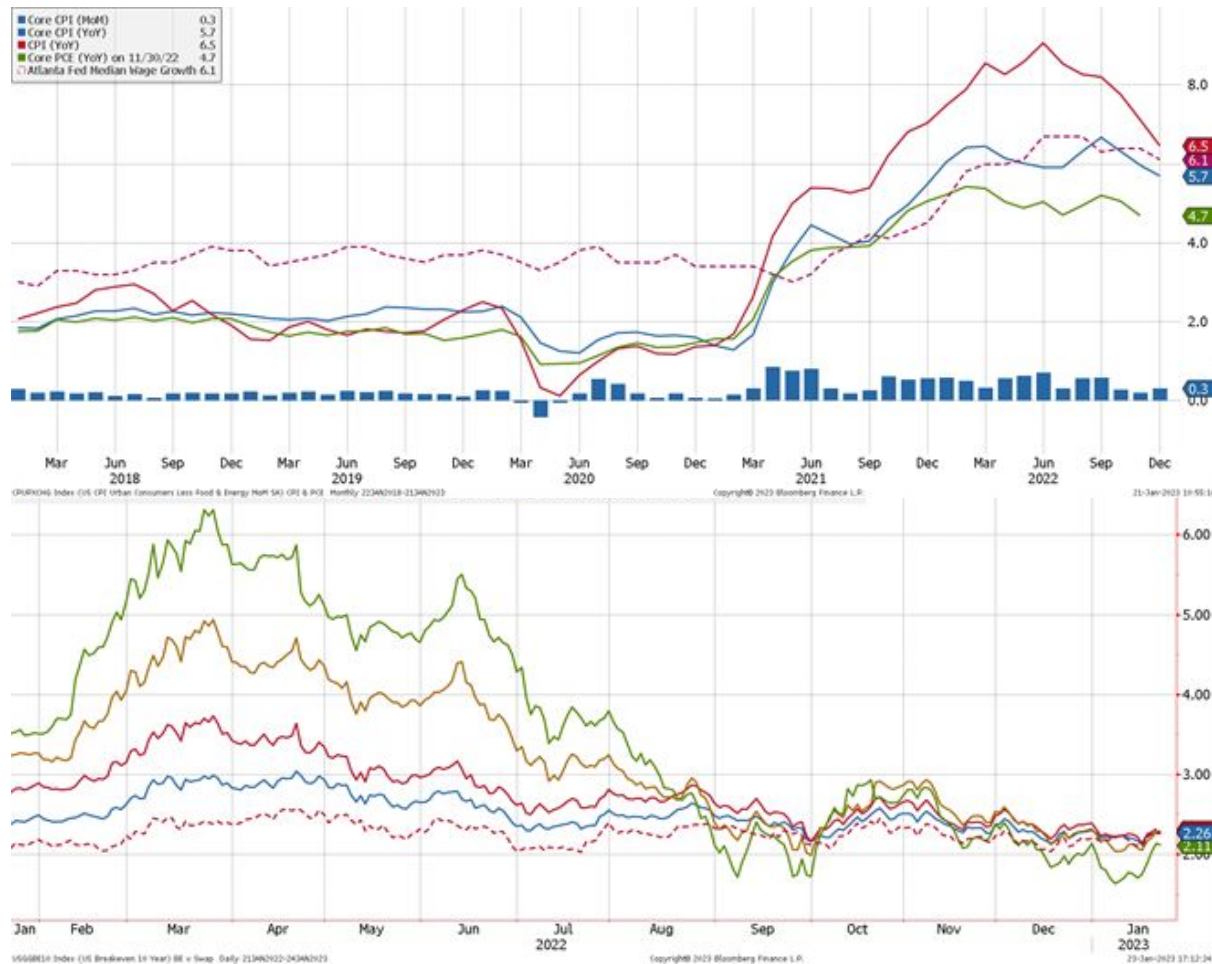


Jerome Powell

August 2022, Jackson Hole

Data Source: Bloomberg

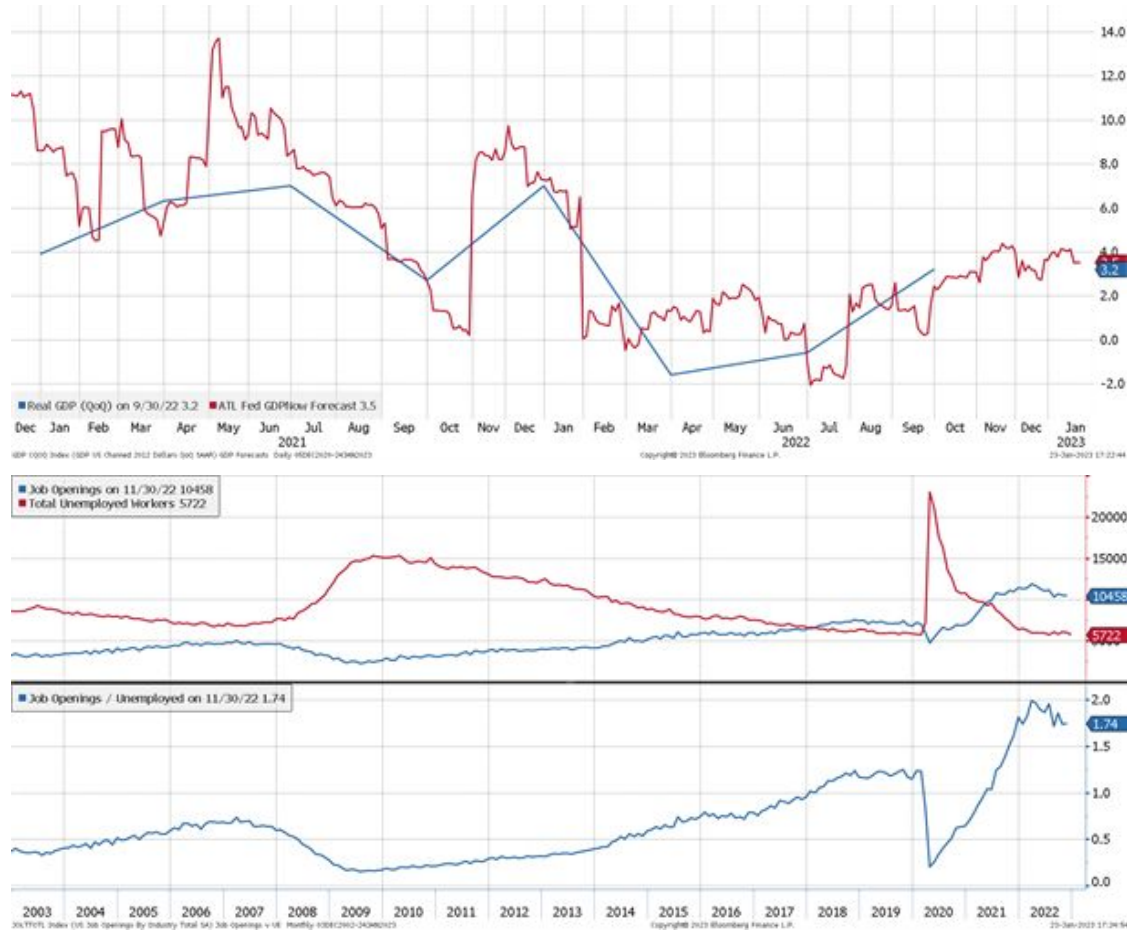
The Fed's Dashboard: Realized & Expected Inflation



Data Source: Bloomberg

- Realized inflation has begun to ease off extreme levels
 - CPI 6.5% v. 9.1% in June 2022
 - Core CPI stabilizing ~5%
 - Wage inflation remains elevated (~6%)
- Inflation expectations remain well-anchored
 - Expectational anchoring at higher levels would make the Fed's job even more challenging
 - These expectations are likely at the heart of the divergence between market and Fed outlooks (i.e., the Fed would likely pause now if they believed these expectations would be realized)

The Fed's Dashboard: Economic Growth & Labor Market



Data Source: Bloomberg

The market seems a bit more confident in the prospects of a “soft landing” as inflation has subsided in recent months

- However, lots more liquidity to be drained
- Powell’s “Sully” Sullenberger moment...



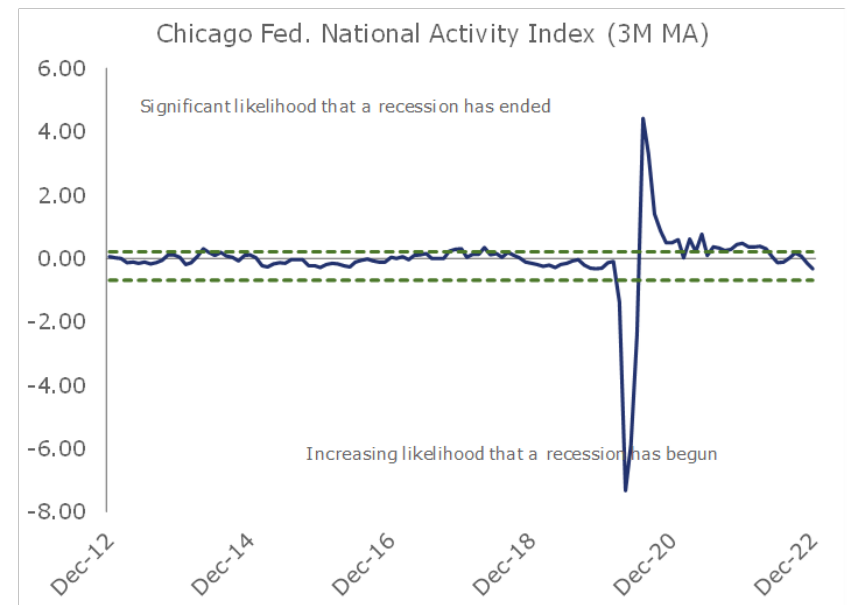
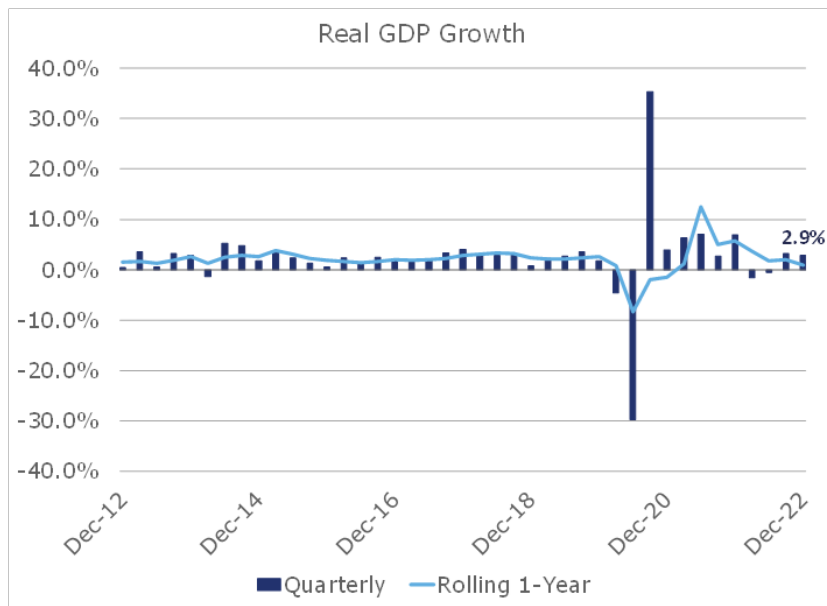
“We’re going to be in the Hudson”

Chesley Burnett "Sully"
Sullenberger III
Pilot of US Airways 1549, January
15, 2009

Labor markets remain tight

- Difficult to see inflation pressures return to Fed target without these tensions reversing
- Recent jobs reports remain strong (good news for economic resilience but challenges the market’s benign inflation expectations)

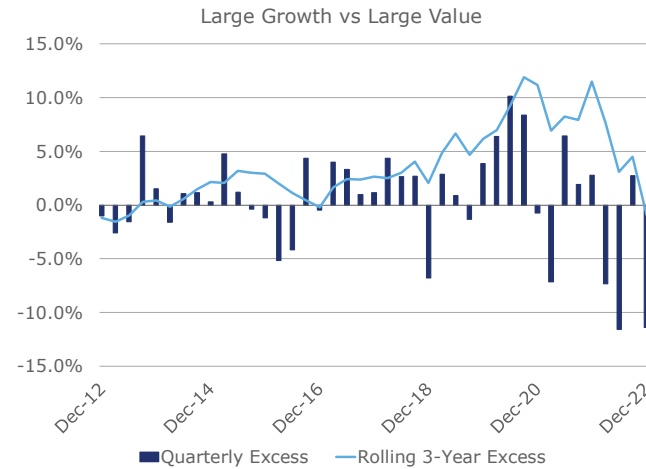
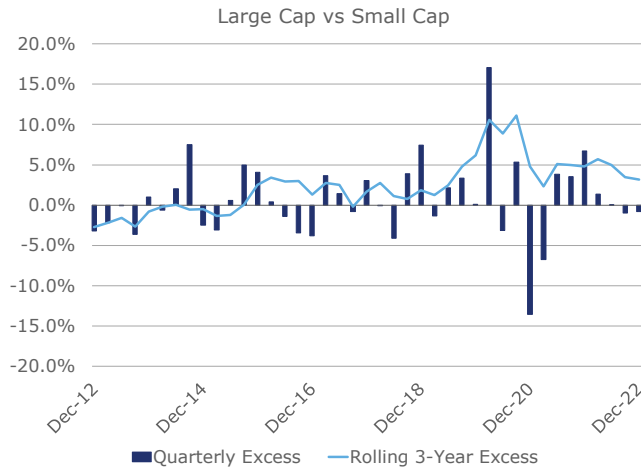
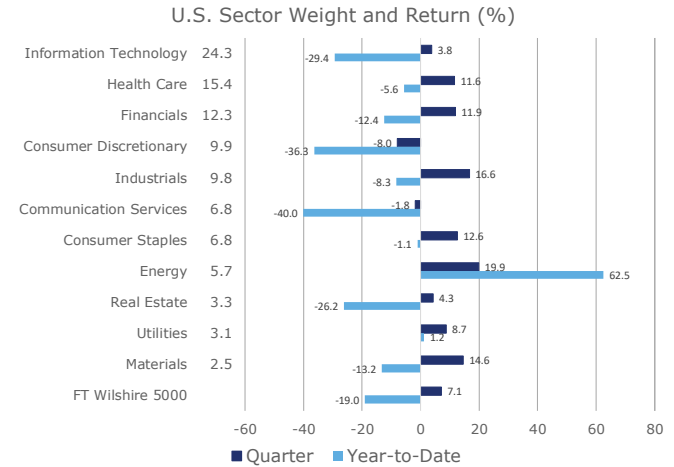
Economic Growth



Data Source: Bloomberg

U.S. Equity Market

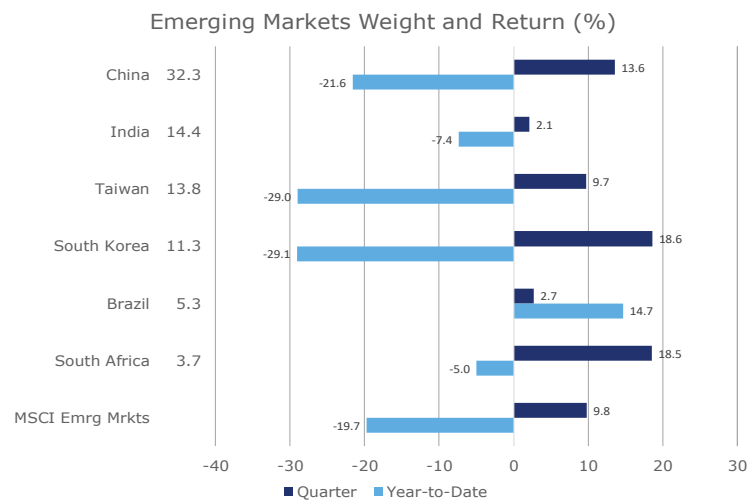
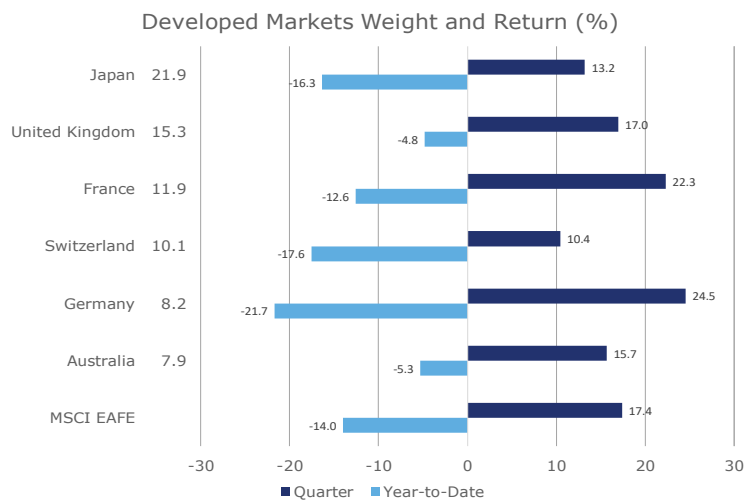
As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	7.1	-19.0	-19.0	7.4	9.0	12.3
Wilshire U.S. Large Cap	7.1	-19.0	-19.0	7.7	9.4	12.6
Wilshire U.S. Small Cap	7.9	-18.7	-18.7	4.4	5.1	9.7
Wilshire U.S. Large Growth	0.8	-29.5	-29.5	7.1	10.0	13.6
Wilshire U.S. Large Value	13.8	-5.5	-5.5	8.1	8.7	11.5
Wilshire U.S. Small Growth	7.1	-23.1	-23.1	3.2	5.1	9.9
Wilshire U.S. Small Value	8.7	-14.2	-14.2	5.6	5.0	9.3
Wilshire REIT Index	4.0	-26.8	-26.8	-0.5	3.4	6.3
MSCI USA Min. Vol. Index	9.8	-9.2	-9.2	5.1	8.6	11.9
FTSE RAFI U.S. 1000 Index	12.5	-7.4	-7.4	9.6	9.1	12.2



Data Sources: Bloomberg, Wilshire Atlas

Non-U.S. Equity Market

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	14.4	-15.6	-15.6	0.5	1.4	4.3
MSCI EAFE (\$G)	17.4	-14.0	-14.0	1.3	2.0	5.2
MSCI Emerging Markets (\$G)	9.8	-19.7	-19.7	-2.3	-1.0	1.8
MSCI Frontier Markets (\$G)	9.2	-17.8	-17.8	-5.7	-3.8	0.2
MSCI ACWI ex-US Growth (\$G)	12.9	-22.8	-22.8	-0.1	1.8	5.0
MSCI ACWI ex-US Value (\$G)	15.7	-8.7	-8.7	0.8	0.6	3.6
MSCI ACWI ex-US Small (\$G)	13.4	-19.6	-19.6	1.5	1.1	5.6
MSCI ACWI Minimum Volatility	8.6	-9.8	-9.8	2.2	5.2	8.4
MSCI EAFE Minimum Volatility	12.5	-14.6	-14.6	-2.6	0.6	5.1
FTSE RAFI Developed ex-US	18.3	-9.0	-9.0	2.7	1.7	4.9
MSCI EAFE LC (G)	8.8	-6.5	-6.5	4.1	4.3	8.1
MSCI Emerging Markets LC (G)	6.7	-15.2	-15.2	0.5	1.7	5.0

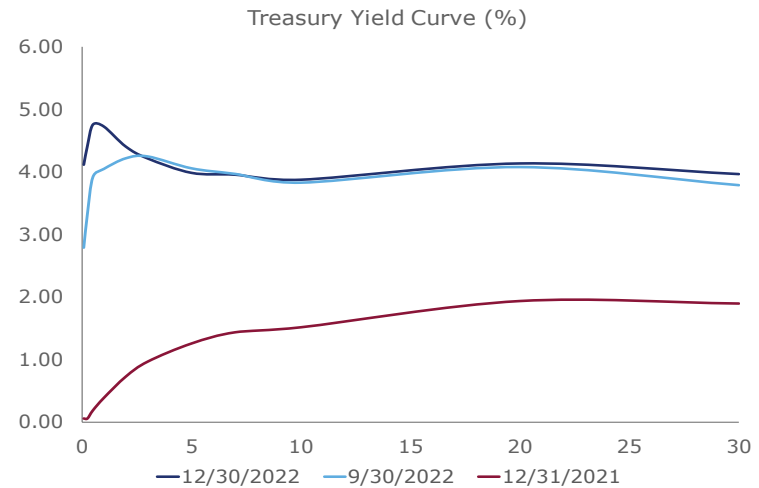
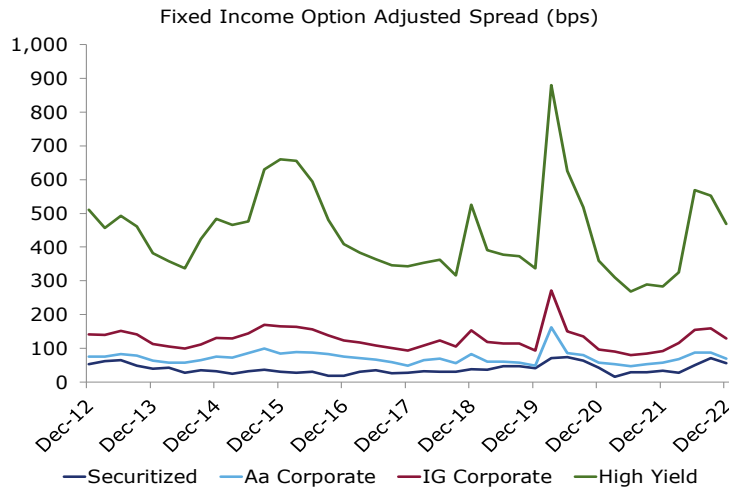


Data Sources: Bloomberg

U.S. Fixed Income

As of 12/30/2022	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	4.7	6.2	1.9	-13.0	-13.0	-2.7	0.0	1.1
Bloomberg Treasury	4.2	6.1	0.7	-12.5	-12.5	-2.6	-0.1	0.6
Bloomberg Gov't-Rel.	4.8	5.2	1.9	-11.1	-11.1	-2.4	0.3	1.1
Bloomberg Securitized	4.8	5.7	2.0	-11.7	-11.7	-3.1	-0.4	0.8
Bloomberg Corporate	5.4	7.1	3.6	-15.8	-15.8	-2.9	0.5	2.0
Bloomberg LT Gov't/Credit	4.9	14.3	2.6	-27.1	-27.1	-6.2	-1.2	1.6
Bloomberg LT Treasury	4.1	16.2	-0.6	-29.3	-29.3	-7.4	-2.2	0.6
Bloomberg LT Gov't-Rel.	5.5	11.6	4.2	-22.7	-22.7	-5.9	-0.8	1.6
Bloomberg LT Corporate	5.6	13.0	5.4	-25.6	-25.6	-5.7	-0.8	2.2
Bloomberg U.S. TIPS *	3.8	7.6	2.0	-11.8	-11.8	1.2	2.1	1.1
Bloomberg High Yield	9.0	3.9	4.2	-11.2	-11.2	0.0	2.3	4.0
S&P/LSTA Leveraged Loan	9.1	0.3	2.7	-0.6	-0.6	2.5	3.3	3.7
Treasury Bills	4.4	0.3	0.9	1.3	1.3	0.7	1.2	0.8

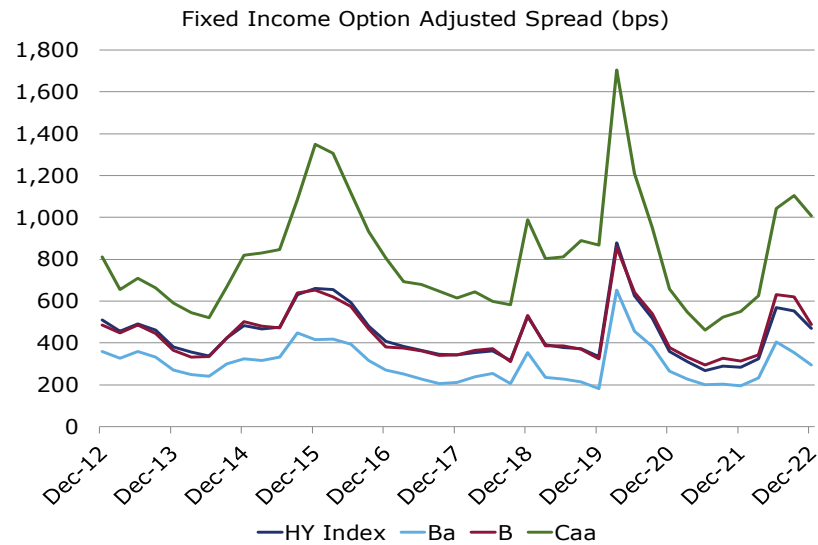
* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index



Data Sources: Bloomberg

High Yield Bond Market

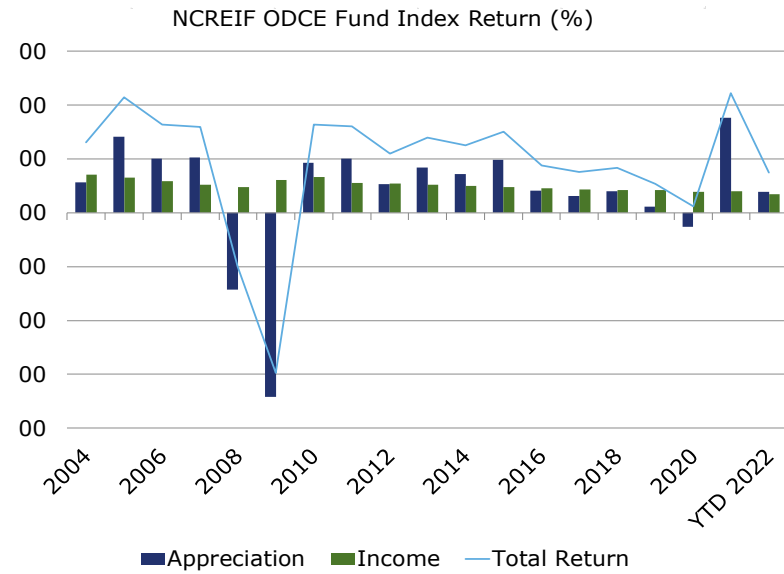
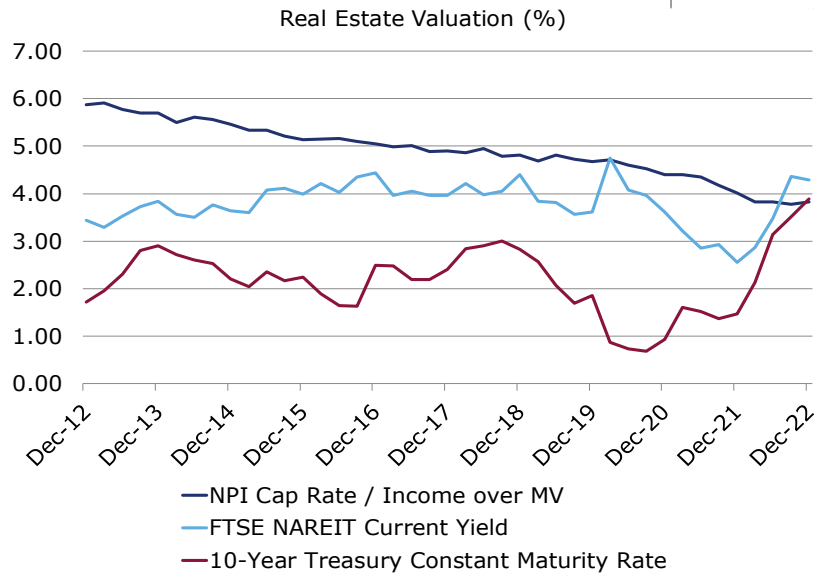
As of 12/31/2022		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		9.0	4.2	-11.2	-11.2	0.0	2.3	4.0
S&P LSTA Leveraged Loan		9.1	3.8	-0.6	-0.6	1.9	3.1	3.2
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	49.9%	7.2	4.3	-10.8	-10.8	0.9	3.0	4.4
B U.S. High Yield	38.6%	9.2	4.9	-10.3	-10.3	-0.5	2.2	3.6
Caa U.S. High Yield	10.7%	14.3	0.5	-16.3	-16.3	-2.4	-0.4	3.5
Ca to D U.S. High Yield	0.7%	36.3	13.8	-10.4	-10.4	1.1	0.4	-5.0



Data Sources: Bloomberg

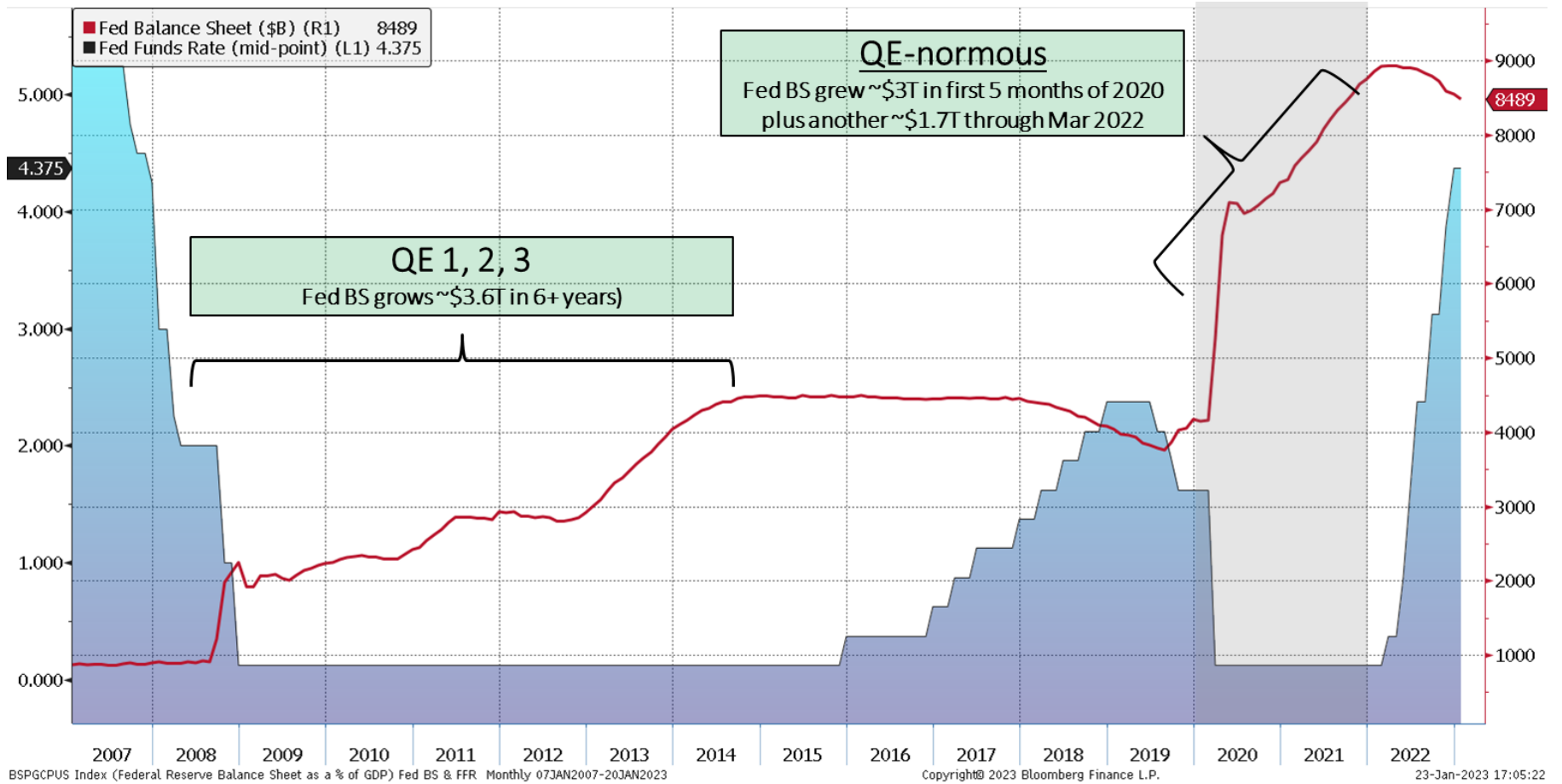
Real Assets

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	2.0	-11.8	-11.8	1.2	2.1	1.1
Bloomberg Commodity Index	2.2	16.1	16.1	12.7	6.4	-1.3
Bloomberg Gold Index	9.5	-0.7	-0.7	4.7	5.7	0.0
Wilshire Global RESI Index	6.4	-24.9	-24.9	-2.7	1.6	4.8
NCREIF ODCE Fund Index	-5.0	7.5	7.5	9.9	8.7	10.1
NCREIF Timberland Index	4.9	12.9	12.9	7.5	5.4	5.8
FTSE Global Core Infrastructure 50/50	9.2	-4.1	-4.1	2.3	5.5	7.9
Alerian Midstream Energy	8.4	21.5	21.5	8.8	6.8	n.a.
Bitcoin	-14.9	-64.3	-64.3	32.2	3.3	103.6



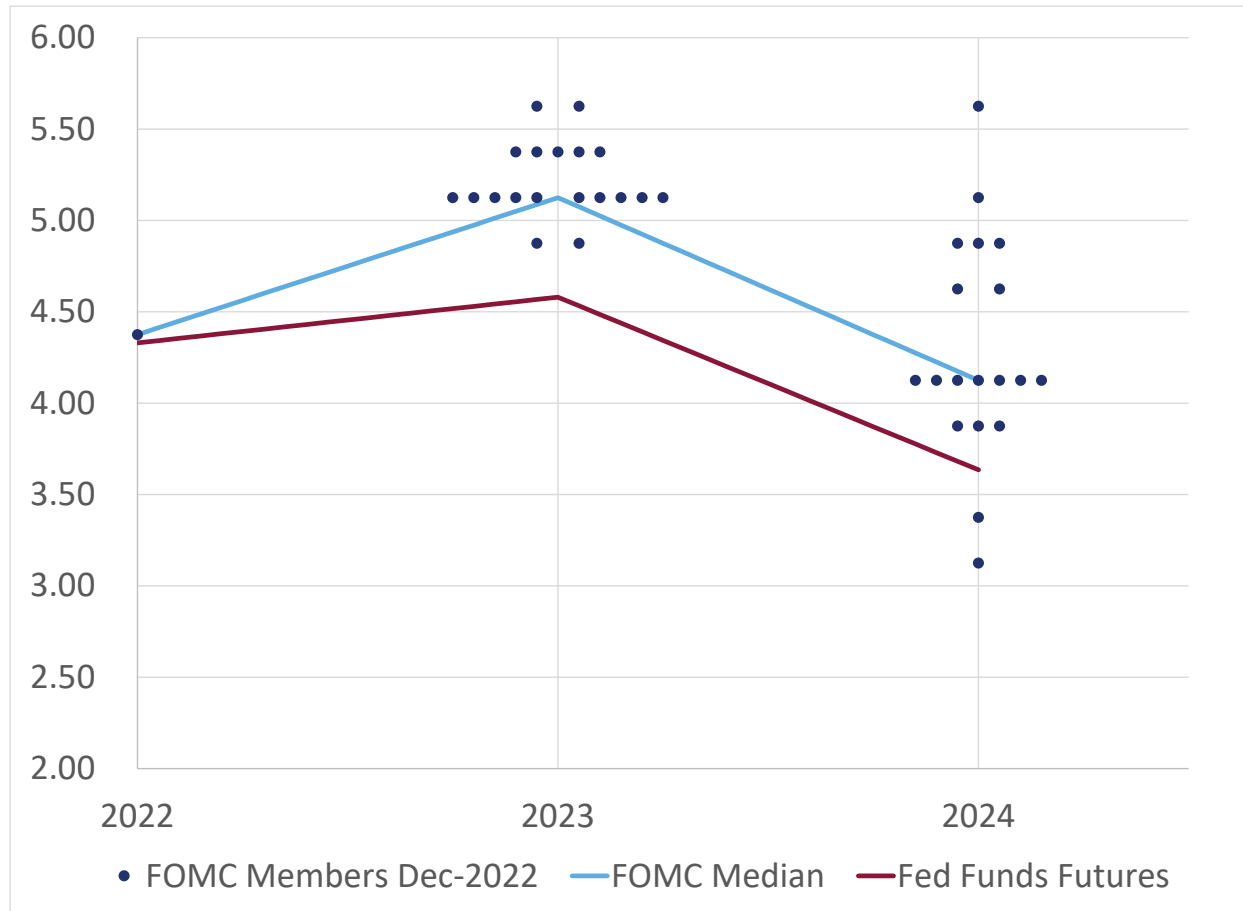
Data Sources: Bloomberg

The Fed: Zero Rates & QE to \$8T and Beyond...



Data Source: Bloomberg

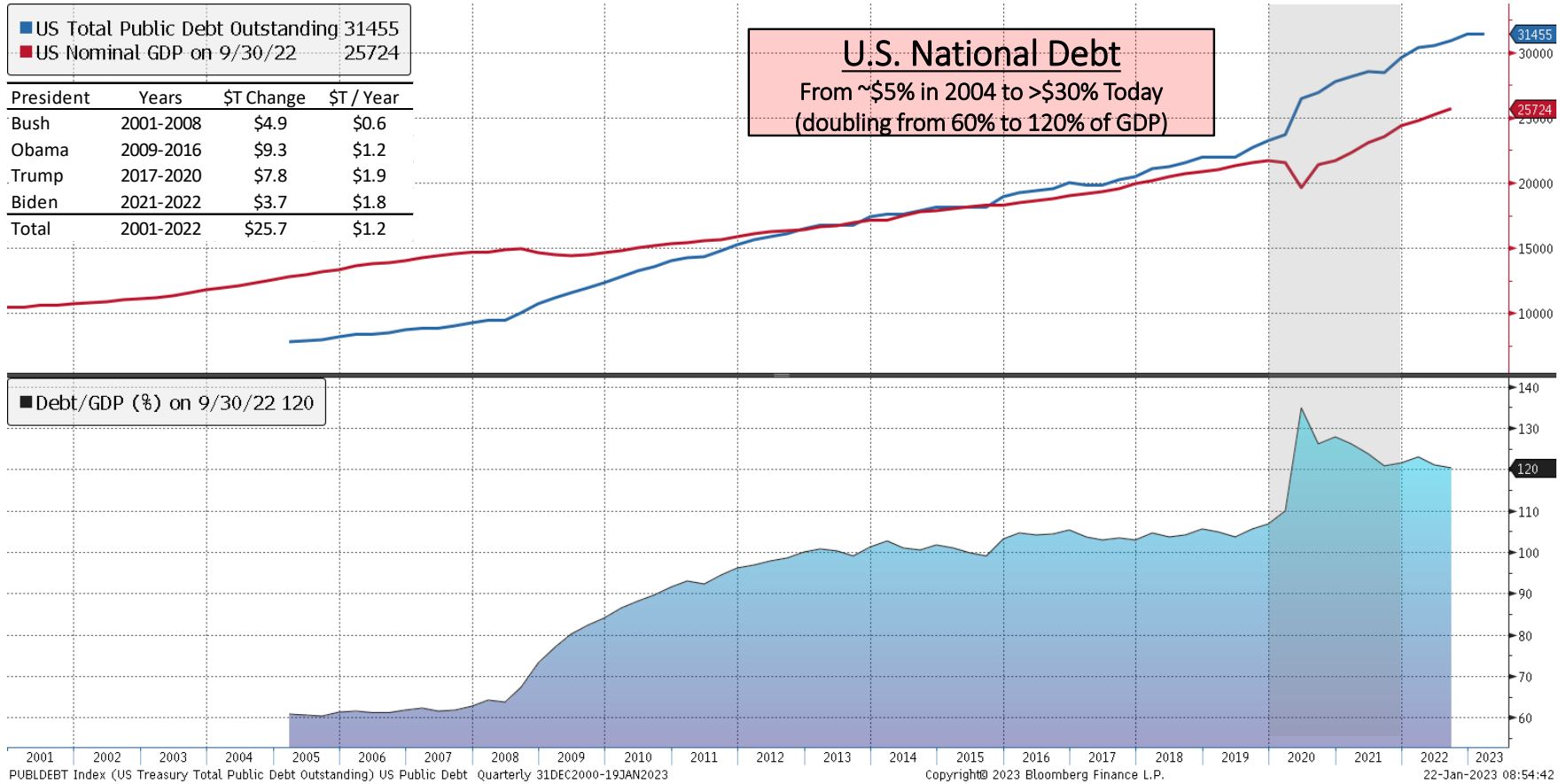
The Fed Outlook vs. Market Consensus



- The market's Dec 2023 implied Fed Funds Rate is below every FOMC member's forecast
- Why the divergence: A Fed credibility issue or just a difference in view?
- How might this play out?
 - What if the Fed's wrong?
 - What if the market is wrong?

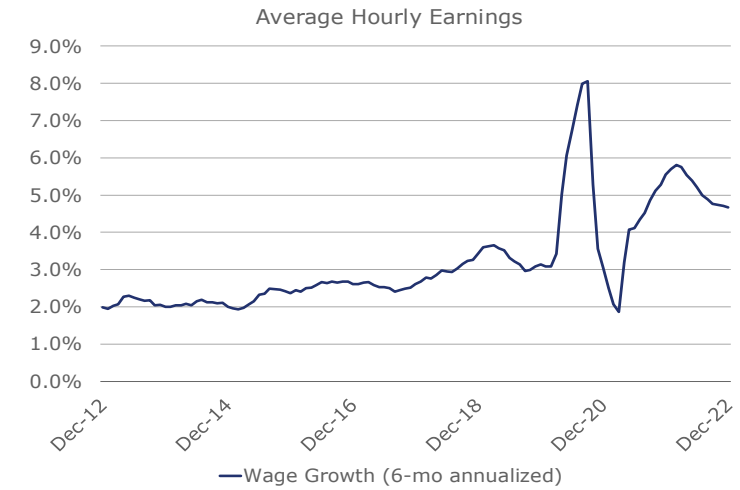
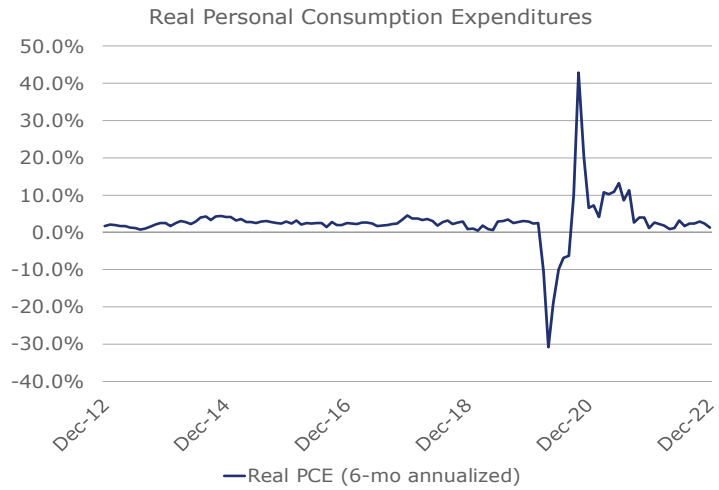
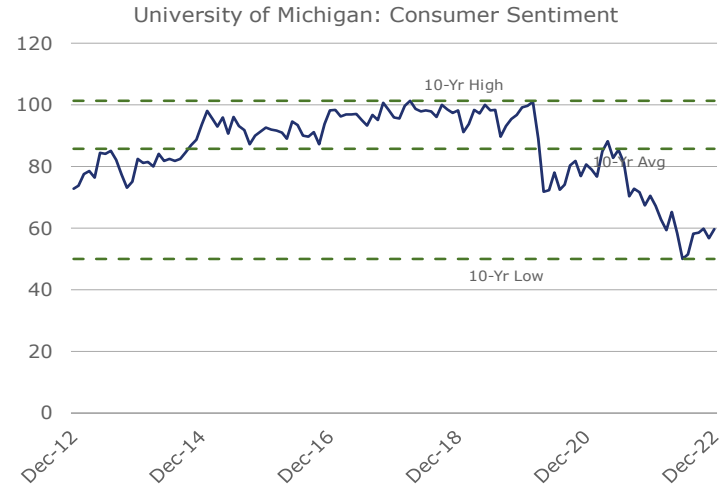
Data Source: Bloomberg

A Secular Explosion in National Debt: “We’re Not in Kansas Anymore”



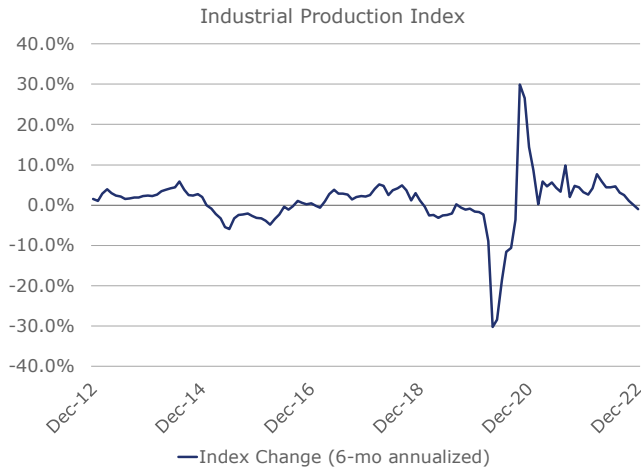
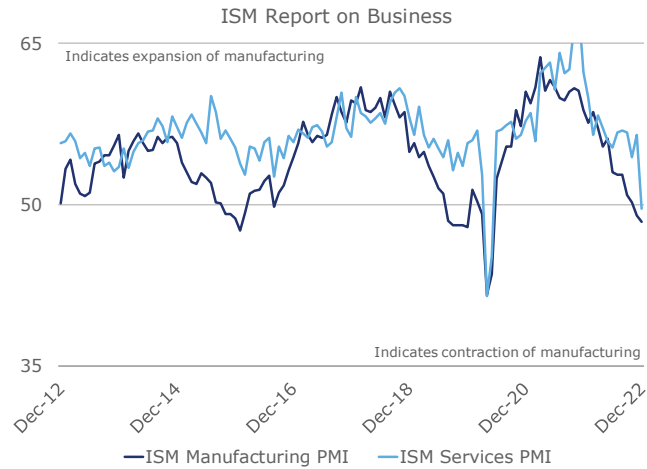
Data Source: Bloomberg

Consumer Activity



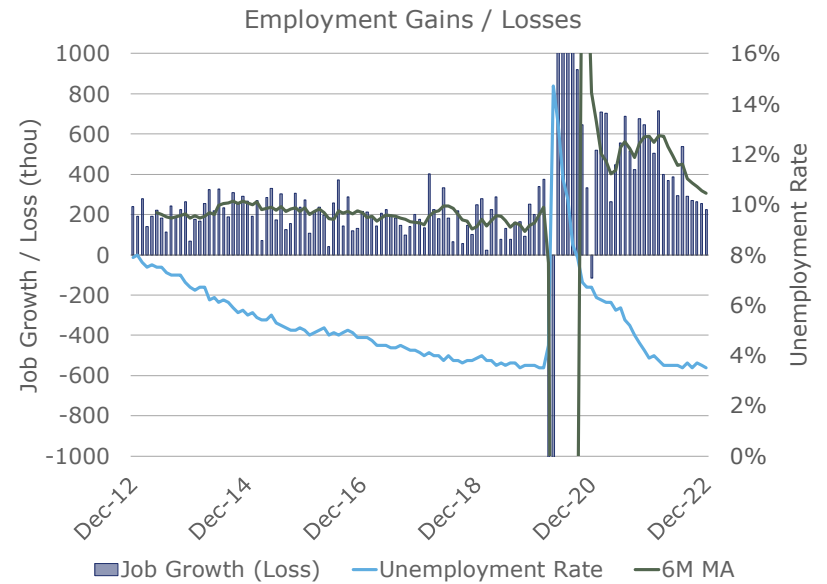
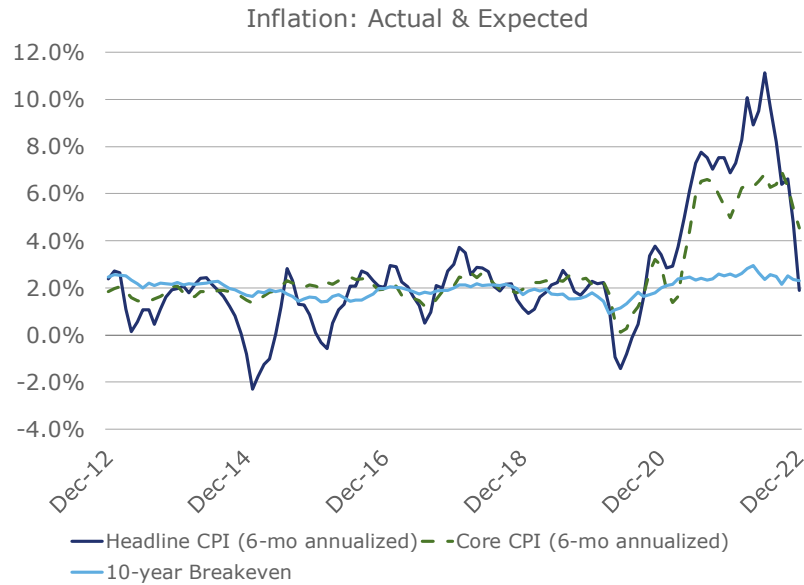
Data Source: Bloomberg

Business Activity



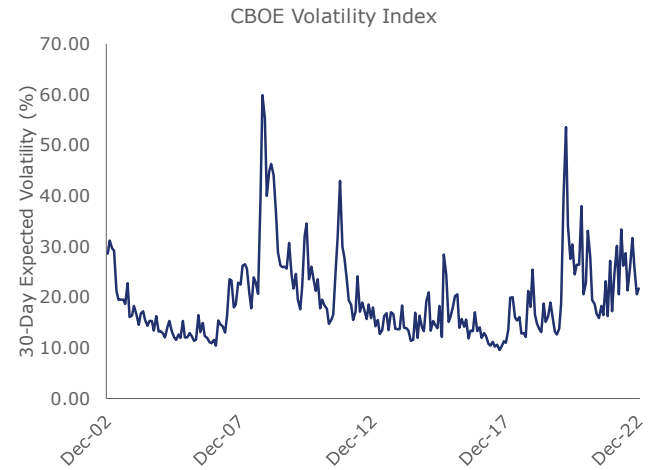
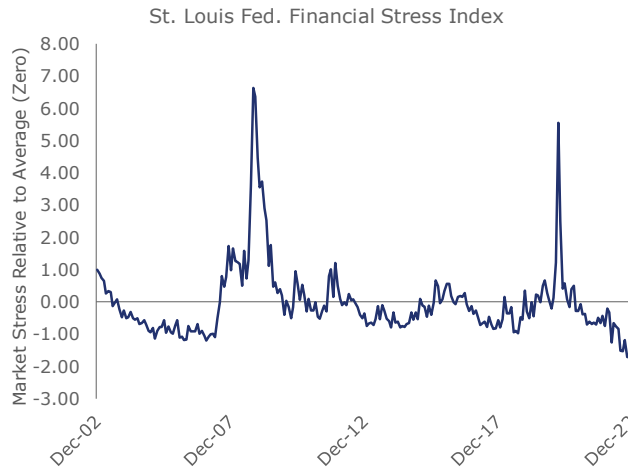
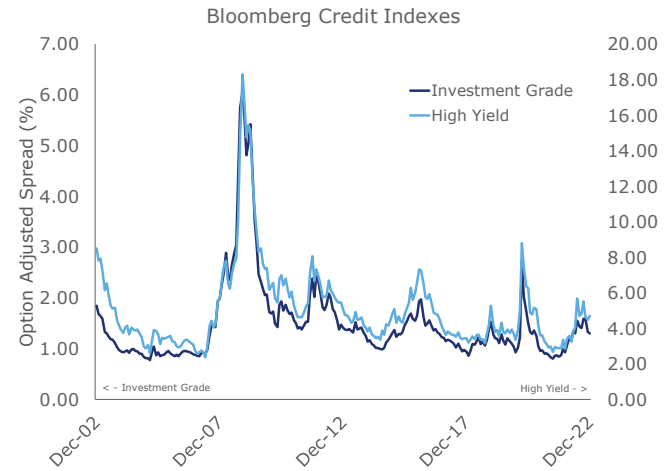
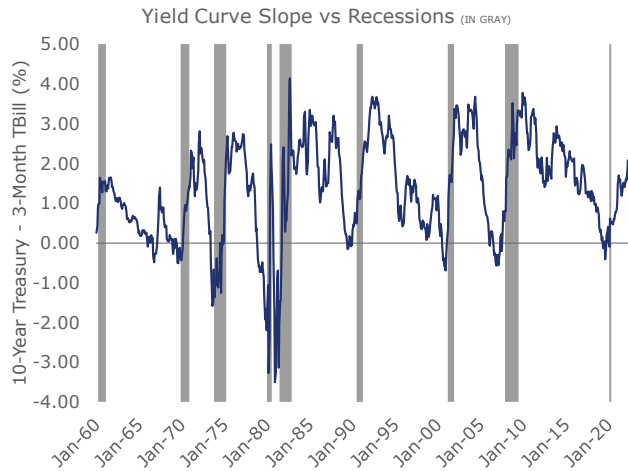
Data Source: Bloomberg

Inflation and Employment



Data Source: Bloomberg

Risk Monitor



Data Sources: Bloomberg

Kentucky Retirement Systems

Performance and Asset Allocations

Quarter Ending: December 31, 2022

December
2022

KPPA MONTHLY PERFORMANCE UPDATE

KERS/KERS-H/SPRS

What's going on in the marketplace?

The story for 2022 was one of lower highs and lower lows with persistent volatility. The 12-month period was macro-driven as decades high inflation levels and aggressive Fed tightening were the central storylines with the regime transitioning from historically easy monetary policy to one of rapid tightening across the world. The unprecedented pace of the policy shift caused a repricing of risk assets as the “everything bubble” burst, best explained by a collapse of multiples with the formerly high-flying growth sectors of the market hit especially hard.

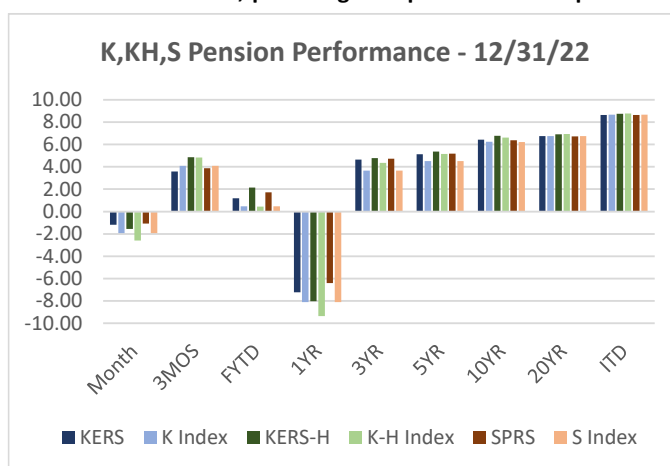
The 2022 calendar year marked the worst performance of the traditional 60/40 equity/fixed income portfolio in the last 80 years. From an equity style perspective, there was nowhere to hide; however, large cap value held up relatively well, falling ‘only’ -7.5% for the year. The large cap growth segment of the market got hit hardest, losing -29.1%, primarily due to weakness in high multiple large cap technology names. From a sector perspective, the information technology, consumer discretionary, and communication services sector all fell more than 30% during the year. Utilities and consumer staples remained relatively flat. The only sector to experience meaningful positive performance was the energy sector which was up roughly 60%. From a factor perspective, quality as defined by operating margin, return on equity, return on invested capital, and future cash flow growth led the market. Companies with higher leverage and limited liquidity were punished.

The high levels of inflation and the actions of global central banks to combat it were the central narrative of 2022. While the balance of data is beginning to indicate that inflation may have peaked and could soon start to roll over, the full potential of the damage to markets and the economy remains uncertain. The probability that the Fed may be near the end of their hiking cycle is rising as goods and commodity inflation has begun to abate. However, stickier pockets like wages and housing are likely to remain elevated, and as such price normalization across the economy is likely to take longer than once hoped. The balance may be that inflation remains elevated for longer than markets currently anticipate, and rates remain higher for longer than markets are pricing.

Volatility is likely to remain elevated in 2023 as the likelihood of a global recession is considered a certainty by many market participants, with only the depth and duration seemingly being debated. While 2022 performance was driven by a risk derating (multiple compression), 2023 is likely to be driven by earnings, which are likely to be weaker in response to a slowing global economy.

The KPPA Pension Trust portfolio fell -1.62% during the month of December, providing 100bps of downside protection

versus a blended benchmark. The KRS Pension Composite produced a -1.24% return during the month. The KERS and SPRS Pension portfolios returned -1.18% and -1.08% respectively, while their benchmark fell -1.94%. The KERS-H Pension portfolio declined -1.56% versus its benchmark return of -2.60%. All three funds outperformed their respective benchmarks with similar drivers of attribution. All three plans benefited from strong selection in the Fixed Income allocation (both in the Core and Specialty Credit spaces), and solid relative performance from the public equity allocation, more specifically from the U.S. Equity allocation. The overweight to Fixed Income was additive in terms of



relative performance, most notably in the KERS and KERS-H plans. All three plans were helped by their overweight cash positions during a volatile market period. Partially offsetting positive relative outperformance, was the underweight to both the Real Return and Real Estate allocations.

For the fiscal year-to-date, the KPPA Pension Trust portfolio gained 2.05%, outperforming the benchmark return of 0.36% while the KRS Pension Composite returned 1.43%. The KERS and SPRS Pension portfolios returned 1.19% and 1.73%, against a benchmark return of 0.47%. The KERS-H Pension portfolio gained 2.15% while its benchmark returned 0.43%. All three funds outperformed due to similar attribution drivers. Relative outperformance was driven by solid performance in the Private Equity, Core Fixed Income, and Public Equities portfolios, most notably within the international strategies. The portfolios benefitted from their overweights to cash during a volatile period. The underweights to Real Estate and Real Return partially offset relative outperformance for all three plans.

Global equity markets were weaker during the month of December, as evidenced by the MSCI ACWI Index returning -3.94%. Domestic markets were significantly weaker than their Non-US market counterparts (R3000: -5.86% versus MSCI ACWI Ex-US: -0.62%). This brought the fiscal year return for global equity markets to 2.28%.

US equity markets fell -5.86% during the month (Russell 3000), while the KPPA portfolio fared slightly better, returning -5.43%. All market segments were significantly weaker; with value holding up better than growth (R3000V: -7.58% versus R3000G: -4.18%). Despite the negative absolute return, individual strategies provided positive relative performance.

For the first two quarters of the fiscal year, the KPPA US Equity portfolio gained 2.96% compared with its benchmark return of 2.40%. During the period, mid-caps significantly outperformed both their small and large cap counterparts (MC: 8.05% versus R2000: 3.91% versus SP500: 2.31%). Value significantly outperformed growth (5.95% versus -1.13%) during the period. The KPPA portfolio's relative outperformance has been driven by its slight overweight down market cap and tilt value.

NonUS equity markets returned -0.62% (MSCI ACWI Ex-US) during the month. Developed markets returned -0.45% (MSCI World Ex-US) during the period while emerging markets fell -1.45% (MSCI EM). The KPPA portfolio lost -0.70% during the month, trailing the index by 8bps. Relative underperformance was driven by stock selection, as most individual mandates struggled.

Fiscal year-to-date, Non-US markets rose 3.09%. Developed markets significantly outperformed their emerging market counterparts (5.66% versus -2.99%). The KPPA portfolio returned 4.65%, thanks to strong relative performance amongst the individual strategies, in particular the relative value and emerging market mandates.

The specialty credit portfolio outperformed its benchmark during the month, returning 0.53% versus -0.10%. The High Yield market declined (-0.62%) as spreads reversed in a continuation of the risk-off sentiment and rates rose. The leveraged loan segment of the market held up better as the Morningstar LSTA Leveraged Loan Index gained 0.42% during the month as quality outperformed better combined with less sensitive rate profile. During the first half of the fiscal year, the portfolio underperformed its benchmark, gaining 2.30% versus 3.85%. Individual strategy relative performance has been mixed fiscal year to date, especially with private market pricing playing catch-up, but continues to produce strong relative performance over longer periods.

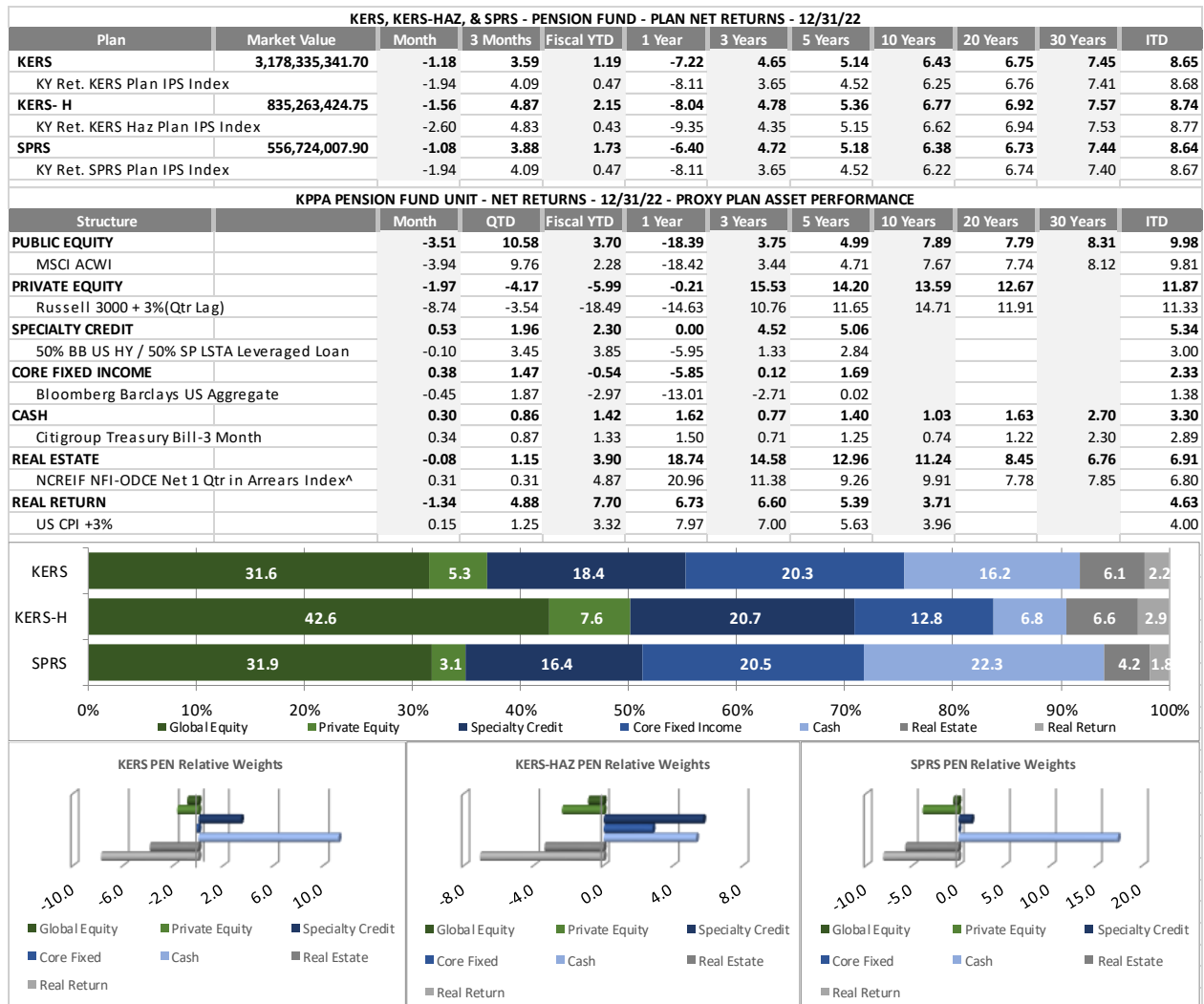
The core fixed income portfolio gained 38bps compared to the Bloomberg Aggregate Index return of -0.45%. Relative outperformance was attributable to positioning within the allocation; the portfolios remain underweight overall duration given rising rates and elevated volatility. Both shorter-term and intermediate credit market segments held up better. For the fiscal year, the portfolio returned -0.54% compared to the benchmark return of -2.97%.

The private equity allocation fell -1.97% during the month, bringing the fiscal year return to -5.99%. Trailing public marks have significantly affected the overall performance of the portfolio, the 1-year return crossed into negative territory, now at -0.21% as of 12/31/22.

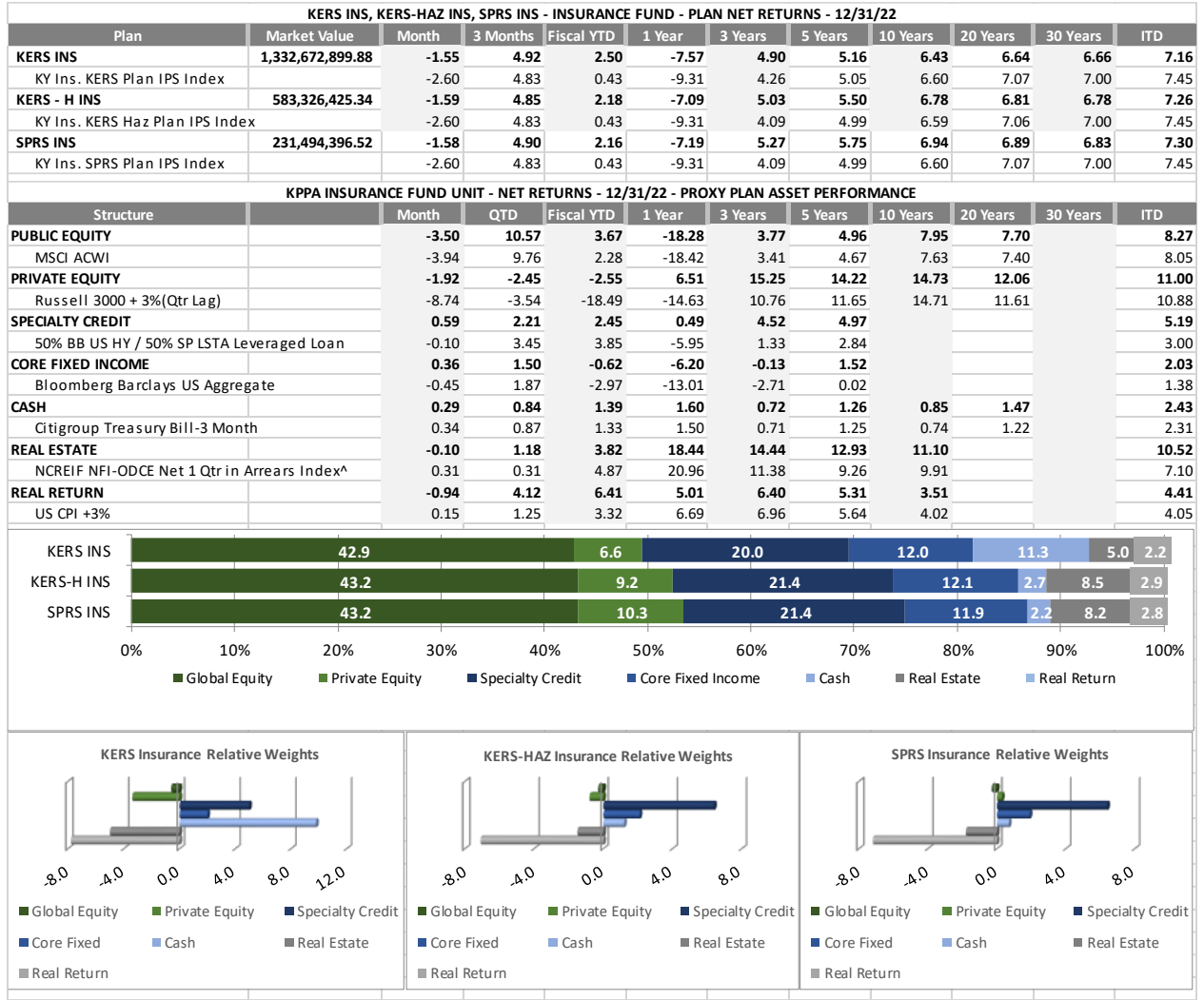
The real return portfolio fell -1.34% during the month, compared to its benchmark return of 0.15%. As with several of the previous month, performance was driven by the MLP portion of the portfolio (approximately 40% of the allocation); the investment was down -4.81%. For the fiscal year, the portfolio has returned 7.70%, bringing the 1-year return to 6.73%.

Real estate remained relatively flat during the month, falling 8bps. The latest quarter performance of 1.15% brought the 1-year return to 18.74% versus 20.96%. The portfolio has benefitted from recent strength in industrial, multi-family, student housing, and storage properties.

The cash portfolio returned 0.30% during the month compared with the 3-month T-bill's 0.34%. This brought the fiscal year return to 1.42% (versus 1.33%).



KRS Investment Committee Meeting - Investment Review and Update

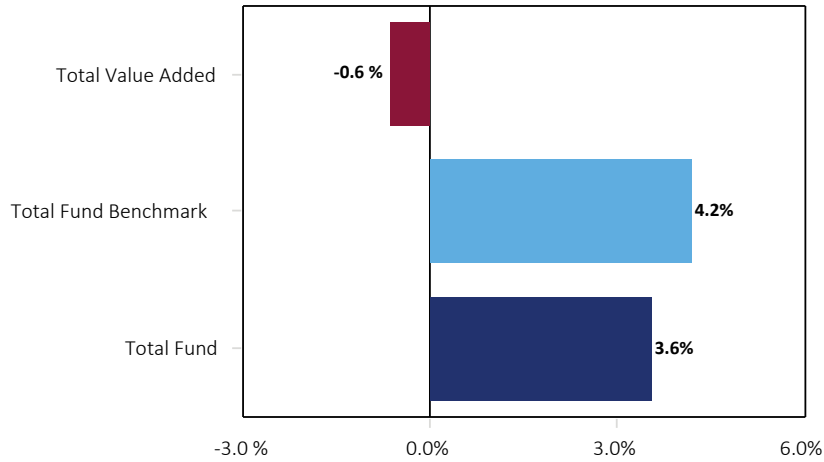


Total Fund Attribution

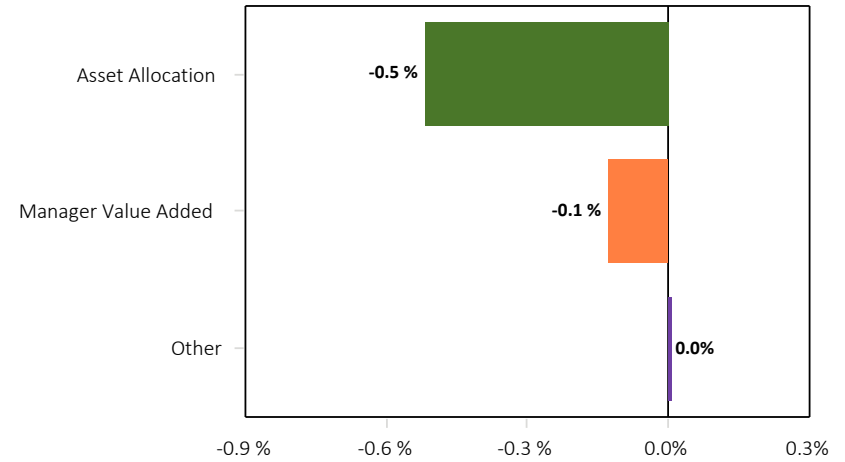
KERS Pension Plan

Periods Ended 1 Quarter Ending December 31, 2022

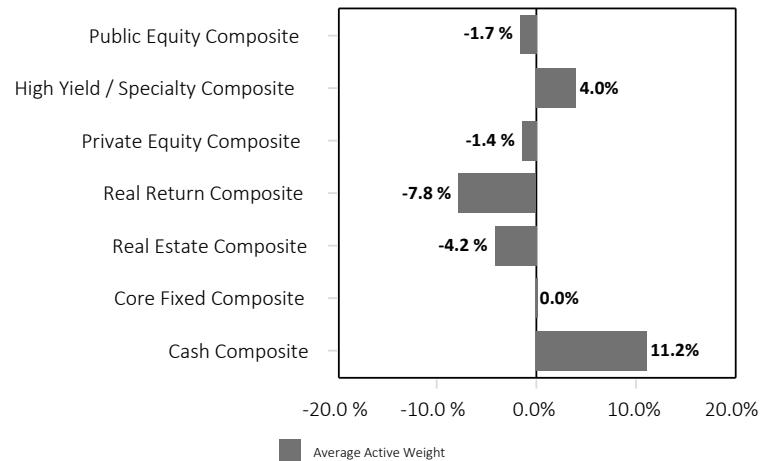
Total Fund Performance



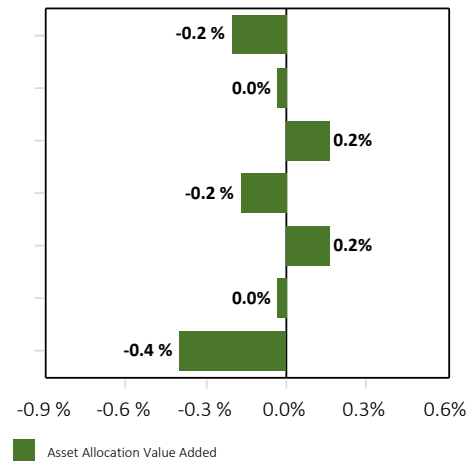
Total Value Added:-0.6 %



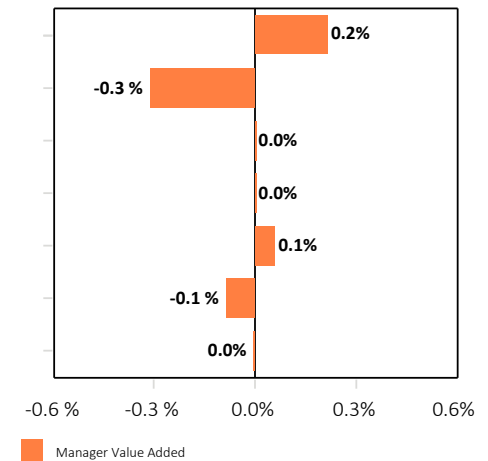
Total Asset Allocation:-0.5 %



Asset Allocation Value Added:-0.5 %



Total Manager Value Added:-0.1 %

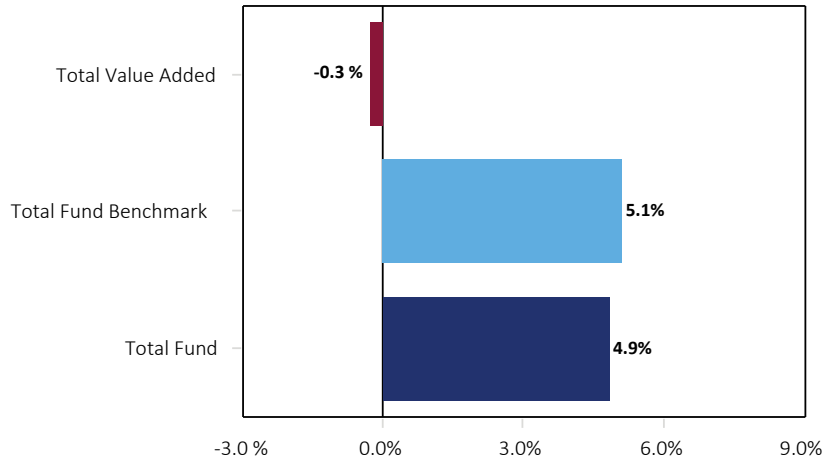


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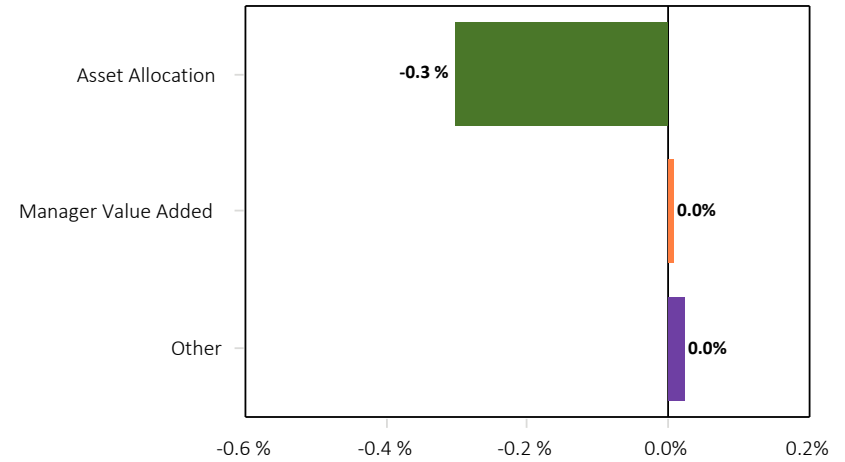
KERS (H) Pension Plan

Periods Ended 1 Quarter Ending December 31, 2022

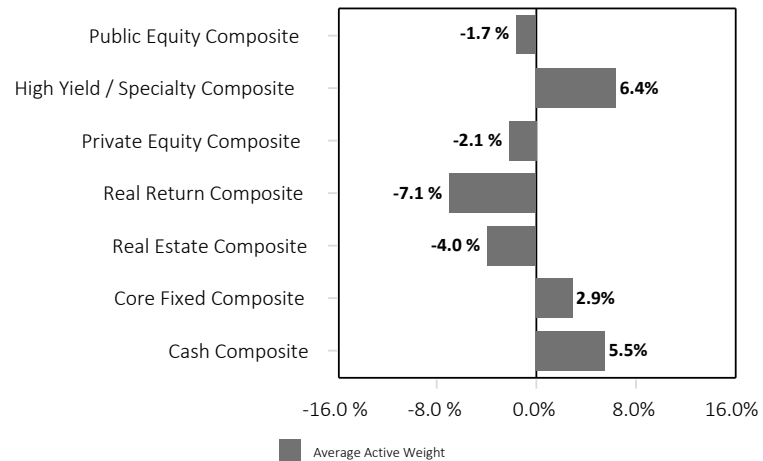
Total Fund Performance



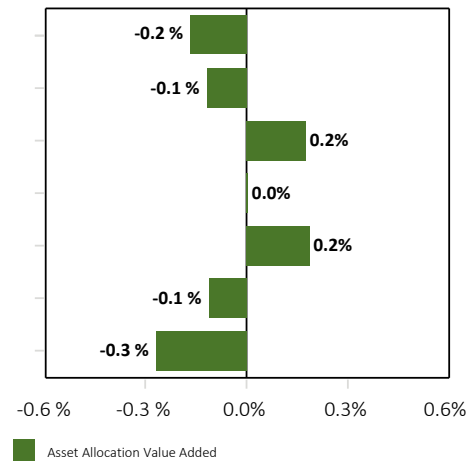
Total Value Added:-0.3 %



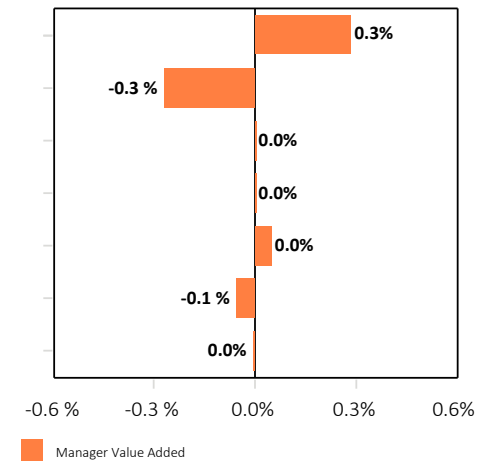
Total Asset Allocation:-0.3 %



Asset Allocation Value Added:-0.3 %



Total Manager Value Added:0.0%

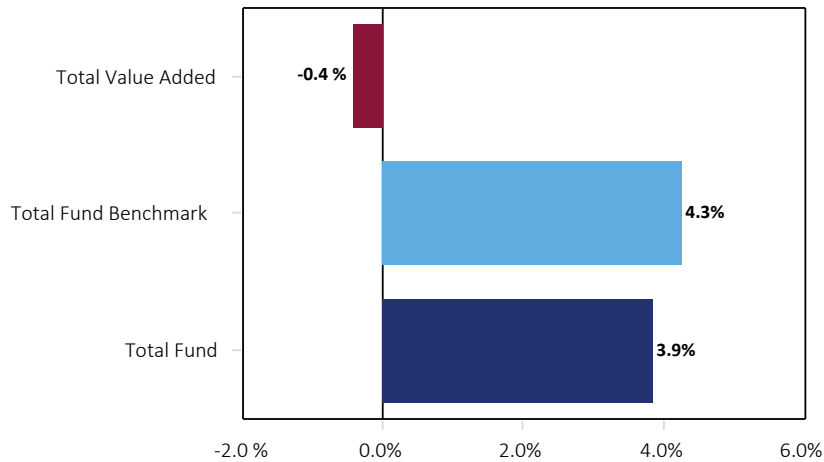


Total Fund Attribution

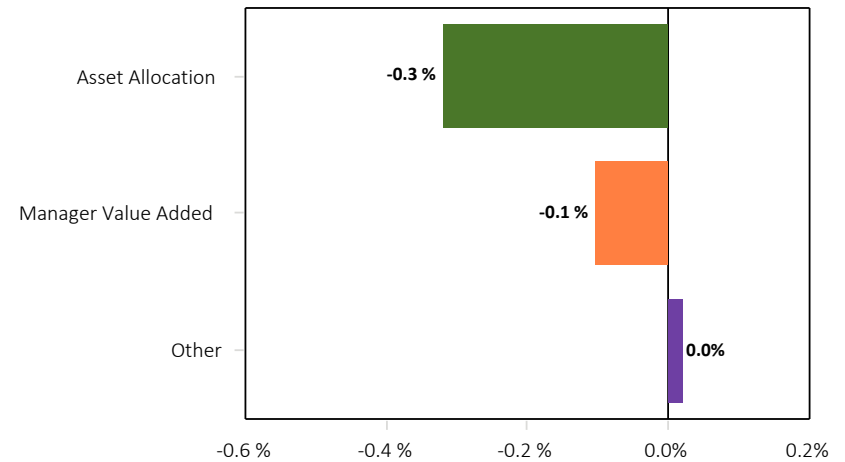
SPRS Pension Plan

Periods Ended 1 Quarter Ending December 31, 2022

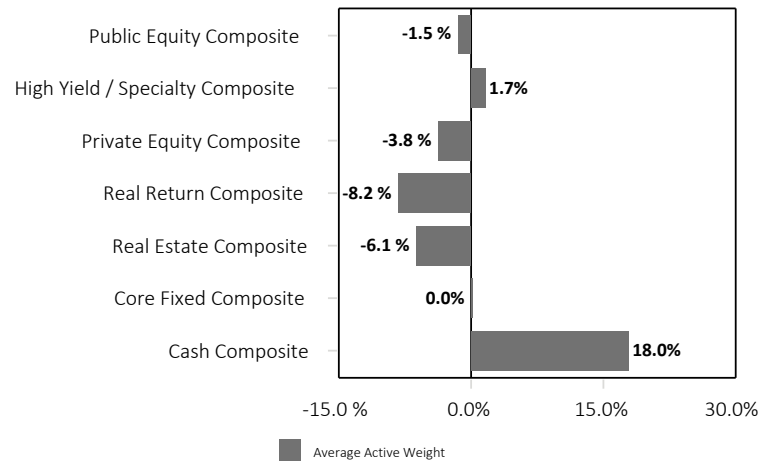
Total Fund Performance



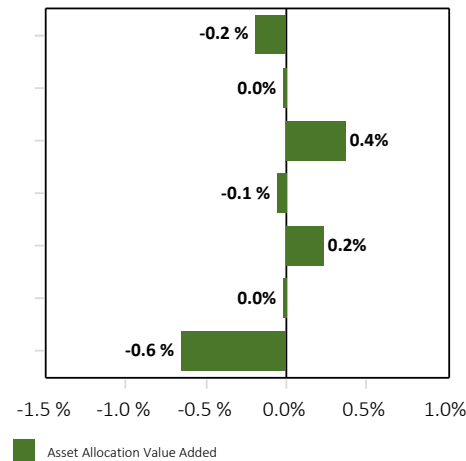
Total Value Added:-0.4 %



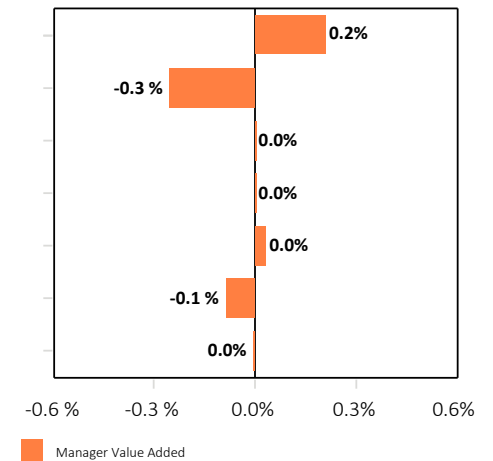
Total Asset Allocation:-0.3 %



Asset Allocation Value Added:-0.3 %



Total Manager Value Added:-0.1 %

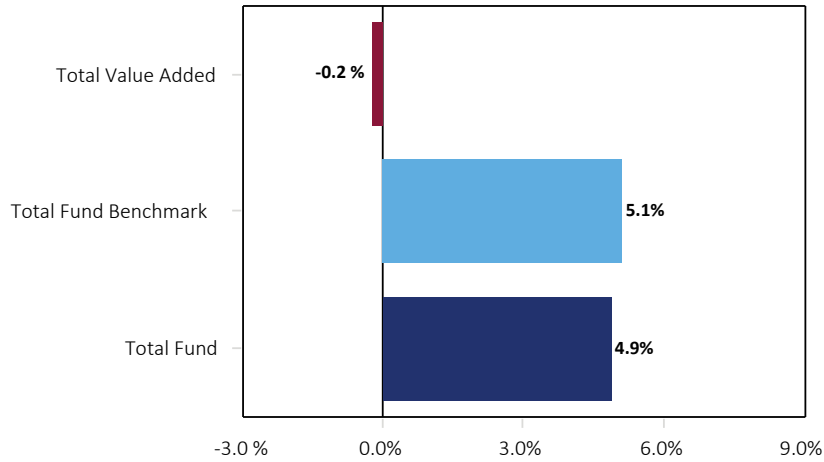


Total Fund Attribution

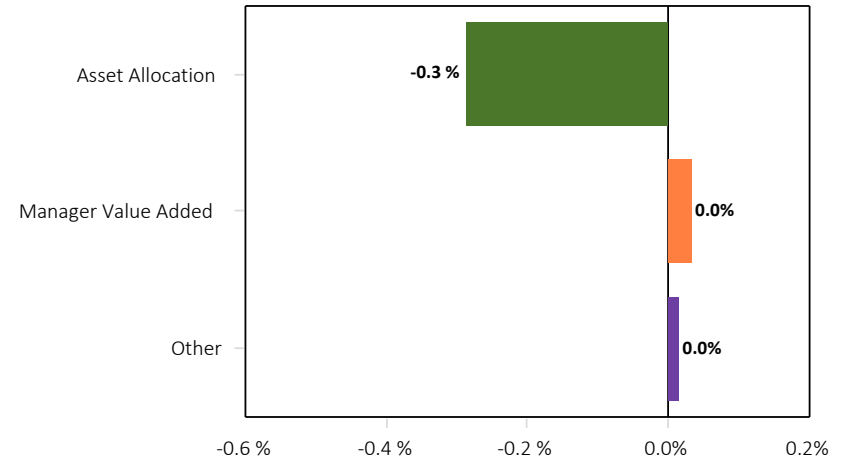
KERS Insurance Plan

Periods Ended 1 Quarter Ending December 31, 2022

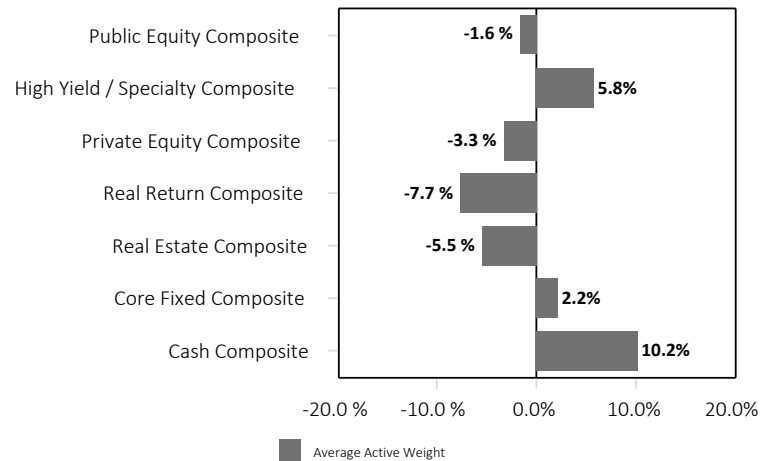
Total Fund Performance



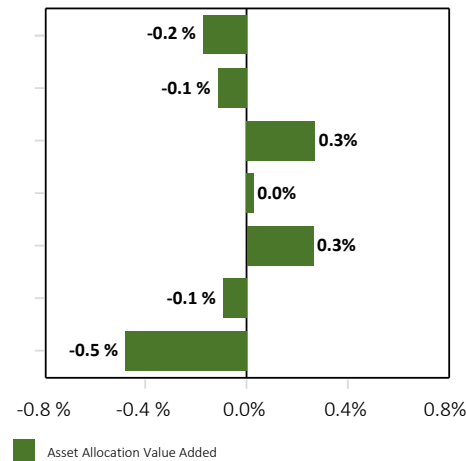
Total Value Added:-0.2 %



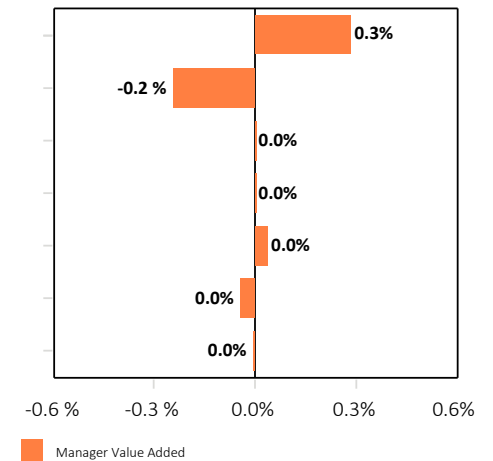
Total Asset Allocation:-0.3 %



Asset Allocation Value Added:-0.3 %



Total Manager Value Added:0.0%

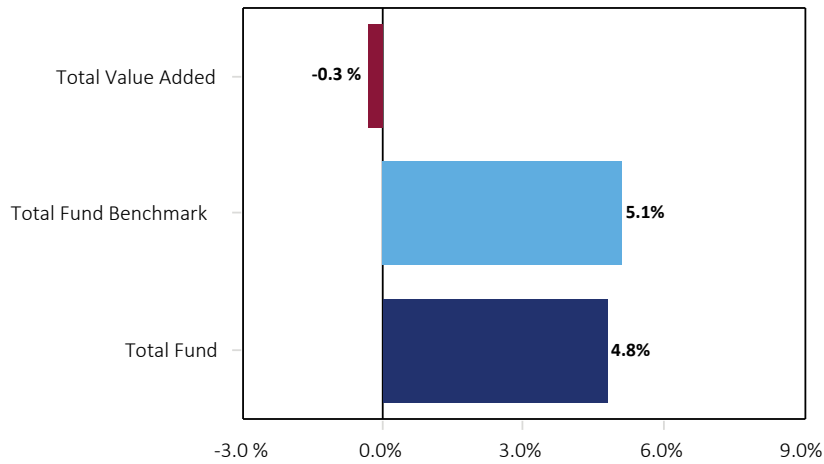


Total Fund Attribution

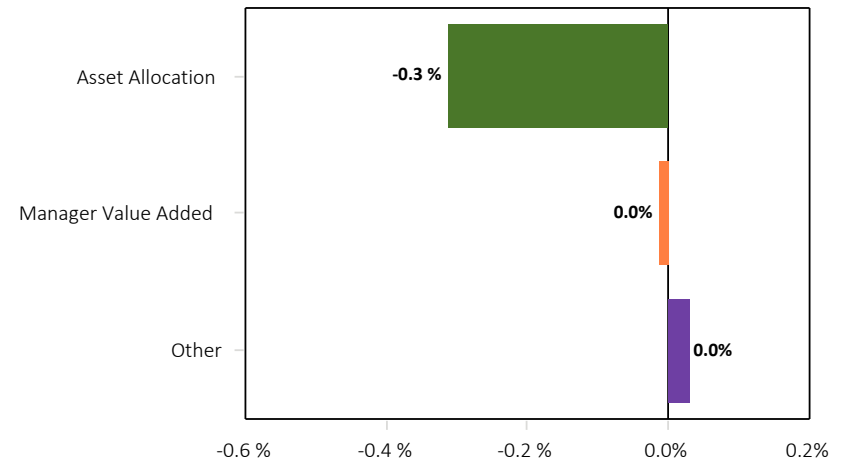
KERS (H) Insurance Plan

Periods Ended 1 Quarter Ending December 31, 2022

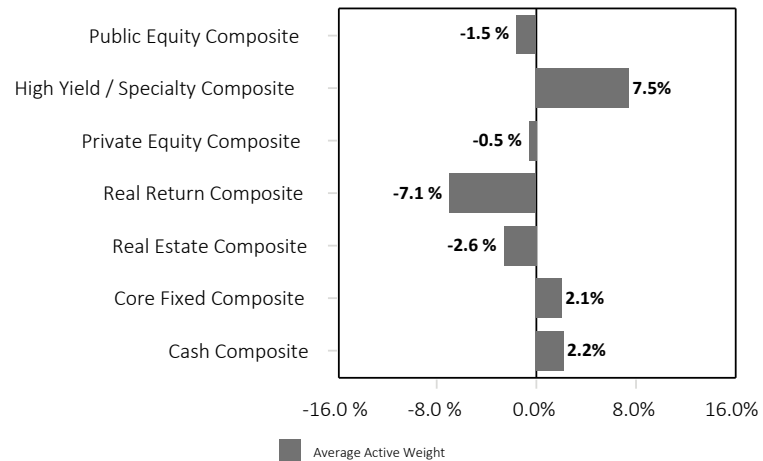
Total Fund Performance



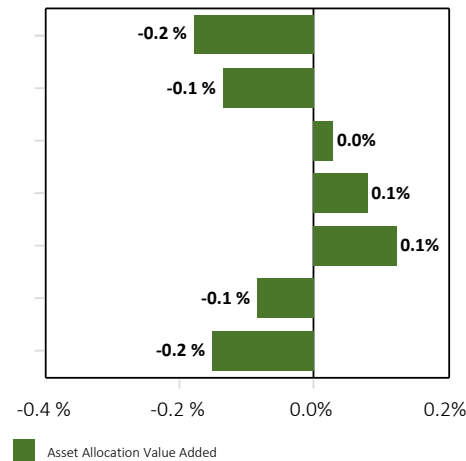
Total Value Added:-0.3 %



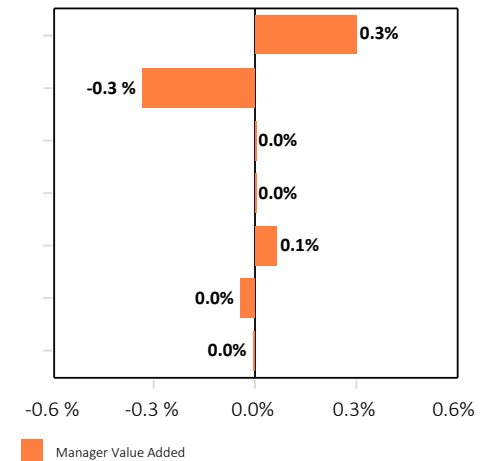
Total Asset Allocation:-0.3 %



Asset Allocation Value Added:-0.3 %



Total Manager Value Added:0.0%

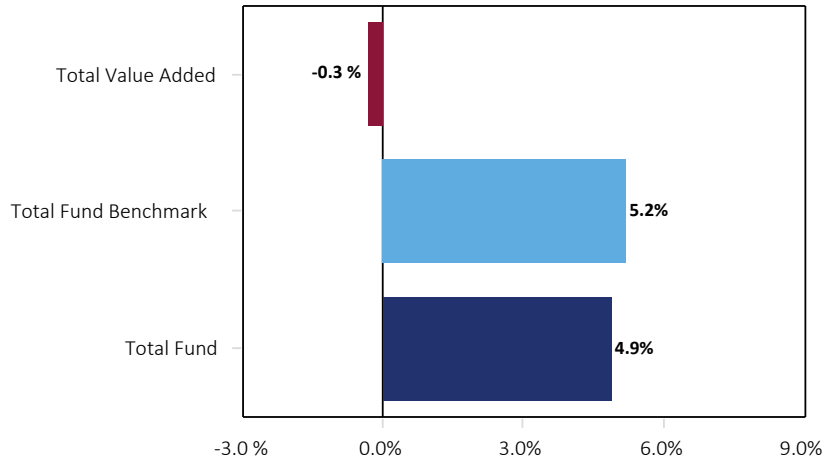


Total Fund Attribution

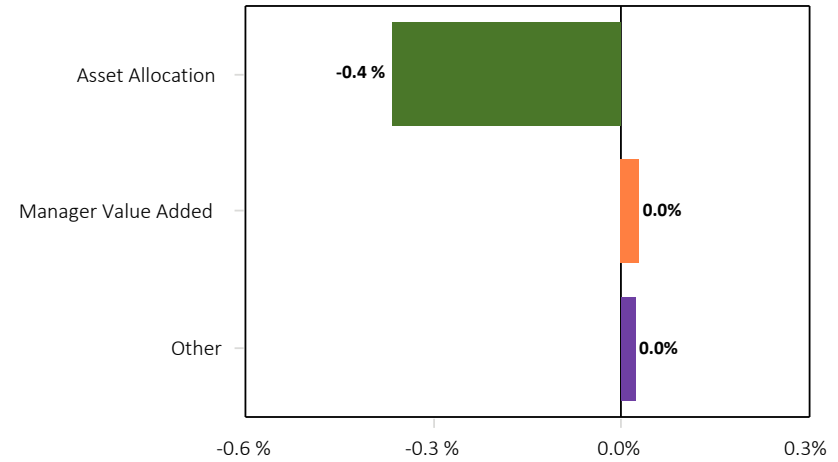
SPRS Insurance Plan

Periods Ended 1 Quarter Ending December 31, 2022

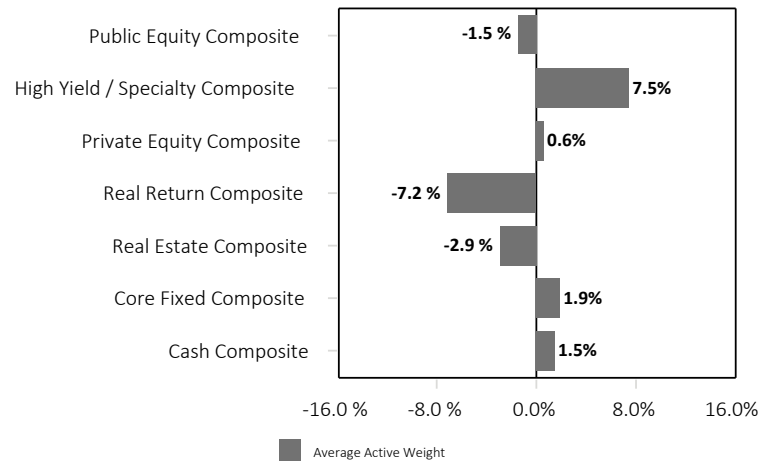
Total Fund Performance



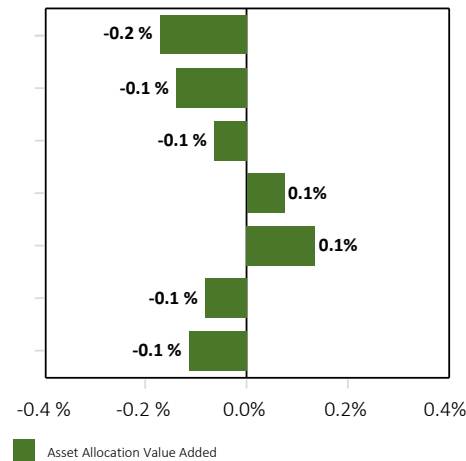
Total Value Added:-0.3 %



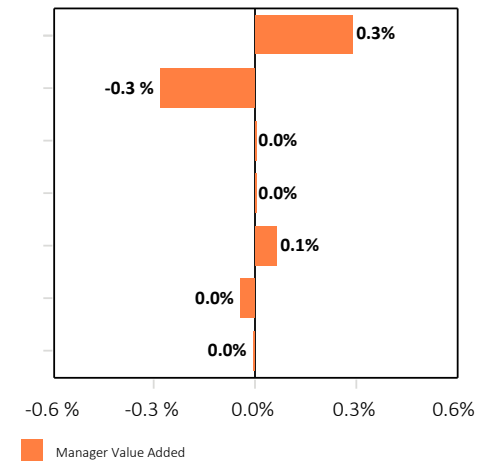
Total Asset Allocation:-0.4 %



Asset Allocation Value Added:-0.4 %



Total Manager Value Added:0.0%

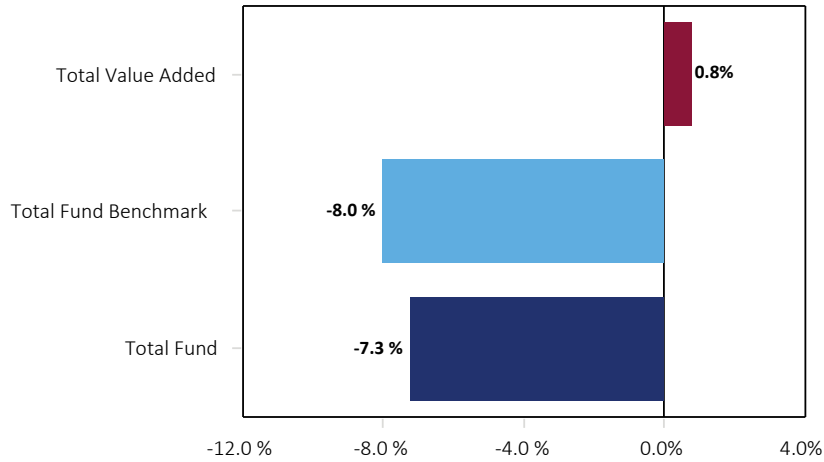


Total Fund Attribution

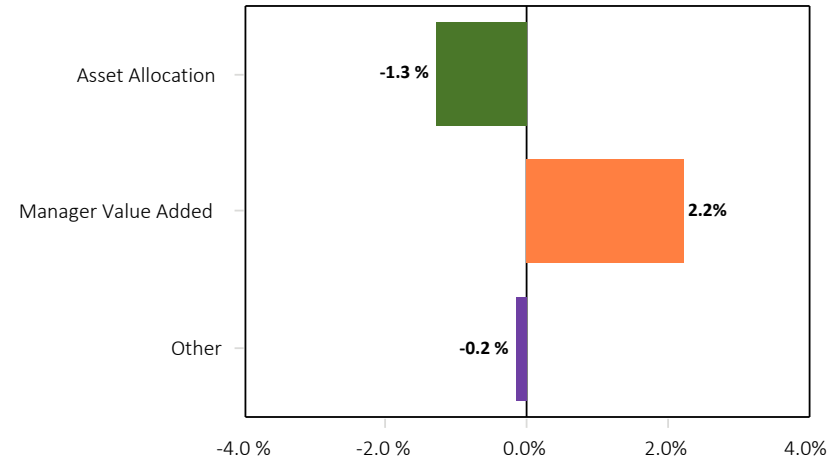
KERS Pension Plan

Periods Ended 1 Year Ending December 31, 2022

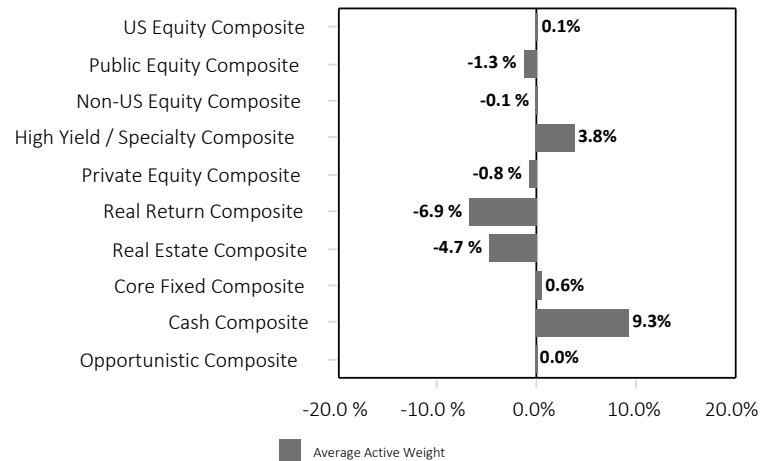
Total Fund Performance



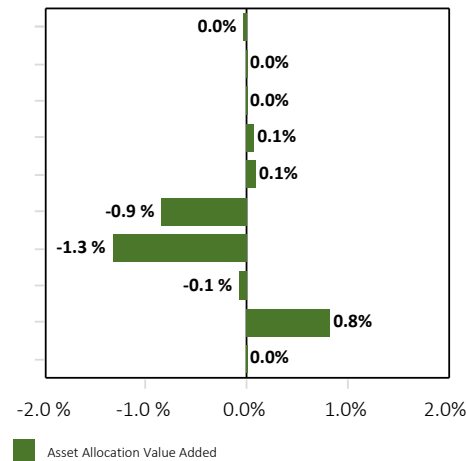
Total Value Added:0.8%



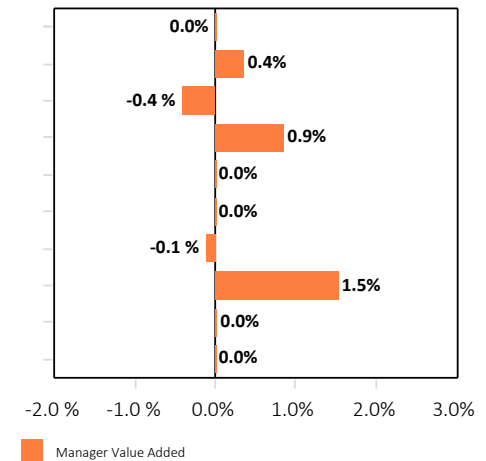
Total Asset Allocation:-1.3 %



Asset Allocation Value Added:-1.3 %



Total Manager Value Added:2.2%

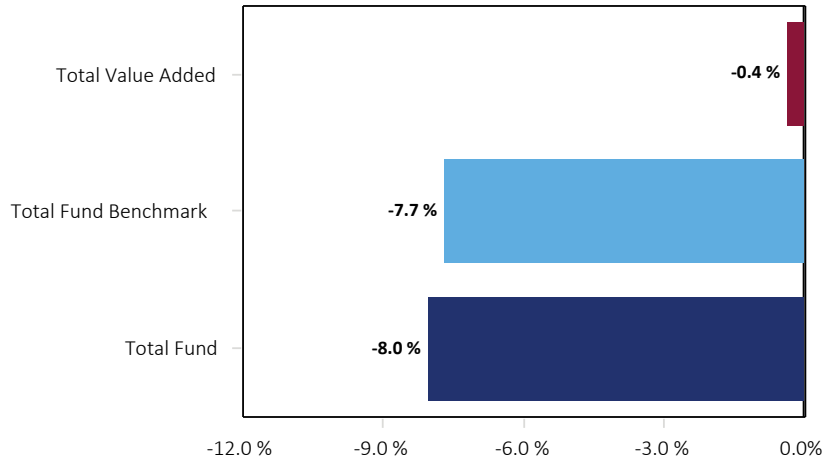


Total Fund Attribution

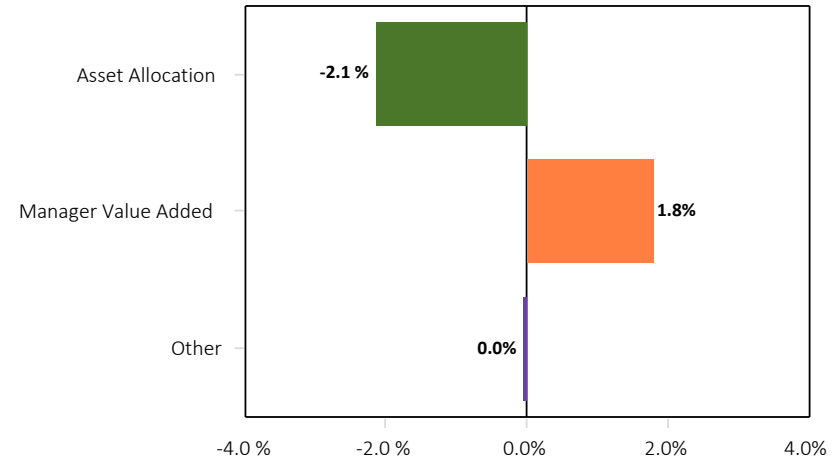
KERS (H) Pension Plan

Periods Ended 1 Year Ending December 31, 2022

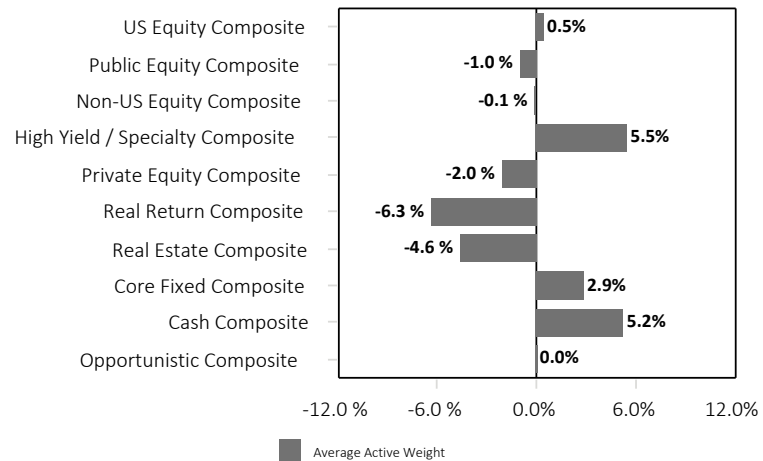
Total Fund Performance



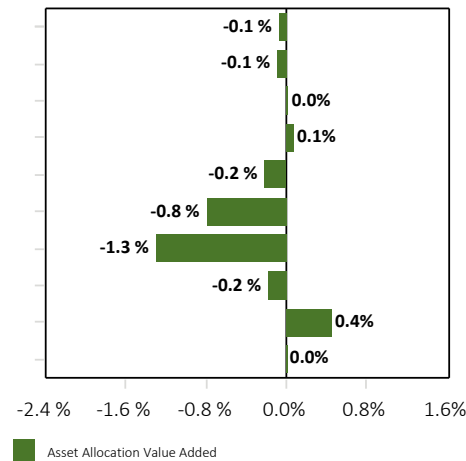
Total Value Added:-0.4 %



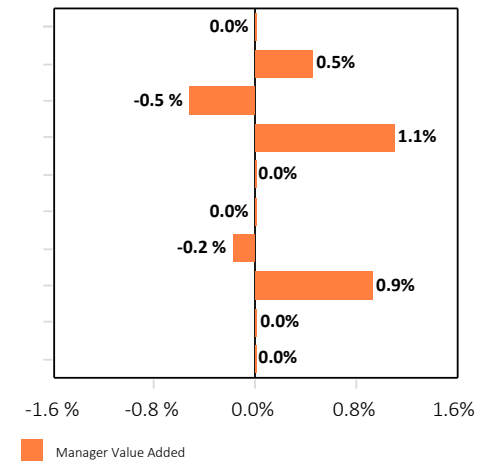
Total Asset Allocation:-2.1 %



Asset Allocation Value Added:-2.1 %



Total Manager Value Added:1.8%

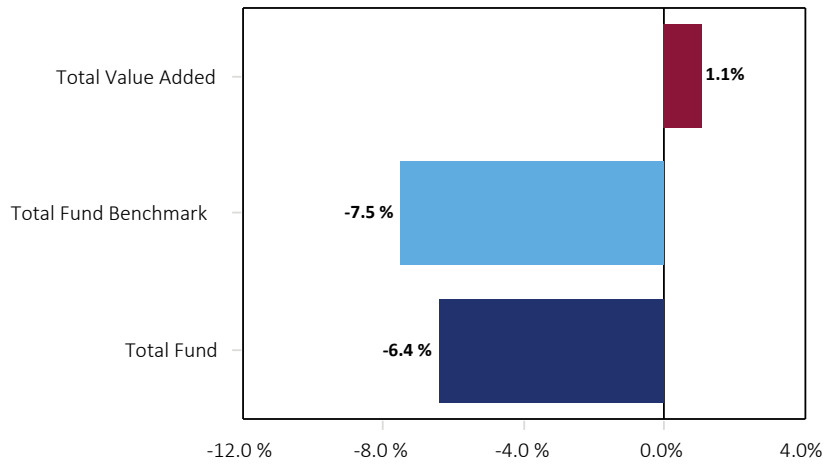


Total Fund Attribution

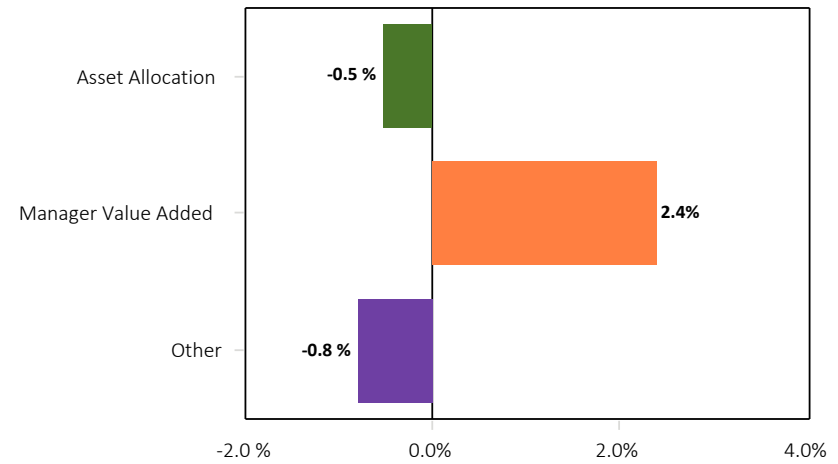
SPRS Pension Plan

Periods Ended 1 Year Ending December 31, 2022

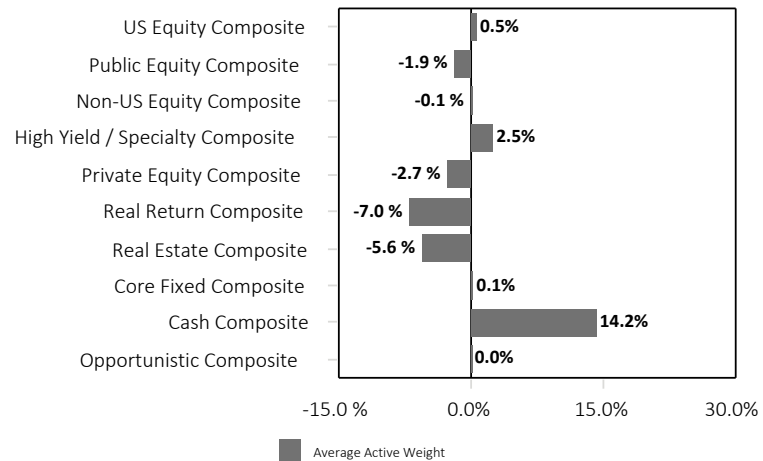
Total Fund Performance



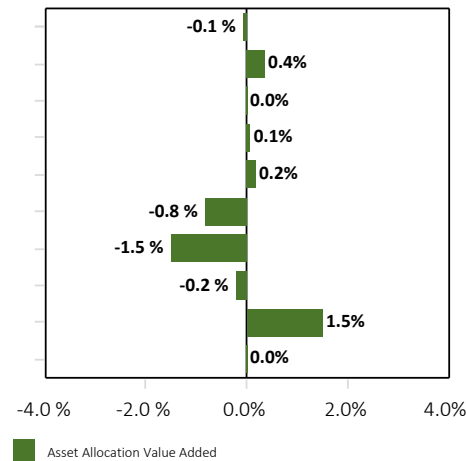
Total Value Added: 1.1%



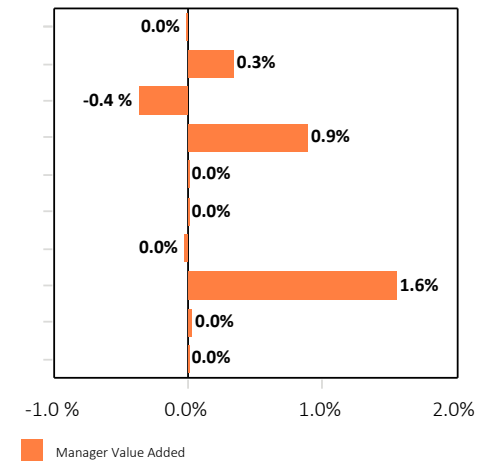
Total Asset Allocation: -0.5%



Asset Allocation Value Added: -0.5%



Total Manager Value Added: 2.4%

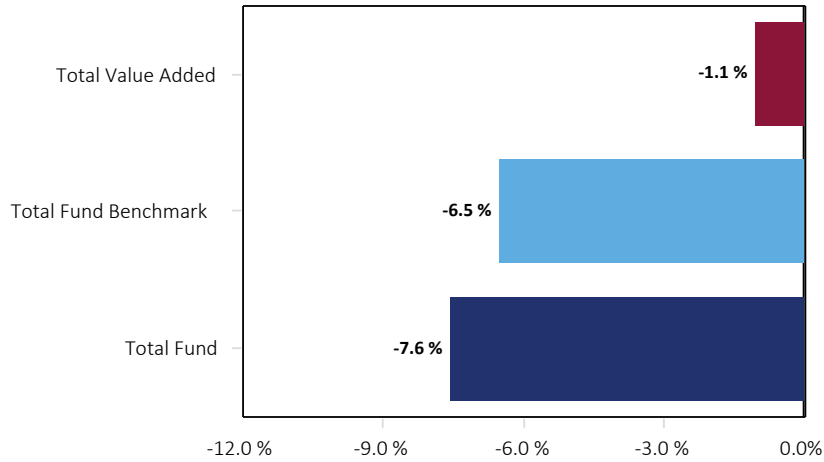


Total Fund Attribution

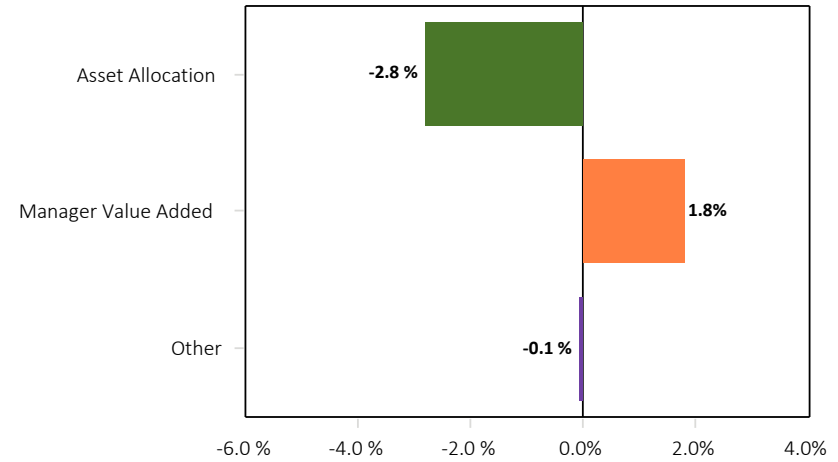
KERS Insurance Plan

Periods Ended 1 Year Ending December 31, 2022

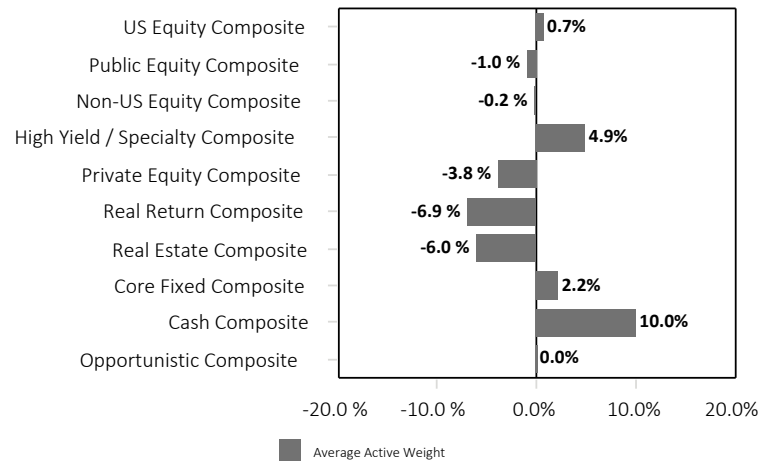
Total Fund Performance



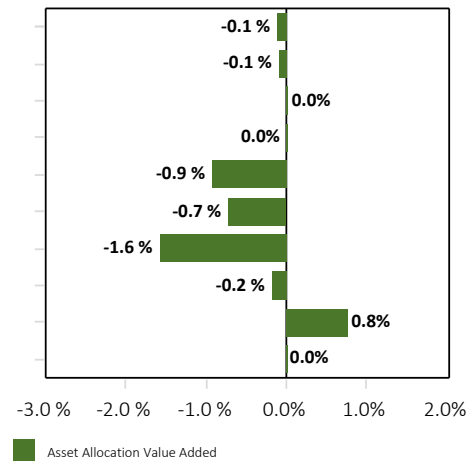
Total Value Added:-1.1 %



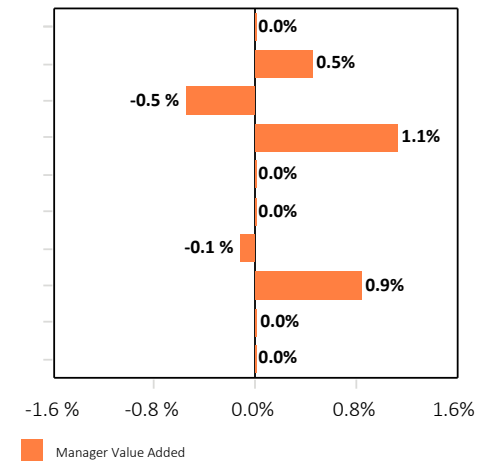
Total Asset Allocation:-2.8 %



Asset Allocation Value Added:-2.8 %



Total Manager Value Added:1.8%

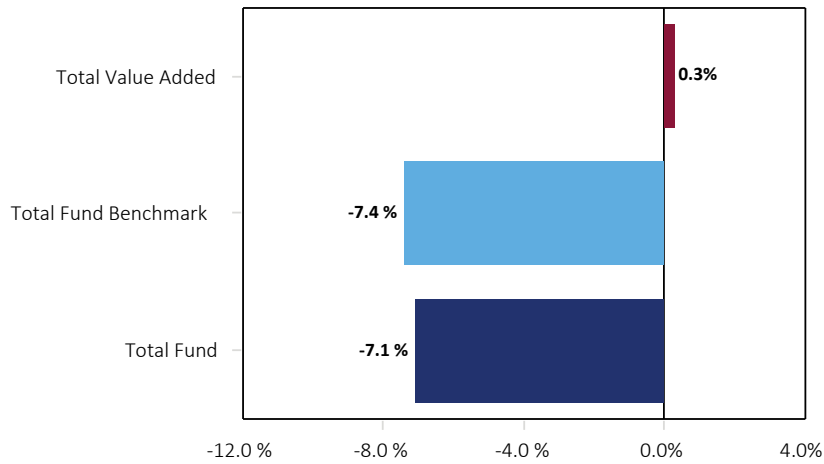


Total Fund Attribution

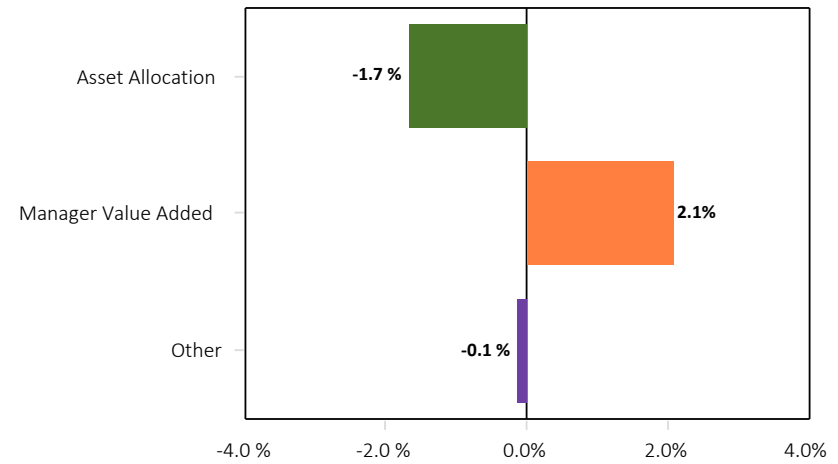
KERS (H) Insurance Plan

Periods Ended 1 Year Ending December 31, 2022

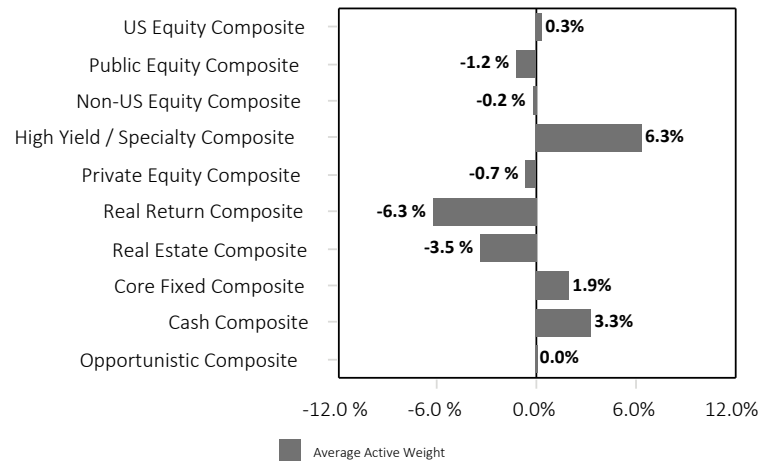
Total Fund Performance



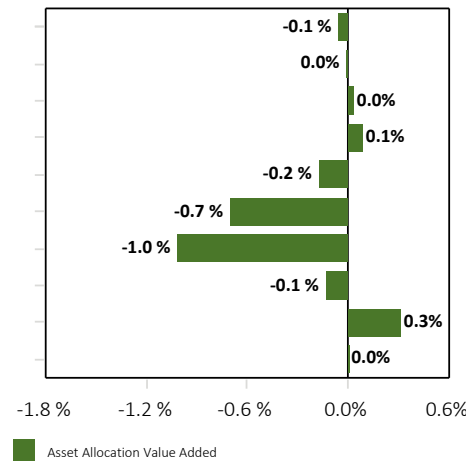
Total Value Added:0.3%



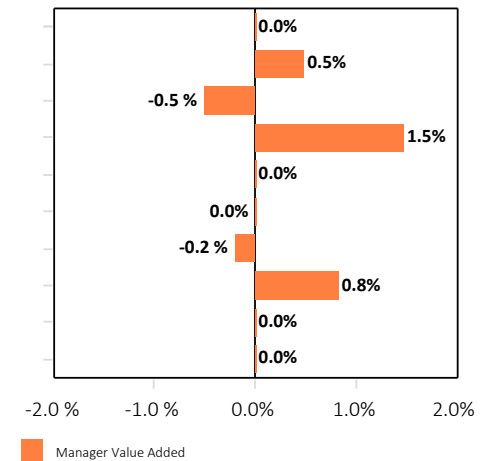
Total Asset Allocation:-1.7%



Asset Allocation Value Added:-1.7%



Total Manager Value Added:2.1%

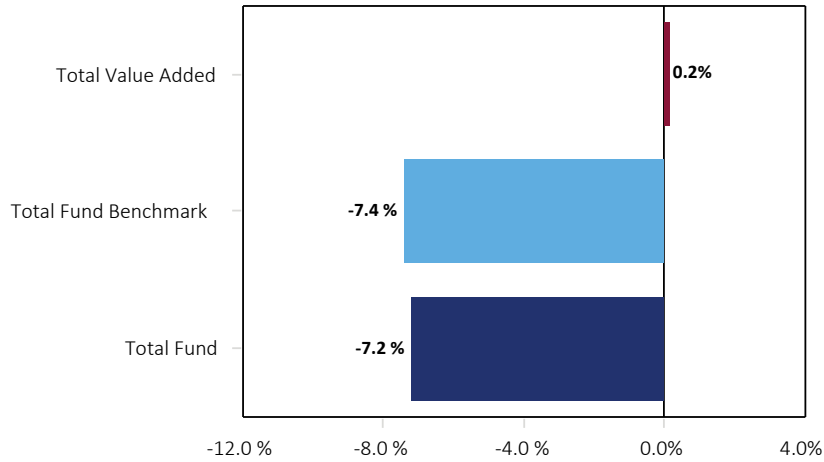


Total Fund Attribution

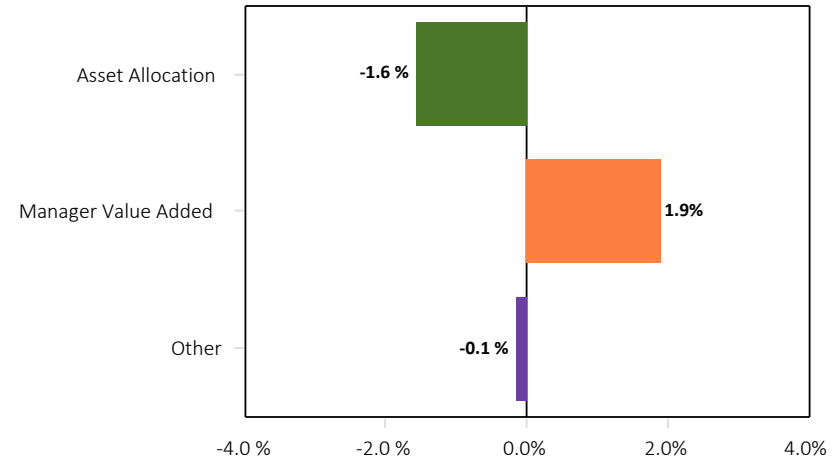
SPRS Insurance Plan

Periods Ended 1 Year Ending December 31, 2022

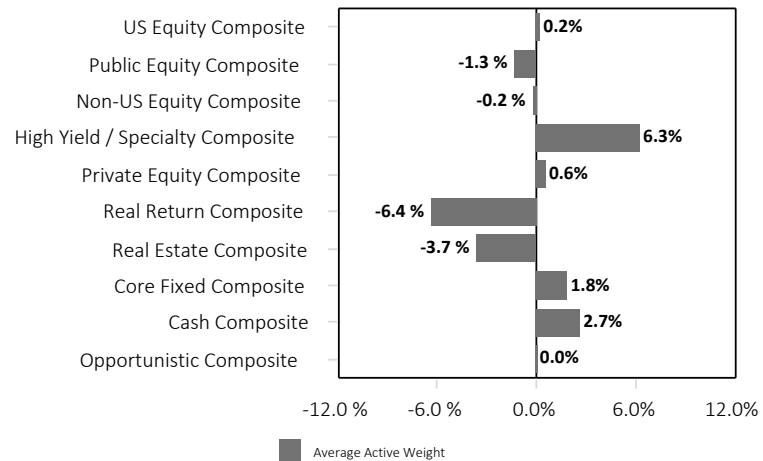
Total Fund Performance



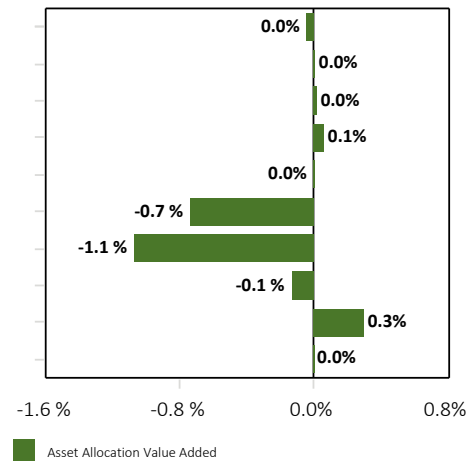
Total Value Added:0.2%



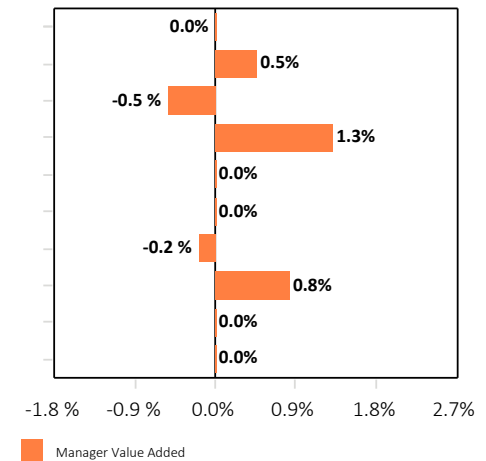
Total Asset Allocation:-1.6%



Asset Allocation Value Added:-1.6%



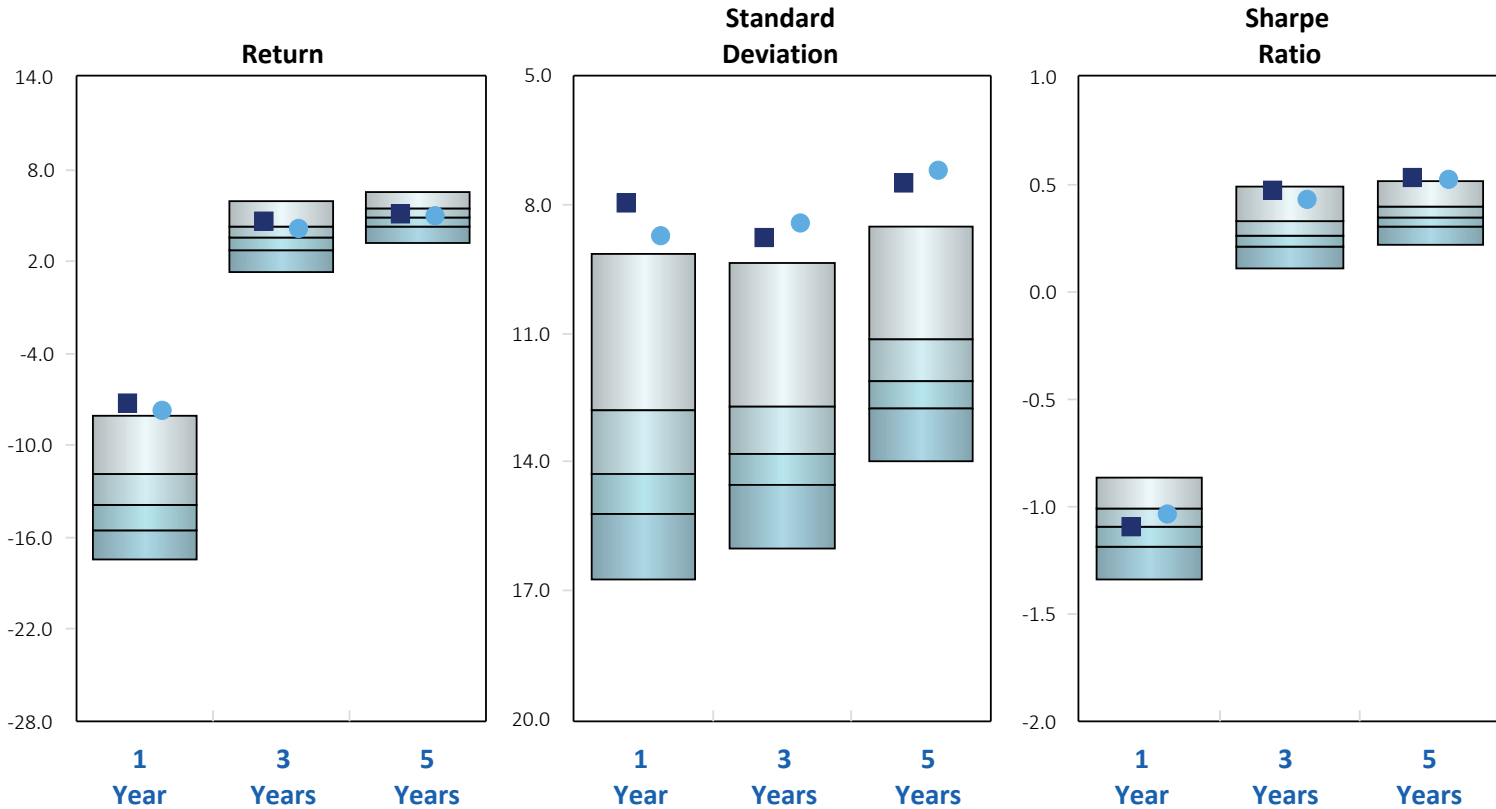
Total Manager Value Added:1.9%



Plan Sponsor Peer Group Analysis - Multi Statistics

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



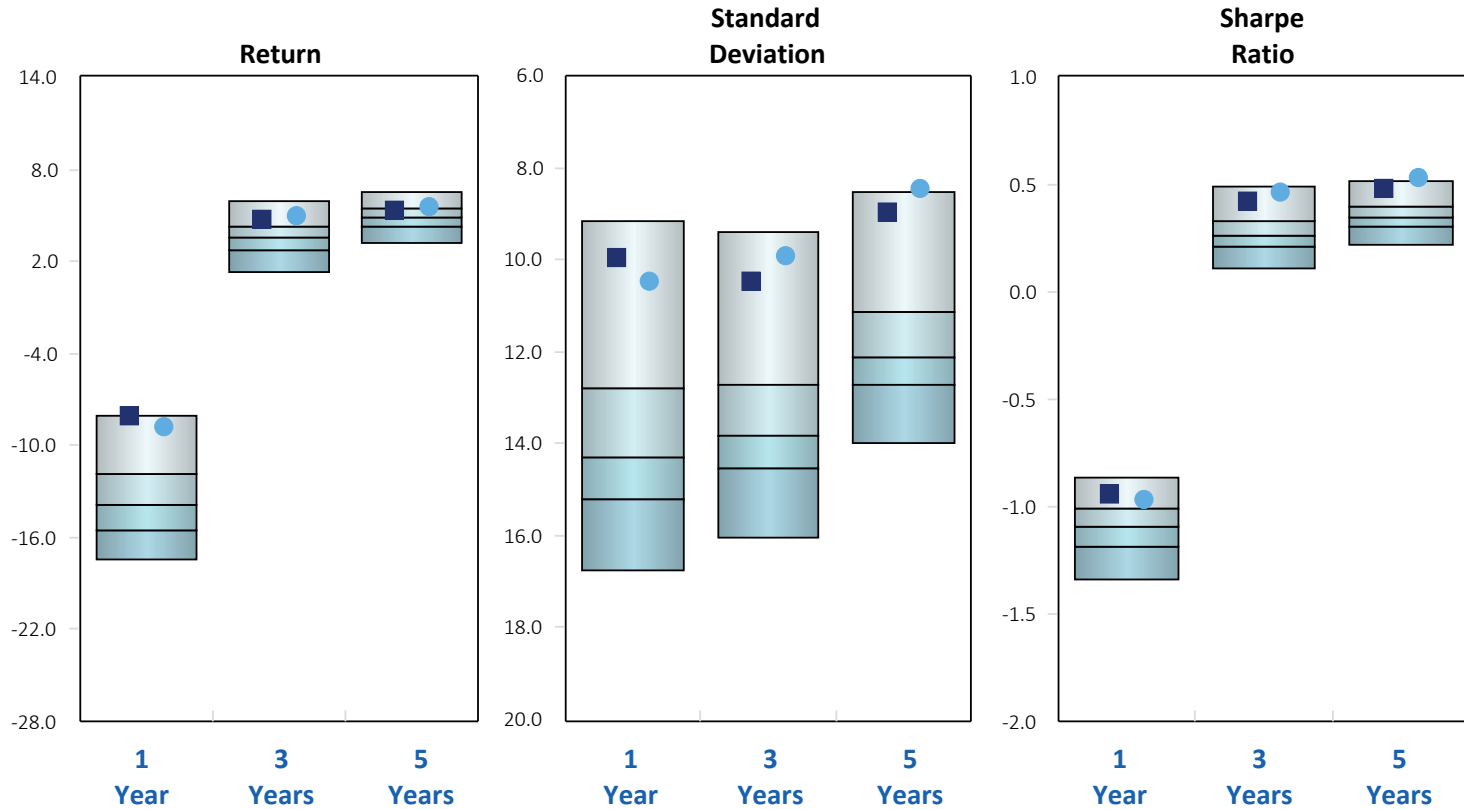
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS Pension Plan	-7.25 (4)	4.67 (19)	5.14 (39)	7.98 (3)	8.77 (3)	7.52 (2)	-1.09 (49)	0.48 (7)	0.53 (5)
● KERS Pension IPS Index	-7.67 (5)	4.12 (32)	4.93 (49)	8.75 (4)	8.45 (2)	7.21 (2)	-1.04 (32)	0.43 (9)	0.52 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

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

Periods Ended December 31, 2022



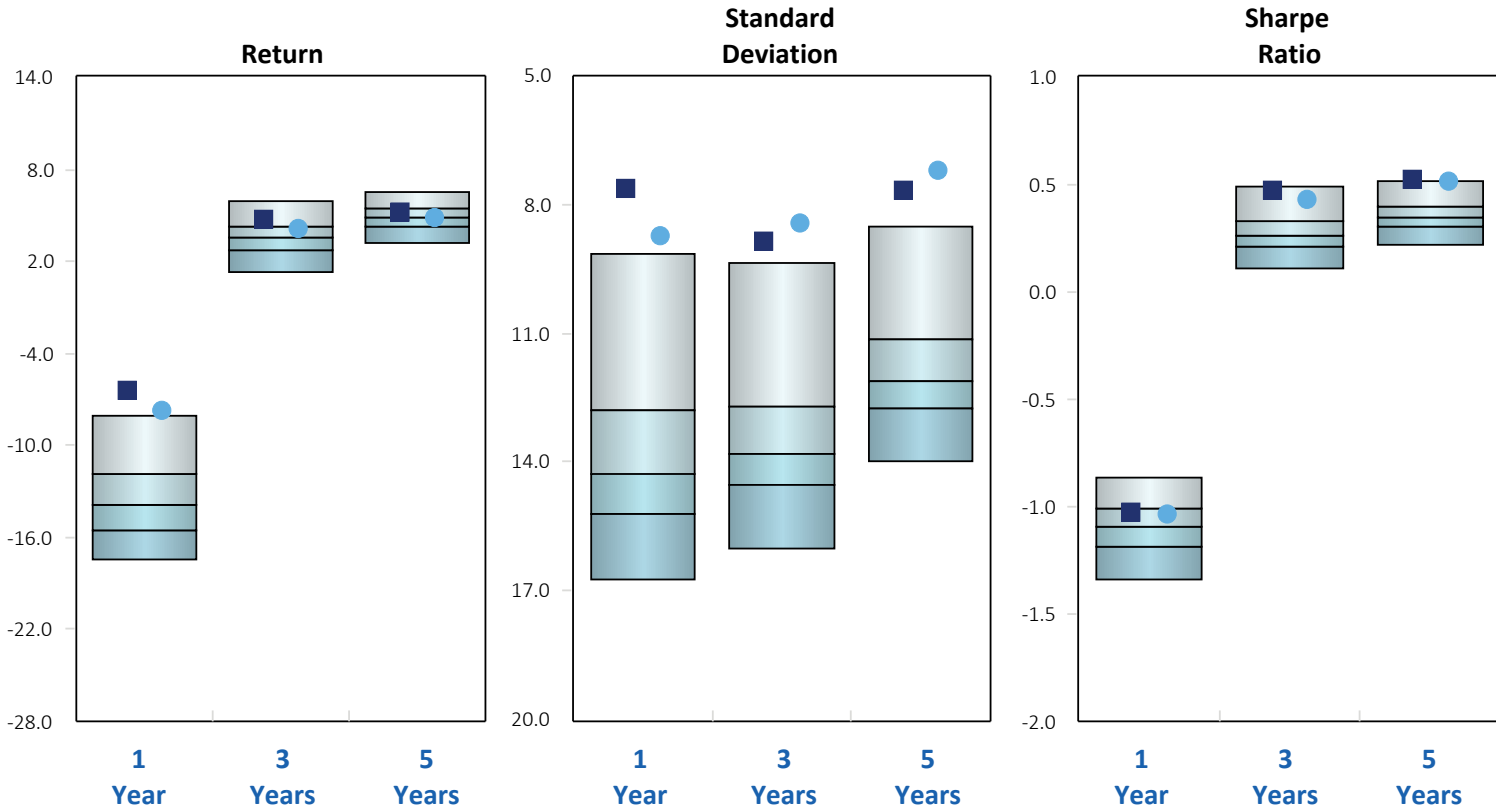
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS (H) Pension Plan	-8.04 (5)	4.78 (17)	5.36 (31)	9.94 (7)	10.47 (7)	8.98 (6)	-0.94 (12)	0.43 (9)	0.48 (8)
● KERS (H) Pension IPS Index	-8.80 (6)	5.02 (12)	5.61 (23)	10.48 (9)	9.92 (6)	8.43 (4)	-0.96 (16)	0.47 (7)	0.54 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

SPRS Pension Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



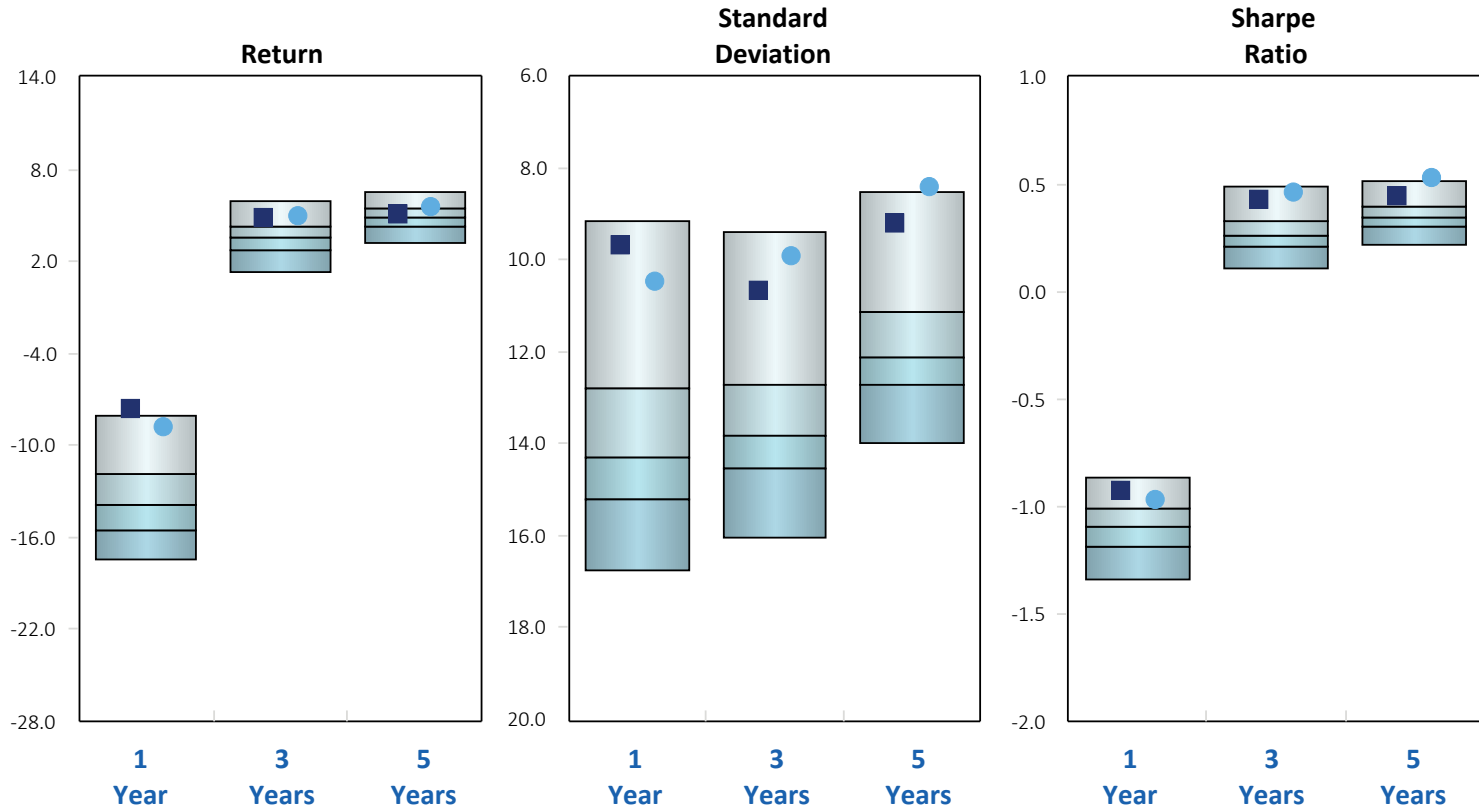
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ SPRS Pension Plan	-6.41 (3)	4.72 (18)	5.18 (38)	7.61 (3)	8.87 (3)	7.65 (2)	-1.03 (30)	0.48 (6)	0.53 (5)
● SPRS Pension IPS Index	-7.67 (5)	4.12 (32)	4.87 (52)	8.75 (4)	8.45 (2)	7.20 (2)	-1.04 (32)	0.43 (9)	0.52 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

KERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



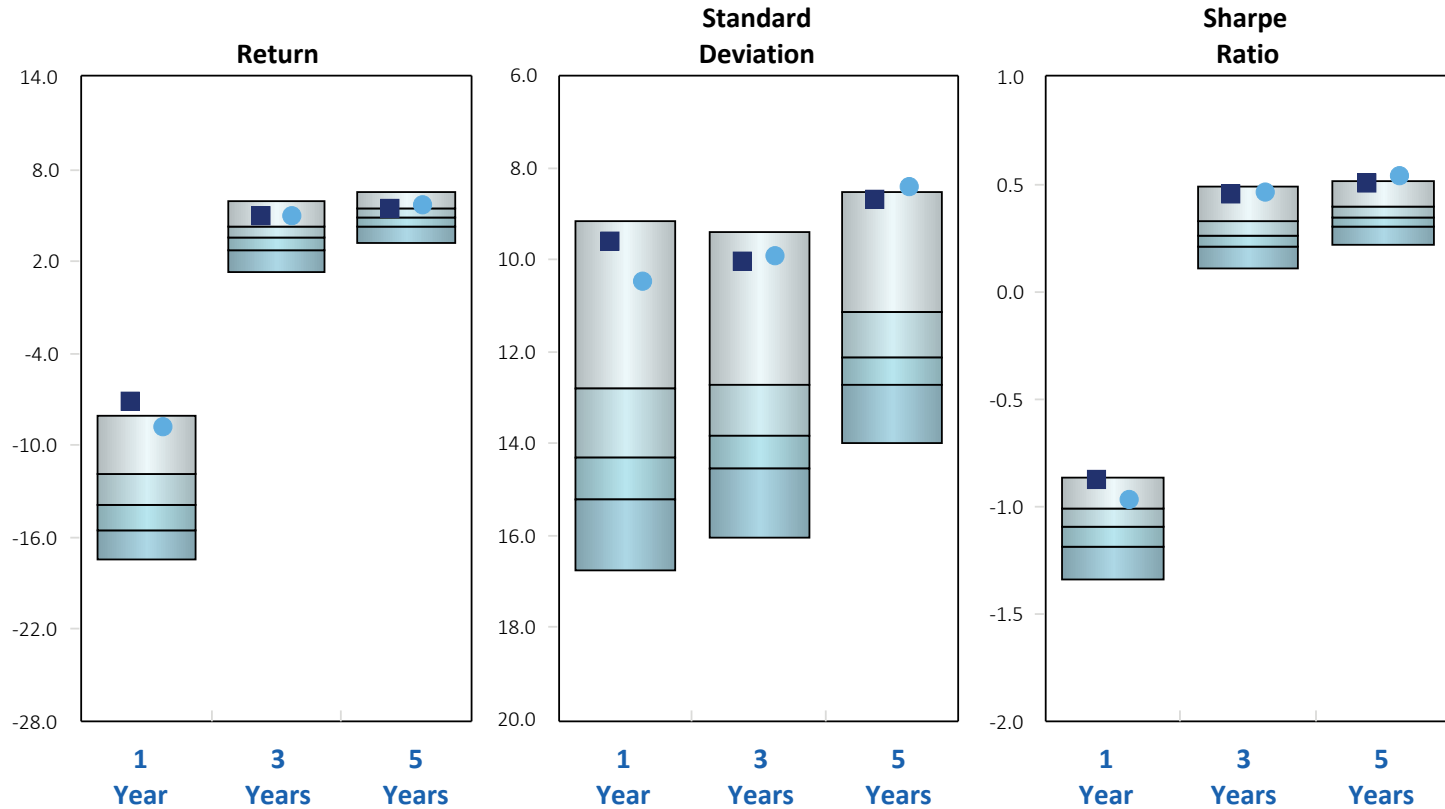
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS Insurance Plan	-7.59 (5)	4.88 (14)	5.15 (39)	9.67 (6)	10.66 (8)	9.21 (7)	-0.92 (9)	0.43 (9)	0.45 (12)
● KERS Insurance IPS Index	-8.80 (6)	5.02 (12)	5.60 (23)	10.48 (9)	9.92 (6)	8.43 (4)	-0.96 (16)	0.47 (7)	0.54 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

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

Periods Ended December 31, 2022



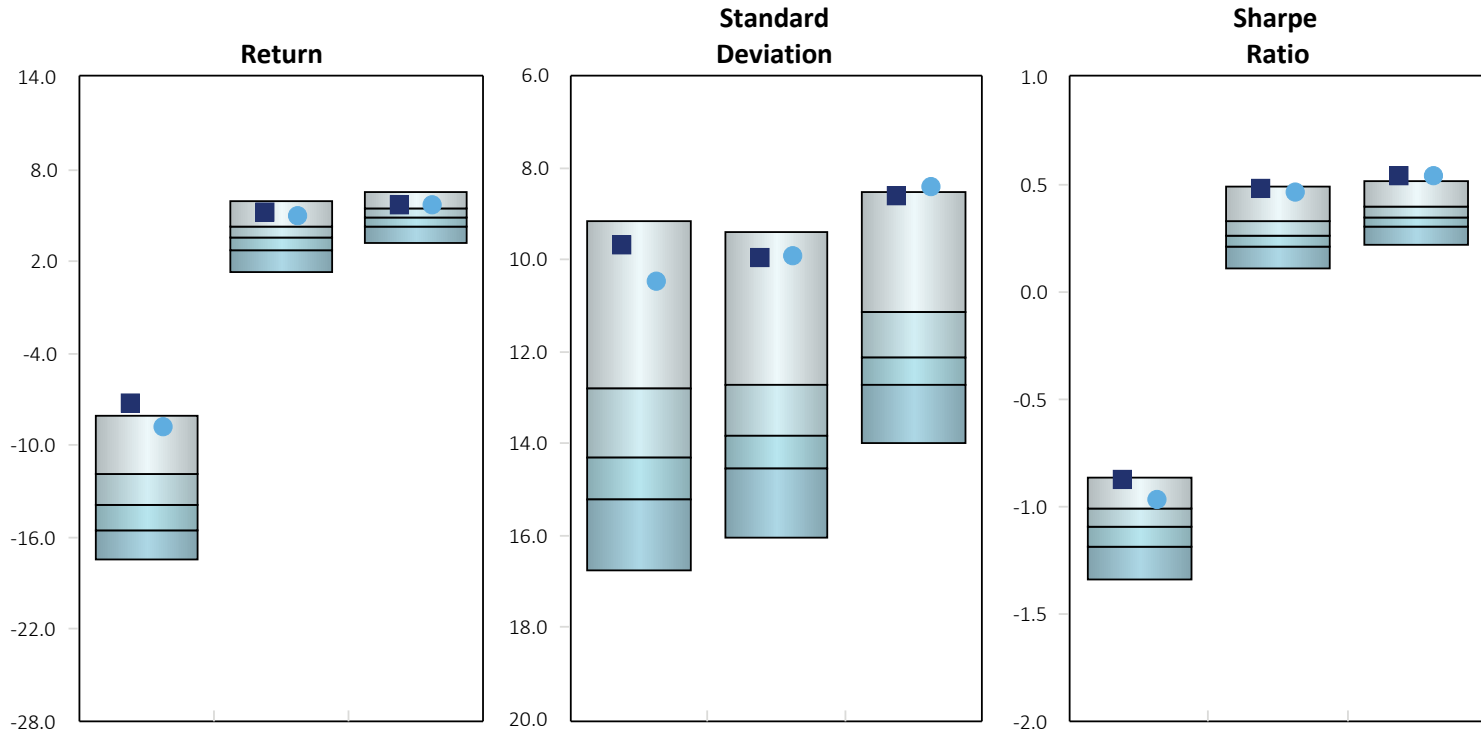
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KERS (H) Insurance Plan	-7.11 (4)	5.00 (13)	5.49 (26)	9.58 (6)	10.05 (6)	8.69 (5)	-0.87 (6)	0.46 (7)	0.51 (6)
● KERS (H) Insurance IPS Index	-8.80 (6)	5.02 (12)	5.66 (21)	10.48 (9)	9.92 (6)	8.43 (4)	-0.96 (16)	0.47 (7)	0.54 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

SPRS Insurance Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



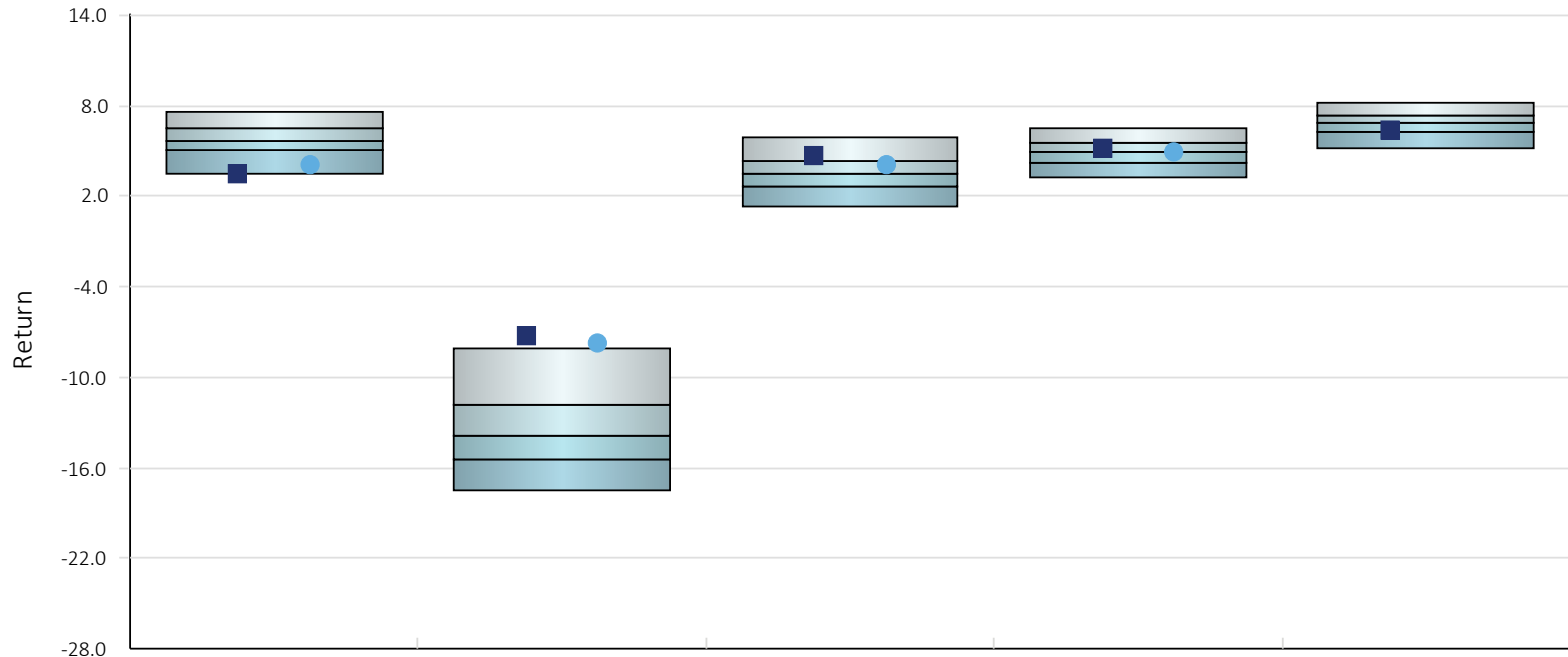
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ SPRS Insurance Plan	-7.21 (4)	5.26 (10)	5.73 (17)	9.69 (6)	9.97 (6)	8.61 (5)	-0.88 (6)	0.49 (6)	0.54 (5)
● SPRS Insurance IPS Index	-8.80 (6)	5.02 (12)	5.66 (20)	10.48 (9)	9.92 (6)	8.43 (4)	-0.96 (16)	0.47 (7)	0.54 (5)
5th Percentile	-8.08	5.92	6.51	9.15	9.38	8.52	-0.87	0.49	0.51
1st Quartile	-11.88	4.33	5.50	12.78	12.72	11.16	-1.00	0.33	0.40
Median	-13.92	3.53	4.90	14.29	13.82	12.12	-1.10	0.26	0.35
3rd Quartile	-15.49	2.71	4.25	15.20	14.55	12.73	-1.19	0.21	0.31
95th Percentile	-17.47	1.29	3.20	16.75	16.03	13.98	-1.34	0.11	0.22

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS Pension Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



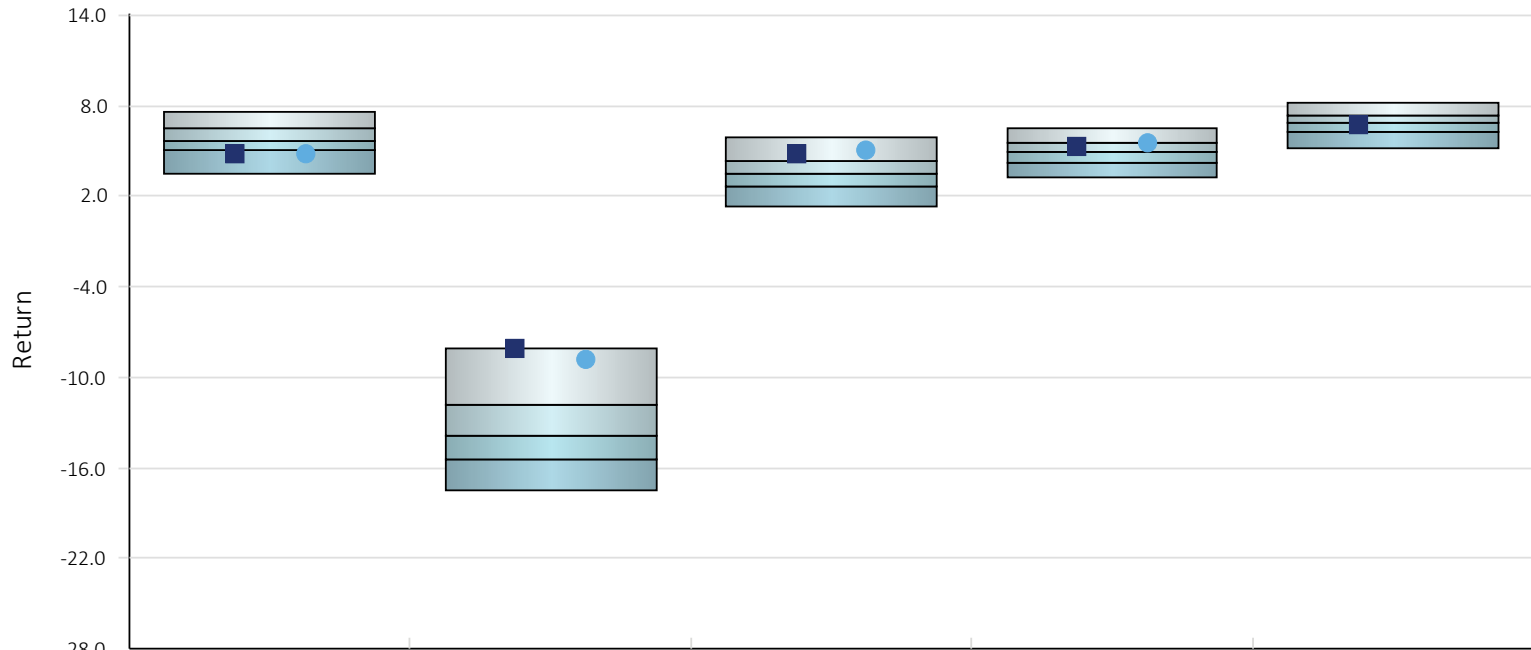
	QTD	1 Year	3 Years	5 Years	10 Years
■ KERS Pension Plan	3.56 (95)	-7.25 (4)	4.67 (19)	5.14 (39)	6.43 (70)
● KERS Pension IPS Index	4.08 (92)	-7.67 (5)	4.12 (32)	4.93 (49)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

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

Periods Ended December 31, 2022



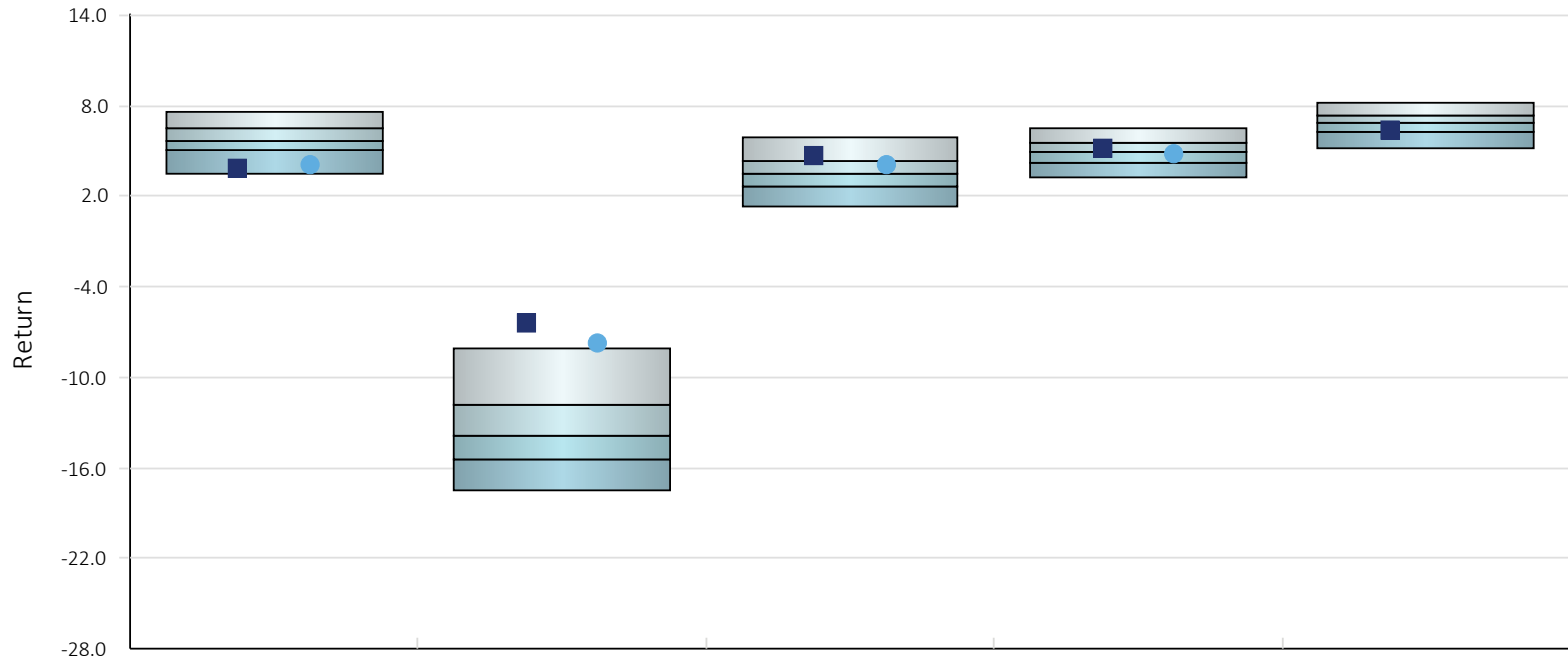
	QTD	1 Year	3 Years	5 Years	10 Years
■ KERS (H) Pension Plan	4.87 (79)	-8.04 (5)	4.78 (17)	5.36 (31)	6.77 (55)
● KERS (H) Pension IPS Index	4.81 (80)	-8.80 (6)	5.02 (12)	5.61 (23)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

SPRS Pension Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



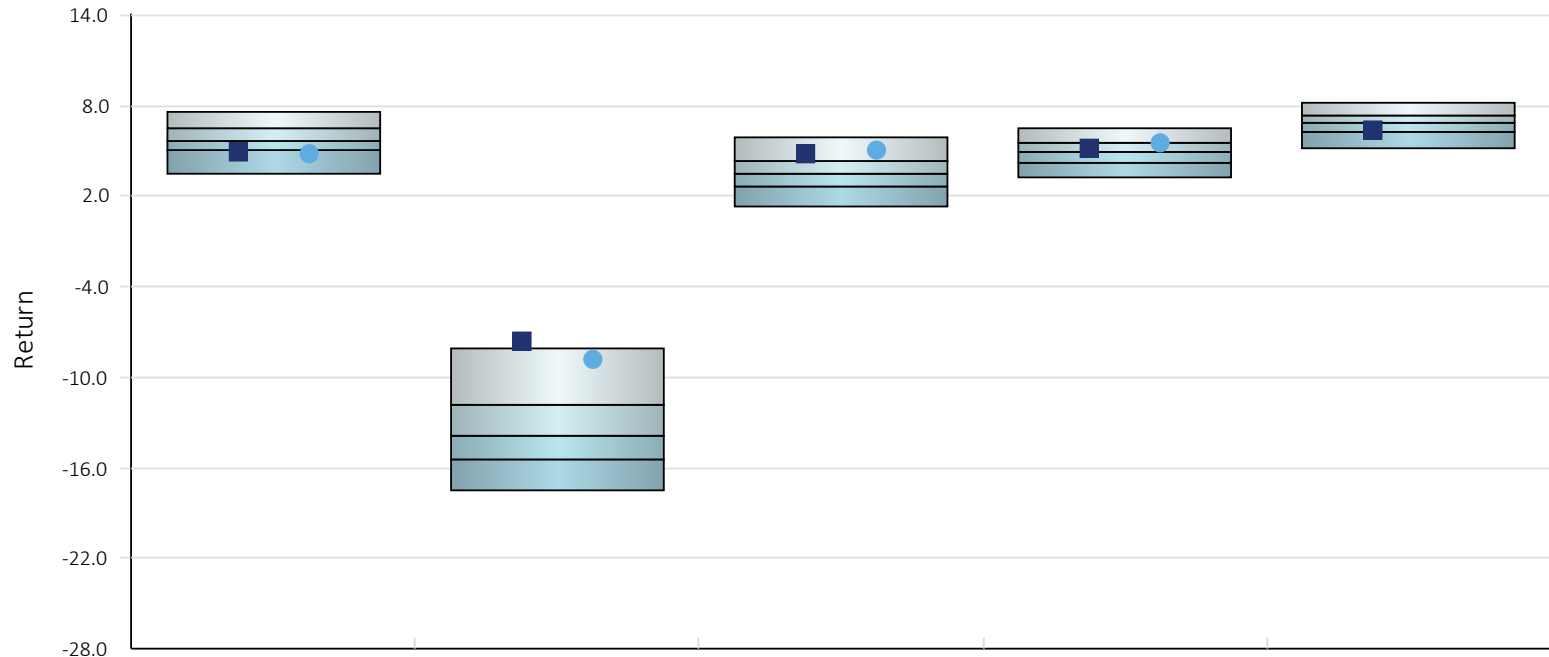
	QTD	1 Year	3 Years	5 Years	10 Years
■ SPRS Pension Plan	3.87 (92)	-6.41 (3)	4.72 (18)	5.18 (38)	6.38 (73)
● SPRS Pension IPS Index	4.08 (92)	-7.67 (5)	4.12 (32)	4.87 (52)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

KERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



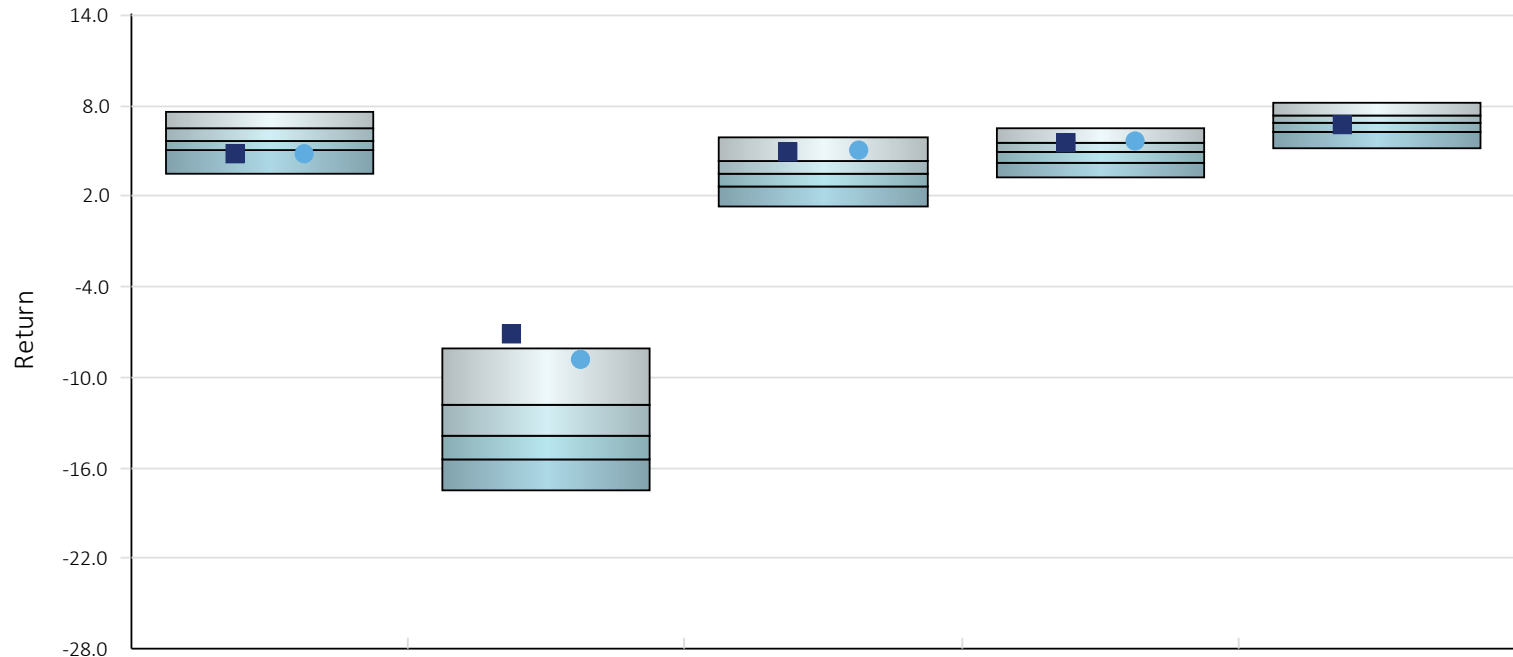
	QTD	1 Year	3 Years	5 Years	10 Years
■ KERS Insurance Plan	4.90 (79)	-7.59 (5)	4.88 (14)	5.15 (39)	6.43 (70)
● KERS Insurance IPS Index	4.81 (80)	-8.80 (6)	5.02 (12)	5.60 (23)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

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

Periods Ended December 31, 2022



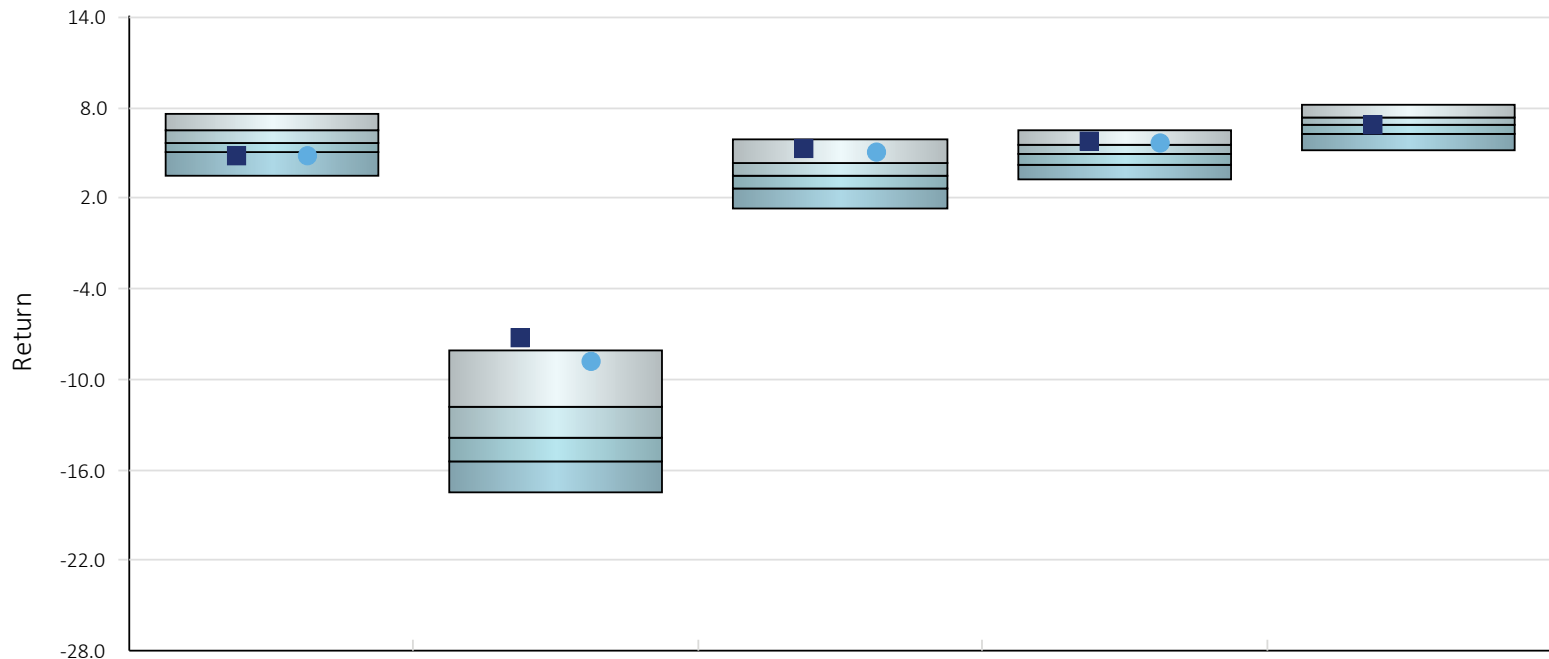
	QTD	1 Year	3 Years	5 Years	10 Years
■ KERS (H) Insurance Plan	4.83 (80)	-7.11 (4)	5.00 (13)	5.49 (26)	6.77 (54)
● KERS (H) Insurance IPS Index	4.81 (80)	-8.80 (6)	5.02 (12)	5.66 (21)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

SPRS Insurance Plan vs All Public Plans-Total Fund

Periods Ended December 31, 2022



	QTD	1 Year	3 Years	5 Years	10 Years
■ SPRS Insurance Plan	4.87 (79)	-7.21 (4)	5.26 (10)	5.73 (17)	6.93 (45)
● SPRS Insurance IPS Index	4.81 (80)	-8.80 (6)	5.02 (12)	5.66 (20)	
5th Percentile	7.55	-8.08	5.92	6.51	8.17
1st Quartile	6.48	-11.88	4.33	5.50	7.40
Median	5.72	-13.92	3.53	4.90	6.84
3rd Quartile	5.02	-15.49	2.71	4.25	6.28
95th Percentile	3.44	-17.47	1.29	3.20	5.19
Population	532	524	511	488	395

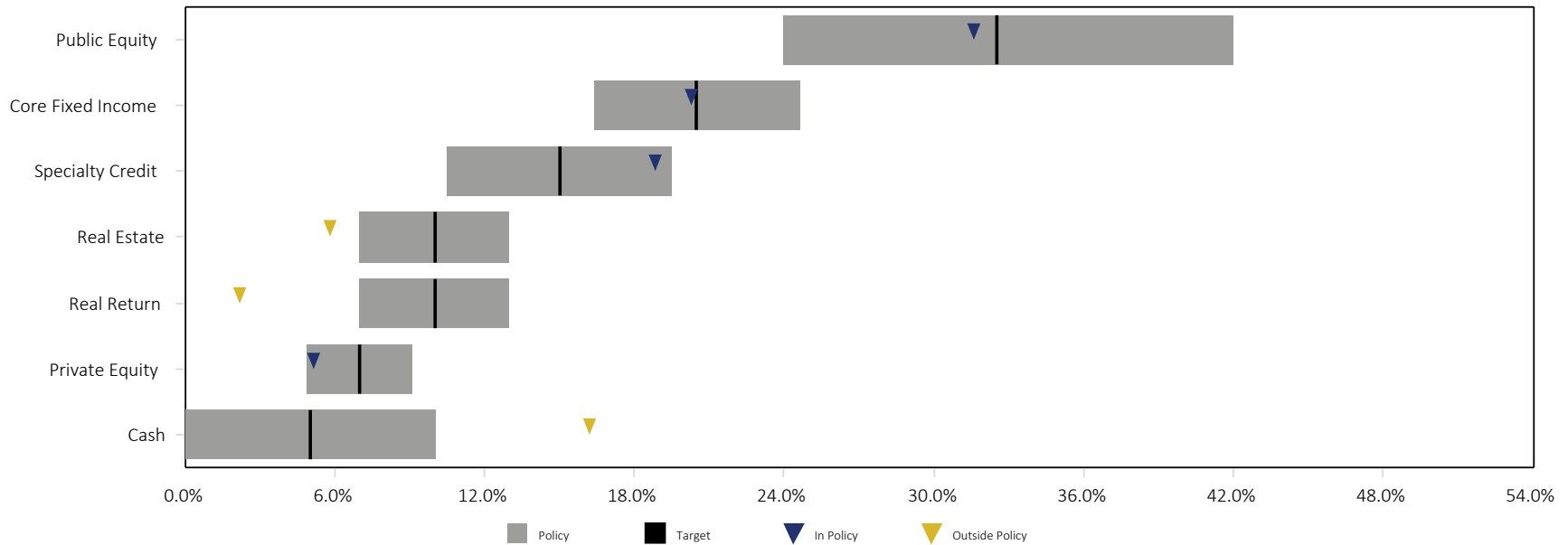
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Asset Allocation Compliance

KERS Pension Plan

Periods Ended As of December 31, 2022

Executive Summary



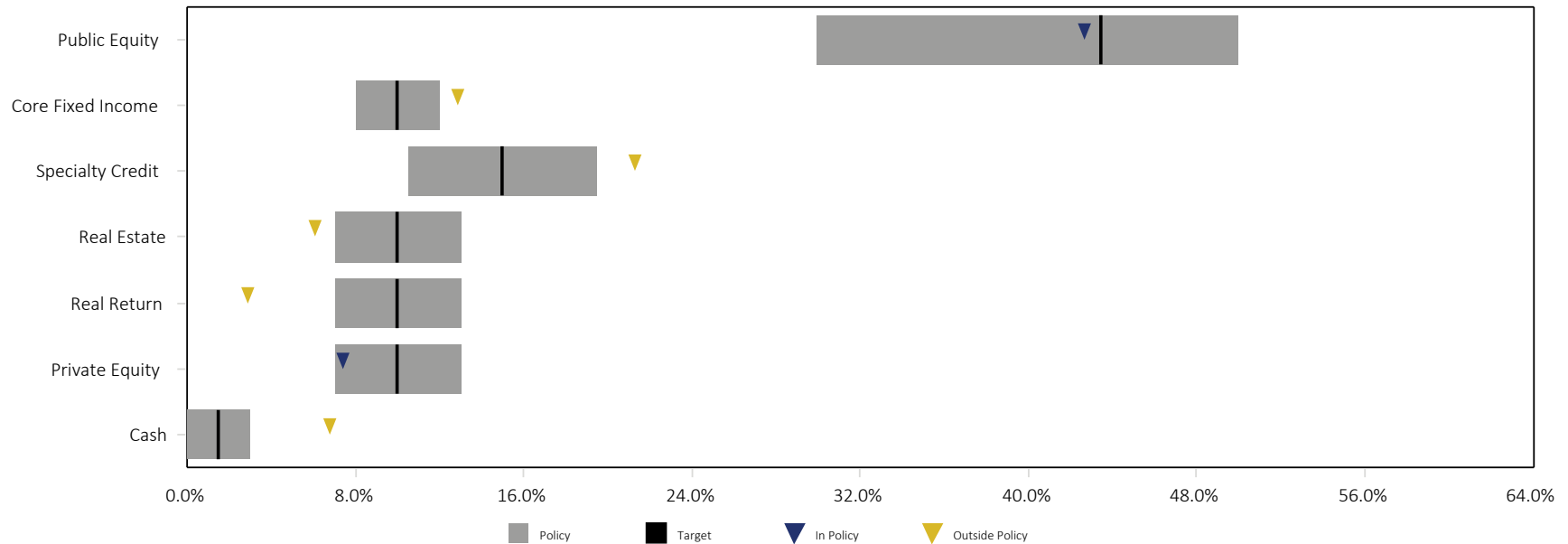
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	1,005,532,940	31.64	24.00	42.00	32.50	27,426,046
Core Fixed Income	645,246,363	20.30	16.40	24.60	20.50	6,312,382
Specialty Credit	597,664,904	18.80	10.50	19.50	15.00	-120,914,603
Real Estate	184,585,622	5.81	7.00	13.00	10.00	133,247,912
Real Return	68,725,411	2.16	7.00	13.00	10.00	249,108,123
Private Equity	162,397,892	5.11	4.90	9.10	7.00	60,085,582
Cash	514,182,209	16.18	0.00	10.00	5.00	-355,265,441
Total Fund	3,178,335,341	100.00			100.00	

Asset Allocation Compliance

KERS (H) Pension Plan

Periods Ended As of December 31, 2022

Executive Summary



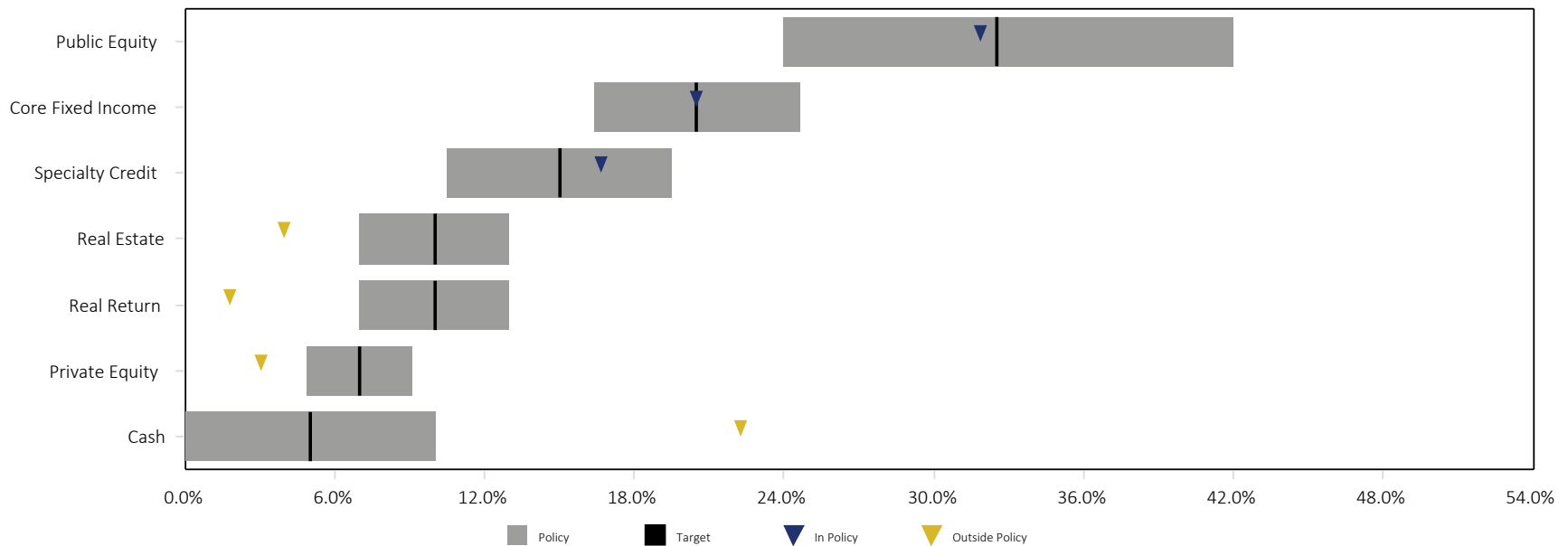
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	356,357,539	42.66	30.00	50.00	43.50	6,982,051
Core Fixed Income	107,272,871	12.84	8.00	12.00	10.00	-23,746,528
Specialty Credit	178,277,966	21.34	10.50	19.50	15.00	-52,988,453
Real Estate	50,756,037	6.08	7.00	13.00	10.00	32,770,306
Real Return	24,066,153	2.88	7.00	13.00	10.00	59,460,190
Private Equity	62,082,995	7.43	7.00	13.00	10.00	21,443,348
Cash	56,449,865	6.76	0.00	3.00	1.50	-43,920,914
Total Fund	835,263,425	100.00			100.00	

Asset Allocation Compliance

SPRS Pension Plan

Periods Ended As of December 31, 2022

Executive Summary



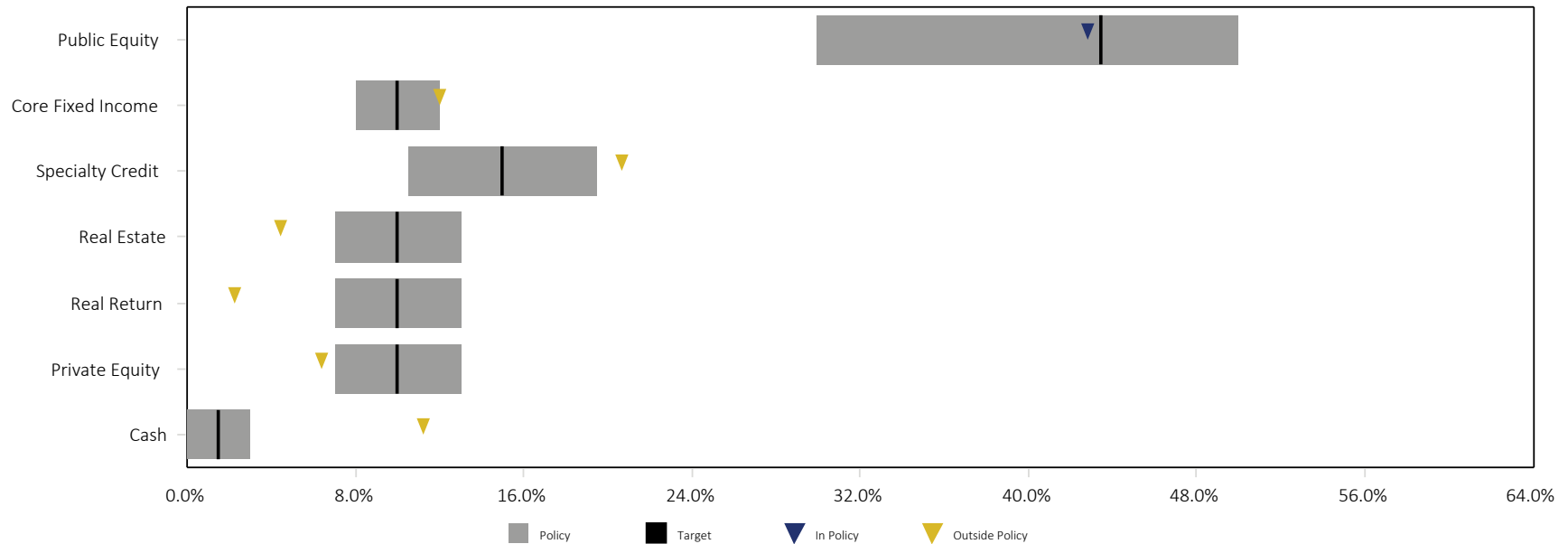
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	177,399,670	31.86	24.00	42.00	32.50	3,535,632
Core Fixed Income	113,943,714	20.47	16.40	24.60	20.50	184,707
Specialty Credit	92,751,055	16.66	10.50	19.50	15.00	-9,242,454
Real Estate	21,965,963	3.95	7.00	13.00	10.00	33,706,438
Real Return	9,982,749	1.79	7.00	13.00	10.00	45,689,652
Private Equity	16,728,373	3.00	4.90	9.10	7.00	22,242,307
Cash	123,952,483	22.26	0.00	10.00	5.00	-96,116,283
Total Fund	556,724,008	100.00			100.00	

Asset Allocation Compliance

KERS Insurance Plan

Periods Ended As of December 31, 2022

Executive Summary



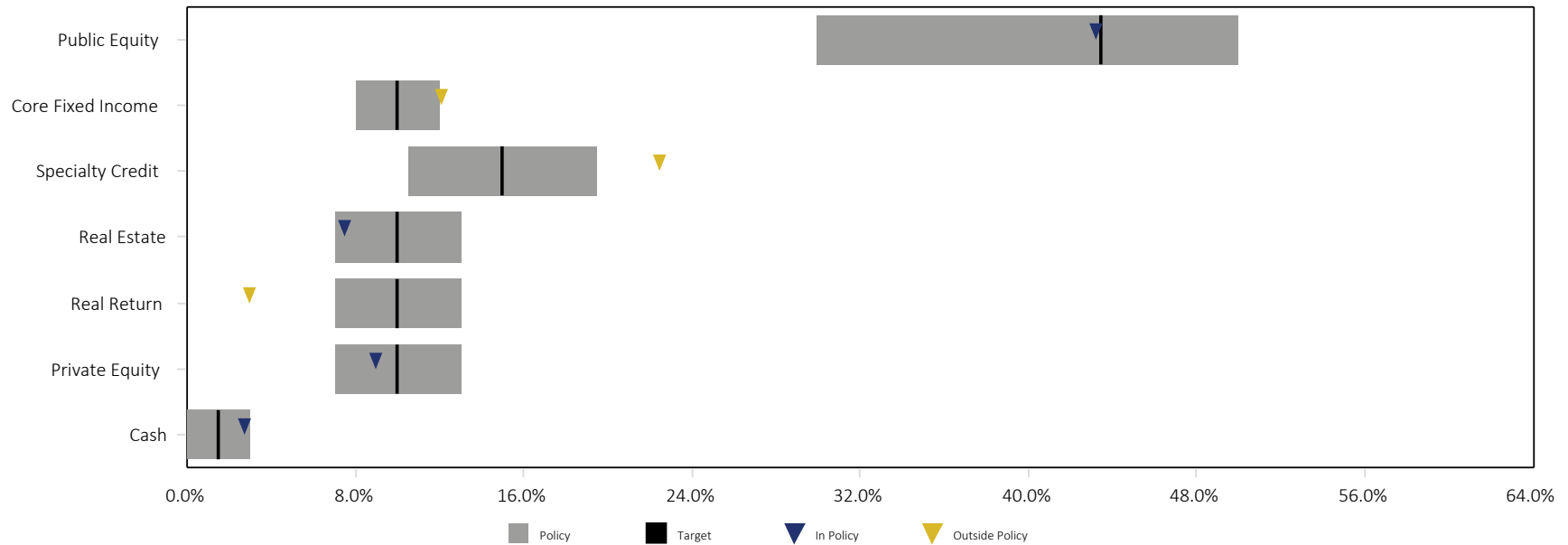
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	571,418,351	42.88	30.00	50.00	43.50	8,294,359
Core Fixed Income	160,651,882	12.05	8.00	12.00	10.00	-27,384,593
Specialty Credit	275,219,068	20.65	10.50	19.50	15.00	-75,318,133
Real Estate	59,651,375	4.48	7.00	13.00	10.00	73,615,915
Real Return	29,995,193	2.25	7.00	13.00	10.00	103,272,097
Private Equity	85,530,831	6.42	7.00	13.00	10.00	47,736,459
Cash	150,206,198	11.27	0.00	3.00	1.50	-130,216,105
Total Fund	1,332,672,898	100.00			100.00	

Asset Allocation Compliance

KERS (H) Insurance Plan

Periods Ended As of December 31, 2022

Executive Summary



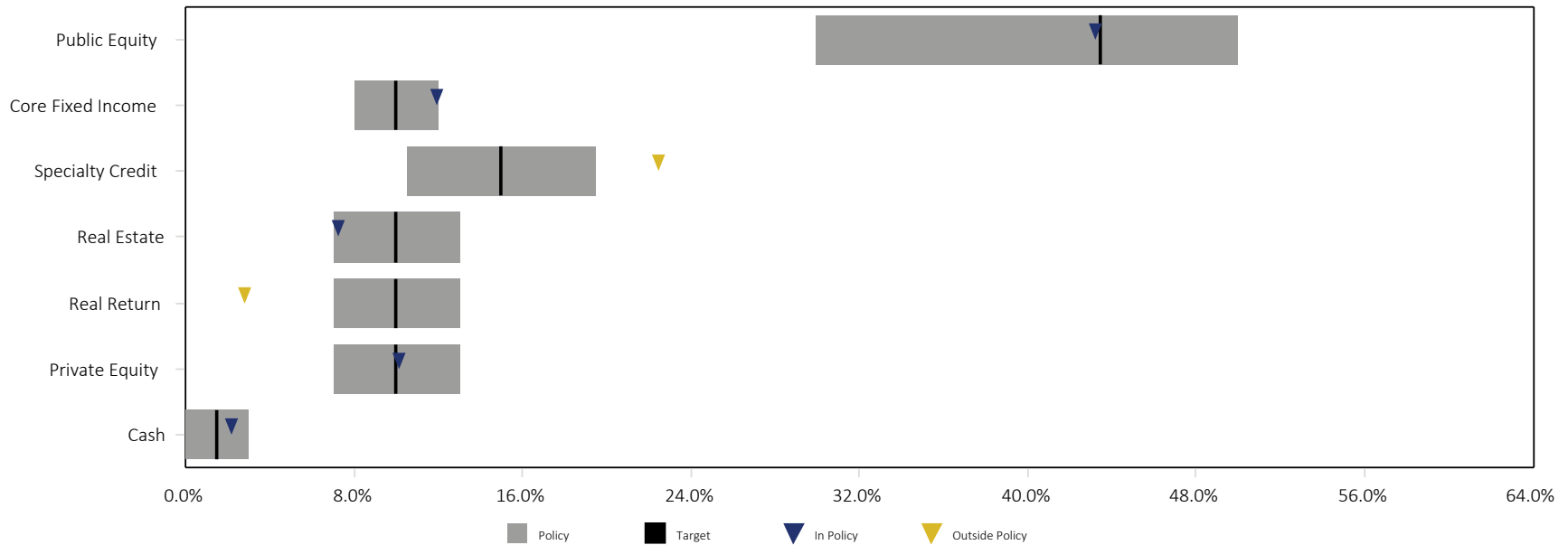
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	252,152,995	43.23	30.00	50.00	43.50	1,593,999
Core Fixed Income	70,377,950	12.06	8.00	12.00	10.00	-12,045,308
Specialty Credit	131,259,118	22.50	10.50	19.50	15.00	-43,760,155
Real Estate	43,772,991	7.50	7.00	13.00	10.00	14,559,652
Real Return	17,322,924	2.97	7.00	13.00	10.00	41,009,718
Private Equity	52,530,454	9.01	7.00	13.00	10.00	5,802,188
Cash	15,909,991	2.73	0.00	3.00	1.50	-7,160,095
Total Fund	583,326,424	100.00			100.00	

Asset Allocation Compliance

SPRS Insurance Plan

Periods Ended As of December 31, 2022

Executive Summary



	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	100,043,812	43.22	30.00	50.00	43.50	656,250
Core Fixed Income	27,617,659	11.93	8.00	12.00	10.00	-4,468,220
Specialty Credit	52,113,157	22.51	10.50	19.50	15.00	-17,388,998
Real Estate	16,742,992	7.23	7.00	13.00	10.00	6,406,448
Real Return	6,470,027	2.79	7.00	13.00	10.00	16,679,413
Private Equity	23,430,873	10.12	7.00	13.00	10.00	-281,433
Cash	5,075,876	2.19	0.00	3.00	1.50	-1,603,460
Total Fund	231,494,396	100.00			100.00	

Asset Allocation & Performance

Total Fund

Periods Ended December 31, 2022

	Market Value \$	Performance (%) net of fees									
		QTD	FYTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
KERS Pension Plan	3,178,335,341	3.56	1.16	-7.25	4.67	5.14	6.43	6.75	7.46	8.65	4/1/1984
KERS Pension IPS Index		4.08	0.34	-7.67	4.12	4.93					
Value Added		-0.52	0.82	0.42	0.55	0.21					
KERS Pension Attribution Index		4.20	1.28	-8.05	4.02						
Value Added		-0.64	-0.12	0.80	0.65						
Assumed Rate 5.25%		1.29	2.59	5.25	5.25	5.25					
Value Added		2.27	-1.43	-12.50	-0.58	-0.11					
KERS Insurance Plan	1,332,672,898	4.90	2.48	-7.59	4.88	5.15	6.43	6.64	6.66	7.16	4/1/1987
KERS Insurance IPS Index		4.81	0.27	-8.80	5.02	5.60					
Value Added		0.09	2.21	1.21	-0.14	-0.45					
KERS Insurance Attribution Index		5.14	2.77	-6.52	5.47						
Value Added		-0.24	-0.29	-1.07	-0.59						
Assumed Rate 6.25%		1.53	3.08	6.25	6.25	6.25					
Value Added		3.37	-0.60	-13.84	-1.37	-1.10					
KERS (H) Pension Plan	835,263,425	4.87	2.14	-8.04	4.78	5.36	6.77	6.92	7.57	8.74	4/1/1984
KERS (H) Pension IPS Index		4.81	0.27	-8.80	5.02	5.61					
Value Added		0.06	1.87	0.76	-0.24	-0.25					
KERS (H) Pension Attribution Index		5.14	2.18	-7.68	5.05						
Value Added		-0.27	-0.04	-0.36	-0.27						
Assumed Rate 6.25%		1.53	3.08	6.25	6.25	6.25					
Value Added		3.34	-0.94	-14.29	-1.47	-0.89					

Asset Allocation & Performance

Total Fund

Periods Ended December 31, 2022

	Market Value \$	Performance (%) net of fees									
		QTD	FYTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
KERS (H) Insurance Plan	583,326,424	4.83	2.16	-7.11	5.00	5.49	6.77	6.81	6.77	7.25	4/1/1987
KERS (H) Insurance IPS Index		4.81	0.27	-8.80	5.02	5.66					
Value Added		0.02	1.89	1.69	-0.02	-0.17					
KERS (H) Insurance Attribution Index		5.13	2.26	-7.41	4.98						
Value Added		-0.30	-0.10	0.30	0.02						
Assumed Rate 6.25%		1.53	3.08	6.25	6.25	6.25					
Value Added		3.30	-0.92	-13.36	-1.25	-0.76					
SPRS Pension Plan	556,724,008	3.87	1.72	-6.41	4.72	5.18	6.38	6.73	7.44	8.64	4/1/1984
SPRS Pension IPS Index		4.08	0.34	-7.67	4.12	4.87					
Value Added		-0.21	1.38	1.26	0.60	0.31					
SPRS Pension Attribution Index		4.27	1.52	-7.50	4.03						
Value Added		-0.40	0.20	1.09	0.69						
Assumed Rate 5.25%		1.29	2.59	5.25	5.25	5.25					
Value Added		2.58	-0.87	-11.66	-0.53	-0.07					
SPRS Insurance Plan	231,494,396	4.87	2.13	-7.21	5.26	5.73	6.93	6.89	6.83	7.30	4/1/1987
SPRS Insurance IPS Index		4.81	0.27	-8.80	5.02	5.66					
Value Added		0.06	1.86	1.59	0.24	0.07					
SPRS Insurance Attribution Index		5.19	2.31	-7.39	5.02						
Value Added		-0.32	-0.18	0.18	0.24						
Assumed Rate 6.25%		1.53	3.08	6.25	6.25	6.25					
Value Added		3.34	-0.95	-13.46	-0.99	-0.52					

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							Inception Date
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	
Public Equity	-3.51	10.54	3.66	-18.46			-14.04	12/1/2021
Public Equity Policy Index	-3.24	10.73	2.89	-17.76			-13.41	
Value Added	-0.27	-0.19	0.77	-0.70			-0.63	
US Equity Composite	-5.43	7.53	2.97	-18.24	7.07	8.55	11.05	4/1/1984
Russell 3000 Index	-5.86	7.18	2.40	-19.21	7.07	8.79	10.94	
Value Added	0.43	0.35	0.57	0.97	0.00	-0.24	0.11	
S&P 500 Index	-5.72	7.55	2.28	-17.96	8.01	9.70	7.92	7/1/2001
S&P 500 Index	-5.76	7.56	2.31	-18.11	7.66	9.42	7.54	
Value Added	0.04	-0.01	-0.03	0.15	0.35	0.28	0.38	
Scientific Beta	-4.02	11.05	4.99	-12.90	6.22	7.73	9.67	7/1/2016
S&P 500 Index	-5.76	7.56	2.31	-18.11	7.66	9.42	11.77	
Value Added	1.74	3.49	2.68	5.21	-1.44	-1.69	-2.10	
River Road FAV	-3.45	11.84	4.71	-16.64	-1.16	5.08	8.44	7/1/2016
Russell 3000 Value Index	-4.18	12.18	5.95	-7.98	5.88	6.50	8.77	
Value Added	0.73	-0.34	-1.24	-8.66	-7.04	-1.42	-0.33	
Westfield Capital	-6.93	0.98	-1.85	-27.94	6.31	10.72	11.91	7/1/2011
Russell 3000 Growth Index	-7.58	2.31	-1.13	-28.97	7.32	10.45	12.79	
Value Added	0.65	-1.33	-0.72	1.03	-1.01	0.27	-0.88	
Internal US Mid Cap	-5.38	11.04	8.46	-12.76	7.74	7.34	9.10	8/1/2014
S&P MidCap 400 Index	-5.54	10.78	8.05	-13.06	7.23	6.71	8.75	
Value Added	0.16	0.26	0.41	0.30	0.51	0.63	0.35	
NTGI Structured	-5.75	9.25	5.74	-15.78	5.83	6.48	9.56	10/1/1999
Russell 2000 Index	-6.49	6.23	3.91	-20.44	3.10	4.13	7.70	
Value Added	0.74	3.02	1.83	4.66	2.73	2.35	1.86	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							Inception Date
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	
Next Century Growth	-3.09	-4.52	4.52	-29.39	22.73		24.40	11/1/2019
Russell Microcap Growth Index	-4.21	2.69	4.90	-29.76	-0.24		4.25	
Value Added	1.12	-7.21	-0.38	0.37	22.97		20.15	
Non-US Equity Composite	-0.70	15.11	4.62	-18.57	0.30	1.64	3.17	7/1/2000
MSCI ACWI ex US IMI (10/17)	-0.62	14.15	3.09	-16.58	0.20	0.85	3.18	
Value Added	-0.08	0.96	1.53	-1.99	0.10	0.79	-0.01	
BlackRock World Ex US	-0.48	16.34	5.75	-13.79	1.71	1.81	5.84	7/1/2009
MSCI World ex US (11/19)	-0.48	16.18	5.50	-14.29	1.27	1.45	5.57	
Value Added	0.00	0.16	0.25	0.50	0.44	0.36	0.27	
American Century	-1.05	13.87	5.03	-26.25	2.30	4.62	4.92	7/1/2014
MSCI ACWI ex US IMI (10/17)	-0.62	14.15	3.09	-16.58	0.20	0.85	2.28	
Value Added	-0.43	-0.28	1.94	-9.67	2.10	3.77	2.64	
Franklin Templeton	-3.40	12.10	3.80	-30.93	-4.75	-0.06	3.21	7/1/2014
MSCI ACWI ex US IMI (10/17)	-0.62	14.15	3.09	-16.58	0.20	0.85	2.28	
Value Added	-2.78	-2.05	0.71	-14.35	-4.95	-0.91	0.93	
Lazard Asset Mgmt	-0.78	13.96	2.86	-15.73	-0.32	1.29	2.89	7/1/2014
MSCI ACWI ex US IMI (10/17)	-0.62	14.15	3.09	-16.58	0.20	0.85	2.28	
Value Added	-0.16	-0.19	-0.23	0.85	-0.52	0.44	0.61	
LSV Asset Mgmt	1.36	19.70	6.57	-9.81	0.22	1.00	2.41	7/1/2014
MSCI ACWI ex US IMI (10/17)	-0.62	14.15	3.09	-16.58	0.20	0.85	2.28	
Value Added	1.98	5.55	3.48	6.77	0.02	0.15	0.13	
Axiom	-0.60	9.28	0.88	-33.07			-28.08	12/1/2021
MSCI AC World ex USA Small Cap (Net)	0.17	13.31	3.83	-19.97			-15.42	
Value Added	-0.77	-4.03	-2.95	-13.10			-12.66	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
JP Morgan Emerging Markets	-1.47	12.16	0.26	-27.56	-1.99		-0.13	11/1/2019
MSCI Emerging Markets IMI Index	-1.30	9.60	-2.04	-19.46	-1.45		0.82	
Value Added	-0.17	2.56	2.30	-8.10	-0.54		-0.95	
Pzena Emerging Markets	-0.29	13.19	4.43	-7.10	2.38		4.32	11/1/2019
MSCI Emerging Markets (Net)	-1.41	9.70	-2.99	-20.09	-2.69		-0.36	
Value Added	1.12	3.49	7.42	12.99	5.07		4.68	
Private Equity Composite	-1.97	-4.17	-5.99	-0.21	15.57	14.23	11.88	7/1/2002
Russell 3000 +3% 1 Quarter Lag	-9.05	-3.76	-19.24	-15.16	10.93	11.87	11.16	
Value Added	7.08	-0.41	13.25	14.95	4.64	2.36	0.72	
Core Fixed Composite	0.38	1.44	-0.56	-5.87	0.11		2.04	10/1/2018
Blmbg. U.S. Aggregate Index	-0.45	1.87	-2.97	-13.01	-2.71		0.41	
Value Added	0.83	-0.43	2.41	7.14	2.82		1.63	
Loomis Sayles Intrmd	0.08	1.82	-2.13	-9.58	-1.39		0.42	2/1/2019
Blmbg. U.S. Intermediate Aggregate Index	-0.26	1.72	-2.19	-9.51	-1.93		-0.06	
Value Added	0.34	0.10	0.06	-0.07	0.54		0.48	
Lord Abbett	0.51	1.28	0.08	-4.16	-0.10		1.42	10/1/2018
ICE BofA 1-3 Year U.S. Corporate Index	0.30	1.39	0.08	-4.07	-0.03		1.42	
Value Added	0.21	-0.11	0.00	-0.09	-0.07		0.00	
NISA	-0.11	2.01	-2.82	-12.64	-2.21	0.35	2.82	2/1/2009
Blmbg. U.S. Aggregate Index	-0.45	1.87	-2.97	-13.01	-2.71	0.02	2.56	
Value Added	0.34	0.14	0.15	0.37	0.50	0.33	0.26	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
High Yield / Specialty Credit Composite	0.53	1.98	2.31	0.01	4.53		5.16	10/1/2018
Policy Index	-0.09	3.46	3.86	-5.94	1.34		2.57	
Value Added	0.62	-1.48	-1.55	5.95	3.19		2.59	
Adams St SPC II A	2.67	2.67	3.24	17.87			15.12	6/1/2020
Adams St SPC II B	1.80	1.80	4.13	1.03			9.66	6/1/2020
Arrowmark	1.07	3.69	5.45	8.73	8.81		9.20	6/1/2018
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55		3.16	
Value Added	0.63	0.95	1.31	9.33	6.26		6.04	
Blue Torch	3.38	3.38	6.35	12.71			9.51	8/1/2020
BSP Coinvestment	0.56	0.56	2.26	5.61	6.65		6.12	10/1/2019
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55		2.89	
Value Added	0.12	-2.18	-1.88	6.21	4.10		3.23	
BSP Private Credit	1.80	1.80	0.77	4.32	7.21		5.65	2/1/2018
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55		3.16	
Value Added	1.36	-0.94	-3.37	4.92	4.66		2.49	
Capital Springs	1.41	1.41	0.86	5.93			8.26	2/1/2020
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60			2.43	
Value Added	0.97	-1.33	-3.28	6.53			5.83	
Cerberus Capital Mgmt	0.87	2.44	4.34	10.42	11.88	10.88	9.70	9/1/2014
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55	3.31	3.44	
Value Added	0.43	-0.30	0.20	11.02	9.33	7.57	6.26	
Columbia	-0.77	4.22	4.12	-9.83	0.01	2.68	5.25	11/1/2011
Blmbg. U.S. Corp: High Yield Index	-0.62	4.17	3.50	-11.19	0.05	2.31	5.01	
Value Added	-0.15	0.05	0.62	1.36	-0.04	0.37	0.24	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Manulife Asset Mgmt	0.10	4.04	2.39	-8.45	1.26	2.35	3.46	12/1/2011
Policy Index	-0.34	2.24	-2.31	-12.99	-2.54	0.18	0.83	
Value Added	0.44	1.80	4.70	4.54	3.80	2.17	2.63	
Marathon Bluegrass	-0.40	-1.99	-4.98	-5.33	4.70	4.55	5.65	1/1/2016
Blmbg. U.S. Corp: High Yield Index	-0.62	4.17	3.50	-11.19	0.05	2.31	5.05	
Value Added	0.22	-6.16	-8.48	5.86	4.65	2.24	0.60	
Shenkman Capital	0.22	3.09	3.99	-0.99	2.09	3.23	4.11	10/1/2010
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55	3.31	4.16	
Value Added	-0.22	0.35	-0.15	-0.39	-0.46	-0.08	-0.05	
Waterfall	-0.63	-0.95	2.97	0.84	2.60	4.80	9.29	2/1/2010
Policy Index	-0.10	2.42	2.86	-6.65	0.59	2.11	4.15	
Value Added	-0.53	-3.37	0.11	7.49	2.01	2.69	5.14	
White Oak Yield Spectrum	1.28	1.28	2.47	5.78	5.81		5.33	3/1/2018
Morningstar LSTA US Leveraged Loan	0.44	2.74	4.14	-0.60	2.55		3.18	
Value Added	0.84	-1.46	-1.67	6.38	3.26		2.15	
H/2 Credit Partner	0.00	0.00	0.00	5.07	2.04	1.36	4.22	7/1/2011
Mesa West Core Lend	1.88	1.88	2.96	5.88	5.56	6.55	6.56	5/1/2013
Mesa West IV	0.71	0.71	-1.66	1.83	6.16	6.74	5.83	3/1/2017
Cash Composite	0.30	0.86	1.42	1.62	0.78	1.41	3.30	1/1/1988
FTSE 3 Month T-Bill	0.34	0.87	1.33	1.50	0.71	1.25	2.89	
Value Added	-0.04	-0.01	0.09	0.12	0.07	0.16	0.41	

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Real Estate Composite	-0.08	1.19	3.94	18.81	14.63	12.51	6.84	7/1/1984
NCREIF ODCE NOF 1 Quarter Lag	0.31	0.31	4.87	20.96	11.38	9.26		
Value Added	-0.39	0.88	-0.93	-2.15	3.25	3.25		
Baring	3.07	8.33	-1.53	10.19	14.96		18.87	1/1/2019
Barings Euro RE II	-0.81	4.37	-1.14	-0.50			-15.14	12/1/2020
Divcowest IV	-0.83	-0.83	-0.20	20.04	13.14	16.10	18.58	3/1/2014
Fundamental Partners III	-1.07	-1.07	-0.18	14.35	18.28	15.40	14.17	5/1/2017
Greenfield Acq VI	-2.70	-2.70	-14.94	-25.21	-43.18	-38.48	-17.05	12/1/2012
Greenfield Acq VII	8.31	8.31	13.16	33.56	22.84	19.62	16.18	7/1/2014
Harrison Street	0.00	2.14	8.46	14.23	8.61	8.06	8.47	5/1/2012
Lubert Adler VII	0.53	0.53	0.18	10.14	-2.57	1.91	-0.55	7/1/2014
Lubert Adler VII B	2.07	2.07	5.19	20.20	25.18	18.12	15.46	7/1/2017
Patron Capital	-5.62	-0.80	-4.40	1.55	5.19	10.10	4.23	8/1/2016
Prologis Targeted US	0.00	0.06	5.86	34.64	26.37	22.33	19.34	10/1/2014
Rubenstein PF II	-5.18	-5.18	-11.02	-7.59	-5.01	0.52	6.58	7/1/2013
Stockbridge Sm/Mkts	0.00	0.64	0.64	21.11	13.36	11.22	10.49	5/1/2014
Walton St RE VI	2.71	2.71	6.05	17.70	4.92	4.21	-11.58	5/1/2009
Walton St RE VII	-2.16	-2.16	3.95	4.50	-1.16	-0.66	5.89	7/1/2013

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Real Return Composite	-1.33	4.90	7.72	6.76	6.59	5.39	4.63	7/1/2011
US CPI + 3%	0.17	1.20	2.45	9.61	8.05	6.88	5.56	
Value Added	-1.50	3.70	5.27	-2.85	-1.46	-1.49	-0.93	
Putnam	0.21	0.24	-0.48	-6.11			8.86	7/1/2020
Policy Index	-3.11	6.24	1.14	-15.86			3.93	
Value Added	3.32	-6.00	-1.62	9.75			4.93	
Tortoise Capital	-4.81	10.57	19.52	32.84	10.06	4.62	9.28	8/1/2009
Alerian MLP Index	-4.70	10.11	18.97	30.92	9.38	4.08	6.52	
Value Added	-0.11	0.46	0.55	1.92	0.68	0.54	2.76	
Amerra AGRI Fund II	3.67	3.67	8.94	21.47	10.42	8.07	6.63	12/1/2012
Amerra AGRI Holdings	-2.33	-2.33	-3.68	-2.63	-2.57	-2.14	-1.67	8/1/2015
BTG Pactual	7.28	7.28	6.66	17.91	6.79	3.05	-2.00	12/1/2014
IFM Infrastructure	1.56	1.56	2.29	4.48	4.17		4.40	7/1/2019
Magnetar MTP EOF II	3.08	3.08	7.97	204.11	71.24	42.04	26.95	8/1/2015
Oberland Capital	1.74	1.74	4.30	8.40	14.07		13.38	8/1/2018
Taurus Mine Finance	8.31	8.31	27.09	82.96	18.14	16.49	15.61	4/1/2015
TPF II	-1.27	-1.27	-2.73	32.93	5.40	5.72	-0.52	10/1/2008
Blackstone Strat Opp	-0.13	-3.00	-2.61	0.84	-4.46	-3.01	-2.47	8/1/2017
Luxor Capital	-0.45	3.45	3.33	3.77	-2.16	0.13	-0.02	4/1/2014
Myriad Opportunities	0.00	-6.78	-7.05	-47.05	-23.31	-16.31	-10.00	5/1/2016
Pine River	-1.26	-1.18	3.88	-9.92	-0.90	4.39	2.61	5/1/2014
PRISMA Capital	0.20	0.20	-0.58	-0.81	-0.10	0.69	2.36	9/1/2011

Asset Allocation & Performance

Pension Plan Accounts

Periods Ended December 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
SRS Partners US	0.00	0.00	0.00	0.00	5.94	6.28	8.32	8/1/2017
Tricadia Select	0.00	0.00	0.00	0.00	0.00	-4.16	-4.68	9/1/2017

Kentucky Public Pensions Authority

KERS, KERS-Hazardous, & SPRS Unit Holdings

Quarter Ending: December 31, 2022

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority						
Pension: KERS, KERS-H, & SPRS Unit Holdings						
Quarter Ended December 31, 2022						
UNIT OF PARTICIPATION	KERS		KERS-H		SPRS	
	Shares/Par	Base Market Value	Shares/Par	Base Market Value	Shares/Par	Base Market Value
Grand Total	20,950,339.028	3,181,076,552.72	4,960,890.426	835,725,513.41	3,868,434.602	556,940,139.93
KRS ABSOLUTE RETURN UNIT	149,641.052	18,137,376.44	39,042.229	4,732,148.00	16,199.058	1,963,421.19
KRS ADAMS STREET A1 UNIT	174,327.349	24,274,060.22	51,841.053	7,218,562.38	21,617.485	3,010,107.91
KRS ADAMS STREET B1 UNIT	178,148.240	22,040,633.15	52,977.307	6,554,391.94	22,091.295	2,733,151.50
KRS AMERRA AGRI UNIT	-	-	28,023.378	2,531,460.63	14,178.361	1,280,786.45
KRS AMERRA UNIT	-	-	7,456.869	1,400,094.42	3,772.782	708,373.85
KRS ARROWMARK UNIT	405,599.625	80,347,474.71	125,747.662	24,910,050.38	50,099.456	9,924,478.54
KRS BLACKROCK UNIT	688,147.351	105,588,319.34	243,181.056	37,313,344.24	98,831.528	15,164,564.57
KRS BLUE TORCH UNIT	157,476.048	23,194,435.78	47,314.490	6,968,887.74	19,521.195	2,875,250.61
KRS BNYM CUSTODY FEE UNIT	-120,213.111	-120,213.11	-31,587.238	-31,587.24	-21,141.370	-21,141.37
KRS BTG UNIT	-	-	17,210.185	1,391,243.97	7,965.109	643,886.74
KRS CASH UNIT	5,255,286.759	514,371,318.47	577,196.855	56,494,254.44	1,267,402.048	124,049,417.73
KRS DIVCOWEST IV UNIT	-	-	151.575	83,648.79	54.514	30,084.31
KRS DOMESTIC EQUITY UNIT	662,460.554	157,004,137.70	233,038.157	55,230,390.20	110,192.981	26,115,900.57
KRS GLOBAL FIXED UNIT	272,116.345	35,020,968.96	133,310.820	17,156,904.30	55,825.490	7,184,657.55
KRS GREENFIELD UNIT	-	-	265.191	3,470.17	95.376	1,248.05
KRS GREENFIELD VII UNIT	-	-	682.060	209,082.93	245.303	75,196.71
KRS HARRISON UNIT	229,149.436	52,536,342.56	56,783.798	13,018,635.85	27,092.529	6,211,415.61
KRS IFM INFRAST DEBT UNIT	76,151.743	10,613,978.92	23,454.145	3,269,023.02	9,091.447	1,267,159.79
KRS INTERNAL EQUITY UNIT	1,544,679.289	432,084,808.60	549,308.650	153,655,146.79	276,759.695	77,416,497.19
KRS INTERNATIONAL EQUITY UNIT	1,992,500.044	310,900,375.99	706,087.036	110,174,514.49	376,308.850	58,717,470.70
KRS L-A VII UNIT	-	-	13,032.050	1,240,495.64	4,685.431	445,997.12
KRS LIQUID CORE FIXED UNIT	5,249,708.742	645,208,460.32	872,769.470	107,266,569.18	927,043.292	113,937,020.98
KRS LIQUID CREDIT FIXED UNIT	10,020.517	0.76	3,470.982	0.26	1,638.453	0.12
KRS LIQUID HY FI UNIT	873,365.873	131,113,280.50	191,184.378	28,701,385.93	141,723.481	21,276,112.44
KRS MAGNETAR MTP UNIT	159.328	81,966.58	28.401	14,610.95	14.098	7,252.74
KRS MESA WEST CORE UNIT	30,939.768	5,710,393.52	18,362.356	3,389,045.41	5,427.457	1,001,717.77
KRS MESA WEST IV UNIT	34,892.283	3,417,232.64	9,544.948	934,800.05	4,034.654	395,140.42
KRS MULTI SECTOR CREDIT FI	787,166.869	127,729,984.65	132,990.502	21,579,763.39	71,068.687	11,531,992.33
KRS OBERLAND UNIT	-	-	5,446.564	389,106.97	-	-
KRS PE 2010 UNIT	491,486.841	149,699,295.84	62,155.282	18,931,538.29	32,350.617	9,853,497.96
KRS PE 2011 UNIT	-	-	15,471.114	4,677,934.74	-	-
KRS PE 2012 A UNIT	-	-	803.733	511,030.81	120.702	76,744.94
KRS PE 2012 B UNIT	-	-	5,071.521	743,202.65	761.621	111,611.24
KRS PE 2013 UNIT	0.008	2.92	24,239.167	8,845,025.23	7,641.327	2,788,368.52
KRS PE 2014 UNIT	-	-	20,674.295	3,397,481.97	6,517.509	1,071,045.92
KRS PE 2015 UNIT	-	-	14,973.763	3,756,931.95	4,720.447	1,184,364.82
KRS PE 2016 UNIT	-	-	29,994.724	7,817,365.31	-	-
KRS PE 2017 UNIT	-	-	15,510.882	2,397,086.50	-	-
KRS PE 2018 UNIT	-	-	18,114.114	3,267,154.35	-	-
KRS PE 2019 UNIT	-	-	17,964.870	4,017,097.78	-	-
KRS PE 2021 UNIT	141,596.042	17,734,533.56	40,709.715	5,098,785.23	16,290.438	2,040,334.71
KRS PERIMETER PARK UNIT	19,205.499	1,879,916.69	15,740.350	1,540,733.03	3,731.088	365,214.91
KRS POST-2015 REAL ESTATE UNIT	220,507.026	34,069,052.39	60,320.726	9,319,748.27	25,497.601	3,939,462.25
KRS PRIVATE CREDIT FI UNIT	399,294.039	74,905,369.19	143,418.483	26,904,519.90	37,067.321	6,953,625.88
KRS PROLOGIS UNIT	246,066.872	63,820,709.54	67,312.722	17,458,447.96	28,453.125	7,379,695.66
KRS REAL RETURN UNIT	231,710.554	39,670,883.12	58,037.817	9,936,584.31	23,175.383	3,967,829.23
KRS RUBENSTEIN PF II UNIT	-	-	4,735.076	912,716.87	1,702.973	328,259.18
KRS SHENKMAN UNIT	152,606.993	23,528,196.27	126,254.954	19,465,368.39	58,716.342	9,052,597.08
KRS STOCKBRIDGE UNIT	123,246.396	29,058,175.24	24,535.920	5,784,908.01	11,887.258	2,802,694.74
KRS TAURUS UNIT	-	-	761.634	215,523.71	240.104	67,943.53
KRS TPF II UNIT	255.889	27,500.86	39.538	4,249.22	18.128	1,948.25
KRS WALTON VI UNIT	22,864.485	3,946,871.24	4,997.614	862,688.97	1,657.353	286,092.55
KRS WALTON VII UNIT	-	-	3,196.765	561,655.78	1,149.716	201,999.41
KRS WATERFALL UNIT	249,774.280	43,480,709.16	77,540.718	13,498,288.96	94,896.864	16,519,647.03

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority						
Insurance: KERS INS, KERS-H INS, & SPRS INS Unit Holdings						
Quarter Ended December 31, 2022						
UNIT OF PARTICIPATION	KERS INS		KERS-H INS		SPRS INS	
	Shares/Par	Base Market Value	Shares/Par	Base Market Value	Shares/Par	Base Market Value
Grand Total	10,307,150.532	1,333,435,825.11	4,865,856.526	583,875,689.13	1,794,051.529	231,714,467.92
KR3 ARROWMARK UNIT	198,111.345	39,666,697.65	123,155.934	24,658,805.87	45,477.526	9,105,704.04
KRS INS PE 2014 UNIT	-	-	13,393.882	2,204,849.46	8,335.534	1,372,163.62
KRS INS ABSOLUTE RETURN UNIT	53,389.102	6,474,080.02	35,451.472	4,298,923.52	13,294.494	1,612,119.60
KRS INS ADAMS STREET A1 UNIT	72,427.642	10,085,124.22	38,963.478	5,425,435.71	15,050.855	2,095,743.26
KRS INS ADAMS STREET B1 UNIT	74,015.103	9,157,203.54	39,817.475	4,926,247.59	15,380.742	1,902,916.83
KRS INS AMERRA AGRI UNIT	32,461.227	2,932,620.03	26,322.951	2,378,074.41	9,893.719	893,820.76
KRS INS AMERRA UNIT	6,443.202	1,214,834.26	5,224.818	985,113.91	1,963.795	370,263.95
KRS INS BLACKROCK UNIT	735,968.976	45,083,495.17	408,777.073	25,040,592.47	154,203.321	9,446,083.88
KRS INS BLUE TORCH UNIT	66,616.664	9,811,879.11	35,017.303	5,157,651.60	13,564.966	1,997,965.65
KRS INS BNYM CUSTODY FEE UNIT	-71,583.946	-71,583.95	-31,659.436	-31,659.44	-12,533.039	-12,533.04
KRS INS BTG UNIT	20,001.053	1,616,853.32	13,560.021	1,096,170.54	5,144.451	415,869.24
KRS INS CASH UNIT	1,452,557.440	150,244,742.81	154,152.856	15,944,743.78	49,193.853	5,088,348.03
KRS INS DB PRIVATE EQ UNIT	8,272.330	2,776,429.15	6,867.415	2,304,899.73	1,537.665	516,084.09
KRS INS DIVCOWEST IV UNIT	157.933	87,654.64	118.367	65,695.05	44.583	24,744.08
KRS INS DOMESTIC EQUITY UNIT	393,666.898	93,254,211.44	170,289.749	40,339,272.47	68,932.448	16,329,137.94
KRS INS GLOBAL FIXED UNIT	171,904.490	21,711,202.05	7,405.298	935,274.70	38,965.867	4,921,313.06
KRS INS GREENFIELD UNIT	277.542	3,614.60	208.010	2,709.04	78.297	1,019.71
KRS INS GREENFIELD VII UNIT	709.345	217,457.20	531.634	162,978.01	200.109	61,345.53
KRS INS HARRISON UNIT	77,338.977	17,340,226.56	56,020.957	12,560,498.26	21,455.354	4,810,520.05
KRS INS IFM INFRASTR DEBT UNIT	33,735.504	4,643,451.59	18,982.226	2,612,768.07	6,395.139	880,245.29
KRS INS INTERNAL EQUITY UNIT	849,561.558	238,198,053.62	377,610.376	105,873,501.15	148,394.468	41,606,488.80
KRS INS INTL EQ UNIT	1,263,836.009	194,941,814.61	524,584.620	80,915,148.02	211,800.383	32,669,389.62
KRS INS L-A-VII UNIT	13,548.550	1,289,967.48	10,154.240	966,792.71	3,824.578	364,140.91
KRS INS LIQUID CORE FIXED UNIT	1,319,606.062	160,636,805.86	578,089.522	70,371,345.65	226,853.429	27,615,067.32
KRS INS LIQUID CREDIT FIXED UN	1,738,367.727	1.74	1,337,212.672	1.34	401,179.551	0.40
KRS INS LIQUID HY FI UNIT	240,019.167	35,080,323.46	106,005.447	15,493,368.37	41,245.701	6,028,320.78
KRS INS MAGNETAR MTP	28.007	14,514.76	22.063	11,434.25	8.389	4,347.64
KRS INS MESA WEST CORE UNIT	32,110.702	5,801,854.79	27,534.291	4,974,975.57	10,315.876	1,863,902.40
KRS INS MESA WEST IV UNIT	10,669.816	1,009,802.21	7,979.816	755,217.88	3,050.668	288,718.31
KRS INS MULTI SECTOR CREDIT FI	212,837.305	33,929,871.88	127,352.658	20,302,171.04	43,970.794	7,009,689.43
KRS INS OBERLAND UNIT	15,552.965	1,147,511.23	4,394.532	324,232.38	1,028.773	75,903.76
KRS INS PE 2010 UNIT	37,525.967	11,228,680.72	17,874.043	5,348,347.77	7,948.694	2,378,442.29
KRS INS PE 2011 UNIT	-	-	18,725.962	5,830,199.28	8,917.113	2,776,281.71
KRS INS PE 2012 A UNIT	-	-	434.734	277,324.53	270.552	172,589.92
KRS INS PE 2012 B UNIT	-	-	3,507.405	516,394.99	2,165.695	318,855.12
KRS INS PE 2013 UNIT	-	-	19,090.033	6,912,468.44	11,880.461	4,301,894.70
KRS INS PE 2015 UNIT	-	-	12,553.757	3,129,664.98	7,812.689	1,947,711.68
KRS INS PE 2016 UNIT	89,495.870	23,323,941.64	54,582.650	14,225,042.37	21,144.643	5,510,605.34
KRS INS PE 2017 UNIT	46,530.955	7,151,948.45	28,378.898	4,361,922.41	10,993.539	1,689,740.18
KRS INS PE 2018 UNIT	57,915.947	10,747,728.29	16,364.268	3,036,792.37	3,830.896	710,916.97
KRS INS PE 2019 UNIT	107,482.187	24,033,923.63	7,677.301	1,716,709.26	3,070.921	686,683.84
KRS INS PE 2021 UNIT	66,720.120	8,410,524.29	31,447.424	3,964,161.39	12,320.212	1,553,046.40
KRS INS POST-2015 REAL ESTATE	71,280.315	10,973,958.40	53,309.619	8,207,280.53	20,380.162	3,137,627.13
KRS INS PRIVATE CREDIT FI UNIT	211,317.698	39,006,121.45	127,602.736	23,553,577.69	45,940.030	8,479,850.04
KRS INS PROLOGIS UNIT	46,483.481	19,191,352.18	34,764.411	14,352,971.00	13,290.350	5,487,106.00
KRS INS REAL RETURN UNIT	68,588.635	11,769,983.98	31,363.109	5,381,989.17	12,242.317	2,100,812.69
KRS INS RUBENSTEIN PF II UNIT	4,991.951	956,421.95	3,741.344	716,814.64	1,409.174	269,987.62
KRS INS SHENKMAN UNIT	287,676.041	43,942,368.84	69,066.460	10,549,866.61	24,045.638	3,672,958.97
KRS INS STOCKBRIDGE UNIT	38,327.097	8,997,492.14	27,034.753	6,346,553.66	10,358.286	2,431,663.35
KRS INS TAURUS UNIT	-	-	407.094	115,423.70	253.351	71,832.82
KRS INS TPF II UNIT	17.081	1,835.66	9.178	986.34	3.998	429.66
KRS INS WALTON VI UNIT	1,735.306	297,761.62	992.318	170,272.11	424.189	72,786.70
KRS INS WALTON VII UNIT	3,329.973	585,059.52	2,495.727	438,486.69	939.400	165,047.86
KRS INS WATERFALL UNIT	145,123.213	24,516,007.30	80,891.582	13,665,206.09	26,156.930	4,418,751.99

Kentucky Public Pensions Authority

Security Litigation Report

Quarter Ending: December 31, 2022

Claims Filed during the Quarter (pg 3):

19

Proceeds Received during the Quarter (pg 4):

\$144,900.41

Kentucky Retirement Systems	
Quarterly Securities Litigation Report	
Quarter Ended 12/31/22	
Total Claims Filed	
No Claim on File	9
Fiscal Year 1997	1
Fiscal Year 1998	2
Fiscal Year 1999	5
Fiscal Year 2000	9
Fiscal Year 2001	8
Fiscal Year 2002	33
Fiscal Year 2003	45
Fiscal Year 2004	38
Fiscal Year 2005	89
Fiscal Year 2006	150
Fiscal Year 2007	70
Fiscal Year 2008	73
Fiscal Year 2009	85
Fiscal Year 2010	65
Fiscal Year 2011	69
Fiscal Year 2012	54
Fiscal Year 2013	48
Fiscal Year 2014	65
Fiscal Year 2015	80
Fiscal Year 2016	224
Fiscal Year 2017	140
Fiscal Year 2018	74
Fiscal Year 2019	55
Fiscal Year 2020	42
Fiscal Year 2021	43
Fiscal Year 2022	49
Fiscal Year 2023	32
Total Filed	1,657
Proceeds Received	
Fiscal Year 1998	\$67,682
Fiscal Year 1999	\$233,370
Fiscal Year 2000	\$303,918
Fiscal Year 2001	\$415,502
Fiscal Year 2002	\$387,318
Fiscal Year 2003	\$519,059
Fiscal Year 2004	\$1,080,920
Fiscal Year 2005	\$1,645,440
Fiscal Year 2006	\$797,535
Fiscal Year 2007	\$5,398,363
Fiscal Year 2008	\$5,402,336
Fiscal Year 2009	\$3,504,682
Fiscal Year 2010	\$2,776,544
Fiscal Year 2011	\$1,292,484
Fiscal Year 2012	\$468,657
Fiscal Year 2013	\$1,070,427
Fiscal Year 2014	\$308,704
Fiscal Year 2015	\$23,639,565
Fiscal Year 2016	\$2,417,957
Fiscal Year 2017	\$1,886,532
Fiscal Year 2018	\$2,247,966
Fiscal Year 2019	\$1,702,272
Fiscal Year 2020	\$1,743,474
Fiscal Year 2021	\$286,420
Fiscal Year 2022	\$616,557
Fiscal Year 2023	\$186,186
Total Proceeds	\$60,399,872

KRS Investment Committee Meeting - Investment Review and Update

Class Action Name	TNT Status Code	Status as of Date	Class Period Start Date	Class Period End Date	Class Account Id	Claimed Account Name
BANK OZK, Securities Litigation	FILED	10/4/2022	2/19/2016	10/18/2018	956588	KRS NTGI STRUCTURED
BANK OZK, Securities Litigation	FILED	10/4/2022	2/19/2016	10/18/2018	956765	KRS INS NTGI STRUCTURED
BENEFITFOCUS, INC., Securities Litigation	FILED	12/19/2022	2/26/2019	11/5/2020	956765	KRS INS NTGI STRUCTURED
BENEFITFOCUS, INC., Securities Litigation	FILED	12/19/2022	2/26/2019	11/5/2020	956588	KRS NTGI STRUCTURED
BOFI HOLDINGS, INC., Securities Litigation (15CV02324GPKSC)	FILED	11/24/2022	9/4/2013	10/13/2015	KR3F1002002	NTGI STRUCTURED
BOFI HOLDINGS, INC., Securities Litigation (15CV02324GPKSC)	FILED	11/24/2022	9/4/2013	10/13/2015	KR2F1002002	NTGI STRUCTURED
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956596	KRS KRS INTERNAL EQUITY
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956774	KRS INS S P 500 INDEX
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956599	KRS S P 500 INDEX
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956588	KRS NTGI STRUCTURED
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956772	KRS INS KRS INTERNAL EQUITY
COVETRUS, INC., Securities Litigation	FILED	12/1/2022	2/8/2019	8/12/2019	956765	KRS INS NTGI STRUCTURED
EVOLENT HEALTH, INC., Securities Litigation	FILED	12/14/2022	1/10/2018	5/28/2019	956588	KRS NTGI STRUCTURED
EVOLENT HEALTH, INC., Securities Litigation	FILED	12/14/2022	1/10/2018	5/28/2019	956765	KRS INS NTGI STRUCTURED
Facebook Fair Fund	FILED	10/18/2022	1/28/2016	3/19/2018	KR2F1011002	KRS INTERNAL EQUITY
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956591	KRS WESTFIELD CAPITAL
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956599	KRS S P 500 INDEX
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956774	KRS INS S P 500 INDEX
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956596	KRS KRS INTERNAL EQUITY
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956768	KRS INS WESTFIELD CAPITAL
Facebook Fair Fund	FILED	10/18/2022	1/28/2016	3/19/2018	KR2F1006002	WESTFIELD CAPITAL
Facebook Fair Fund	FILED	10/18/2022	1/28/2016	3/19/2018	KR3F1011002	KRS INTERNAL EQUITY
Facebook Fair Fund	FILED	11/24/2022	1/28/2016	3/19/2018	956772	KRS INS KRS INTERNAL EQUITY
Facebook Fair Fund	FILED	10/18/2022	1/28/2016	3/19/2018	KR3F1006002	WESTFIELD CAPITAL
Facebook Fair Fund	FILED	10/18/2022	1/28/2016	3/19/2018	KR2F1902002	S&P 500 INDEX
FLUOR CORPORATION, Securities Litigation (18CV01338)	FILED	10/14/2022	8/14/2013	2/14/2020	956596	KRS KRS INTERNAL EQUITY
FLUOR CORPORATION, Securities Litigation (18CV01338)	FILED	10/14/2022	8/14/2013	2/14/2020	956772	KRS INS KRS INTERNAL EQUITY
FLUOR CORPORATION, Securities Litigation (18CV01338)	FILED	10/11/2022	8/14/2013	2/14/2020	956599	KRS S P 500 INDEX
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956596	KRS KRS INTERNAL EQUITY
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956591	KRS WESTFIELD CAPITAL
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956597	KRS RIVER ROAD FAV
General Electric Company Fair Fund	FILED	10/12/2022	10/16/2015	1/16/2018	KR3F1006002	WESTFIELD CAPITAL
General Electric Company Fair Fund	FILED	10/12/2022	10/16/2015	1/16/2018	KR2F1902002	S&P 500 INDEX
General Electric Company Fair Fund	FILED	10/12/2022	10/16/2015	1/16/2018	KR3F1011002	KRS INTERNAL EQUITY
General Electric Company Fair Fund	FILED	10/12/2022	10/16/2015	1/16/2018	KR2F1006002	WESTFIELD CAPITAL
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956768	KRS INS WESTFIELD CAPITAL
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956772	KRS INS KRS INTERNAL EQUITY
General Electric Company Fair Fund	FILED	10/12/2022	10/16/2015	1/16/2018	KR2F1011002	KRS INTERNAL EQUITY
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956599	KRS S P 500 INDEX
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956774	KRS INS S P 500 INDEX
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956592	KRS RIVER ROAD
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	956769	KRS INS RIVER ROAD
General Electric Company Fair Fund	FILED	12/13/2022	10/16/2015	1/16/2018	909181	KRS INS RIVER ROAD FAV
GROUPON, INC Securities Litigation	FILED	12/2/2022	7/30/2019	2/18/2020	956765	KRS INS NTGI STRUCTURED
GROUPON, INC Securities Litigation	FILED	12/2/2022	7/30/2019	2/18/2020	956588	KRS NTGI STRUCTURED
HARMAN INTERNATIONAL INDUSTRIES, INC., Securities Litigation (17CV00246)	FILED	11/7/2022	1/10/2017	3/12/2017	KR3F1902002	S&P 500 INDEX
HARMAN INTERNATIONAL INDUSTRIES, INC., Securities Litigation (17CV00246)	FILED	11/7/2022	1/10/2017	3/12/2017	KR2F1902002	S&P 500 INDEX
INOVIO PHARMACEUTICALS, INC Securities Litigation	FILED	12/15/2022	2/14/2020	8/10/2020	956765	KRS INS NTGI STRUCTURED
INOVIO PHARMACEUTICALS, INC Securities Litigation	FILED	12/15/2022	2/14/2020	8/10/2020	956588	KRS NTGI STRUCTURED
INTRUSION INC., Security Litigation	FILED	12/6/2022	10/14/2020	8/26/2021	956588	KRS NTGI STRUCTURED
MALLINCKRODT PLC, Securities Litigation	FILED	10/28/2022	10/6/2015	11/6/2017	KR3F1011002	KRS INTERNAL EQUITY
MALLINCKRODT PLC, Securities Litigation	FILED	10/27/2022	10/6/2015	11/6/2017	956599	KRS S P 500 INDEX
MALLINCKRODT PLC, Securities Litigation	FILED	10/27/2022	10/6/2015	11/6/2017	KR2F1011002	KRS INTERNAL EQUITY
SEALED AIR CORPORATION, Securities Litigation	FILED	12/19/2022	11/17/2014	6/20/2019	956596	KRS KRS INTERNAL EQUITY
SEALED AIR CORPORATION, Securities Litigation	FILED	12/19/2022	11/17/2014	6/20/2019	956772	KRS INS KRS INTERNAL EQUITY
SEALED AIR CORPORATION, Securities Litigation	FILED	12/19/2022	11/17/2014	6/20/2019	956599	KRS S P 500 INDEX
TWITTER, INC., Securities Litigation	FILED	11/10/2023	2/6/2015	7/28/2015	KR2F4290002	INST VEN PTRN XII
TWITTER, INC., Securities Litigation	FILED	11/10/2023	2/6/2015	7/28/2015	KR3F4290002	INST VEN PTRN XII
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	956592	KRS RIVER ROAD
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	956769	KRS INS RIVER ROAD
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/7/2022	4/24/2015	6/24/2019	KR3F1007002	RIVER ROAD
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	956773	KRS INS TRANSITION
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	KR3F3060002	NUVEEN REAL ASSET
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	956598	KRS TRANSITION
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/7/2022	4/24/2015	6/24/2019	KR2F1007002	RIVER ROAD
UNITI GROUP INC. SECURITIES LITIGATION	FILED	11/29/2022	4/24/2015	6/24/2019	KR2F3060002	NUVEEN REAL ASSET
Vanda Pharms Inc. Securities Litigation	FILED	12/19/2022	11/4/2015	2/11/2019	956588	KRS NTGI STRUCTURED
Vanda Pharms Inc. Securities Litigation	FILED	12/19/2022	11/4/2015	2/11/2019	956765	KRS INS NTGI STRUCTURED
VENATOR MATERIALS PLC, Securities Litigation	FILED	11/24/2022	8/2/2017	10/29/2018	956766	KRS INS SYSTEMATIC
VENATOR MATERIALS PLC, Securities Litigation	FILED	11/24/2022	8/2/2017	10/29/2018	956589	KRS SYSTEMATIC
WALGREEN COMPANY Securities Litigation (15CV03187)	FILED	10/21/2022	4/17/2014	8/5/2014	KR2F1902002	S&P 500 INDEX
WALGREEN COMPANY Securities Litigation (15CV03187)	FILED	10/21/2022	4/17/2014	8/5/2014	KR3F1902002	S&P 500 INDEX



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008

Base Currency: USD

KR2G0000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Status: FINAL

Trans Code	Shares/Par	Description	Trade Date	Price	Cost	Amount	Net Gain/Loss
Link Ref	Security Id	Broker	C. Settle Date	Local/Base	Local/Base	Local/Base	Local/Base
		Transaction No./Client Ref No.	Reported Date				
CLASS ACTIONS							
CASH & CASH EQUIVALENTS							
U.S. DOLLAR							
CD	0.000	24213CenturyLink Inc. (2017) (NA9123459 D Minn) Distribution 1ST DISTR 20221006S000140 / 000000000000 KR2F10110002 : KRS INTERNAL EQUITY	10/5/2022	0.000000	264.84	264.84	264.84
			10/5/2022	0.000000	264.84	264.84	264.84
						Gain/Loss Local Amounts: 264.84 Long	
						Gain/Loss Base Amounts: 264.84 Long	
CD	0.000	24213CenturyLink Inc. (2017) (NA9123459 D Minn) Distribution 1ST DISTR 20221006S000170 / 000000000000 KR2F19020002 : S&P 500 INDEX	10/5/2022	0.000000	14.72	14.72	14.72
			10/5/2022	0.000000	14.72	14.72	14.72
						Gain/Loss Local Amounts: 14.72 Long	
						Gain/Loss Base Amounts: 14.72 Long	
CD	0.000	3-16-CV-05479-JSTWELLS FARGO & NA9123459 COMPANY (2016) Distribution 3 20221006S000190 / 000000001111 KR2F19020002 : S&P 500 INDEX	10/6/2022	0.000000	106.84	106.84	106.84
			10/6/2022	0.000000	106.84	106.84	106.84
						Gain/Loss Local Amounts: 106.84 Long	
						Gain/Loss Base Amounts: 106.84 Long	
CD	0.000	1-18-cv-04253ROCKWELL MEDICAL, NA9123459 INC. (2018) Distribution 2ND 20221006S000320 / 000000000000 KR2F10020002 : NTGI STRUCTURED	10/6/2022	0.000000	19.32	19.32	19.32
			10/6/2022	0.000000	19.32	19.32	19.32
						Gain/Loss Local Amounts: 19.32 Long	
						Gain/Loss Base Amounts: 19.32 Long	
CD	0.000	23548Wells Fargo & Company (SE NA9123459 C) Distribution 1ST DISTRIBUTI 20221011S000010 / 000000000008 KR2F19010002 : STATE STREET TRANSIT	10/11/2022	0.000000	61,122.58	61,122.58	61,122.58
			10/11/2022	0.000000	61,122.58	61,122.58	61,122.58
						Gain/Loss Local Amounts: 61,122.58 Long	
						Gain/Loss Base Amounts: 61,122.58 Long	
CD	0.000	23548Wells Fargo & Company (SE NA9123459 C) Distribution 1ST DISTRIBUTI 20221011S000020 / 000000000008 KR2F10120002 : RIVER ROAD FAV	10/11/2022	0.000000	9,995.62	9,995.62	9,995.62
			10/11/2022	0.000000	9,995.62	9,995.62	9,995.62
						Gain/Loss Local Amounts: 9,995.62 Long	
						Gain/Loss Base Amounts: 9,995.62 Long	



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008
 Base Currency: USD
 Status: FINAL

KR2G00000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Trans Code Link Ref	Shares/Par Security Id	Description Broker	Trade Date C. Settle Date Reported Date	Price Local/Base	Cost Local/Base	Amount Local/Base	Net Gain/Loss Local/Base
CD	0.000 NA9123459	23548Wells Fargo & Company (SE C) Distribution 1ST DISTRIBUTI 20221011S000060 / 000000000008 KR2F10110002 : KRS INTERNAL EQUITY	10/11/2022 10/11/2022	0.000000 0.000000	10,061.94 10,061.94	10,061.94 10,061.94	10,061.94 10,061.94 Gain/Loss Local Amounts: 10,061.94 Long Gain/Loss Base Amounts: 10,061.94 Long
CD	0.000 NA9123459	23033RTI SURGICAL HOLDINGS, IN C. Distribution 1ST DISTRIBUTI 20221020S000250 / 000000000080 KR2F10020002 : NTGI STRUCTURED	10/20/2022 10/20/2022	0.000000 0.000000	206.14 206.14	206.14 206.14	206.14 206.14 Gain/Loss Local Amounts: 206.14 Long Gain/Loss Base Amounts: 206.14 Long
CD	0.000 NA9123459	A-13-686890-BParametric Sound Corporation (Nevada District C 20221021S000280 / 000000000000 KR2F10020002 : NTGI STRUCTURED	10/21/2022 10/21/2022	0.000000 0.000000	12.34 12.34	12.34 12.34	12.34 12.34 Gain/Loss Local Amounts: 12.34 Long Gain/Loss Base Amounts: 12.34 Long
CD	0.000 NA9123459	22050ACLARIS THERAPEUTICS, INC . Distribution 1ST DISTRIBUTIO 20221028S000350 / 000000000087 KR2F10020002 : NTGI STRUCTURED	10/27/2022 10/27/2022	0.000000 0.000000	122.69 122.69	122.69 122.69	122.69 122.69 Gain/Loss Local Amounts: 122.69 Long Gain/Loss Base Amounts: 122.69 Long
CD	0.000 NA9123459	3535COMMUNITY HEALTH SYSTEMS, INC. (2011) Distribution 1ST D 20221101S005150 / 000000000007 KR2F19020002 : S&P 500 INDEX	11/1/2022 11/1/2022	0.000000 0.000000	2,020.24 2,020.24	2,020.24 2,020.24	2,020.24 2,020.24 Gain/Loss Local Amounts: 2,020.24 Long Gain/Loss Base Amounts: 2,020.24 Long
CD	0.000 NA9123459	19893SYMANTEC CORPORATION (201 8) Distribution 1ST DISTRIBUTI 20221109S000150 / 000000000000 KR2F10110002 : KRS INTERNAL EQUITY	11/9/2022 11/9/2022	0.000000 0.000000	489.77 489.77	489.77 489.77	489.77 489.77 Gain/Loss Local Amounts: 489.77 Long Gain/Loss Base Amounts: 489.77 Long
CD	0.000 NA9123459	19893SYMANTEC CORPORATION (201 8) Distribution 1ST DISTRIBUTI 20221109S000250 / 000000000000 KR2F19020002 : S&P 500 INDEX	11/9/2022 11/9/2022	0.000000 0.000000	217.47 217.47	217.47 217.47	217.47 217.47 Gain/Loss Local Amounts: 217.47 Long Gain/Loss Base Amounts: 217.47 Long



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008

Base Currency: USD

Status: FINAL

KR2G00000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Trans Code Link Ref	Shares/Par Security Id	Description Broker	Trade Date C. Settle Date Reported Date	Price Local/Base	Cost Local/Base	Amount Local/Base	Net Gain/Loss Local/Base
CD	0.000 NA9123459	05-2367 (SRC) (CLW)MERCK & CO INC. SECURITIES, DERIVATIVE & 20221110S000230 / 000000000010 KR2F19020002 : S&P 500 INDEX	11/10/2022 11/10/2022	0.000000 0.000000	390.31 390.31	390.31 390.31	390.31 390.31 Gain/Loss Local Amounts: 390.31 Long Gain/Loss Base Amounts: 390.31 Long
CD	0.000 NA9123459	BIG LOTS SEC LIT 20221111S000010 / 0B70525DD023 KR2F90010002 : CASH ACCOUNT KR2	11/9/2022 11/9/2022	0.000000 0.000000	22.16 22.16	22.16 22.16	22.16 22.16 Gain/Loss Local Amounts: 22.16 Long Gain/Loss Base Amounts: 22.16 Long
CD	0.000 NA9123459	BIG LOTS SEC LIT 20221111S000020 / 0B70525DD023 KR2F90010002 : CASH ACCOUNT KR2	11/9/2022 11/9/2022	0.000000 0.000000	360.58 360.58	360.58 360.58	360.58 360.58 Gain/Loss Local Amounts: 360.58 Long Gain/Loss Base Amounts: 360.58 Long
CD	0.000 NA9123459	BIG LOTS SEC LIT 20221111S000030 / 0B70525DD023 KR2F90010002 : CASH ACCOUNT KR2	11/9/2022 11/9/2022	0.000000 0.000000	330.19 330.19	330.19 330.19	330.19 330.19 Gain/Loss Local Amounts: 330.19 Long Gain/Loss Base Amounts: 330.19 Long
CD	0.000 NA9123459	3-18-cv-05704-RSLIMPINJ, INC. (W.D. WASH.) Distribution 2ND 20221116S000150 / 000000000084 KR2F10020002 : NTGI STRUCTURED	11/16/2022 11/16/2022	0.000000 0.000000	183.40 183.40	183.40 183.40	183.40 183.40 Gain/Loss Local Amounts: 183.40 Long Gain/Loss Base Amounts: 183.40 Long
CD	0.000 NA9123459	COMMUNITY SYSTEMS HEALTH (2011) SEC LIT 20221121S000080 / F75569409F5B KR2F90010002 : CASH ACCOUNT KR2	11/18/2022 11/18/2022	0.000000 0.000000	993.12 993.12	993.12 993.12	993.12 993.12 Gain/Loss Local Amounts: 993.12 Long Gain/Loss Base Amounts: 993.12 Long
CD	0.000 NA9123459	CITIGROUP INC (VOL FA CAP) SEC FAIR FUND 20221201S000470 / 6EA9A7F1B881 KR2F19020002 : S&P 500 INDEX	11/29/2022 11/29/2022	0.000000 0.000000	514.96 514.96	514.96 514.96	514.96 514.96 Gain/Loss Local Amounts: 514.96 Long Gain/Loss Base Amounts: 514.96 Long



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008
 Base Currency: USD
 Status: FINAL

KR2G00000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Trans Code Link Ref	Shares/Par Security Id	Description Broker	Trade Date C. Settle Date Reported Date	Price Local/Base	Cost Local/Base	Amount Local/Base	Net Gain/Loss Local/Base
CD	0.000	20584CITI SPONSORED AMERICAN D NA9123459 EPOSITARY RECEIPTS (CITIBANK N 20221216S000020 / 000000000009 KR2F20050002 : AMERICAN CENTURY	12/16/2022 12/16/2022	0.000000 0.000000	18.49 18.49	18.49 18.49	18.49 18.49 Gain/Loss Local Amounts: 18.49 Long Gain/Loss Base Amounts: 18.49 Long
CD	0.000	3-17-CV-2616-MBSSCANA Corporat ion (2017)(D.S.C) Distribution NA9123459 20221219S000070 / 000000000000 KR2F19020002 : S&P 500 INDEX	12/19/2022 12/19/2022	0.000000 0.000000	1,259.77 1,259.77	1,259.77 1,259.77	1,259.77 1,259.77 Gain/Loss Local Amounts: 1,259.77 Long Gain/Loss Base Amounts: 1,259.77 Long
CD	0.000	CITI SPONSORED ADRS CITIBANK NA9123459 20221221S000030 / 04A3D22F6BC1 KR2F90010002 : CASH ACCOUNT KR2	12/16/2022 12/16/2022	0.000000 0.000000	345.77 345.77	345.77 345.77	345.77 345.77 Gain/Loss Local Amounts: 345.77 Long Gain/Loss Base Amounts: 345.77 Long
CD	0.000	CITIGROUP INC (VOL FA CAP) SEC FAIR FUND NA9123459 20230110A000010 KR2F90010002 : CASH ACCOUNT KR2	11/30/2022 12/1/2022	0.000000 0.000000	93.32 93.32	93.32 93.32	93.32 93.32 Gain/Loss Local Amounts: 93.32 Long Gain/Loss Base Amounts: 93.32 Long
TOTAL U.S. DOLLAR CASH & CASH EQUIVALENTS:					<u>89,166.58</u>	<u>89,166.58</u>	<u>89,166.58</u>
TOTAL CASH & CASH EQUIVALENTS CLASS ACTIONS:					<u>89,166.58</u>	<u>89,166.58</u>	<u>89,166.58</u>
TOTAL CLASS ACTIONS:					<u>89,166.58</u>	<u>89,166.58</u>	<u>89,166.58</u>
TOTAL TRANSACTIONS BASE:					<u>89,166.58</u>	<u>89,166.58</u>	<u>89,166.58</u>



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008

Base Currency: USD

KR3G0000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Status: REVISED

Trans Code	Shares/Par	Description	Trade Date	Price	Cost	Amount	Net Gain/Loss
Link Ref	Security Id	Broker	C. Settle Date	Local/Base	Local/Base	Local/Base	Local/Base
		Transaction No./Client Ref No.	Reported Date				
CLASS ACTIONS							
CASH & CASH EQUIVALENTS							
U.S. DOLLAR							
CD	0.000	23548Wells Fargo & Company (SE NA9123459 C) Distribution 1ST DISTRIBUTI 20221011S000020 / 0000000000008 KR3F10120002 : RIVER ROAD FAV	10/11/2022	0.000000	4,478.61	4,478.61	4,478.61
			10/11/2022	0.000000	4,478.61	4,478.61	4,478.61
						Gain/Loss Local Amounts: 4,478.61 Long	
						Gain/Loss Base Amounts: 4,478.61 Long	
CD	0.000	23548Wells Fargo & Company (SE NA9123459 C) Distribution 1ST DISTRIBUTI 20221011S000060 / 0000000000008 KR3F10110002 : KRS INTERNAL EQUITY	10/11/2022	0.000000	50,385.34	50,385.34	50,385.34
			10/11/2022	0.000000	50,385.34	50,385.34	50,385.34
						Gain/Loss Local Amounts: 50,385.34 Long	
						Gain/Loss Base Amounts: 50,385.34 Long	
CD	0.000	23033RTI SURGICAL HOLDINGS, IN NA9123459 C. Distribution 1ST DISTRIBUTI 20221020S000250 / 0000000000080 KR3F10020002 : NTGI STRUCTURED	10/20/2022	0.000000	80.36	80.36	80.36
			10/20/2022	0.000000	80.36	80.36	80.36
						Gain/Loss Local Amounts: 80.36 Long	
						Gain/Loss Base Amounts: 80.36 Long	
CD	0.000	22050ACLARIS THERAPEUTICS, INC NA9123459 . Distribution 1ST DISTRIBUTIO 20221028S000360 / 0000000000087 KR3F10020002 : NTGI STRUCTURED	10/27/2022	0.000000	45.44	45.44	45.44
			10/27/2022	0.000000	45.44	45.44	45.44
						Gain/Loss Local Amounts: 45.44 Long	
						Gain/Loss Base Amounts: 45.44 Long	
CD	0.000	19893SYMANTEC CORPORATION (201 NA9123459 8) Distribution 1ST DISTRIBUTI 20221109S000150 / 0000000000000 KR3F10110002 : KRS INTERNAL EQUITY	11/9/2022	0.000000	106.36	106.36	106.36
			11/9/2022	0.000000	106.36	106.36	106.36
						Gain/Loss Local Amounts: 106.36 Long	
						Gain/Loss Base Amounts: 106.36 Long	
CD	0.000	19893SYMANTEC CORPORATION (201 NA9123459 8) Distribution 1ST DISTRIBUTI 20221109S000250 / 0000000000000 KR3F19020002 : S&P 500 INDEX	11/9/2022	0.000000	93.95	93.95	93.95
			11/9/2022	0.000000	93.95	93.95	93.95
						Gain/Loss Local Amounts: 93.95 Long	
						Gain/Loss Base Amounts: 93.95 Long	



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008

Base Currency: USD

KR3G0000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Status: REVISED

Trans Code Link Ref	Shares/Par Security Id	Description Broker	Trade Date C. Settle Date Reported Date	Price Local/Base	Cost Local/Base	Amount Local/Base	Net Gain/Loss Local/Base
CD	0.000 NA9123459	05-2367 (SRC) (CLW)MERCCK & CO INC. SECURITIES, DERIVATIVE & 20221110S000230 / 000000000010 KR3F19020002 : S&P 500 INDEX	11/10/2022 11/10/2022	0.000000 0.000000	137.56 137.56	137.56 137.56	137.56 137.56 Gain/Loss Local Amounts: 137.56 Long Gain/Loss Base Amounts: 137.56 Long
CD	0.000 NA9123459	BIG LOTS SEC LIT 20221111S000010 / 0B70525DD023 KR3F90010002 : CASH ACCOUNT KR3	11/9/2022 11/9/2022	0.000000 0.000000	71.36 71.36	71.36 71.36	71.36 71.36 Gain/Loss Local Amounts: 71.36 Long Gain/Loss Base Amounts: 71.36 Long
CD	0.000 NA9123459	BIG LOTS SEC LIT 20221111S000020 / 0B70525DD023 KR3F90010002 : CASH ACCOUNT KR3	11/9/2022 11/9/2022	0.000000 0.000000	143.27 143.27	143.27 143.27	143.27 143.27 Gain/Loss Local Amounts: 143.27 Long Gain/Loss Base Amounts: 143.27 Long
CD	0.000 NA9123459	18935Tivity Health, Inc. Distr ibution 1ST DISTRIBUTION PROCE 20221116S000160 / 000000000000 KR3F10020002 : NTGI STRUCTURED	11/16/2022 11/16/2022	0.000000 0.000000	164.45 164.45	164.45 164.45	164.45 164.45 Gain/Loss Local Amounts: 164.45 Long Gain/Loss Base Amounts: 164.45 Long
CD	0.000 NA9123459	MERICK AND CO SEC LIT 20221122S000100 / F75569409F5B KR3F19020002 : S&P 500 INDEX	11/18/2022 11/18/2022	0.000000 0.000000	6.95 6.95	6.95 6.95	6.95 6.95 Gain/Loss Local Amounts: 6.95 Long Gain/Loss Base Amounts: 6.95 Long
CD	0.000 NA9123459	20584CITI SPONSORED AMERICAN D EPOSITARY RECEIPTS (CITIBANK N 20221216S000020 / 000000000009 KR3F20050002 : AMERICAN CENTURY	12/16/2022 12/16/2022	0.000000 0.000000	6.22 6.22	6.22 6.22	6.22 6.22 Gain/Loss Local Amounts: 6.22 Long Gain/Loss Base Amounts: 6.22 Long
CD	0.000 NA9123459	20584CITI SPONSORED AMERICAN D EPOSITARY RECEIPTS (CITIBANK N 20221216S000040 / 000000000009 KR3F90010002 : CASH ACCOUNT KR3	12/16/2022 12/16/2022	0.000000 0.000000	5.50 5.50	5.50 5.50	5.50 5.50 Gain/Loss Local Amounts: 5.50 Long Gain/Loss Base Amounts: 5.50 Long



Transaction Detail
Reported By Transaction Category

Report ID: IACS0008

Base Currency: USD

Status: REVISED

KR3G00000000 - TOTAL FUND

9/30/2022 - 12/31/2022

Trans Code	Shares/Par	Description	Trade Date	Price	Cost	Amount	Net Gain/Loss
Link Ref	Security Id	Broker	C. Settle Date	Local/Base	Local/Base	Local/Base	Local/Base
Transaction No./Client Ref No.			Reported Date				
CD	0.000	CITI SPONSORED ADRS CITIBANK	12/16/2022	0.000000	8.46	8.46	8.46
	NA9123459	20221221S000030 / 04A3D22F6BC1		0.000000	8.46	8.46	8.46
		KR3F90010002 : CASH ACCOUNT KR3	12/16/2022				
						Gain/Loss Local Amounts: 8.46 Long	
						Gain/Loss Base Amounts: 8.46 Long	

TOTAL U.S. DOLLAR CASH & CASH EQUIVALENTS:	55,733.83	55,733.83	55,733.83
	55,733.83	55,733.83	55,733.83
TOTAL CASH & CASH EQUIVALENTS CLASS ACTIONS:	55,733.83	55,733.83	55,733.83
TOTAL CLASS ACTIONS:	55,733.83	55,733.83	55,733.83
TOTAL TRANSACTIONS BASE:	55,733.83	55,733.83	55,733.83

Kentucky Retirement Systems

Capital Calls and Distributions

Quarter Ending: December 31, 2022

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority
Capital Calls and Distributions
For the quarter ending December 31, 2022

Pension Funds Managers	Total Pension Funds Commitments	Kentucky Employees Retirement System					Kentucky Employees Hazardous Retirement System					State Police Employees Retirement System				
		Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation
Adams Street SPC II A1	175,000,000	31,747,734	25,141,506	11,974,335	12,151,272	24,964,569	9,441,066	7,476,521	3,560,899	3,613,516	7,423,904	3,936,882	3,117,676	1,484,879	1,506,820	3,095,735
Adams Street SPC II B1	175,000,000	31,747,734	20,388,306	7,329,940	5,263,744	22,454,503	9,441,067	6,063,027	2,179,760	1,565,320	6,677,467	3,936,882	2,528,254	908,950	652,731	2,784,473
AMERRA Agri Fund II, LP	40,100,000	0	0	0	0	0	2,477,739	1,451,462	0	0	1,451,462	1,253,605	734,363	0	0	734,363
AMERRA-KRS Agri Holding Company, LP	65,000,000	0	0	0	0	0	4,016,284	2,261,259	250,368	37,065	2,474,562	2,032,029	1,144,078	126,673	18,753	1,251,999
Arcano KRS Fund I, L.P.	36,000,000	13,050,524	5,360,386	0	0	5,360,386	1,650,419	677,895	0	0	677,895	859,011	352,831	0	0	352,831
Ares Special Situations Fund IV, L.P.	26,192,000	0	0	0	0	0	1,622,790	1,252,510	0	53,557	1,198,952	511,579	394,850	0	16,884	377,966
Barings Euro Real Estate II	158,753,438	29,655,144	5,881,122	582,739	0	7,048,141	8,112,303	1,608,808	159,411	0	1,928,052	3,429,075	680,044	67,383	0	814,988
Barings Real Estate European Value Add I SCSp	112,061,250	20,933,043	8,444,054	345,675	573,820	8,970,265	5,726,331	2,309,910	94,561	156,971	2,453,858	2,420,523	976,400	39,971	66,352	1,037,247
Bay Hills Capital I, L.P.	67,500,000	24,469,733	1,829,453	0	0	1,829,453	3,094,535	231,360	0	0	231,360	1,610,645	120,418	0	0	120,418
Bay Hills Capital III, L.P.	51,250,000	1	1	0	0	1	3,175,320	3,014,078	0	0	3,014,078	1,001,010	950,179	0	0	950,179
Bay Hills Emerging Partners II LP	45,000,000	16,313,156	32,694,681	0	0	32,694,681	2,063,023	4,134,693	0	0	4,134,693	1,073,764	2,152,027	0	0	2,152,027
Bay Hills Emerging Partners II-B LP	45,000,000	16,313,156	22,367,693	0	0	22,367,693	2,063,023	2,828,703	0	0	2,828,703	1,073,764	1,472,285	0	0	1,472,285
BDCM Opportunity Fund IV, L.P.	35,580,000	0	0	0	0	0	2,204,447	3,212,221	6,870	188,152	3,024,069	694,947	1,012,646	2,166	59,315	953,331
Blackstone Capital Partners V, L.P.	47,174,735	17,101,529	65,495	0	0	65,495	2,162,724	8,283	0	0	8,283	1,125,656	4,311	0	0	4,311
Blackstone Capital Partners VI, L.P.	60,000,000	0	0	0	0	0	3,299,994	1,395,987	0	167,224	1,228,763	0	0	0	0	0
Blue Torch Credit Opportunities Fund II LP	140,000,000	25,356,966	23,979,399	0	0	23,979,399	7,618,631	7,204,734	0	0	7,204,734	3,143,324	2,972,557	0	0	2,972,557
BSP Co-Invest Vehicle K LP	0	0	5,664,935	0	113,286	5,551,649	0	2,034,732	0	40,690	1,994,042	0	525,888	0	10,517	515,371
BSP Private Credit Fund	100,000,000	14,833,350	14,057,381	0	509,228	13,548,153	5,327,845	5,049,132	0	182,905	4,866,227	1,377,012	1,304,977	0	47,273	1,257,704
BTG Pactual Brazil Timberland Fund I	34,500,000	0	0	0	0	0	2,058,030	1,675,637	0	179,704	1,495,933	952,485	775,500	0	83,170	692,338
Camelot Opportunities Fund, L.P.	23,400,000	8,482,841	2,784,706	0	0	2,784,706	1,072,772	352,164	0	0	352,164	558,357	183,295	0	0	183,295
Cerberus KRS Levered Loan Opportunities Fund, L.P.	140,000,000	20,766,690	22,156,359	3,717,238	0	26,418,182	7,458,982	7,958,124	1,335,158	0	9,488,886	1,927,816	2,056,822	345,079	0	2,452,456
Columbia Capital Equity Partners IV, L.P.	27,000,000	9,787,893	1,038,991	0	0	1,038,991	1,237,814	131,395	0	0	131,395	644,258	68,388	0	0	68,388
Crestview Partners II, L.P.	67,500,000	24,469,733	11,841,318	23,416	1,096,984	10,767,750	3,094,535	1,497,498	2,961	138,729	1,361,730	1,610,645	779,418	1,541	72,206	708,754
Crestview Partners III, L.P.	39,000,000	0	0	0	0	0	2,416,341	2,373,154	5,000	71,407	2,306,746	761,744	748,129	1,576	22,511	727,195
CS Adjacent Investment Partners Parallel LP	140,000,000	20,766,690	11,588,771	2,019,119	3,633,974	9,973,916	7,458,982	4,162,456	725,227	1,305,251	3,582,432	1,927,816	1,075,810	187,439	337,350	925,900
CVC European Equity Partners VI, L.P.	23,394,941	1	1	0	0	1	1,449,491	1,684,659	13,512	182,281	1,663,785	456,948	531,084	4,260	57,464	524,503
DAG Ventures II, L.P.	27,000,000	9,787,893	698,137	0	0	698,137	1,237,814	88,289	0	0	88,289	644,258	45,953	0	0	45,953
DAG Ventures III, L.P.	27,000,000	9,787,893	132,557	0	0	132,557	1,237,814	16,764	0	0	16,764	644,258	8,725	0	0	8,725
DAG Ventures IV, L.P.	90,000,000	32,626,311	14,110,101	0	0	14,110,101	4,126,046	1,784,417	0	0	1,784,417	2,147,527	928,754	0	0	928,754
DAG Ventures V, L.P.	8,000,000	0	0	0	0	0	439,999	2,485	0	0	2,485	0	0	0	0	0
DCM VI, L.P.	13,500,000	4,893,947	2,293,119	0	489,395	1,803,724	618,907	289,996	0	61,891	228,106	322,129	150,938	0	32,213	118,725
DivcoWest Fund IV	20,800,000	0	0	0	0	0	1,244,069	82,953	0	0	82,953	447,430	29,834	0	0	29,834
Essex Woodlands Fund VIII, L.P.	22,500,000	8,156,578	-626,596	0	0	-626,596	1,031,512	-79,242	0	0	-79,242	536,882	-41,244	0	0	-41,244
Fundamental Partners III LP	70,000,000	13,076,001	11,952,375	0	263,364	11,689,012	3,577,001	3,269,628	0	72,044	3,197,584	1,512,000	1,382,073	0	30,453	1,351,620
Green Equity Investors V, L.P.	90,000,000	32,626,311	1,036,587	0	346,232	690,355	4,126,046	131,091	0	43,786	87,305	2,147,527	68,230	0	22,790	45,440
Green Equity Investors VI, L.P.	32,000,000	0	0	0	0	0	1,759,997	1,797,350	0	20,631	1,776,719	0	0	0	0	0
Green Equity Investors VII LP	25,000,000	0	0	0	0	0	1,525,000	2,252,663	0	272,822	1,979,840	0	0	0	0	0
Greenfield Acquisition Partners VI, L.P.	38,100,000	0	0	0	0	0	2,278,801	3,377	0	0	3,377	819,568	1,214	0	0	1,214
Greenfield Acquisition Partners VII, L.P.	27,800,000	0	0	0	0	0	1,662,744	233,814	0	6,956	226,858	598,005	84,091	0	2,502	81,589
H.I.G. BioVentures II, L.P.	13,500,000	0	0	0	0	0	742,499	517,953	0	0	517,953	0	0	0	0	0
H.I.G. Capital Partner V, L.P.	13,100,000	0	0	0	0	0	811,643	786,219	4,819	109,200	681,839	255,868	247,853	1,519	34,425	214,948
H.I.G. Ventures II, L.P.	18,000,000	6,525,262	1,083,759	0	0	1,083,759	825,209	137,056	0	0	137,056	429,505	71,335	0	0	71,335
H&F Spock I LP	3,250,153	1,178,228	3,741,428	0	0	3,741,428	149,000	473,155	0	0	473,155	77,553	246,268	0	0	246,268
Harvest Partners V, L.P.	36,000,000	13,050,524	-63,477	0	0	-63,477	1,650,419	-8,028	0	0	-8,028	859,011	-4,178	0	0	-4,178
Harvest Partners VI, L.P.	28,400,000	0	0	0	0	0	1,607,440	491,032	0	0	491,032	241,400	73,742	0	0	73,742
Harvest Partners VII LP	20,000,000	0	0	0	0	0	1,220,000	1,840,870	2,745	0	1,843,615	0	0	0	0	0
Hellman and Friedman Capital Partners VI, L.P.	20,000,000	7,250,291	110	0	0	110	916,899	14	0	0	14	477,228	7	0	0	7
Horsley Bridge International Fund V, L.P.	45,000,000	16,313,156	37,611,052	0	909,856	36,701,196	2,063,023	4,756,436	0	115,064	4,641,372	1,073,764	2,475,632	0	59,888	2,415,744
IFM US Infrastructure Debt Fund	70,000,000	11,678,693	9,922,899	1,187,021	330,837	10,779,083	3,596,947	3,056,176	365,593	101,895	3,319,874	1,394,272	1,184,655	141,714	39,497	1,286,871
Institutional Venture Partners XII, L.P.	27,000,000	9,787,893	125,475	0	0	125,475	1,237,814	15,868	0	0	15,868	644,258	8,259	0	0	8,259
Kayne Anderson Energy Fund VII LP	50,000,000	0	0	0	0	0	3,050,000	1,687,475	0	0	1,687,475	0	0	0	0	0
KCP IV Co-Invest	12,657,585	0	0	0	0	0	784,232	188,219	0	0	205,050	247,227	59,336	0	0	64,641
Keyhaven Capital Partners Fund III, L.P.	26,929,056	9,762,175	3,535,294	0	0	3,851,419	1,234,562	447,087	0	0	487,065	642,565	232,700	0	0	253,508
Keyhaven Capital Partners IV LP	12,657,585	0	0	0	0	0	784,232	607,270	29,376	31,612	660,274	247,227	191,440	9,261	9,966	208,150
Levine Leichtman Capital Partners V, L.P.	46,000,000	1	1	0	0	1	2,850,043	1,354,346	0	11,990	1,342,355	898,468	426,953	0	3,780	423,174
Levine Leichtman Capital Partners VI LP	37,500,000	0	0	0	0	0	2,287,504	2,438,361	0	5,155	2,433,206	0	0	0	0	0
Lubert Adler VII	34,750,000	0	0	0	0	0	2,078,050	1,247,056	0	0	1,247,056	747,124	448,356	0	0	448,356
Lubert-Adler Real Estate Fund VII-B LP	36,750,000	6,864,900	2,084,312	0	338,350	1,745,962	1,877,925	570,173	0	92,557	477,616	793,800	241,012	0	39,124	201,889
Magentar MTP Energy Opportunities Fund II LLC	37,500,000	0	0	0	0	0	2,242,500	19,747	0	0	19,747	806,249	7,100	0	0	7,100
MatlinPatterson Global Opportunities Partners II	45,000,000	16,313,156	314,561	0	0	314,561	2,063,023	39,781								

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority
Capital Calls and Distributions
For the quarter ending December 31, 2022

Pension Funds Managers	Total Pension Funds Commitments	Kentucky Employees Retirement System					Kentucky Employees Hazardous Retirement System					State Police Employees Retirement System				
		Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation
Merit Mezzanine Fund IV, L.P.	27,000,000	9,787,893	102,659	0	0	102,659	1,237,814	12,983	0	0	12,983	644,258	6,757	0	0	6,757
Mesa West Core Lending Fund, LP	57,500,000	5,474,001	5,710,394	172,938	172,938	5,710,394	3,248,749	3,389,045	102,637	102,637	3,389,045	960,250	1,001,718	30,337	30,337	1,001,718
Mesa West Real Estate Income Fund IV LP	36,000,000	13,050,524	3,643,568	3,045,122	57,017	6,631,674	1,650,419	460,779	385,098	7,211	838,666	859,011	239,827	200,436	3,753	436,510
MiddleGround Partners I LP	50,000,000	0	0	0	0	0	2,925,000	3,957,188	239,666	116,201	4,047,708	0	0	0	0	0
MiddleGround Partners II LP	50,000,000	9,584,069	6,301,061	679,484	0	6,980,545	2,755,477	1,811,593	195,356	0	2,006,949	1,102,634	724,929	78,174	0	803,102
MiddleGround Partners II-X LP	25,000,000	4,792,034	2,913,746	362,470	0	3,276,216	1,377,739	837,719	104,212	0	941,932	551,317	335,223	41,702	0	376,924
Mill Road Capital I, L.P.	27,000,000	9,787,893	1,323,579	0	0	1,323,579	1,237,814	167,385	0	0	167,385	644,258	87,121	0	0	87,121
New Mountain Partners II, L.P.	25,000,000	9,062,864	51,448	0	51,595	-148	1,146,124	6,506	0	6,525	-19	596,535	3,386	0	3,396	-10
New Mountain Partners III, L.P.	32,337,197	11,722,705	520,451	0	107,972	412,479	1,482,498	65,818	0	13,655	52,164	771,611	34,257	0	7,107	27,150
New Mountain Partners IV, L.P.	32,800,000	1	0	0	0	0	2,032,204	668,083	2,545	23,208	647,420	640,647	210,611	802	7,316	204,097
New State Capital Partners Fund III LP	17,500,000	3,354,424	582,622	111,163	0	693,785	964,417	167,507	31,960	0	199,467	385,922	67,030	12,789	0	79,819
Oak Hill Capital Partners II, L.P.	67,500,000	24,469,733	61,952	0	0	61,952	3,094,535	7,835	0	0	7,835	1,610,645	4,078	0	0	4,078
Oak Hill Capital Partners III, L.P.	33,750,000	12,234,867	293,992	5,396	264,326	35,063	1,547,267	37,179	682	33,428	4,434	805,323	19,351	355	17,398	2,308
Oberland Capital Healthcare LP	3,450,000	0	0	0	0	0	201,825	442,531	0	53,424	389,107	0	0	0	0	0
Patron Capital V LP	38,421,000	7,177,043	3,472,807	0	0	3,783,345	1,963,314	950,003	0	0	1,034,952	829,894	401,567	0	0	437,475
Riverside Capital Appreciation Fund VI, L.P.	35,500,000	0	0	0	0	0	2,009,300	561,910	0	0	561,910	301,749	84,385	0	0	84,385
Rubenstein Properties Fund II	20,800,000	0	0	0	0	0	1,244,066	865,419	0	0	865,419	447,429	311,248	0	0	311,248
Secondary Opportunities Fund III, L.P.	25,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Strategic Value Special Situations Fund IV LP	43,300,000	0	0	0	0	0	2,533,050	3,084,923	0	2,221	3,082,702	0	0	0	0	0
Strategic Value Special Situations Fund V LP	70,000,000	13,417,696	4,565,927	1,001,296	0	5,567,223	3,874,668	1,312,731	287,878	0	1,600,610	1,543,688	525,304	115,198	0	640,502
Taurus Mining Finance Fund LLC	45,100,000	0	0	0	0	0	2,794,280	230,256	0	14,732	215,524	880,891	72,588	0	4,644	67,943
Tenaska Power Fund II, L.P.	27,000,000	8,824,749	27,152	0	0	27,152	1,363,534	4,195	0	0	4,195	625,175	1,924	0	0	1,924
Triton Fund IV, L.P.	26,850,860	1	0	0	0	1	1,663,611	1,109,683	0	0	1,208,911	524,449	349,824	0	0	381,106
VantagePoint Venture Partners 2006, L.P.	27,000,000	9,787,893	2,518,879	0	288,290	2,230,589	1,237,814	318,547	0	36,458	282,089	644,258	165,798	0	18,976	146,822
VantagePoint Venture Partners IV, L.P.	36,000,000	13,050,524	21,582	0	0	21,582	1,650,419	2,729	0	0	2,729	859,011	1,421	0	0	1,421
Vista Equity Partners III, L.P.	45,000,000	16,313,156	1,204,950	0	0	1,204,950	2,063,023	152,383	0	0	152,383	1,073,764	79,312	0	0	79,312
Vista Equity Partners IV, L.P.	27,000,000	0	0	0	0	0	1,484,997	1,033,511	0	0	1,033,511	0	0	0	0	0
Vista Equity Partners VI LP	25,000,000	0	0	0	0	0	1,525,900	2,014,489	0	25,741	1,988,747	0	0	0	0	0
Walton Street Real Estate Fund VI, LP	36,000,000	10,001,992	4,053,754	0	0	4,053,754	2,186,190	886,051	0	0	886,051	725,004	293,840	0	0	293,840
Walton Street Real Estate Fund VII, LP	38,120,000	0	0	0	0	0	2,279,995	549,538	0	0	549,538	820,000	197,641	0	0	197,641
Warburg, Pincus Private Equity IX, L.P.	50,000,000	18,125,728	43,149	0	36,251	6,897	2,292,248	5,457	0	4,584	872	1,193,071	2,840	0	2,386	454
Warburg, Pincus Private Equity X, L.P.	38,750,000	14,047,440	310,774	0	0	310,774	1,776,492	39,302	0	0	39,302	924,630	20,456	0	0	20,456
Wayzata Opportunities Fund II, L.P.	67,500,000	24,469,733	529	0	0	529	3,094,535	67	0	0	67	1,610,645	35	0	0	35
Wayzata Opportunities Fund III, L.P.	35,500,000	0	0	0	0	0	2,009,300	310,696	0	54,357	256,339	301,749	46,659	0	8,163	38,496
White Oak Yield Spectrum Parallel Fund LP	100,000,000	14,833,350	21,184,372	0	863,284	20,321,088	5,327,845	7,609,005	0	310,075	7,298,931	1,377,012	1,966,591	0	80,141	1,886,450

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority

Capital Calls and Distributions

For the quarter ending December 31, 2022

Insurance Funds Managers	Total Insurance Funds Commitments	Kentucky Employees Retirement System					Kentucky Employees Hazardous Retirement System					State Police Employees Retirement System				
		Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation
Adams Street SPC II A1	75,000,000	13,190,205	10,445,521	4,974,968	5,048,479	10,372,009	7,095,858	5,619,316	2,676,354	2,715,901	5,579,770	2,740,996	2,170,636	1,033,825	1,049,101	2,155,360
Adams Street SPC II B1	75,000,000	13,190,205	8,470,713	3,045,364	2,186,923	9,329,154	7,095,858	4,556,940	1,638,297	1,176,486	5,018,751	2,740,996	1,760,260	632,843	454,455	1,938,649
AMERRA Agri Fund II, LP	16,200,000	2,153,555	1,259,404	0	0	1,259,404	1,746,327	1,021,256	0	0	1,021,256	656,373	383,848	0	0	383,848
AMERRA-KRS Agri Holding Company, LP	35,000,000	4,652,745	2,619,600	290,044	42,938	2,866,706	3,772,929	2,124,244	235,198	34,819	2,324,623	1,418,089	798,416	88,401	13,087	873,731
Arcano KRS Fund I, L.P.	4,000,000	903,884	371,263	0	0	371,263	430,530	176,837	0	0	176,837	191,459	78,640	0	0	78,640
Ares Special Situations Fund IV, L.P.	13,808,000	0	0	0	0	0	1,038,363	801,435	0	34,269	767,166	646,214	498,764	0	21,327	477,437
Barings Euro Real Estate II	68,037,188	9,661,282	1,915,997	189,849	0	2,296,198	7,225,547	1,432,950	141,986	0	1,717,296	2,762,312	547,814	54,281	0	686,519
Barings Real Estate European Value Add I SCSp	48,026,250	6,819,728	2,750,969	112,617	186,944	2,922,402	5,100,386	2,057,414	84,225	139,813	2,185,627	1,949,867	786,545	32,199	53,450	835,561
Bay Hills Capital I, L.P.	7,500,000	1,694,783	126,646	0	0	126,646	807,244	60,323	0	0	60,323	358,986	26,826	0	0	26,826
Bay Hills Capital III, L.P.	48,750,000	0	0	0	0	0	3,666,009	3,130,180	0	0	3,130,180	2,281,498	1,948,031	0	0	1,948,031
Bay Hills Emerging Partners II LP	5,000,000	1,129,855	2,264,446	0	0	2,264,446	538,163	1,078,581	0	0	1,078,581	239,324	479,652	0	0	479,652
Bay Hills Emerging Partners II-B LP	5,000,000	910,000	1,247,741	0	0	1,247,741	555,000	760,985	0	0	760,985	215,000	294,796	0	0	294,796
BDCM Opportunity Fund IV, L.P.	24,420,000	0	0	0	0	0	1,836,387	2,675,900	5,723	156,738	2,519,163	1,142,854	1,665,316	3,561	97,544	1,567,772
Blackstone Capital Partners V, L.P.	12,414,403	2,805,296	10,682	0	0	10,682	1,336,194	5,088	0	0	5,088	594,214	2,263	0	0	2,263
Blackstone Capital Partners VI, L.P.	40,000,000	0	0	0	0	0	3,360,001	1,421,370	0	170,265	1,251,106	1,599,998	676,842	0	81,078	595,764
Blue Torch Credit Opportunities Fund II LP	60,000,000	10,726,688	10,143,940	0	0	10,143,940	5,638,524	5,332,201	0	0	5,332,201	2,184,246	2,065,582	0	0	2,065,582
BSP Co-Invest Vehicle K LP	0	0	2,973,167	0	59,075	2,914,092	0	1,795,326	0	35,672	1,759,654	0	646,360	0	12,843	633,518
BSP Private Credit Fund	50,000,000	8,493,880	8,049,544	0	291,595	7,757,949	5,128,971	4,860,662	0	176,077	4,684,584	1,846,552	1,749,954	0	63,392	1,686,519
BTG Pactual Brazil Timberland Fund I	15,500,000	2,391,768	1,947,364	0	208,845	1,738,519	1,621,536	1,320,245	0	141,590	1,178,655	615,184	500,880	0	53,717	447,163
Camelot Opportunities Fund, L.P.	2,600,000	587,525	192,869	0	0	192,869	279,845	91,866	0	0	91,866	124,449	40,853	0	0	40,853
Cerberus KRS Levered Loan Opportunities Fund, L.P.	60,000,000	10,192,656	10,874,730	1,824,485	0	12,966,507	6,154,765	6,566,631	1,101,703	0	7,829,736	2,215,862	2,364,144	396,639	0	2,818,892
Columbia Capital Equity Partners IV, L.P.	3,000,000	677,913	71,961	0	0	71,961	322,898	34,276	0	0	34,276	143,595	15,243	0	0	15,243
Crestview Partners II, L.P.	7,500,000	1,694,783	820,133	1,622	75,981	745,773	807,244	390,639	772	36,191	355,220	358,986	173,719	344	16,094	157,969
Crestview Partners III, L.P.	21,000,000	0	0	0	0	0	1,579,203	1,550,977	3,268	46,668	1,507,577	982,799	965,233	2,034	29,043	938,224
CS Adjacent Investment Partners Parallel LP	60,000,000	10,192,656	5,687,972	991,019	1,783,618	4,895,373	6,154,765	3,434,643	598,420	1,077,026	2,956,037	2,215,862	1,236,553	215,445	387,755	1,064,244
CVC European Equity Partners VI, L.P.	12,913,938	0	0	0	0	0	971,130	1,080,434	8,666	116,903	1,067,047	604,372	672,396	5,393	72,754	664,064
DAG Ventures II, L.P.	3,000,000	677,913	48,351	0	0	48,351	322,898	23,030	0	0	23,030	143,595	10,242	0	0	10,242
DAG Ventures III, L.P.	3,000,000	677,913	9,178	0	0	9,178	322,898	4,372	0	0	4,372	143,595	1,944	0	0	1,944
DAG Ventures IV, L.P.	10,000,000	2,259,711	977,271	0	0	977,271	1,076,326	465,485	0	0	465,485	478,649	207,004	0	0	207,004
DAG Ventures V, L.P.	7,000,000	0	0	0	0	0	588,000	3,321	0	0	3,321	280,000	1,581	0	0	1,581
DCM VI, L.P.	1,500,000	338,957	158,823	0	33,896	124,927	161,449	75,649	0	16,145	59,504	71,797	33,642	0	7,180	26,462
DivcoWest Fund IV	9,200,000	1,303,635	86,925	0	0	86,925	977,043	65,148	0	0	65,148	368,004	24,538	0	0	24,538
Essex Woodlands Fund VIII, L.P.	5,000,000	1,129,855	-86,797	0	0	-86,797	538,163	-41,342	0	0	-41,342	239,324	-18,385	0	0	-18,385
Fundamental Partners III LP	30,000,000	4,260,001	3,893,938	0	85,801	3,808,138	3,185,999	2,912,226	0	64,169	2,848,057	1,218,001	1,113,338	0	24,532	1,088,806
Green Equity Investors V, L.P.	10,000,000	2,259,711	71,794	0	23,980	47,814	1,076,326	34,196	0	11,422	22,774	478,649	15,207	0	5,079	10,128
Green Equity Investors VI, L.P.	28,000,000	0	0	0	0	0	2,352,000	2,401,920	0	27,571	2,374,349	1,119,999	1,143,770	0	13,129	1,130,641
Green Equity Investors VII LP	25,000,000	4,550,000	6,721,059	0	813,995	5,907,064	2,775,000	4,099,107	0	496,447	3,602,660	1,075,001	1,587,943	0	192,318	1,395,626
Greenfield Acquisition Partners VI, L.P.	16,700,000	2,367,209	3,517	0	0	3,517	1,774,156	2,636	0	0	2,636	667,811	992	0	0	992
Greenfield Acquisition Partners VII, L.P.	12,200,000	1,729,339	243,179	0	7,235	235,944	1,296,093	182,256	0	5,422	176,834	487,855	68,602	0	2,041	66,561
GTCR Fund IX-A, L.P.	7,000,000	1,581,797	0	0	0	0	753,428	0	0	0	0	335,054	0	0	0	0
H.I.G. BioVentures II, L.P.	11,500,000	0	0	0	0	0	966,000	673,863	0	0	673,863	459,999	320,887	0	0	320,887
H.I.G. Capital Partner V, L.P.	6,900,000	0	0	0	0	0	518,881	502,628	3,081	69,811	435,898	322,920	312,805	1,917	43,446	271,276
H.I.G. Ventures II, L.P.	2,000,000	451,942	75,061	0	0	75,061	215,265	35,753	0	0	35,753	95,730	15,899	0	0	15,899
H&F Spock I LP	1,794,672	405,544	874,572	0	0	874,572	193,165	416,569	0	0	416,569	85,902	185,251	0	0	185,251
Harvest Partners V, L.P.	4,000,000	903,884	-4,397	0	0	-4,397	430,530	-2,094	0	0	-2,094	191,459	-931	0	0	-931
Harvest Partners VI, L.P.	11,600,000	0	0	0	0	0	872,320	266,472	0	0	266,472	542,879	165,836	0	0	165,836
Harvest Partners VII LP	20,000,000	3,640,000	5,492,431	8,191	0	5,500,622	2,220,000	3,349,780	4,996	0	3,354,775	860,001	1,297,663	1,935	0	1,299,598
Hellman and Friedman Capital Partners VI, L.P.	7,500,000	1,694,783	26	0	0	26	807,244	12	0	0	12	358,986	5	0	0	5
Horsley Bridge International Fund V, L.P.	5,000,000	1,129,855	2,604,956	0	63,017	2,541,939	538,163	1,240,770	0	30,016	1,210,754	239,324	551,778	0	13,348	538,430
IFM US Infrastructure Debt Fund	30,000,000	5,109,247	4,341,115	519,303	144,736	4,715,682	2,874,861	2,442,650	292,201	81,440	2,653,411	968,545	822,932	98,443	27,437	893,938
Institutional Venture Partners XII, L.P.	3,000,000	677,913	8,660	0	0	8,660	322,898	4,125	0	0	4,125	143,595	1,834	0	0	1,834
Kayne Anderson Energy Fund VII LP	50,000,000	9,100,000	5,034,761	0	0	5,034,761	5,550,000	3,070,651	0	0	3,070,651	2,150,001	1,189,532	0	0	1,189,532
KCP IV Co-Invest	8,687,415	0	0	0	0	0	653,295	156,793	0	0	170,814	406,570	97,579	0	0	106,304
Keyhaven Capital Partners Fund III, L.P.	2,988,300	675,269	244,856	0	0	266,751	321,638	116,628	0	0	127,057	143,035	51,865	0	0	56,503
Keyhaven Capital Partners IV LP	8,687,415	0	0	0	0	0	653,295	505,878	24,471	26,334	550,033	406,570	314,828	15,229	16,389	342,307
Levine Leichtman Capital Partners V, L.P.	24,000,000	0	0	0	0	0	1,804,804	857,646	0	7,593	850,053	1,123,199	533,746	0	4,725	529,021
Levine Leichtman Capital Partners VI LP	37,500,000	6,824,999	7,275,097	0	15,381	7,259,716	4,162,518	4,437,030	0	9,381	4,427,649	1,612,494	1,718,835	0	3,634	1,715,202
Lubert Adler VII	15,250,000	2,160,925	1,289,967	0	0	1,289,967	1,619,550	966,793	0	0	966,793	610,001	364,141	0	0	364,141
Lubert-Adler Real Estate Fund VII-B LP	15,750,000	2,236,500	679,043	0	110,230	568,813	1,									

KRS Investment Committee Meeting - Investment Review and Update

Kentucky Public Pensions Authority
Capital Calls and Distributions
For the quarter ending December 31, 2022

Insurance Funds Managers	Total Insurance Funds Commitments	Kentucky Employees Retirement System					Kentucky Employees Hazardous Retirement System					State Police Employees Retirement System				
		Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation	Commitment	Beginning Valuation	Period Contributions	Period Distributions	Ending Valuation
MatlinPatterson Global Opportunities Partners	5,000,000	1,129,855	0	0	0	0	538,163	0	0	0	0	239,324	0	0	0	0
MatlinPatterson Global Opportunities Partners II	5,000,000	1,129,855	21,787	0	0	21,787	538,163	10,377	0	0	10,377	239,324	4,615	0	0	4,615
MatlinPatterson Global Opportunities Partners III	5,000,000	1,129,855	2,638	0	0	2,638	538,163	1,257	0	0	1,257	239,324	558	0	0	558
Merit Mezzanine Fund IV, L.P.	3,000,000	677,913	7,110	0	0	7,110	322,898	3,387	0	0	3,387	143,595	1,506	0	0	1,506
Mesa West Core Lending Fund, LP	29,600,000	3,759,201	5,801,855	0	0	5,801,855	3,223,440	4,974,976	0	0	4,974,976	1,207,680	1,863,902	0	0	1,863,902
Mesa West Real Estate Income Fund IV LP	14,000,000	1,988,001	554,621	463,867	8,685	1,009,802	1,486,800	414,794	346,920	6,496	755,218	568,400	158,575	132,627	2,483	288,718
MiddleGround Partners I LP	25,000,000	17,500,000	23,675,490	1,433,898	695,223	24,217,065	1,250,000	1,691,107	102,421	49,659	1,729,791	500,000	676,443	40,969	19,864	691,916
MiddleGround Partners II LP	25,000,000	4,796,517	3,153,478	340,060	0	3,493,537	2,260,759	1,486,339	160,281	0	1,646,621	885,701	582,306	62,794	0	645,100
MiddleGround Partners II-X LP	12,500,000	2,398,258	1,458,235	181,405	0	1,639,640	1,130,379	687,315	85,502	0	772,817	442,851	269,271	33,497	0	302,768
Mill Road Capital I, L.P.	3,000,000	677,913	91,671	0	0	91,671	322,898	43,664	0	0	43,664	143,595	19,418	0	0	19,418
New Mountain Partners II, L.P.	5,000,000	1,129,855	6,414	0	6,405	9	538,163	3,055	0	3,051	4	239,324	1,359	0	1,357	2
New Mountain Partners III, L.P.	7,186,045	1,623,838	72,093	0	14,957	57,136	773,453	34,339	0	7,124	27,215	343,959	15,271	0	3,168	12,103
New Mountain Partners IV, L.P.	17,200,000	0	0	0	0	0	1,293,443	425,216	1,620	14,771	412,065	804,959	264,628	1,008	9,193	256,444
New State Capital Partners Fund III LP	7,500,000	1,438,955	249,929	47,686	0	297,615	678,228	117,800	22,476	0	140,276	265,710	46,151	8,805	0	54,956
Oak Hill Capital Partners II, L.P.	7,500,000	1,694,783	4,291	0	0	4,291	807,244	2,044	0	0	2,044	358,986	909	0	0	909
Oak Hill Capital Partners III, L.P.	12,500,000	2,824,638	67,873	1,246	61,024	8,095	1,345,407	32,329	593	29,067	3,856	598,311	14,377	264	12,926	1,715
Oberland Capital Healthcare LP	15,500,000	5,951,995	1,305,064	0	157,553	1,147,511	1,681,752	368,749	0	44,517	324,232	393,703	86,325	0	10,422	75,904
Patron Capital V LP	14,941,500	2,121,693	1,026,654	0	0	1,118,457	1,586,787	767,821	0	0	836,479	606,625	293,536	0	0	319,784
Riverside Capital Appreciation Fund VI, L.P.	18,712,500	0	0	0	0	0	1,396,123	390,428	0	0	390,428	862,056	241,075	0	0	241,075
Rubenstein Properties Fund II	9,200,000	1,303,637	906,859	0	0	906,859	977,044	679,669	0	0	679,669	368,003	255,997	0	0	255,997
Secondary Opportunities Fund III, L.P.	75,000,000	10,548,299	3,075,996	0	318,912	2,757,084	8,756,849	2,553,591	0	264,750	2,288,840	1,960,724	571,768	0	59,280	512,488
Strategic Value Special Situations Fund IV LP	21,700,000	8,332,800	10,148,251	0	7,306	10,140,945	2,354,450	2,867,409	0	2,064	2,865,344	551,180	671,264	0	483	670,781
Strategic Value Special Situations Fund V LP	30,000,000	5,755,820	1,958,657	429,528	0	2,388,185	2,712,910	923,180	202,451	0	1,125,631	1,062,842	361,676	79,315	0	440,990
Taurus Mining Finance Fund LLC	19,900,000	0	0	0	0	0	1,496,479	132,932	0	7,890	125,042	931,319	82,729	0	4,910	77,819
Tenaska Power Fund II, L.P.	3,000,000	588,919	1,812	0	0	1,812	316,438	974	0	0	974	137,845	424	0	0	424
Triton Fund IV, L.P.	13,814,484	0	0	0	0	0	1,038,852	709,962	0	0	773,447	646,517	441,837	0	0	481,346
VantagePoint Venture Partners 2006, L.P.	3,000,000	677,913	174,459	0	19,967	154,492	322,898	83,097	0	9,511	73,586	143,595	36,954	0	4,229	32,724
VantagePoint Venture Partners IV, L.P.	4,000,000	903,884	1,495	0	0	1,495	430,530	712	0	0	712	191,459	317	0	0	317
Vista Equity Partners III, L.P.	5,000,000	1,129,855	83,457	0	0	83,457	538,163	39,752	0	0	39,752	239,324	17,678	0	0	17,678
Vista Equity Partners IV, L.P.	23,000,000	0	0	0	0	0	1,932,000	1,344,611	0	0	1,344,611	919,999	640,290	0	0	640,290
Vista Equity Partners V LP	25,000,000	4,550,000	6,010,441	0	76,802	5,933,639	2,775,000	3,665,709	0	46,841	3,618,868	1,075,001	1,420,050	0	18,146	1,401,905
Walton Street Real Estate Fund VI, LP	4,000,000	754,575	305,825	0	0	305,825	431,496	174,883	0	0	174,883	184,453	74,758	0	0	74,758
Walton Street Real Estate Fund VII, LP	16,755,000	2,375,001	572,437	0	0	572,437	1,780,001	429,027	0	0	429,027	669,998	161,487	0	0	161,487
Warburg, Pincus Private Equity IX, L.P.	10,000,000	2,259,711	5,379	0	4,519	860	1,076,326	2,562	0	2,153	410	478,649	1,139	0	957	182
Warburg, Pincus Private Equity X, L.P.	7,500,000	1,694,783	37,481	0	0	37,481	807,244	17,852	0	0	17,852	358,986	7,939	0	0	7,939
Wayzata Opportunities Fund II, L.P.	7,500,000	1,694,783	37	0	0	37	807,244	17	0	0	17	358,986	8	0	0	8
Wayzata Opportunities Fund III, L.P.	18,712,500	0	0	0	0	0	1,396,123	215,881	0	37,769	178,112	862,056	133,299	0	23,321	109,978
White Oak Yield Spectrum Parallel Fund LP	50,000,000	8,493,880	11,418,033	0	465,256	10,952,777	5,128,971	6,894,700	0	280,941	6,613,759	1,846,552	2,482,257	0	101,146	2,381,111

Kentucky Public Pensions Authority

Internal Asset Holdings Report & Internal Asset Transaction Report

Quarter Ending: December 31, 2022

Reports can be found:

<https://kyret.ky.gov/Investments/Investments-Library/Pages/Internal-Reports.aspx>

Kentucky Public Pensions Authority

Commissions Report

Quarter Ending: December 31, 2022

Reports can be found:

<https://kyret.ky.gov/Investments/Investments-Library/Pages/Commissions-Reports.aspx>















Kentucky Retirement Systems (KRS) Pension and Insurance Trusts
Investment Policy Statement and Compliance Review
For the Quarter Ended December 31, 2022

Compliance Guidelines	Compliance Status
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).	
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.	
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.	
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.	
All investment management services will be contracted according to the CERS Investment Procurement Policy established by the CERS Board.	
Securities issued by the state of Kentucky, its subsidiaries or affiliates are prohibited.	
The amount of stock in the domestic or international equity allocation in any single corporation shall not exceed 5% of the aggregate market value of the System's assets.	
The amount of stock held in domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation.	
The amount of stock in any one industry in the domestic equity allocation shall not exceed 10% of the aggregate market value of the System's assets.	
Investment in "frontier" markets shall not exceed 5% of the System's international equity assets.	
The duration of the total fixed income portfolio shall not deviate from the Barclays Aggregate Index by more than 25%.	
The duration of the TIPS portfolio shall not deviate from the Barclay's TIPS Index by more than 10%.	
The amount invested in the debt of a single corporation shall not exceed 5% of the total market value of the System's Assets.	
50% of the fixed income assets must have liquidity that is T+3 (trade date plus three days) or better.	
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.	
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).	



Kentucky Retirement Systems (KRS) Pension and Insurance Trusts
Investment Policy Statement and Compliance Review
For the Quarter Ended December 31, 2022

No public fixed income manager shall invest more than 5% of the total market value of assets held in any single issue, short-term instruments, with the exception of U.S. Government issued, guaranteed or agency obligations.	
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.	
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.	
The private equity portfolio should earn a return that meets or exceeds the Systems Private Equity Index. Individual private equity investments should earn a Net IRR above the median Net IRR of other similar funds, of the same vintage year.	
For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market goal or benchmark.	
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.	
For periods greater than five years or a full market cycle, individual portfolios should compare favorably on a risk-adjusted basis and generate returns that rank above the median return of a relevant peer group.	
For periods greater than five years or a full market cycle, volatility, as measured by the standard deviation of monthly returns, should be comparable to the benchmark.	
For periods greater than five years or a full market cycle, returns should rank above the median return of a relevant peer group.	

Legend	
	In Compliance
	To be Determined